ZACKLIFT

INSTALLATION & OWNER'S MANUAL

Z30, Z303, Z402, Z403 FIFTHWHEELER & PERMANENT

FOR SUPPORT, CALL
509.674.4426

Zacklift International, Inc.
1102 E. 1st Street
Cle Elum, WA., 98922
email@zacklift.com
www.zacklift.com

ed: K21Jan2014

Zacklift Installation & Owner's Manual

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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 use whenever we can be of assistance. We look forward to serving you in the future.

All ratings are structural ratings only, and will vary based on chassis weight, wheelbase 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 Head completely into lock position before folding to prevent pivoting of Grid Head.
7. FIFTHWHEELER 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 FIFTHWHEELER mounting frame when off truck, resting on stabilizing hardware. Stand clear of Zacklift and FIFTHWHEELER mounting frame while loading and unloading structure from chassis.

Notes:

1. Read all instruction 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 clearance for any movement of the tilt cylinder and truck springs.

3. Tack or bolt all parts temporarily before welding completely.

4. Make sure all work is done on a level surface. Level ground is essential for making accurate measurements.

5. If frame is aluminum, plates must be bolted on.

6. It is suggested that on a Permanent Mount installation (not a FIFTHWHEELER mounting), a weak or rotted subframe be removed and replaced with a suitable material.

Address all questions or concerns before beginning an installation to:

Zacklift International, Inc.
1102 E. 1st Street
Cle Elum, WA., 98922
Phone: (509) 674-4426
Fax: (509) 674-5267

Website: www.zacklift.com
Email: parts@zacklift.com

Installing Permanent Mount Zacklift

Installation Notes

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

1) Read all instructions carefully before beginning installation. Failure to do so could result in severe damage to Zacklift.

2) The ideal installation of a Zacklift is as close to the rear axle of the truck as possible with enough room for proper clearance of any moment of the tilt cylinder, the Zacklift, truck springs and drive-train.

3) Tack or bolt all parts temporarily before welding completely. Bolts should be left loose with the ability to move during assembly before tightening when assembly is complete.

4) Make sure all work is done on level ground to ensure accurate measurements and placement of Zacklift equipment.

5) If truck frame is aluminum, plates must be bolted on.

6) It is suggested that on a permanent mounting (not a FIFTHWHEELER mounting), weak or rotted subframe sections should be removed and replaced with adequate and suitable material.

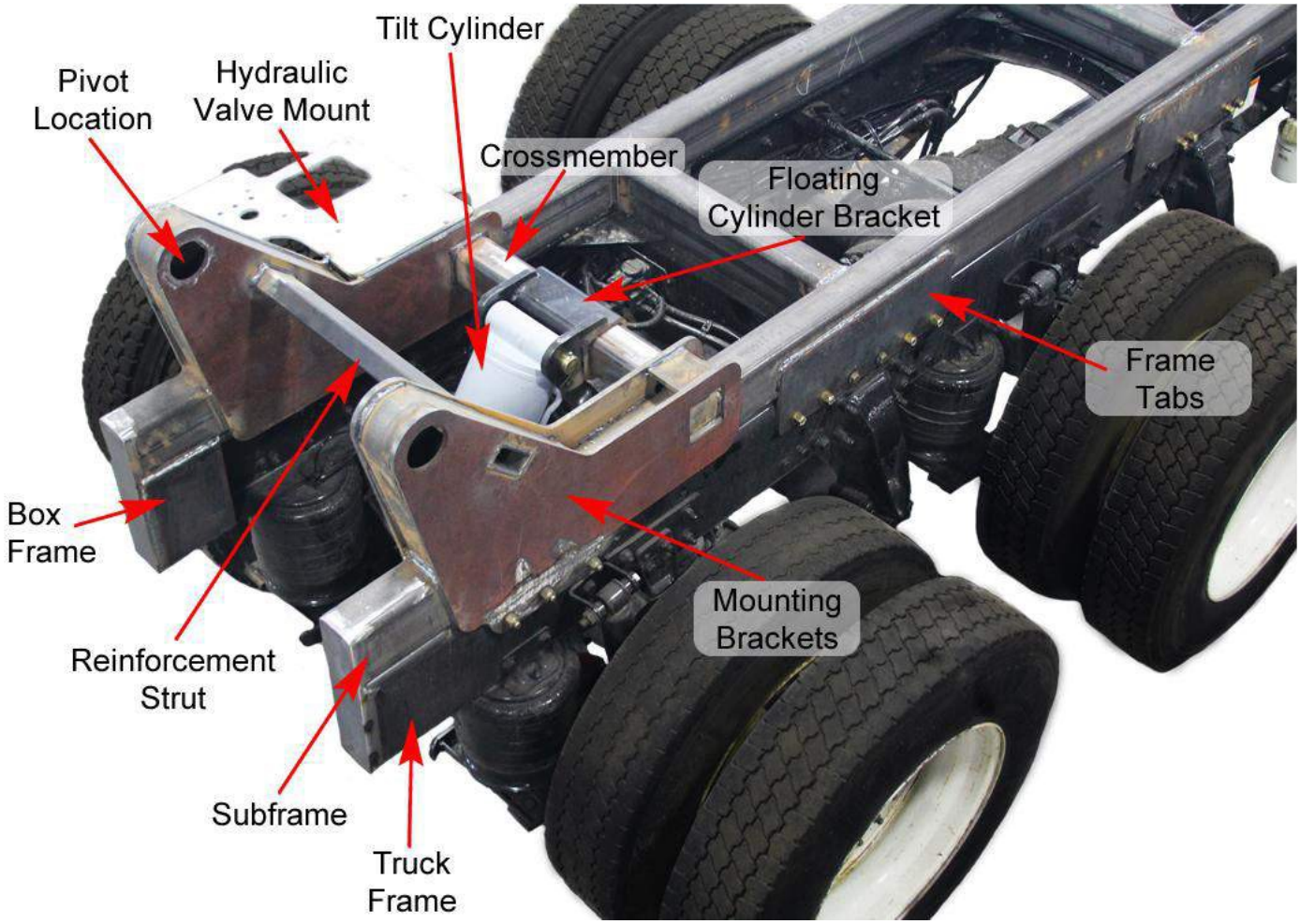
Warning

Operate Zacklift Properly

1) Only use tilt cylinder for lifting, regardless of how high you must lift a load.
2) Never use fold-up feature for purpose of lifting a load. Costly breakage of internal parts and possible personal injury could result.
3) Always use safety chains to secure load to towing vehicle. Follow chain-up procedures outlined by State and Federal guidelines.
4) To avoid possible injury, stand clear of Zacklift while operating.
5) Always retract grid completely into lock position before folding, to prevent pivoting of grid head.

For help or further details on instructions to install a permanent mount.
Contact Zacklift at parts@zacklift.com, or call (509) 674 – 4426.

Installation Overview



1. 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.
2. Ideal installation of a Zacklift permanent mount is as close to the rear axle as possible. Be sure to allow enough room for clearances.
3. The factory advises 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 inch rectangular steel tubing.
4. If your truck frame is aluminum all attachments must be bolted. Make sure all bolts are of adequate strength.
5. Mockup the subframe, then weld all components together.
6. Fit the frame to the truck and box the mainframe and subframe of your truck.
7. Install the components for the tilt cylinder, Zacklift and hydraulic valve assembly.
8. Plumb hydraulic lines and operate the Zacklift to purge all air from the system.

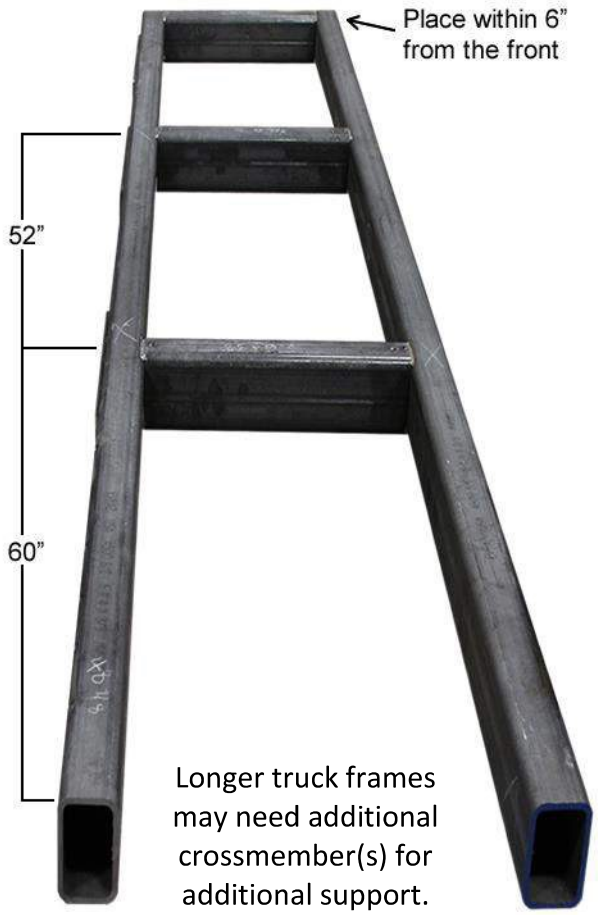
DO NOT WELD SUBFRAME OR FRAME TABS TO TRUCK FRAME. With the exception of boxing the end of the frame, no welding is on occur to the truck frame itself.

Preparing a Wrecker Body

1. Before starting the installation, remove or protect any and all airlines, hydraulic lines and wiring in and near all work areas.
2. If possible, remove the wrecker body and toolboxes from the frame. If this is not possible, remove a section approximately 36 inches wide and 50 inches deep from the rear-center of the wrecker body. This allows access and possible replacement or reinforcing of the subframe, installation of the mounting ears and removal of the rear crossmember. In some applications you will need to relocate the winch control rods to fully recess the Zacklift.
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 a ½ inch clearance on either side of the Zacklift main body.

With the tailboard and deck cut out, follow the instructions in the “Preparing the Bare Frame” portion of the installation guide to complete the rest of the installation. Your truck may vary, use discretion when necessary. Follow instructions as closely as possible. For advice on a particular question, please contact Zacklift for support.

Building the Subframe



Longer truck frames may need additional crossmember(s) for additional support.

Zacklift recommends the subframe be assembled from 4x6x3/8 rectangular tubing.

Subframe length should extend the entire length of the truck frame, from behind the cab to the end of the frame.

Position first crossmember at the bogie point, approximately 60 inches forward from the end.

The second rear crossmember is located 52 inches on center from the center point of first crossmember.

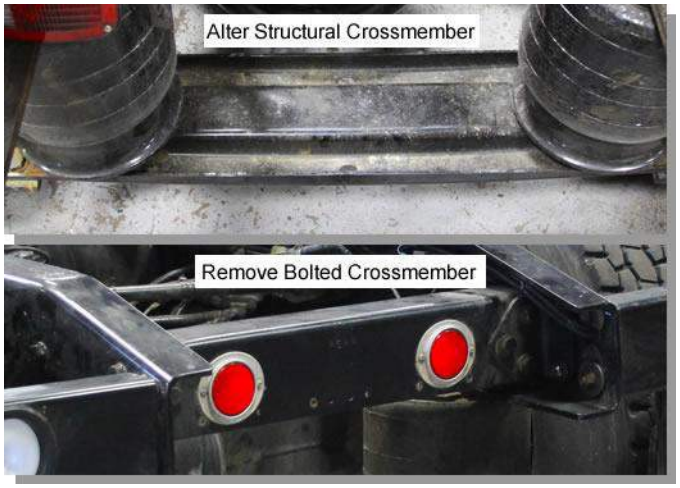
A third crossmember should be within 6 inches of the cab.

Additional crossmembers may be located directly above any exposed crossmembers in the truck frame, or positioned where necessary for a winch or other heavy equipment.

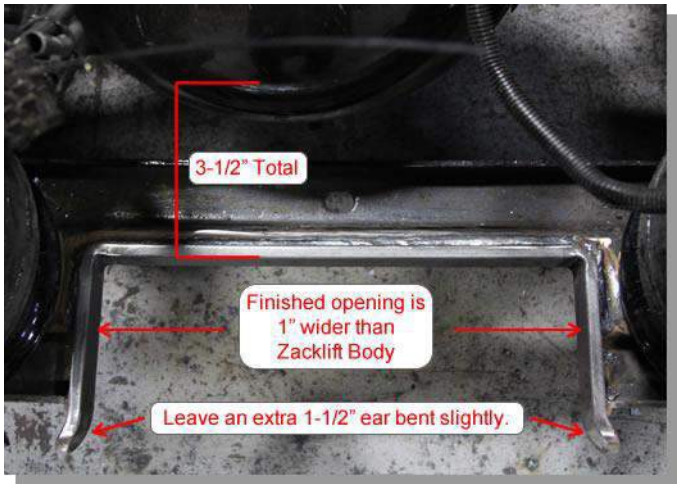
Place tubing width equal to the frame. Make sure the crown follows the contour of the truck frame. Make sure there are no gaps between subframe and truck rails.

Tack all components during initial fabrication. Do not fully weld until all pieces are fabricated, positioned and tacked properly.

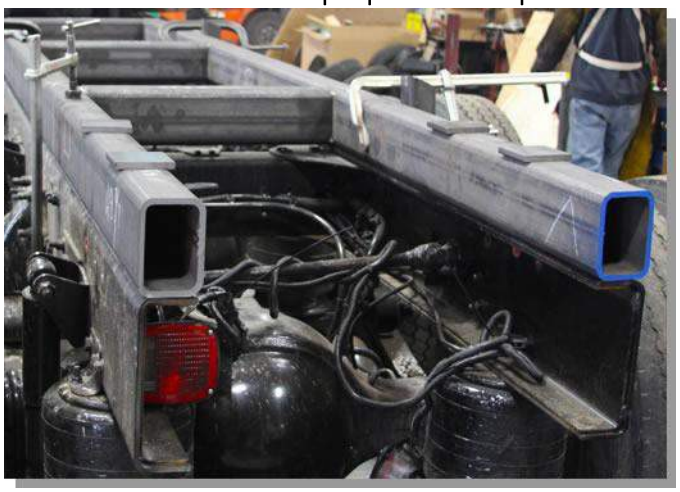
#1) Make sure truck is on level flat ground. Remove all wires, hydraulic lines, tail-light housings or pneumatic air lines 12 inches from the rear.



#2) The Zacklift needs to be located as close to rear axle as possible. Alter structural crossmembers or remove bolt on crossmembers for proper Zacklift placement.

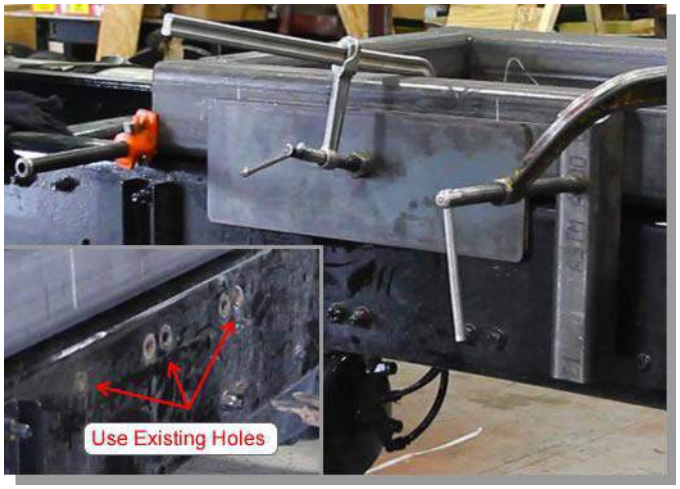


#3) The Zacklift needs to be located 4 inches from the differential housing. Give a half inch on all sides for clearance in the final cut. Weld a 1x3/8 inch flat bar stock for support.



#4) Measure truck frame from rear of the cab, to end of the main truck rails. Cut two tubes to this measurement.

#5) Measure between subframe rails, cut three or more crossmembers to this measurement. Locate crossmembers at 60”, 52” on center and 6” from cab.



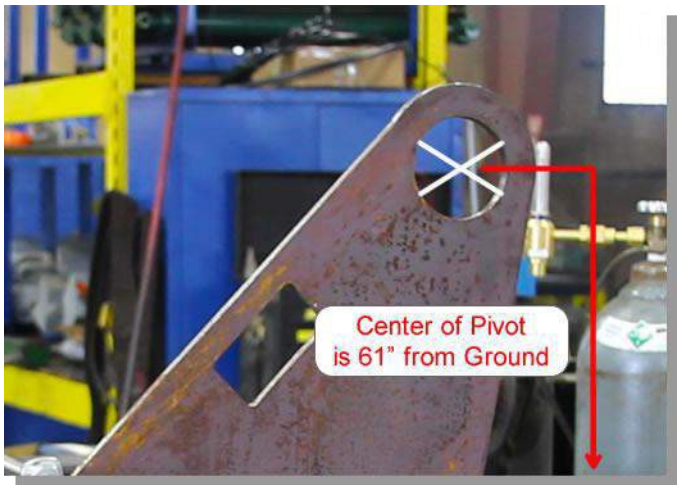
#6) Cut (x6) 8x24x3/8 inch plate (not supplied) to fit over existing frame hole locations. Clamp plate in place and transfer hole locations.

#7) Clamp the plate in place. Fit bolts loosely, do not tighten. Tack weld the plate securely to the subframe rails.

#8) Use steps 8 and 9 to place all frame tabs around the subframe. Space tabs as close to center of the crossmembers as you can.

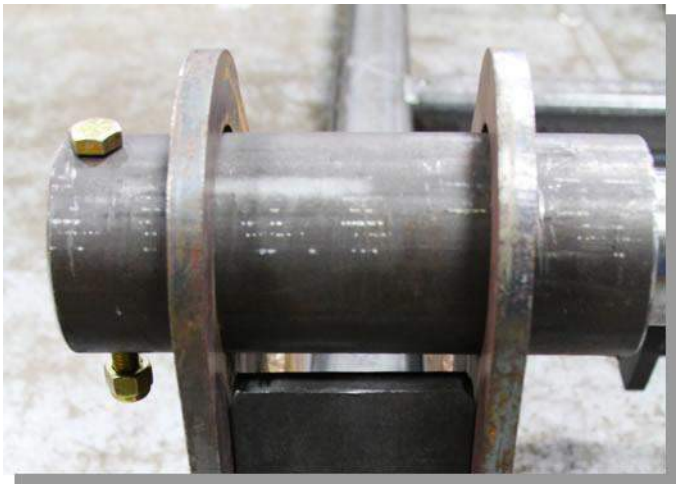
#9) Before mounting ears, cut supplied 4x4 crossmember to fit between subframe. Place in crossmember opening. DO NOT WELD FLOATING BRACKET TO CROSSMEMBER.

#10) Mount the ears to the back of the subframe. Position the ears so that the pivot point his positioned near the rear of the tire. Clamp into place. This is an initial starting location.



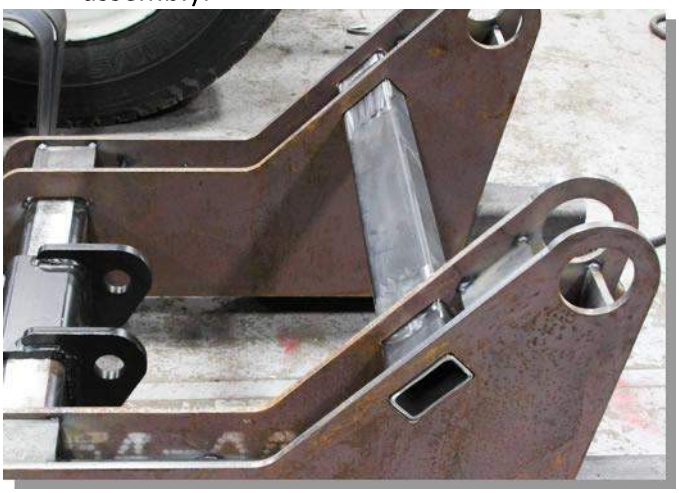
#11) Raise or lower mounting ear until center of pivot location is 61 inches from level ground. Then level mounting ear to truck frame. Use shims and clamps to hold ear in place. DO NOT WELD OR TACK AT THIS TIME.

#12) With pivot pin centered in pivot location, use a level on the inside against the pivot pin. Use a degree wheel to position level at 7 degrees. Slide mounting ears until bottom of level is 4 inches from rear differential. Tack in place.



#13) Loosely bolt pivot pin into pivot bosses. Center pivot pin left to right in subframe assembly.

#14) The center of the pivot pin should be 30 inches from inner top corner of crossmember. Tack pivot bosses pin in place.



#15) Cut supplied 2x4 reinforcement strut to size, tack weld in place. Double check all measurements and temporary welds.

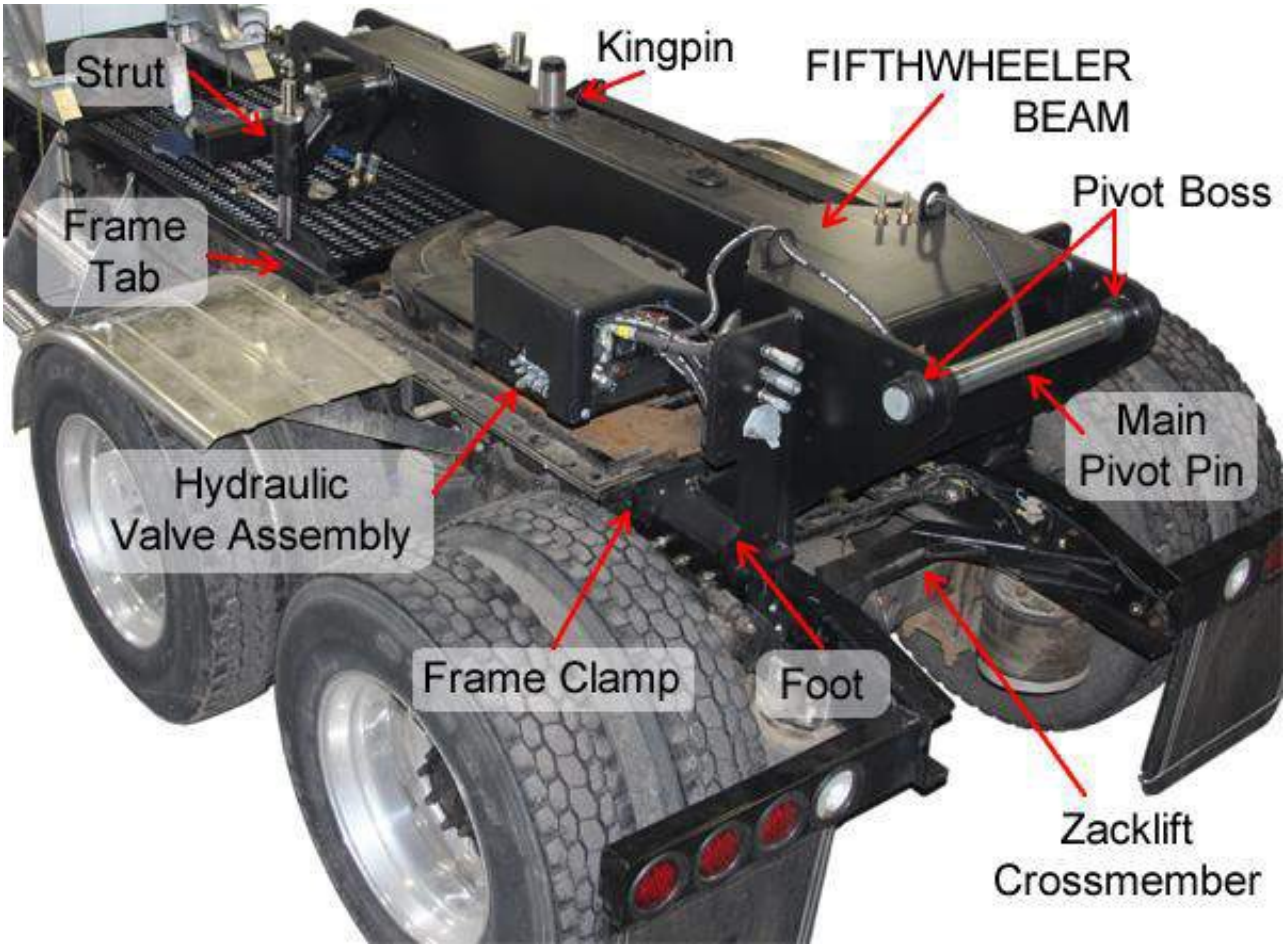
#16) Remove subframe from truck and fully weld all connections and placements. Then return subframe to truck and securely bolt in place.

#17) Use 1/2" plate to box the end of subframe and truck frame. Enclose the truck frame at least 10 to 12 inches from the end.

#18) Make sure the pivot bushing is inserted into the main pivot before installing Zacklift to subframe. See hydraulics section C-1 for connection instructions and diagram.

Installing a Zacklift FIFTHWHEELER

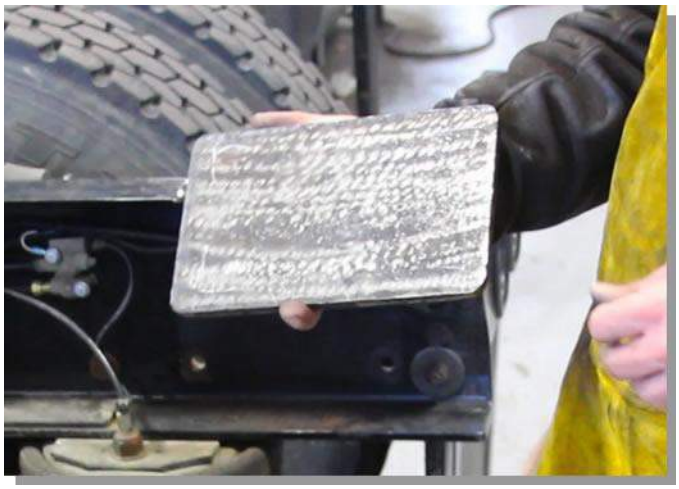
For video demonstrations of the FIFTHWHEELER install, go to zacklift.com and click on the video links.



Overview

1. It is advised to work on solid level ground during the entire installation. Make sure the truck frame is level before starting installation.
2. Ideal installation of a Zacklift is as close to the rear axle as possible. Be sure to allow enough room for clearances.
3. Remove (or alter structural crossmembers) to ensure the Zacklift unit can be placed as close to the rear axle as possible. This is essential for proper weight distribution when towing.
4. Mark new crossmember brackets with the hole locations of the old crossmember brackets.
5. Install new rear crossmember with the newly fabricated crossmember brackets using the original bolts from the original crossmember brackets.
6. Install FIFTHWHEELER beam and locate it properly on the frame by measuring the angle of the Zacklift to 7 degrees.
7. Install strut mounts and frame tabs.
8. Install the tilt cylinder to the FIFTHWHEELER beam.
9. Install Zacklift and attach the tilt cylinder rod.
10. Plum hydraulic lines to the tilt cylinder and Zacklift unit from the preinstalled hydraulic valve assembly.
11. Bleed hydraulic lines by cycling the Zacklift through its full range of motion.

#1) Begin by removing rear crossmember. Remove all mounting brackets and electrical wiring from the rear. Retain bolts for reuse.



#2) Fabricate a new crossmember mounting bracket. Start by clamping supplied plate to old mount location. Transfer hole locations and drill.

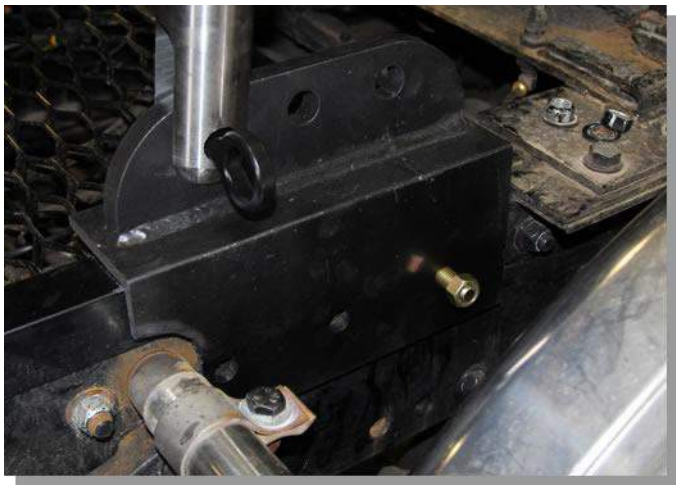
#3) Weld supplied ears to mounting plate so that crossmember slides in between ears. Mark hole locations from crossmember on ears and drill.

#4) Mount the fabricated mounting bracket loosely. Install Zacklift crossmember into brackets. Adjust as needed, then tighten bolts.

#5) Lower FIFTHWHEELER beam, onto truck locking kingpin into fifth-wheel plate.

#6) Adjust height of kingpin, leveling beam on truck.

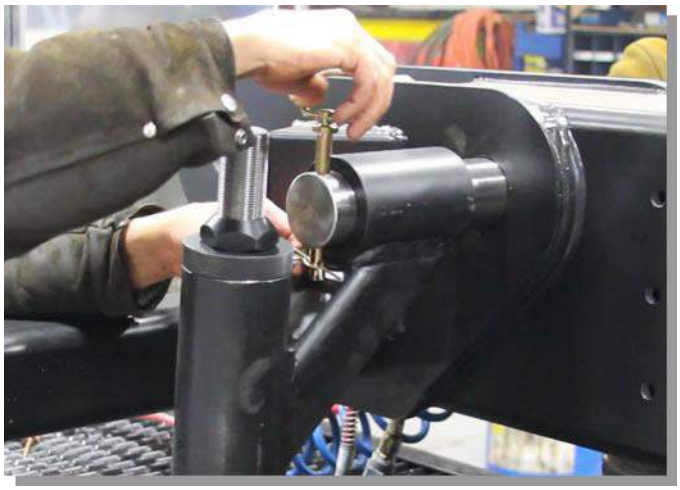
#7) Use a degree wheel and level to position the FIFTHWHEELER. Place top of level on inside of the pivot. Place bottom of level 4 inches from differential housing. Slide the FIFTHWHEELER until degree wheel reads 7 degrees.



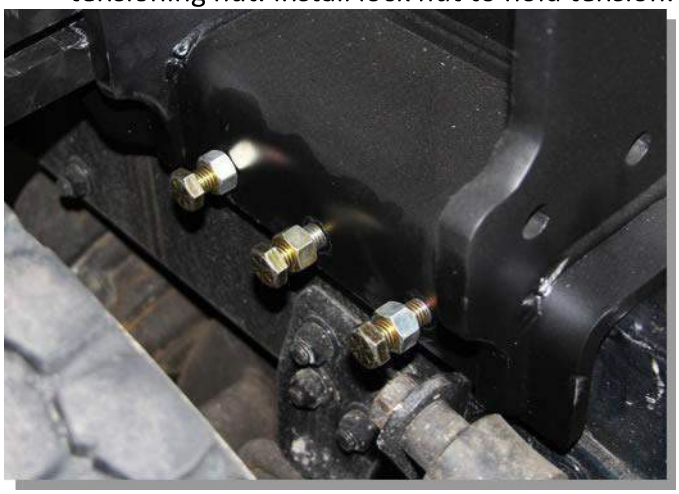
#8) Mount frame tab directly under front of FIFTHWHEELER beam. Trim tab to fit truck frame. Transfer holes to frame tab and drill. Bolt tab to truck.

#9) Insert strut mounting pin into FIFTHWHEELER beam. Place strut arm onto strut mounting pin.

#10) Locate strut on strut arm. Pin to frame tab with supplied pin and hairpin. Apply tension with tensioning nut. Install lock nut to hold tension.

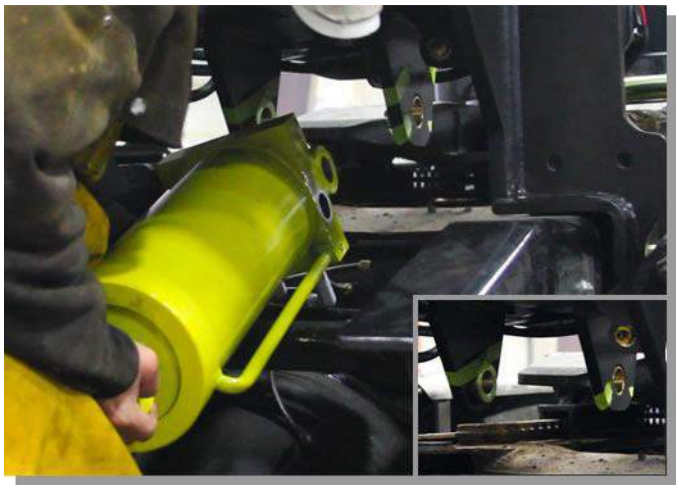


#11) Finish strut installation by placing supplied pin and hairpin in strut mounting pin.



#12) Adjust bolts in FIFTHWHEELER foot until the beam is centered on truck frame. Install nuts to lock bolts into place.

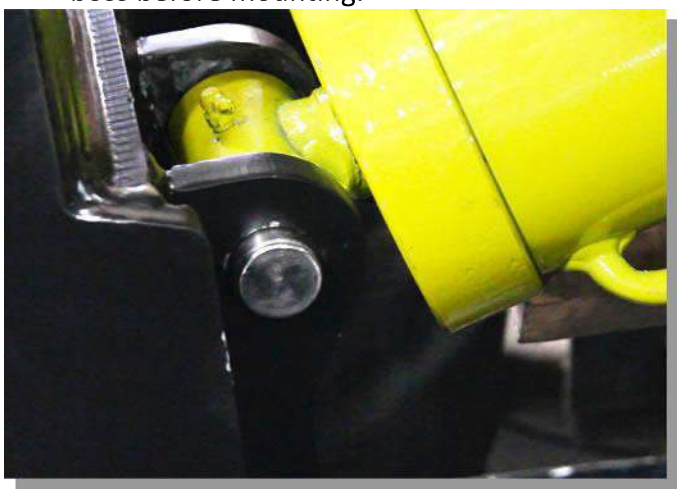
#13) Use frame clamp to secure FIFTHWEELER foot to truck frame.



#14) Position tilt cylinder so that external return line is down and to the right. (Z30 & Z303 require supplied bushings be inserted into mounts before installing cylinder. Use tape to hold in place during install.)

#15) Hoist the Zacklift into position. Verify that supplied bushings are installed in Zacklift pivot boss before mounting.

#16) Pin Zacklift into place with the pivot pin. Secure pivot pin with supplied bolts and lock nuts.

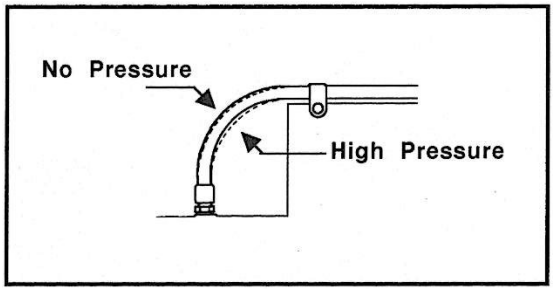


#17) Use the supplied pin and snap rings to secure tilt cylinder to Zacklift. Position grease zerk facing up for easy maintenance.

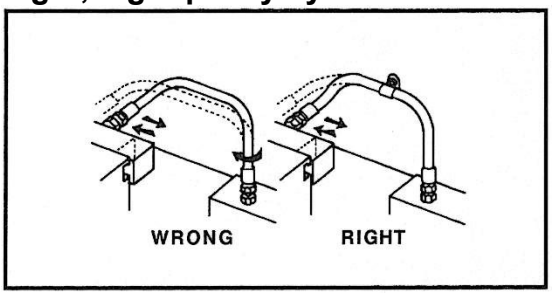
#18) Connect all hydraulic hoses. Hoses are labeled for easy installation. Cycle the Zacklift to expel air from system.

General Hydraulic Tips

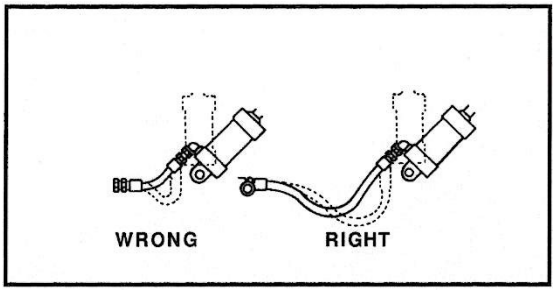
Zacklift valve hydraulic pressure preset at 2600 psi. Recommended gallons per minute is 8-10. Zacklift recommends a medium weight, high quality hydraulic oil.



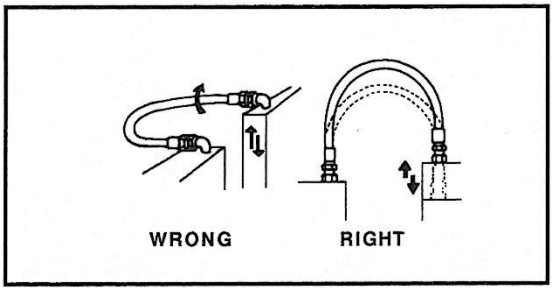
Since hose length varies under pressure, be sure to clamp so that the curve can absorb the changes. It is not recommended to clamp high and low pressure hoses together.



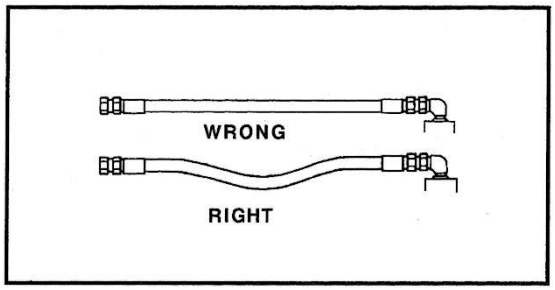
You can avoid twisting in hoses that are bent in two planes by clamping hoses at change of plane.



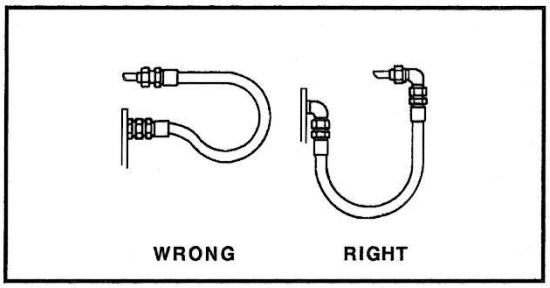
To avoid abrasion and get proper distribution of movement on flexing applications, be sure you have enough hose.



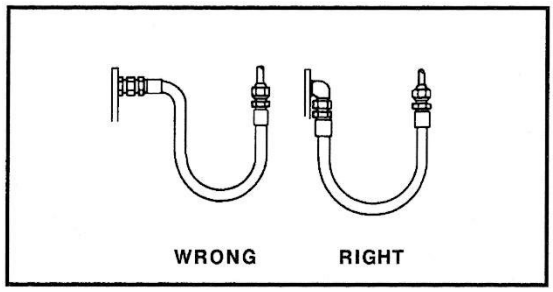
If hoses are installed in the same plane as the motion of the boss, you can prevent unnecessary twisting and distortion.



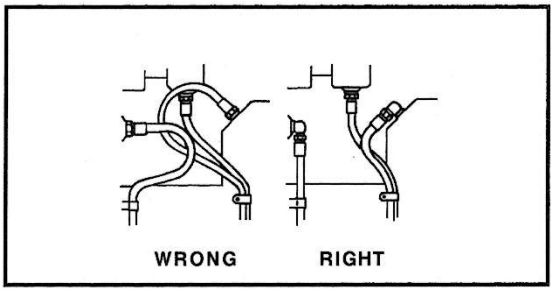
Be sure to allow for the +2% to -4% change in length of hose under pressure.



An angle adapter can be used to avoid sharp bends in the hose when the angle falls below minimum requirements.

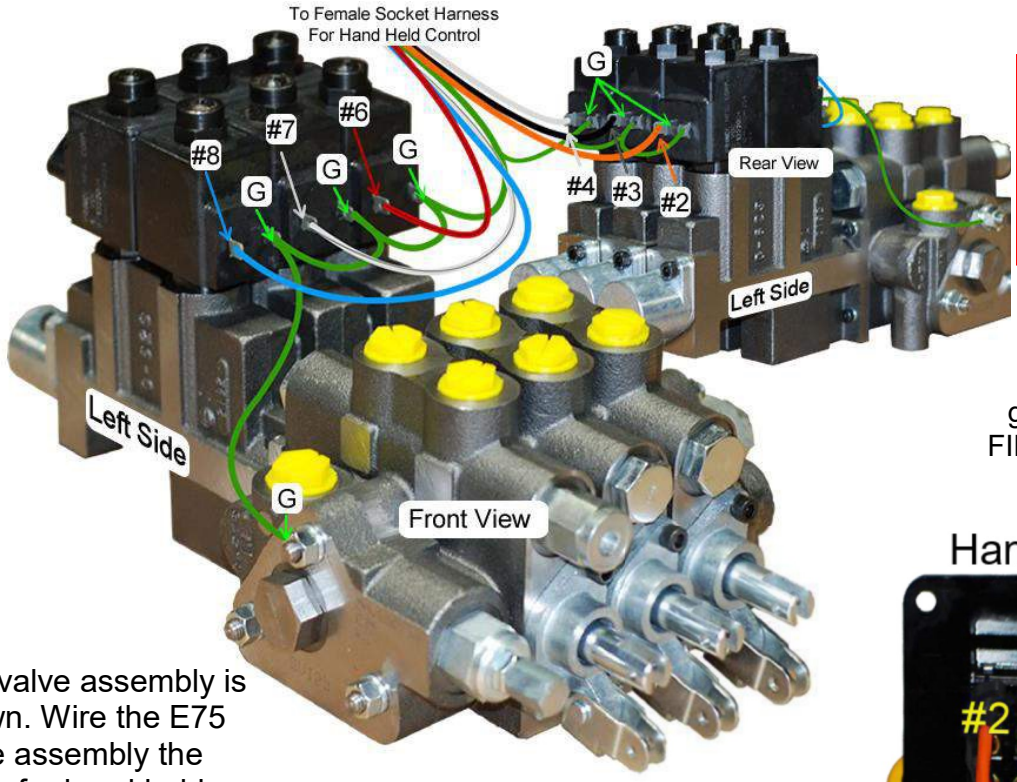


By using the proper angle adapters, you can avoid sharp twists and bends in the hose.



With the use of 45° and 90° adapters, the overall appearance is improved and you can avoid excessive hose length.

Remote Wiring Diagram



Always use appropriate electrical connectors to make your connections. Tape alone is not advised.

* Make sure valve body is grounded to truck frame or FIFTHWHEELER beam and 12-volt negative terminal.

E35 valve assembly is shown. Wire the E75 valve assembly the same for hand held control.

Location	Wire	Function
#2	Orange	Raise-Unfold Horizontal
#3	Black	Retract Horizontal
#4	White	Tilt Up
#6	Red\Black	Tilt Down
#7	White\Black	Extend Horizontal
#8	Blue	Lower-Fold Horizontal
G	Green	Ground Wire
R	Red	Hot Wire
Aux	Light Green	Auxiliary Hot Wire

Hand Held Control

9-Way Plug
Male End

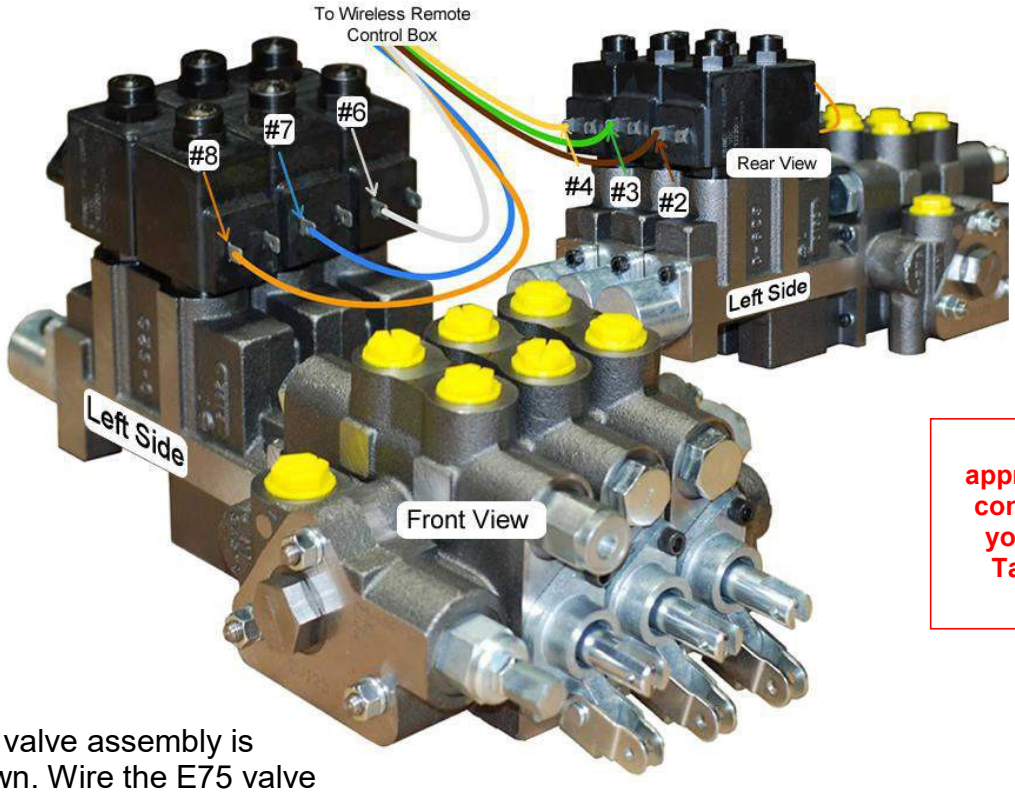
Plug End

* If using a PTO with the Zacklift, eliminate the light green auxiliary wire. Securely cap the wire so not to short out.

The red wire is connected to a 12-volt constant positive and should be protected with a 10-amp fuse.

The light green wire becomes a 12-volt power source when any of the function switches are activated. This wire is used to switch on the optional 12-volt power pack.

Wireless Remote Wiring Diagram



Always use appropriate electrical connectors to make your connections. Tape alone is not advised.

E35 valve assembly is shown. Wire the E75 valve assembly the same for wireless control.

Location	Wire	Function
#2	Brown	Raise-Unfold Horizontal
#3	Green	Retract Horizontal
#4	Yellow	Tilt Up
#6	White	Tilt Down
#7	Blue	Extend Horizontal
#8	Orange	Lower-Fold Horizontal
G	Black	Ground
R	Red	Hot Wire
	Gray	Not Used

Green coil ground not shown. Connect the black ground wire to same location as green coil ground.

* Make sure valve body is grounded to truck frame or FIFTHWHEELER beam and 12-volt negative terminal.

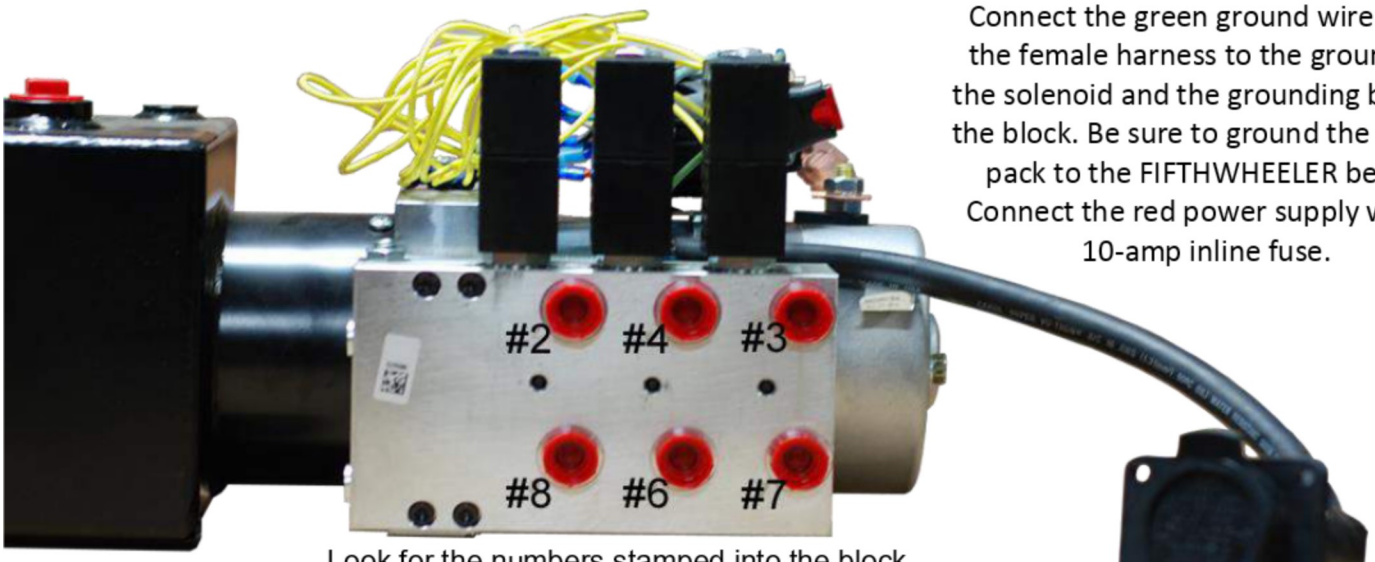
Use an electrical crimp cap to terminate the Gray wire. It is not used.

The Red wire connects to a 12-volt constant power source with a 10-amp fuse.

The transmitter will be found inside the receiver box.

12-Volt Power Pack Wiring & Hydraulic Diagram

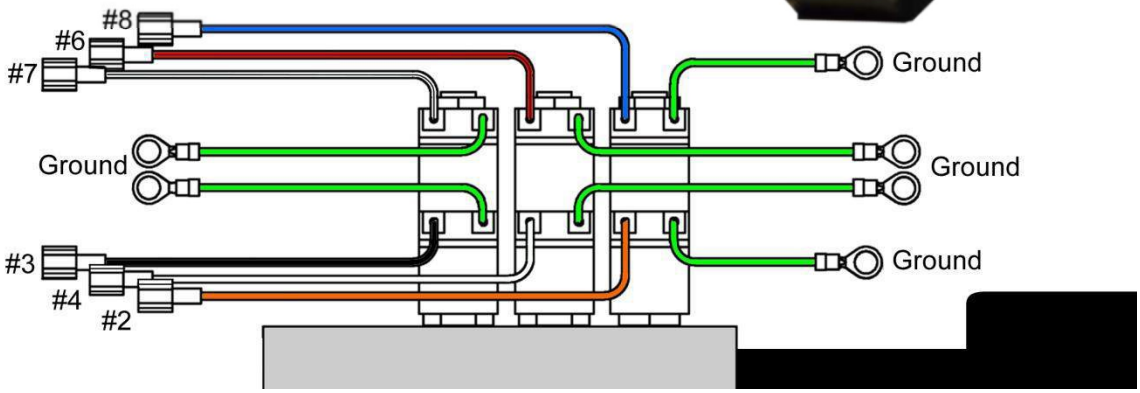
Connect the green ground wire from the female harness to the ground on the solenoid and the grounding bolt on the block. Be sure to ground the power pack to the FIFTHWHEELER beam. Connect the red power supply with a 10-amp inline fuse.



Look for the numbers stamped into the block.

Front View

Back View



Location	Wire	Function
#2	Orange	Raise-Unfold Horizontal
#3	Black	Retract Horizontal
#4	White	Tilt Up
#6	Red\Black	Tilt Down
#7	White\Black	Extend Horizontal
#8	Blue	Lower-Fold Horizontal
G	Green	Ground
R	Red	Hot - to Solenoid & Post
Aux	Light-Green	Solenoid Start Post

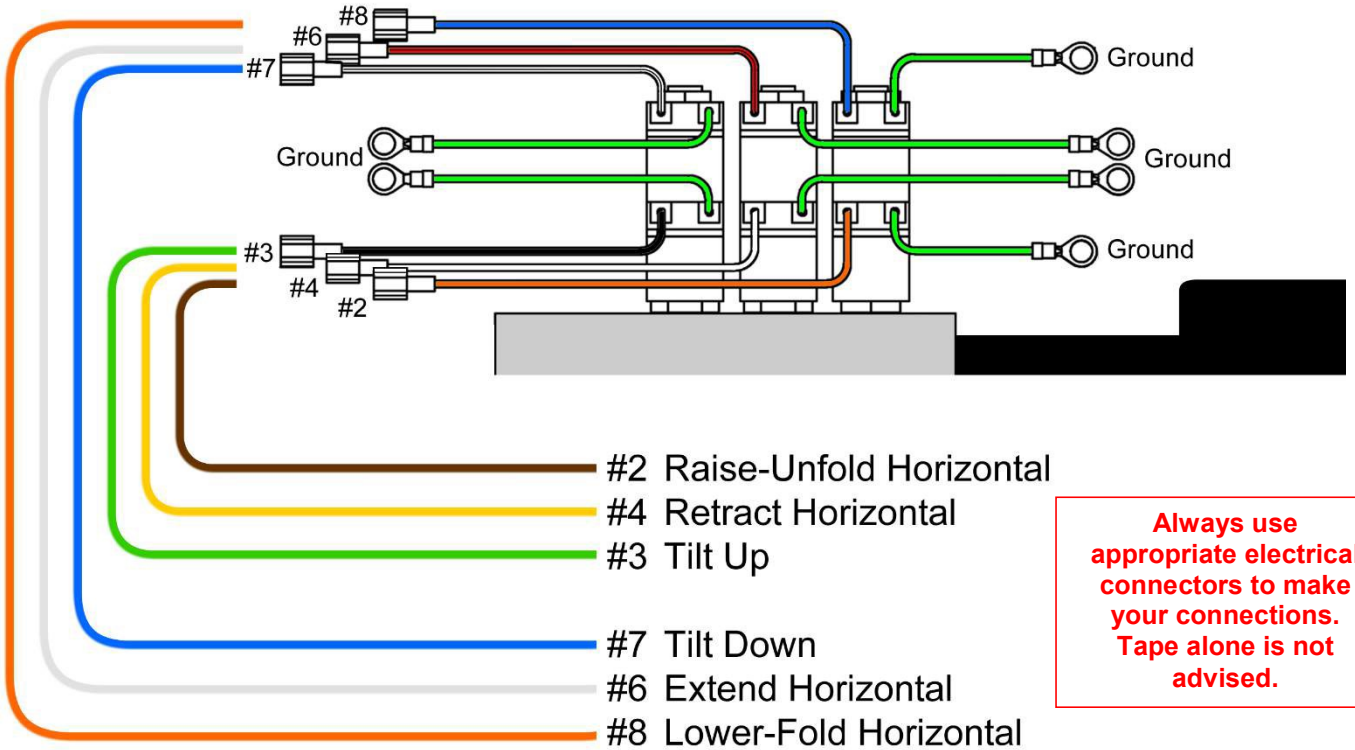
*Yellow wires will connect to these color coded wires of the female wire harness. Yellow ground wires will have to be located with care. Use the figure above to help.

FILL HYDRAULIC RESERVOIR WITH DEXRON AUTOMATIC TRANSMISSION FLUID ONLY! Use of other fluids may cause unit to fail.

Oil level should be 1/2 inch from the top with all cylinders collapsed. Unit must be run in each function to fill cylinders and hydraulics with oil, then refill. Cycle each function fully out and fully in to expel air from cylinders and lines.

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.

12-Volt Power Pack Wiring to Wireless Remote Diagram



Always use appropriate electrical connectors to make your connections. Tape alone is not advised.

Location	Wire	Function
#2	Brown	Raise-Unfold Horizontal
#3	Green	Retract Horizontal
#4	Yellow	Tilt Up
#6	White	Tilt Down
#7	Blue	Extend Horizontal
#8	Orange	Lower-Fold Horizontal
G	Black	Ground
R	Red	Hot Wire
	Gray	Not Used

Green coil ground not shown. Connect the black ground wire to same location as green coil ground.

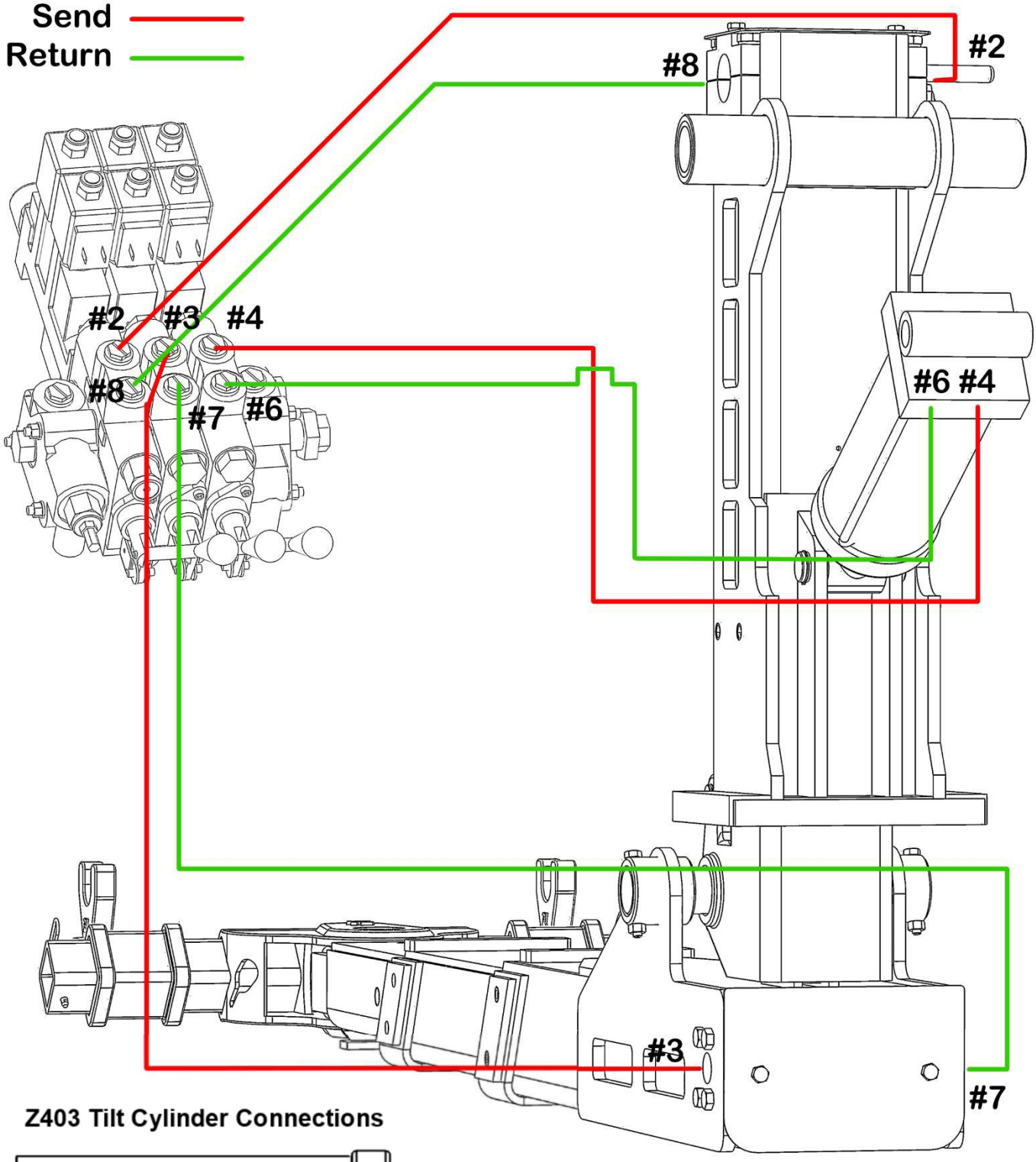
* Make sure valve body is grounded to truck frame or FIFTHWHEELER beam and 12-volt negative terminal.

Use an electrical crimp cap to terminate the Gray wire. It is not used.

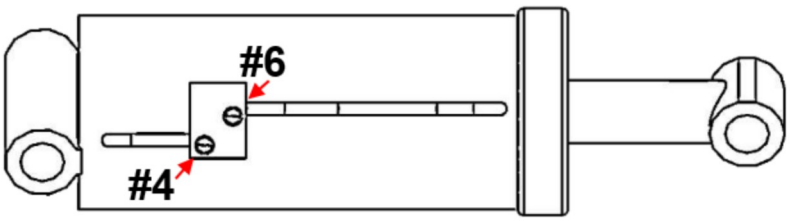
The Red wire connects to a 12-volt constant power source with a 10-amp fuse.

Wireless transmitter will be found inside the reciever box

Hydraulic Hose Connection Diagram



Z403 Tilt Cylinder Connections



12-Volt Power Pack Wiring and 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. The reading should be 2,500 to 2,600 psi.
3. Voltmeter should not read less than 9-6 volt under full load.
4. If voltage is less than 9-6 volts, check condition of:
    a. Battery
    b. Cleanliness and soundness of terminals and cables
    c. Length and diameter of battery cables
5. Perform above test with voltmeter connected to the terminal of battery (AT BATTERY).

TROUBLESHOOTING HYDRAULIC PRESSURE:

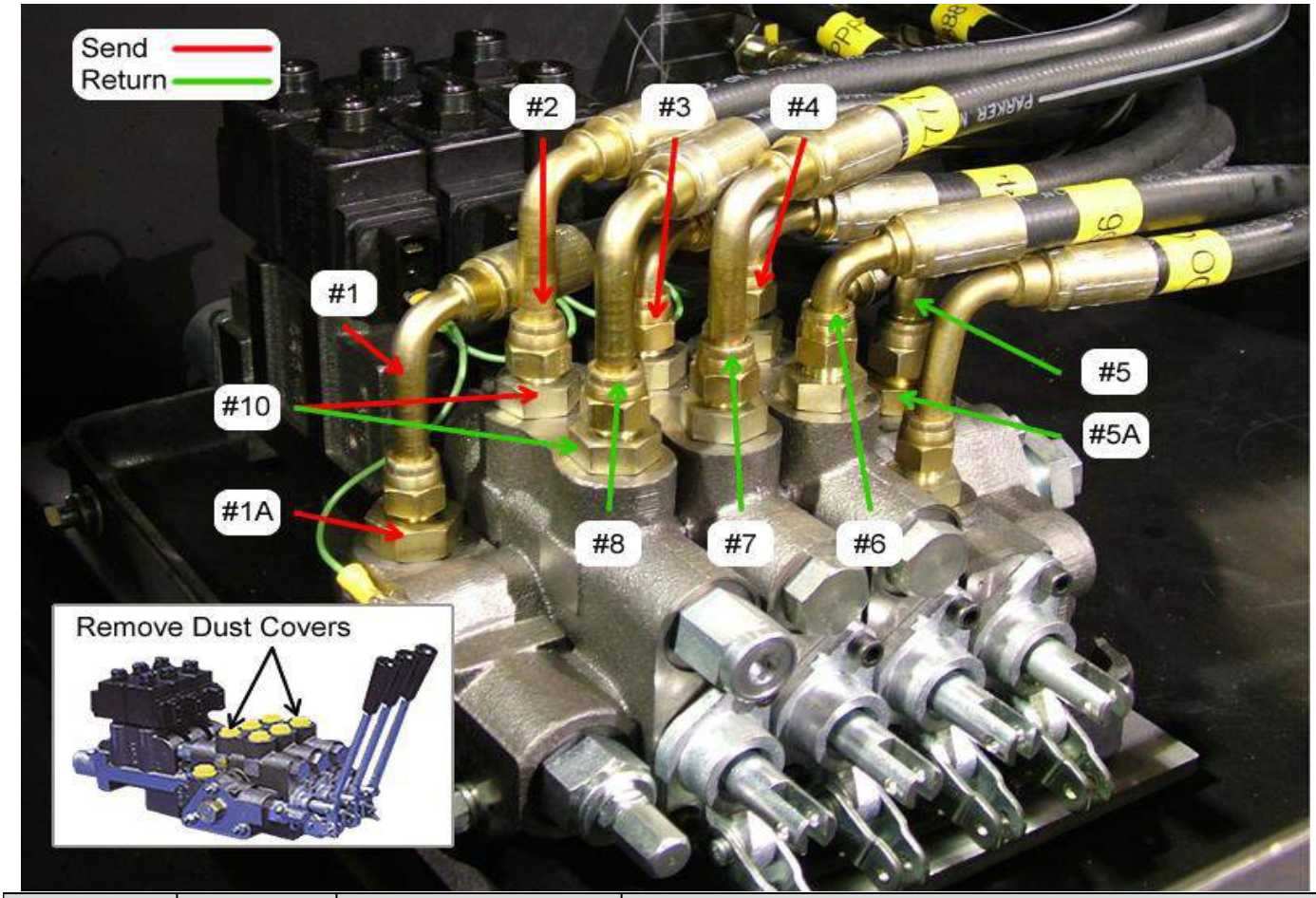
1. Make sure all of the above installation requirements are met.
2. Run same test as above #2.
3. If 2,500 psi cannot be attained, the pressure relief valve cartridge on the underside of pump body will require MINIMAL adjusting. To adjust, back off 1/2 inch lock nut and screw 1/8 inch Allen screw in by ¼.

Troubleshooting Zacklift

Nearly all problems are caused by incorrect hydraulic connections. Always double check your connection to the valve, see page C-6.

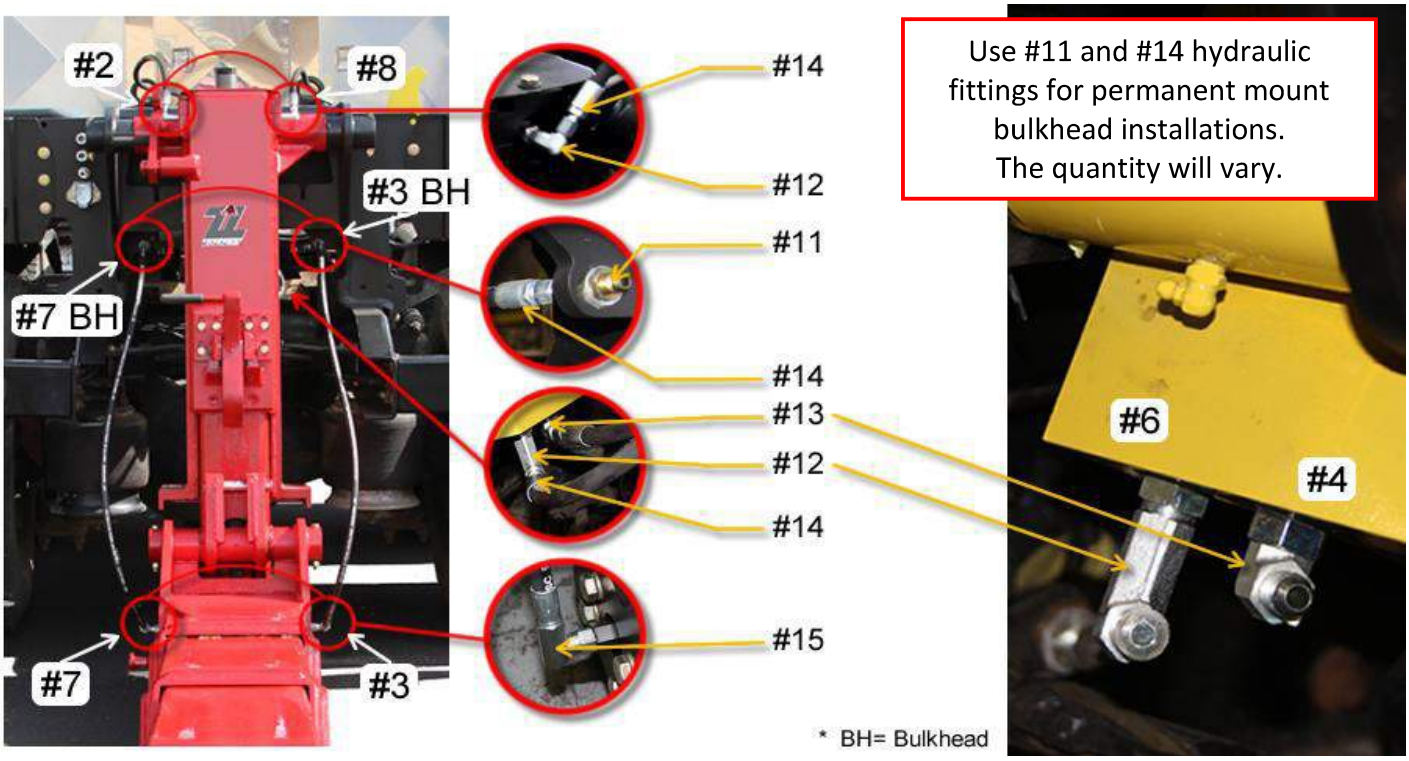
Symptom	Possible Cause	Solution
No Zacklift functions operate.	No hydraulic pressure to Zacklift. Insufficient power supply. Corroded electrical connections.	Check for correct hydraulic pressure from valve. Pressure should be 2,500 psi. Check electrical connections.
Zacklift "Lift" function has no power.	Hoses 8 & 2 in wrong positions.	Switch hoses 8 & 2 on valve body of lift cylinder. Port 8 should only have maximum pressure of 1,000 psi. Port 2 should be equal to pump pressure.
All Zacklift functions sluggish.	Low hydraulic flow rate. Insufficient power supply.	Check hydraulic fluid level in tank. Check hydraulic pressure, then check hydraulic filter on return line.
Fold function operates. Lower or raise function does not operate.	Bent inner main caused by carrying load out of lock. Inner main rusted in place. Wear pad adjustment too tight.	Inspect inner main, replace if necessary. Adjust wear pad plugs, see section D.
Tilt function does not operate.	Lack of hydraulic pressure to cylinder.	Check hydraulic pressure to tilt cylinder; 2,500 psi.
Extend retract function does not operate.	Lack of hydraulic pressure to cylinder.	Check hydraulic pressure to extend cylinder; 2,500 psi.
Lower, raise and fold function does not operate.	Lack of hydraulic pressure to cylinder.	Check hydraulic pressure to lift cylinder; 2,500 psi.
Unable to raise inner main into safety lock or "J-Lock."	Normal wear.	Adjust safety lock.
Unable to fold into lock.	Bent Inner main caused by carrying load out of lock. Dirt accumulation in roller guides of inner main.	Inspect inner main, replace if necessary. Clean roller guides of inner main.
Looseness of horizontal members.	Normal wear.	Adjust wear pad plugs. See section D.
Looseness of inner main.	Normal wear.	Adjust wear pad plugs. See section D.

Hydraulic Valve Fittings



Location	Quantity	Part Number	Description
# 1A	1	10-8-F5OX-S (0503-10-8)	1/2 inch Triple-Lok Male 37° Flare, JIC to 3/4 inch-16 Male Straight Thread O-Ring
# 5A	1	10-12-F5OX-S (0503-10-12)	3/4 inch Triple-Lok Male 37° Flare, JIC to 1 1/16 inch-12 Male Straight Thread O-Ring
Z403			
# 10	6	8 F5OX-S (0503-8-8)	1/2 inch Triple-Lok Male 37° Flare, JIC to 3/4 inch – 16 Male Straight Thread O-Ring
# 1, 2, 8, 7	3	14143-8-8	Zinc plated, 1/2 inch i.d. tube w/ 1/2 inch connector and Female JIC 37° - Swivel - 90° Elbow - Long Drop
# 3, 4, 5, 6	3	13943-8-8	Zinc plated, 1/2 inch i.d. tube w/ 1/2 inch connector and Female JIC 37° - Swivel - 90° Elbow - Short Drop
Z30 and Z303			
# 10	6	6-8 F5OX-S (0503-8-6)	3/8 inch Triple-Lok Male 37° Flare, JIC to 3/4 inch – 16 Male Straight Thread O-Ring
# 2, 8, 7	3	14143-6-6	Zinc plated, 3/8 inch i.d. tube w/ 3/8 inch connector and Female JIC 37° - Swivel - 90° Elbow - Long Drop
# 3, 4, 6	3	13943-6-6	Zinc plated, 3/8 inch i.d. tube w/ 3/8 inch connector and Female JIC 37° - Swivel - 90° Elbow - Short Drop

Zacklift & Tilt Cylinder Hydrualic Fittings



Location	Quantity	Part Number	Description
Z403			
# 11	Varies/2	8 WTX-S (0353-8-8 Steel)	Triple-Lok, steel, 1/2 inch male 37° flare to male 37° flare JIC SAE Bulkhead Union
# 12	3	8 CC5OX-S (6801LL-8-8 Steel)	Triple-Lok, steel, zink plated 1/2 inch i.d. male 37° flare to 1/2 inch male straight thread O-Ring, 90° elbow, SAE
# 13	1	8 C5OX-S (6801-8-8 Steel)	Triple-Lok, steel, zink plated 1/2 inch i.d. male 37° flare to 1/2 inch male straight thread O-Ring, 90° elbow, SAE
# 14	Varies/8	10643-8-8	Zinc plated, steel 1/2 inch female JIC 37° swivel, straight, to 1/2 inch i.d. crimp hose fitting
# 15	2	10L43-8-8	Zinc plated, steel 1/2 inch male SAE straight thread with O-Ring to 1/2 i.d. crimp fitting, 90° elbow, swivel
Z30 and Z303			
# 11	Varies/2	6 WTX-S (0353-6-6 Steel)	Triple-Lok, steel, 3/8 inch male 37° flare to male 37° flare JIC SAE Bulkhead Union
# 12	3	6 CC5OX-S (6801LL-6-6 Steel)	Triple-Lok, steel, zink plated 3/8 inch i.d. male 37° flare to 3/8 inch male straight thread O-Ring, 90° elbow, SAE
# 13	1	6 C5OX-S (6801-6-6 Steel)	Triple-Lok, steel, zink plated 3/8 inch i.d. male 37° flare to 3/8 inch male straight thread O-Ring, 90° elbow, SAE
# 14	Varies/8	10643-6-6	Zinc plated, steel 3/8 inch female JIC 37° swivel, straight, to 3/8 inch i.d. crimp hose fitting
# 15	2	10L43-8-6	Zinc plated, steel 1/2 inch male SAE straight thread with O-Ring to 3/8 i.d. crimp fitting, 90° elbow, swivel

12-Volt Power Pack Hydraulic Fittings

Location	Quantity	Part Number	Description
Z403			
# 10	6	PS810503-8-8	1/2 inch 5,000 p.s.i. 3/4 inch - 16 male SAE O-Ring straight thread to 3/4 inch – 16 male JIC 37°
# 2, 4, 8	3	14143-8-8	Zinc plated, 1/2 inch i.d. tube w/ 1/2 inch connector and Female JIC 37° - Swivel - 90° Elbow - Long Drop
# 3, 6, 7	3	13943-8-8	Zinc plated, 1/2 inch i.d. tube w/ 1/2 inch connector and Female JIC 37° - Swivel - 90° Elbow - Short Drop
Z30 and Z303			
# 10	6	PS610503-6-6	3/8 inch 5,000 p.s.i. 9/16 inch - 18 male SAE O-Ring straight thread to 9/16 inch - 18 male JIC 37°
# 2, 4, 8	3	14143-6-6	Zinc plated, 3/8 inch i.d. tube w/ 3/8 inch connector and Female JIC 37° - Swivel - 90° Elbow - Long Drop
# 3, 6, 7	3	13943-6-6	Zinc plated, 3/8 inch i.d. tube w/ 3/8 inch connector and Female JIC 37° - Swivel - 90° Elbow - Short Drop

Hydraulic Parts List

Use these parts to round out your installation. You will find these fittings used in the FIFTHWHEELER application as well as in permanent mounts for accessories and other add-ons.

Z403 Parts List

Item #	Description
1/2 CD45-S (5503-8-8)	1/2 inch male MNPTF 45° street elbow to 1/2 inch female, SAE 140339
8-8FMTXS (0103-8-8)	1/2 inch Triple-Lok 37° Flare end/Male NPTF thread 1/2 pipe size, SAE 070102
NS-501-8FP	1/2 inch steel, 1/2-14 port size female NPSF (15 GPM) quick coupling
NS-502-8FP	1/2 inch steel, 1/2-14 port size NPSF (15 GPM) quick coupling male nipple
302/301-8	2-wire braided hose, 1/2 inch i.d., 3,500 psi, 14,000 min burst.

Z30, Z303 Parts List

Item #	Description
3/8 CD45-S (5503-6-6)	3/8 inch male MNPTF 45° street elbow to 3/8 inch female, SAE 140339
6-6FMTXS (0103-6-6)	3/8 inch Triple-Lok 37° Flare end/Male NPTF thread 3/8 pipe size, SAE 070102
NS-371-6FP	3/8 inch steel, 3/8-18 port size female NPSF (10 GPM) quick coupling
NS-372-6FP	3/8 inch steel, 3/8-18 port size NPSF (10 GPM) quick coupling male nipple
302/301-6	2-wire braided hose, 3/8 inch i.d., 4,000 psi, 16,000 min burst.

Seal Kit Identification

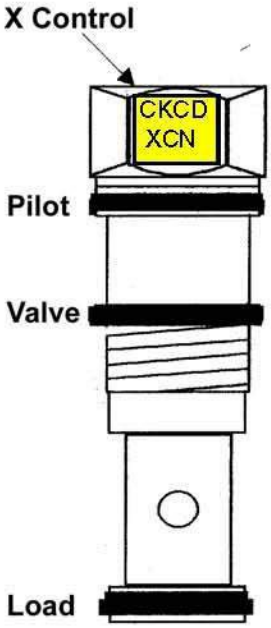
Seal Kits, Extend, Lift and Tilt for Z30, Z303 and Z403

Lift Model	Part Number	Description
Z30 & Z303	Z30-05b	6 x 11-3/4 inch Tilt Cylinder Repair Kit
	Z30-15b	5 x 17 inch Lift Cylinder Repair Kit
	Z13-33b	3 x 35 inch Extend Cylinder Repair Kit
Z303 & Z403	Z04-33b	3 x 35 x 30 inch Extend Cylinder Repair Kit
Z403	Z4-05b	7 x 11-3/4 inch Tilt Cylinder Repair Kit
	Z4-15b	6 x 17 inch Lift Cylinder Repair Kit

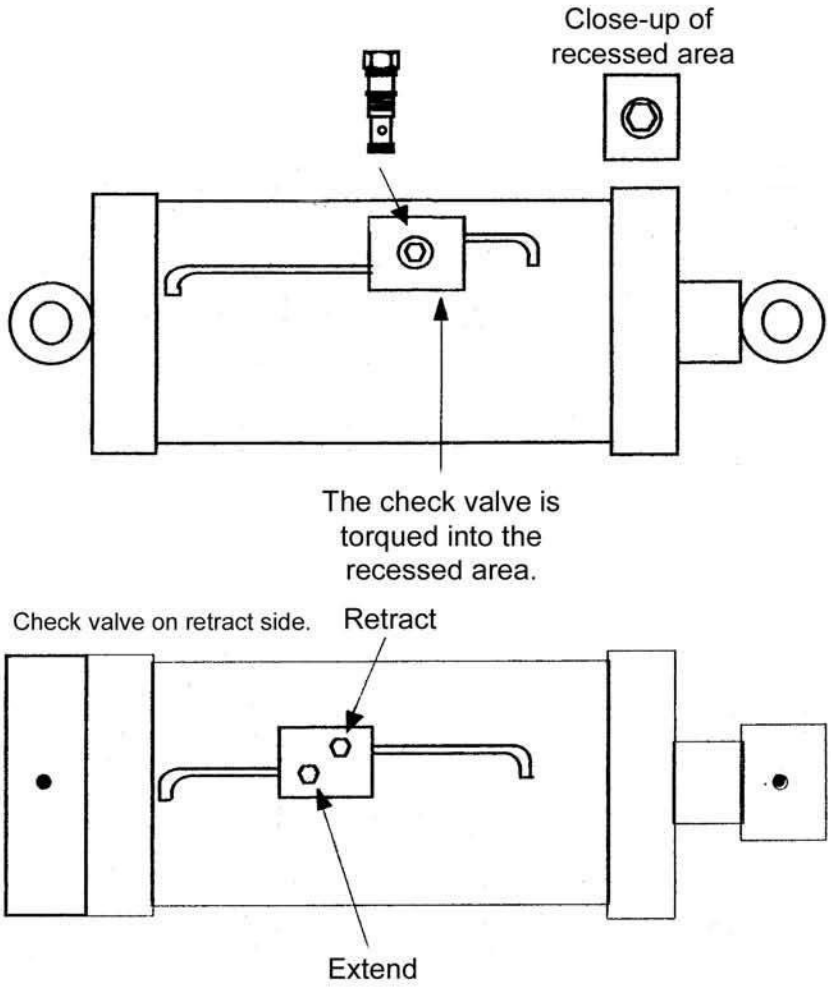
Tilt Cylinder (7 x 12") Placement of Pilot-to-Open Check Valves

Pilot-To-Open Check Valve
Suitable for load locking application
CKCD- XCN preset to 35psi
Installation Torque 30 to 35lb. ft.

Tilt Cylinder
Z403



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



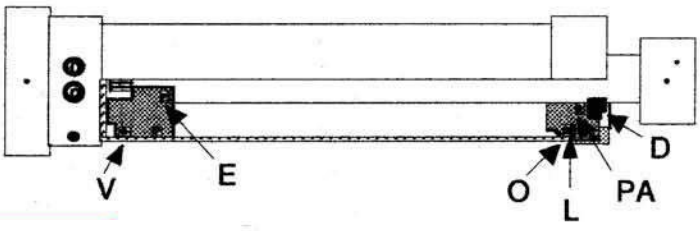
Tilt Cylinder--Repair Kit Parts and Location

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

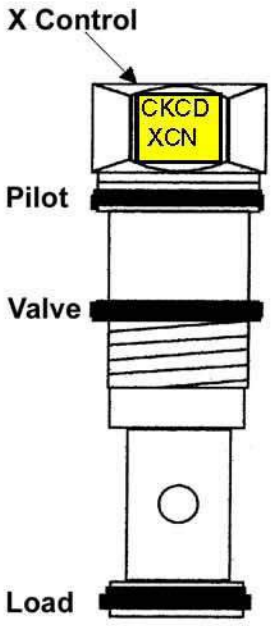


Tilt Cylinder (6 x 11-3/4")-Placement of Pilot-to-Open Check Valves

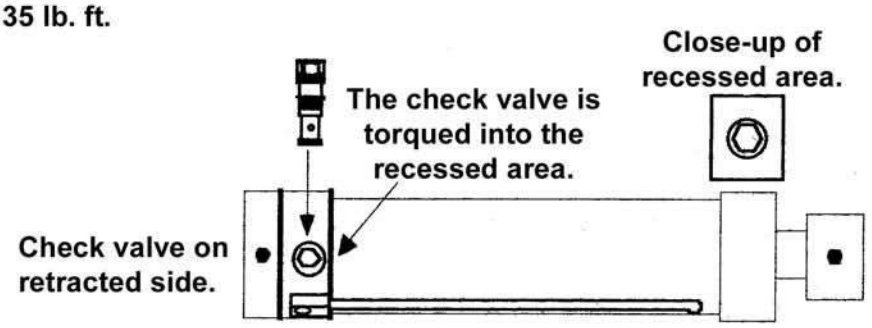
Tilt Cylinder

Z30/Z303

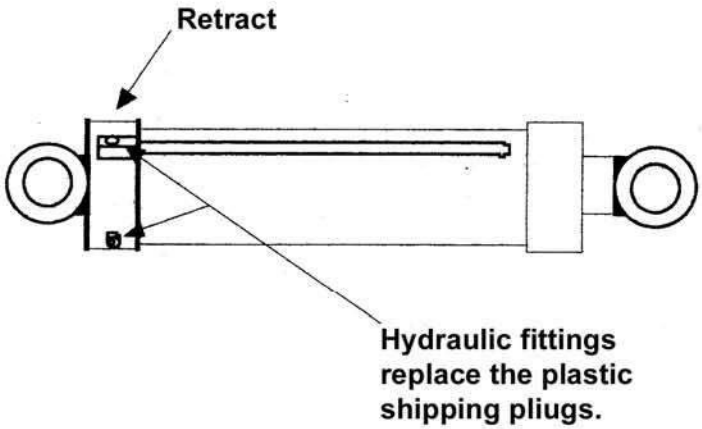
Pilot-To-Open Check Valves
Suitable for Load Locking Application
CKCD- XCN preset to 35psi
Installation Torque 30 to 35 lb. ft.



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



Check load lock on push.



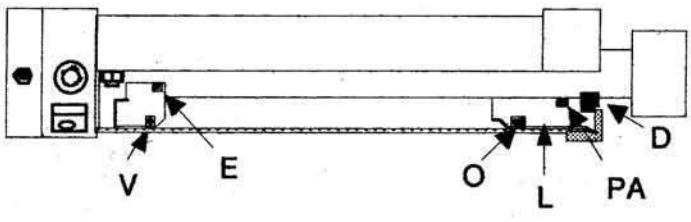
Tilt Cylinder-Repair Kit Parts and Location

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



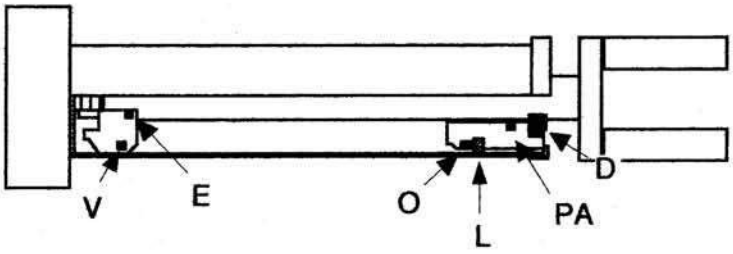
Lift Cylinder-Repair Kit and Location

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

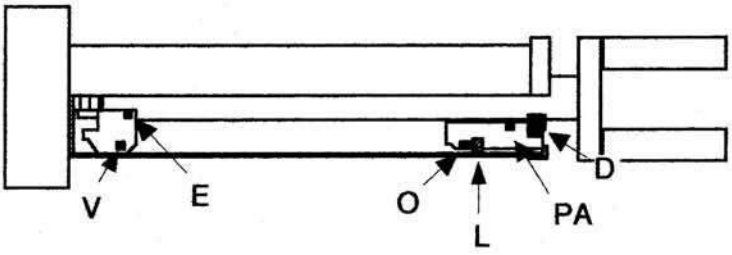


Cylinder size: 6 x 17"
Cylinder part number: Z4-15

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

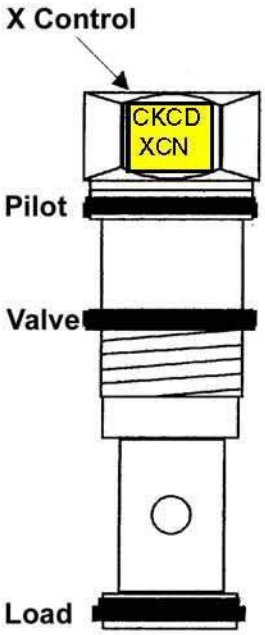


Extend Cylinder 3 x 30 x 46-1/8 x 2 Placement of Pilot-to-Open Check Valve

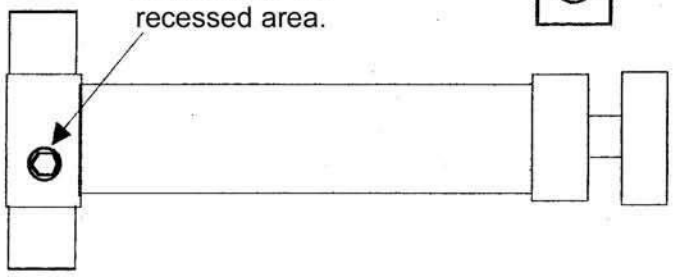
Extend Cylinder

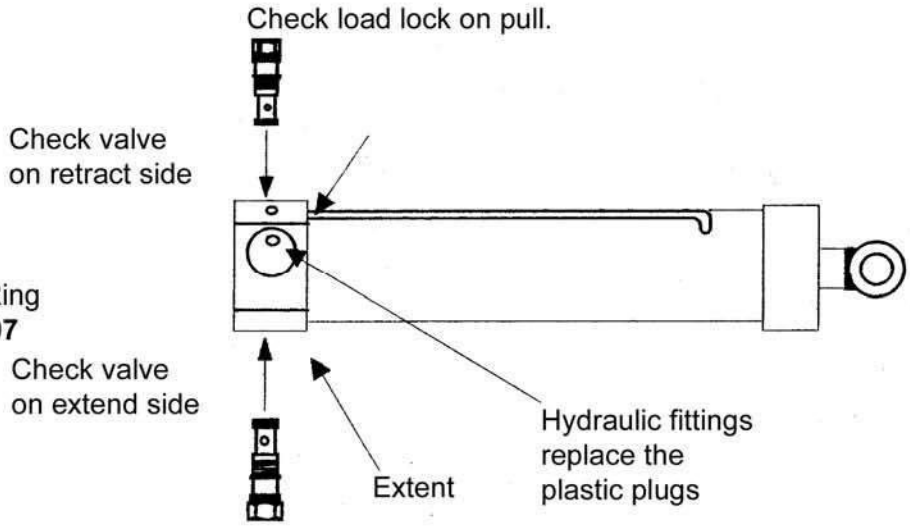
Z303/Z403

Pilot-to-Open Check Valve
Suitable for loading application
CKCD- XCN
Installation Torque 30 to 35 lb. ft.



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



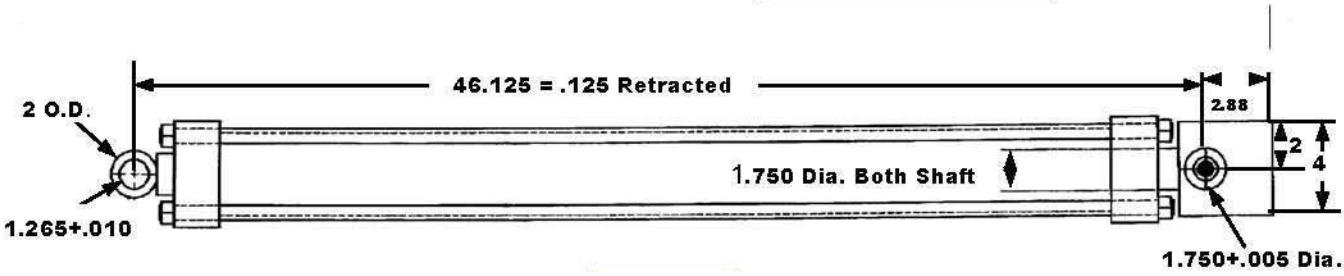


Repair Kit:
Part # RK-3.00-160

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

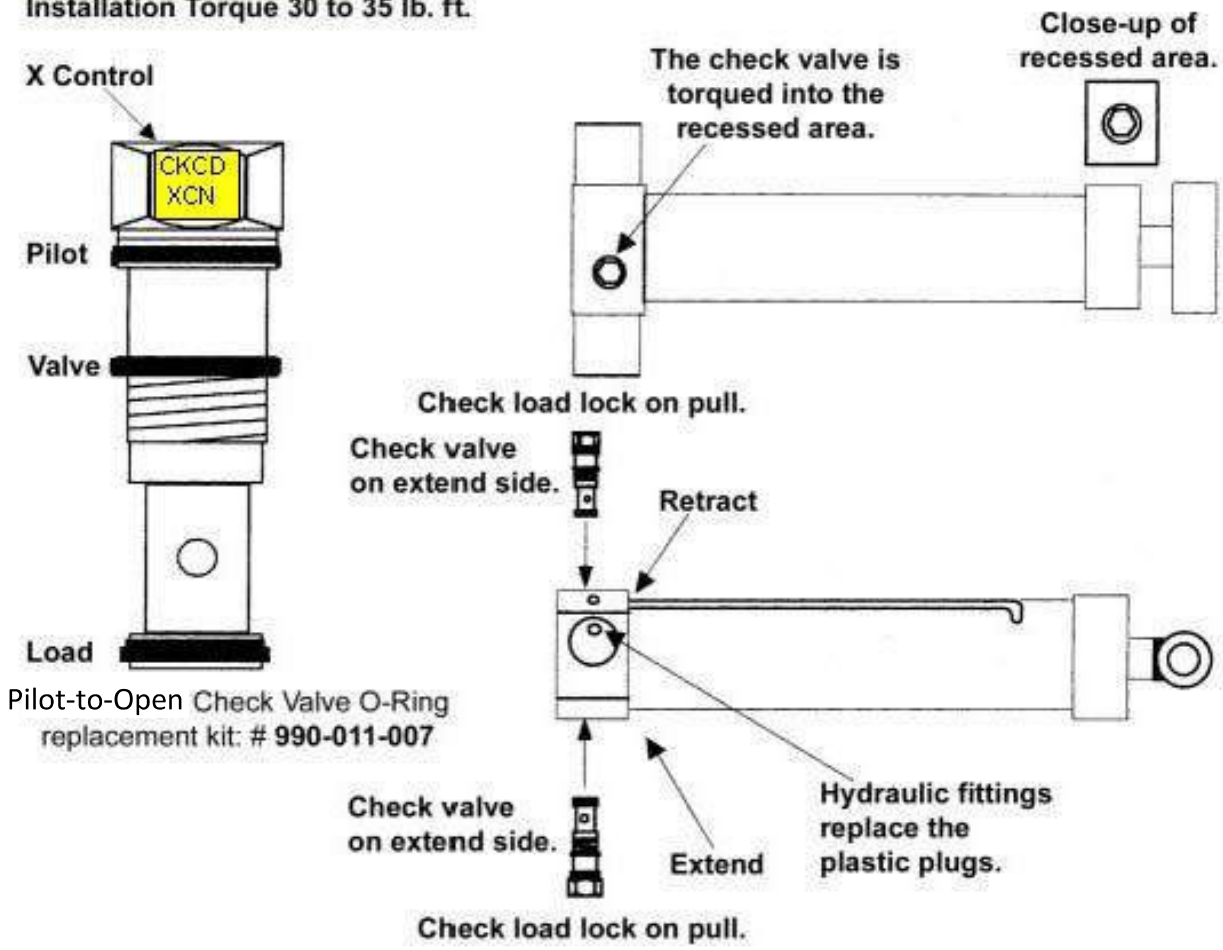


Extend Cylinder (3 x 30") Placement of Pilot-to-Open Check Valves

Extend Cylinder

Z18/Z30

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



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

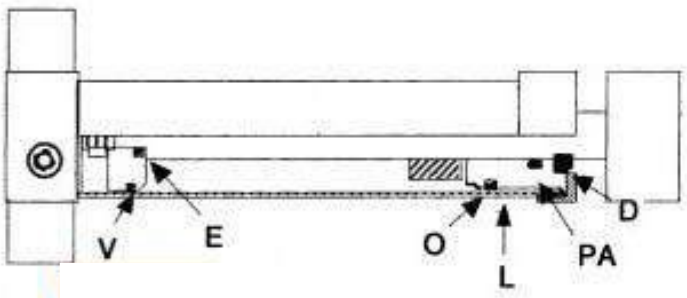
Extend Cylinder-Repair Kit Parts and Location

Cylinder size: 3 x 30"

Cylinder part number: Z13-33

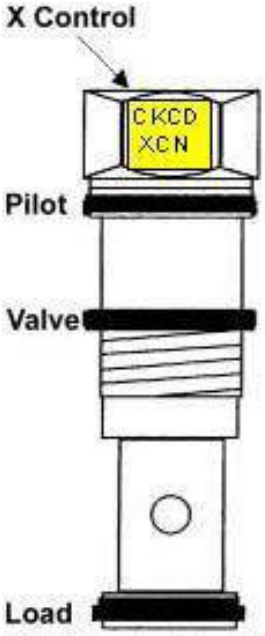
Repair Kit:
Part # RK-3.00-016

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

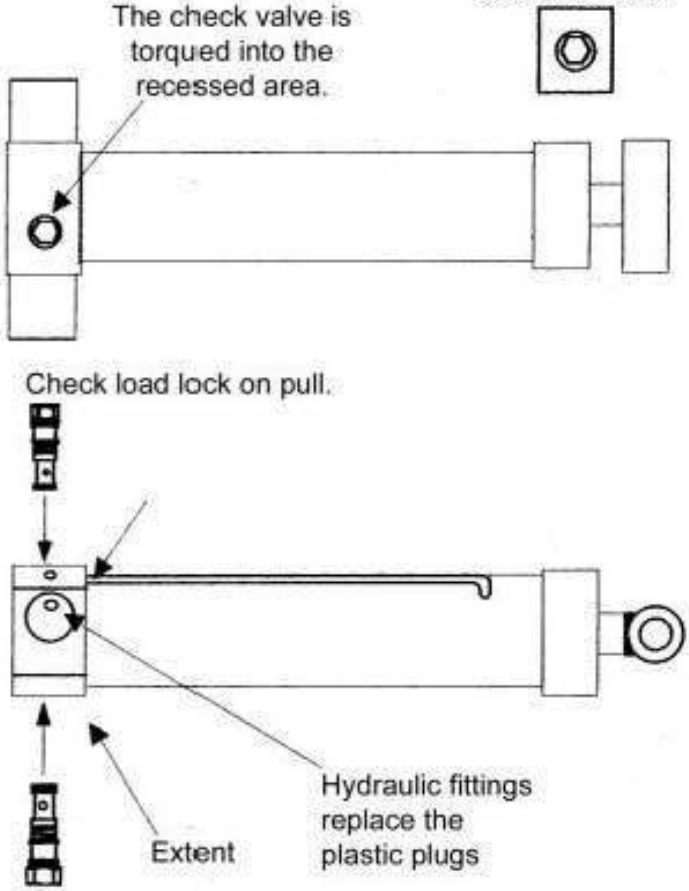
Pilot-to-Open Check Valve
Suitable for loading application
CKCD-XCN
Installation Torque 30 to 35 lb. ft.



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

Extend Cylinder

38,000lb Stiff Legs

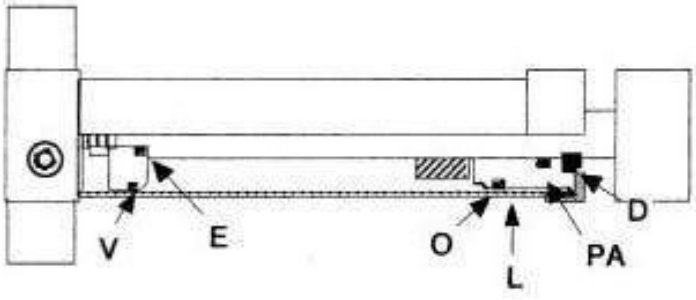


Extend Cylinder-Repair Kit Parts and Location

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

Repair Kit:
Part# RK-3.00-016

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



PTO Pump Installation for Z30 &Z303

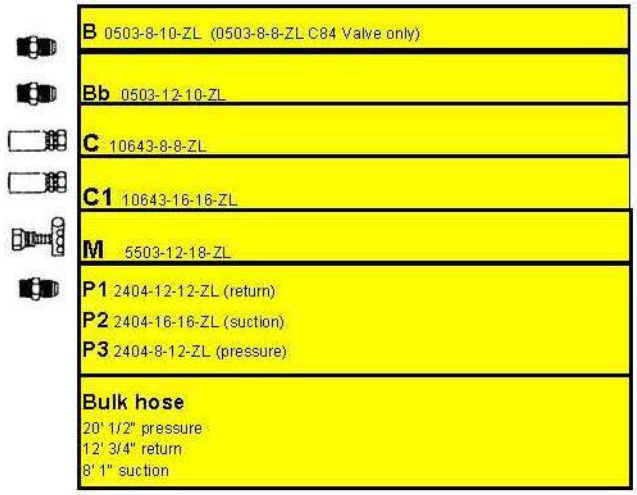
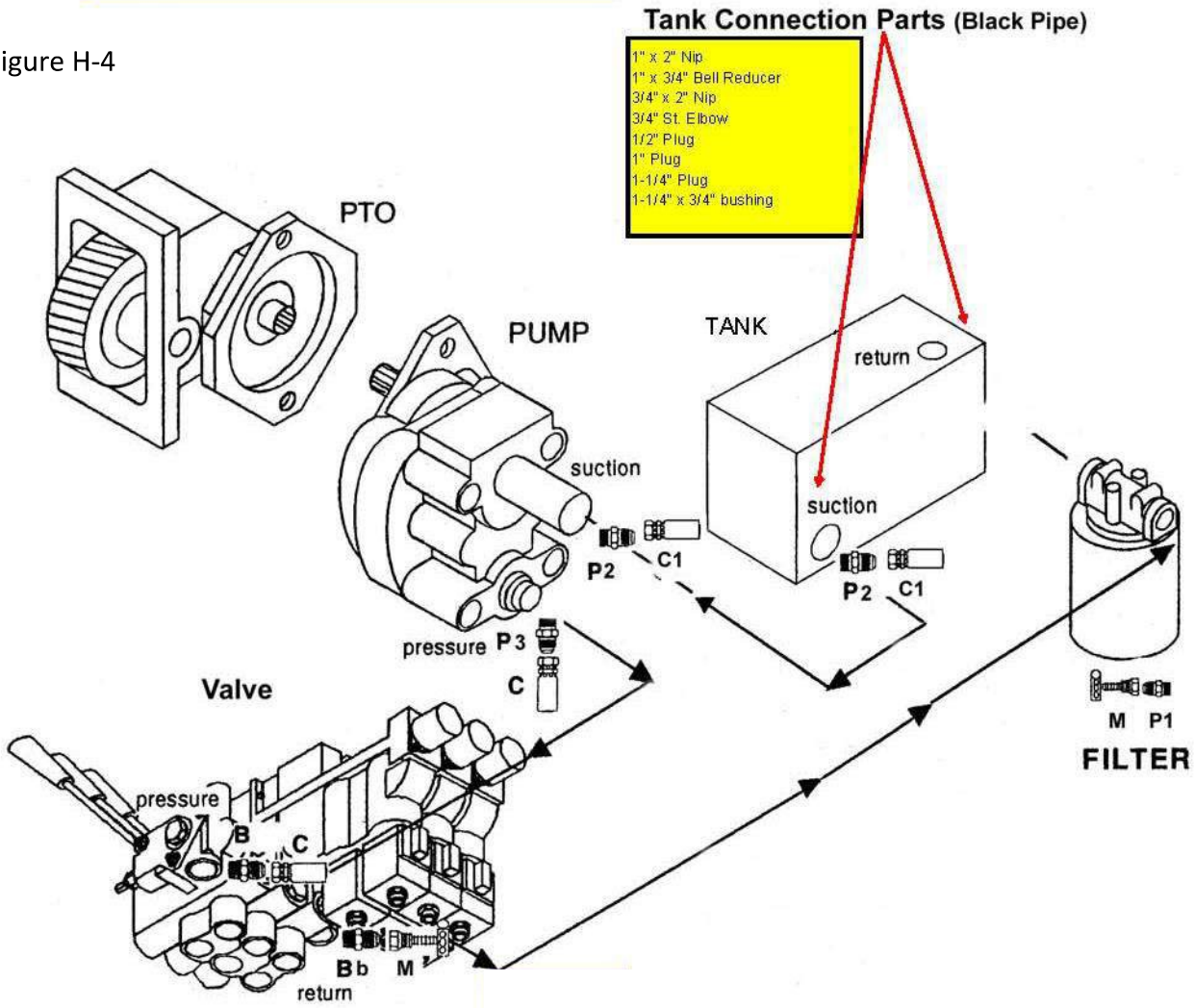


Figure H-4



PTO Pump Installation for Z403

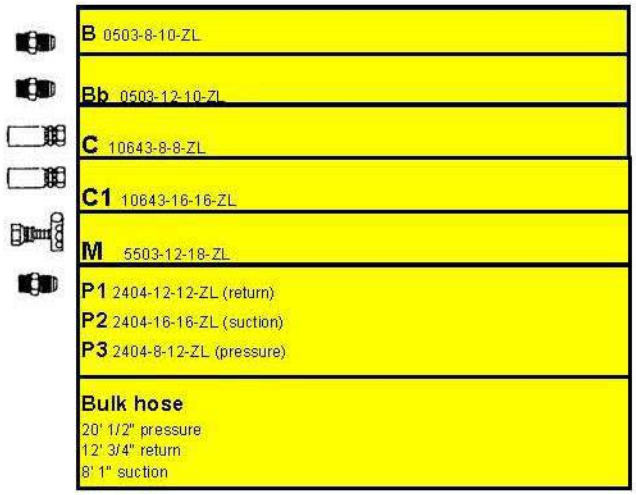
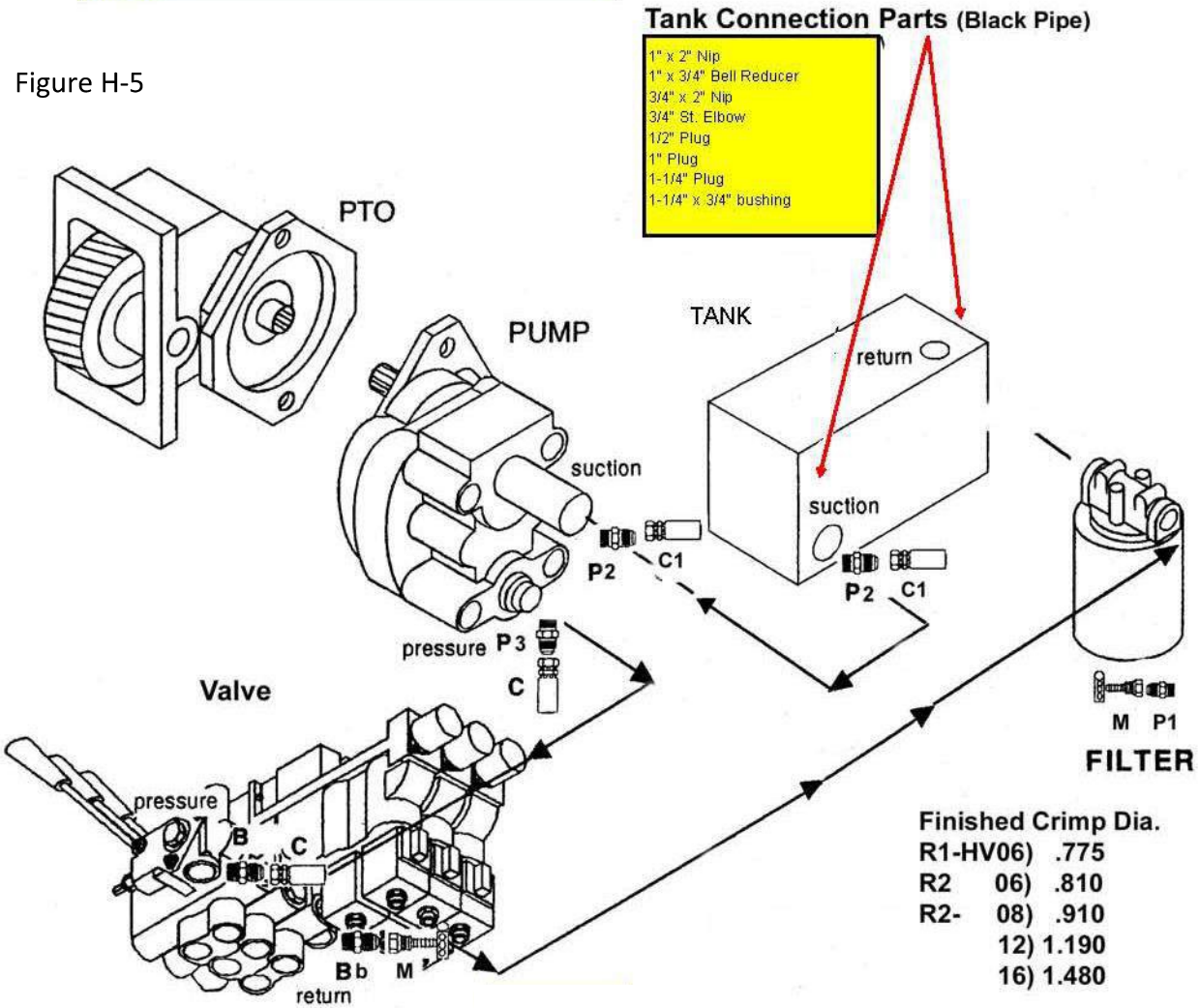


Figure H-5



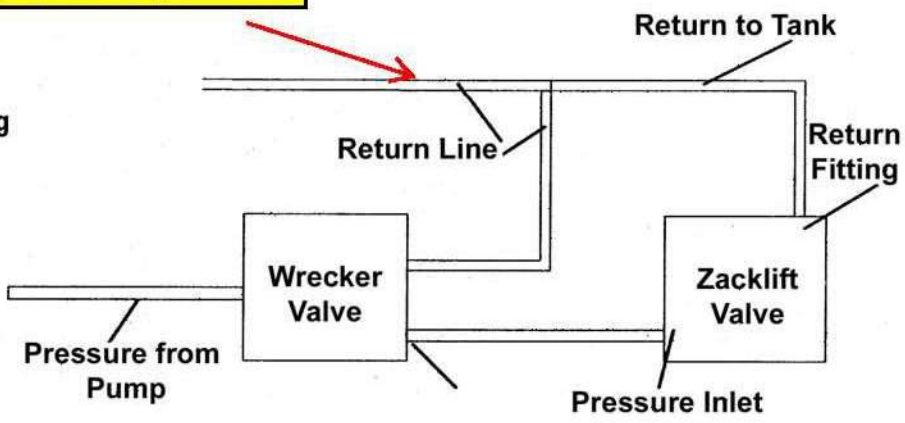
Existing Hydraulic Systems

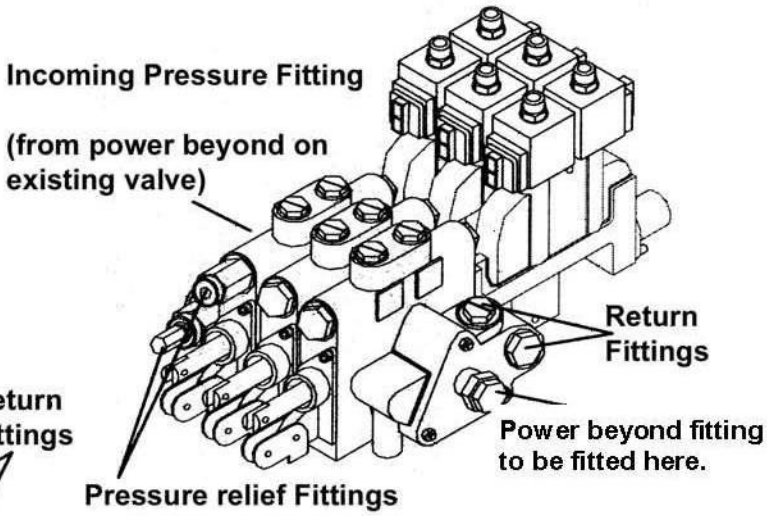
Zacklift recommends a 25 Micron filter on return line. Recirculate fluid threw filter for 1 hour before using Zacklift valving.

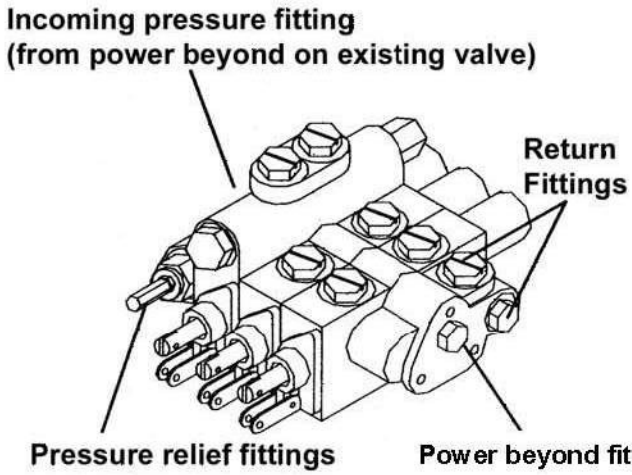
Use of a power beyond fitting or power beyond plate is recommended for tapping into an existing hydraulic system.

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.







Note:
Zacklift valve hydraulic pressure preset at 2600psi. Recommended gallons per minute is 8-10. Zacklift recommends a medium weight, high quality hydraulic oil.

Seal Kit Identification

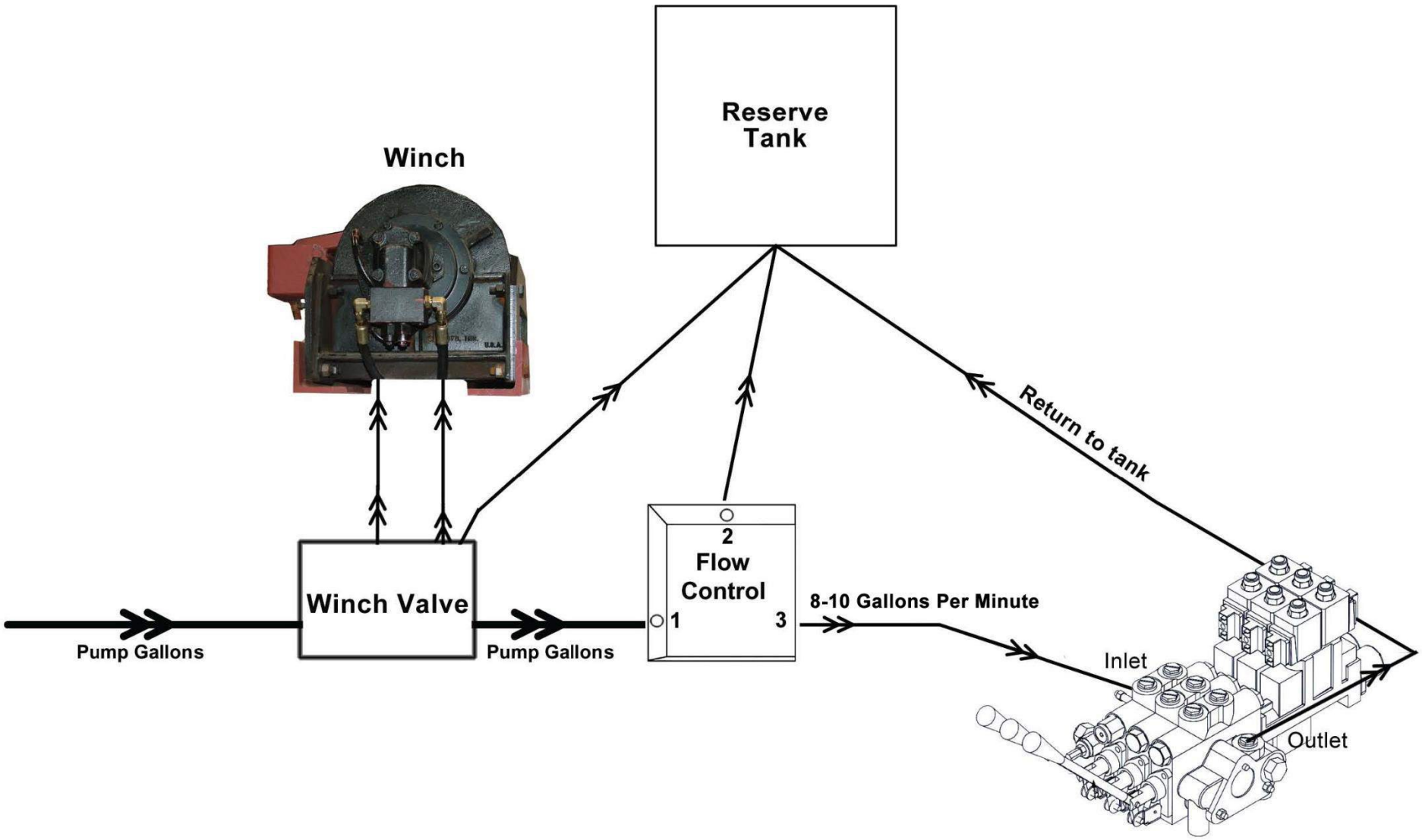
Seal Kits, Extend, Lift, Tilt / Z18,30,303,403

Z18: Part #	Description
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

Z30: Part #	Description
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

Z303: Part #	Description
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

Z403: Part #	Description
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

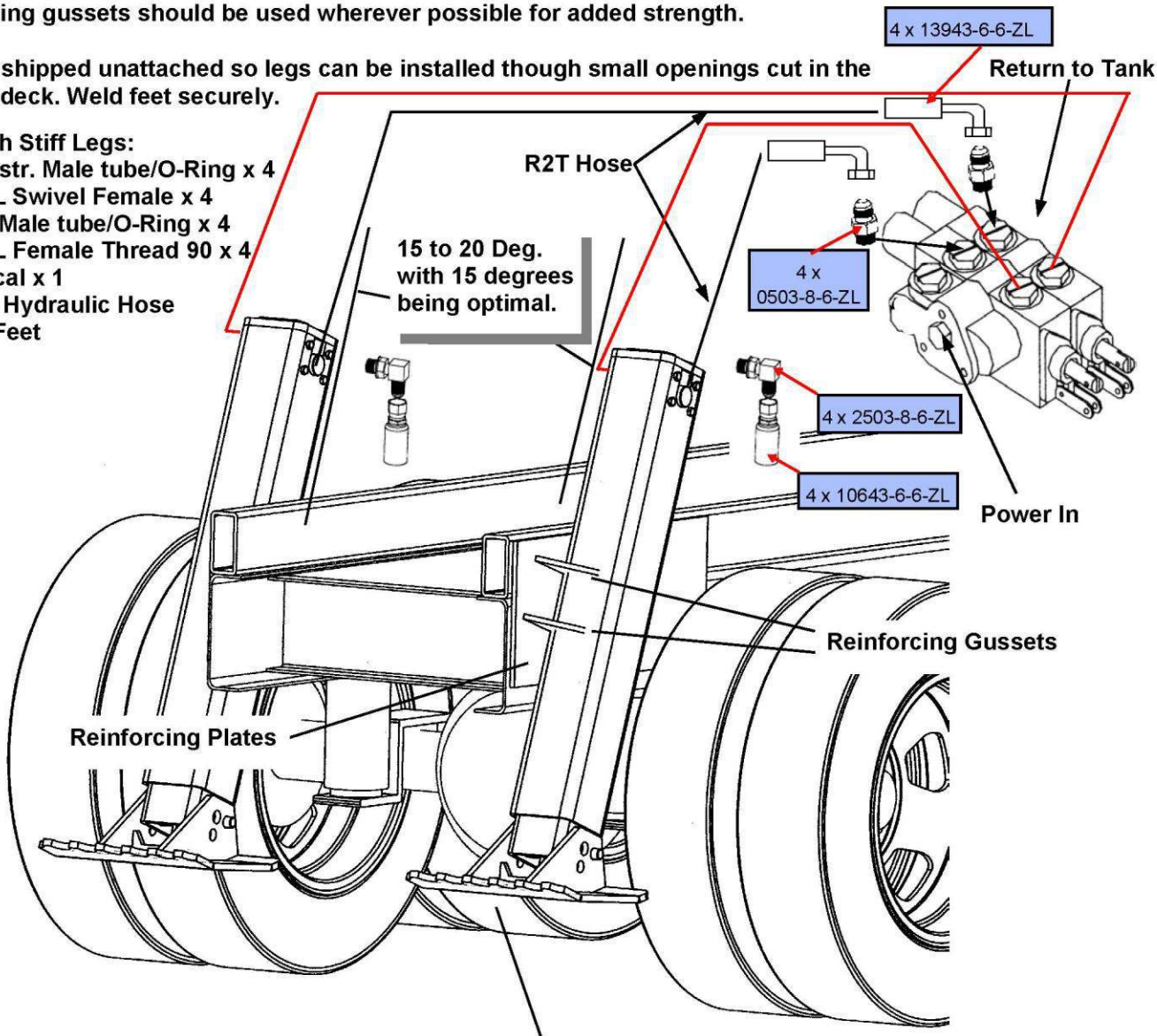


Flow Control to Winch & Valve

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 though small openings cut in the wrecker deck. Weld feet securely.

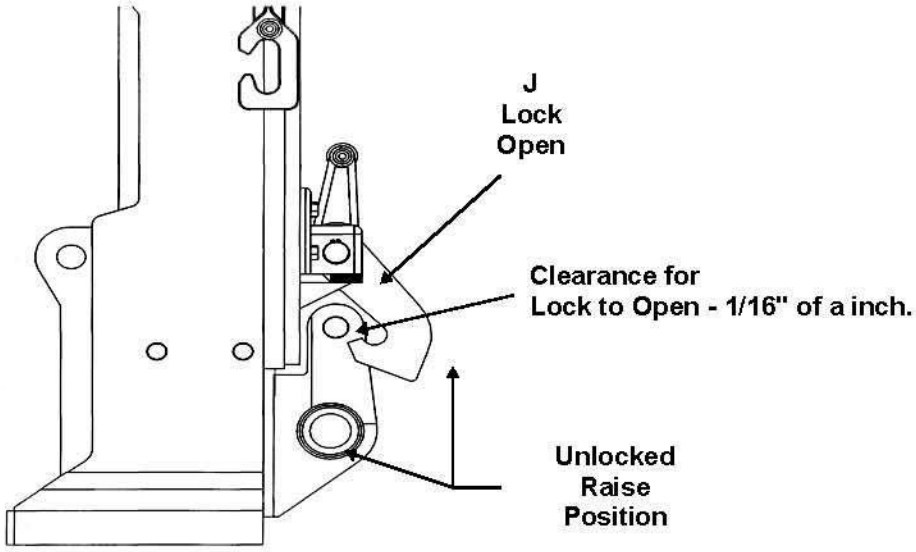
Included with Stiff Legs:
0503-8-6-ZL str. Male tube/O-Ring x 4
10643-6-6-ZL Swivel Female x 4
2503-8-6-ZL Male tube/O-Ring x 4
13943-6-6-ZL Female Thread 90 x 4
Stiff Leg Decal x 1
3/8" R2T 3/8 Hydraulic Hose
24 Feet

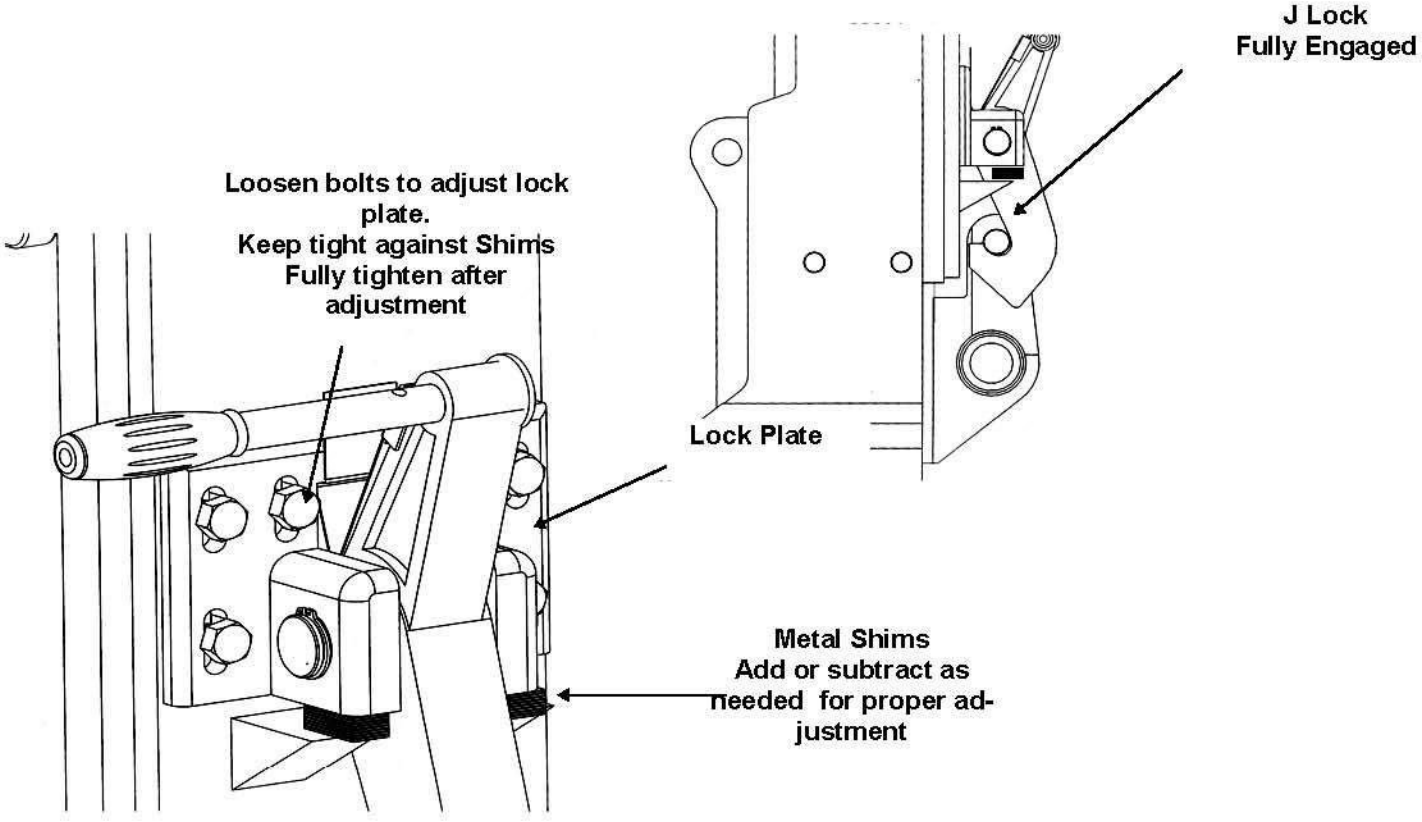


To flip foot pad, pull 1" pin and hair pin, push claw down. Replace pin in lower hole, and replace hair pin.

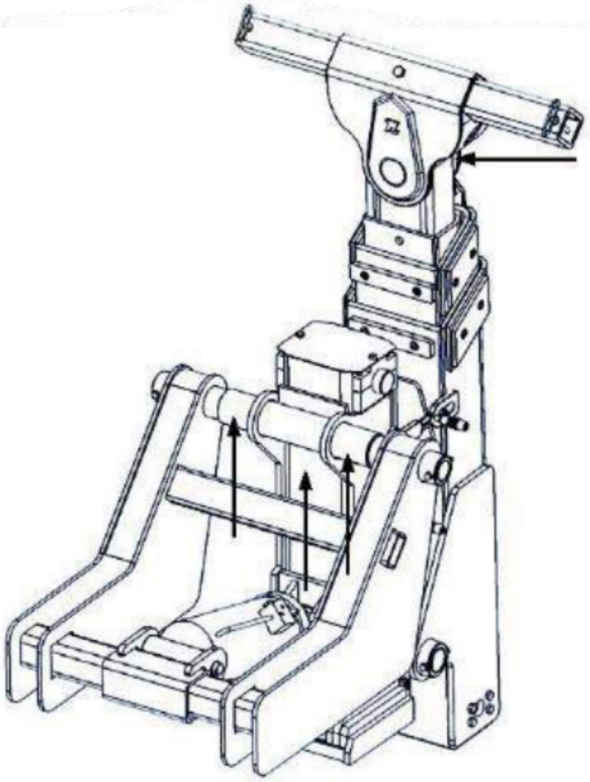
J Lock Adjustment

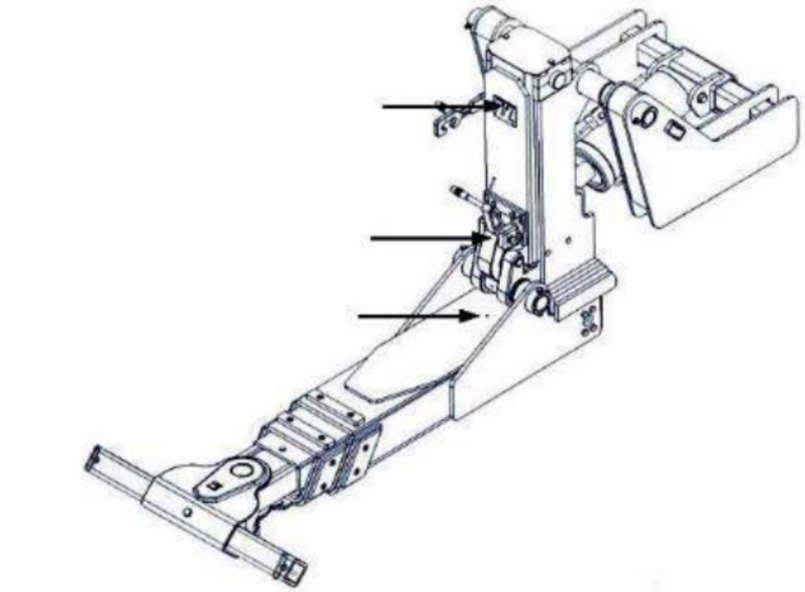
Adjusting the J Lock is important to the safe operation of the Zacklift.
When properly adjusted there should be just enough clearance to open the
J Lock with the Zacklift loaded, and the Zacklift in the fully "Unlocked Raise" Position.

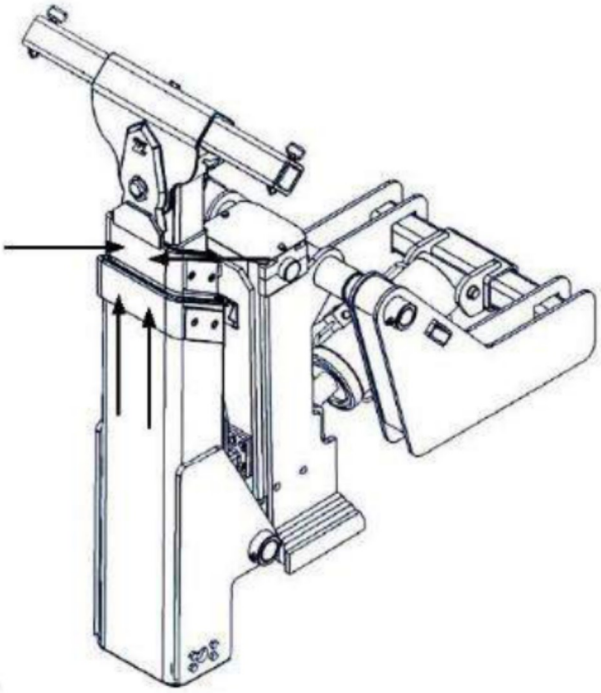


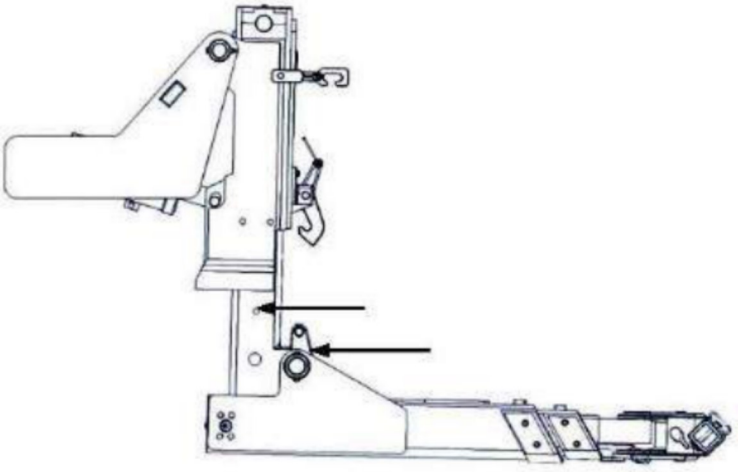


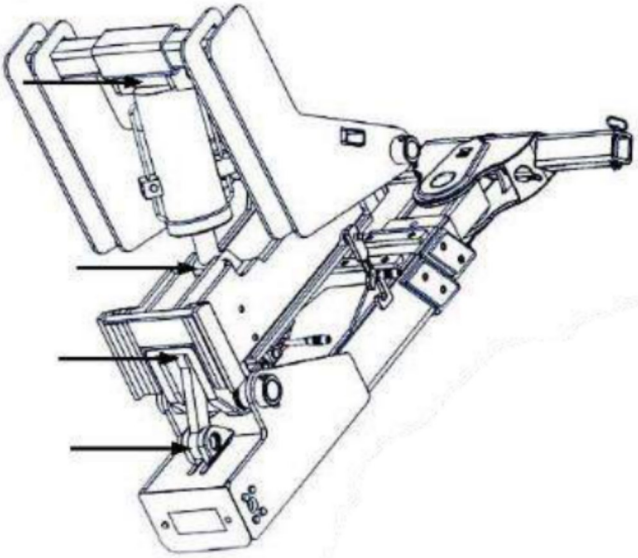
Routine Maintenance











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.

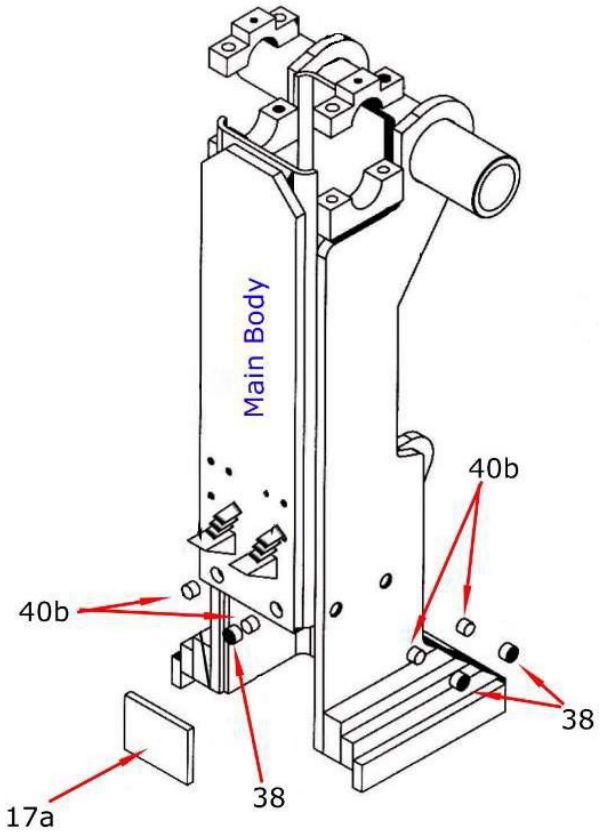
Wear Pad Identification
Main body/Inner Main/Z30,303,403

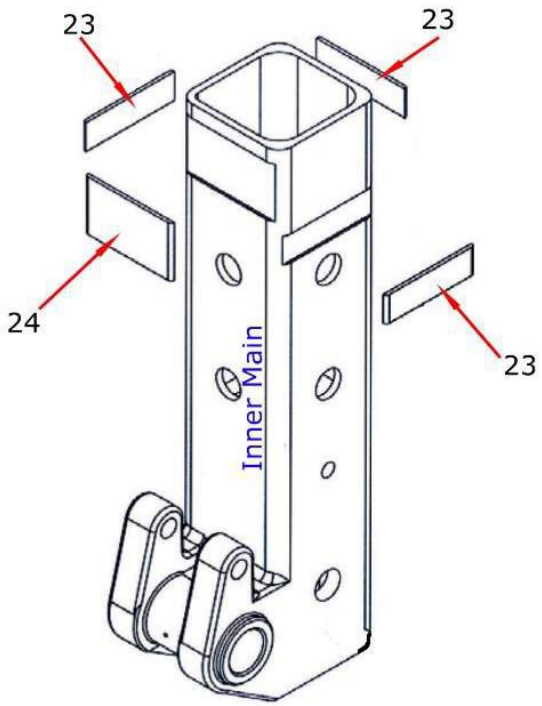
Z18:
Part # Z1304-40b (7/8 x 5/8" round Nylatron, 6 per main tube)
Z1-17a (5/8 x 4 x 5" flat Nylatron, 1 per main tube)
Z1-24 (1/4 x 4 x 5-1/8" flat Nylatron, 1 per inner main)
Z1-23 (1/4 x 2 x 5-1/8" flat UHMW, 3 per inner main)
Z1304-38 Plug (6 per main body)

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)



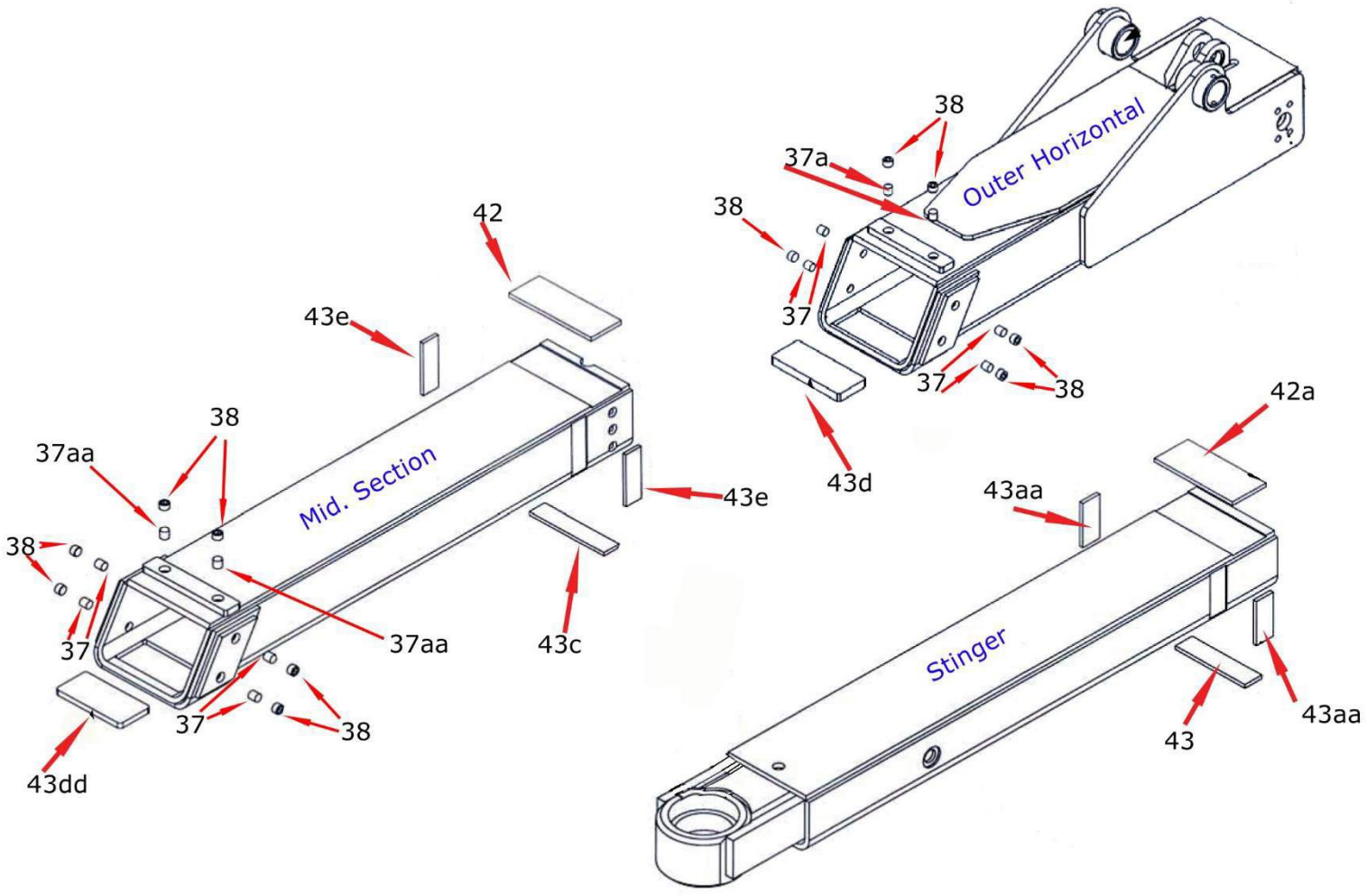


Wear Pad Identification

Outer Horizontal/Mid. Section/Stinger/Z30,303,403

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)



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 Pin
Z1304-106 Main Pivot Pin Bushing
Z1-215a Upper Lift Cylinder Block
Z1-215c Lower Lift Cylinder Block
Z1-317 Main Body

Z30:

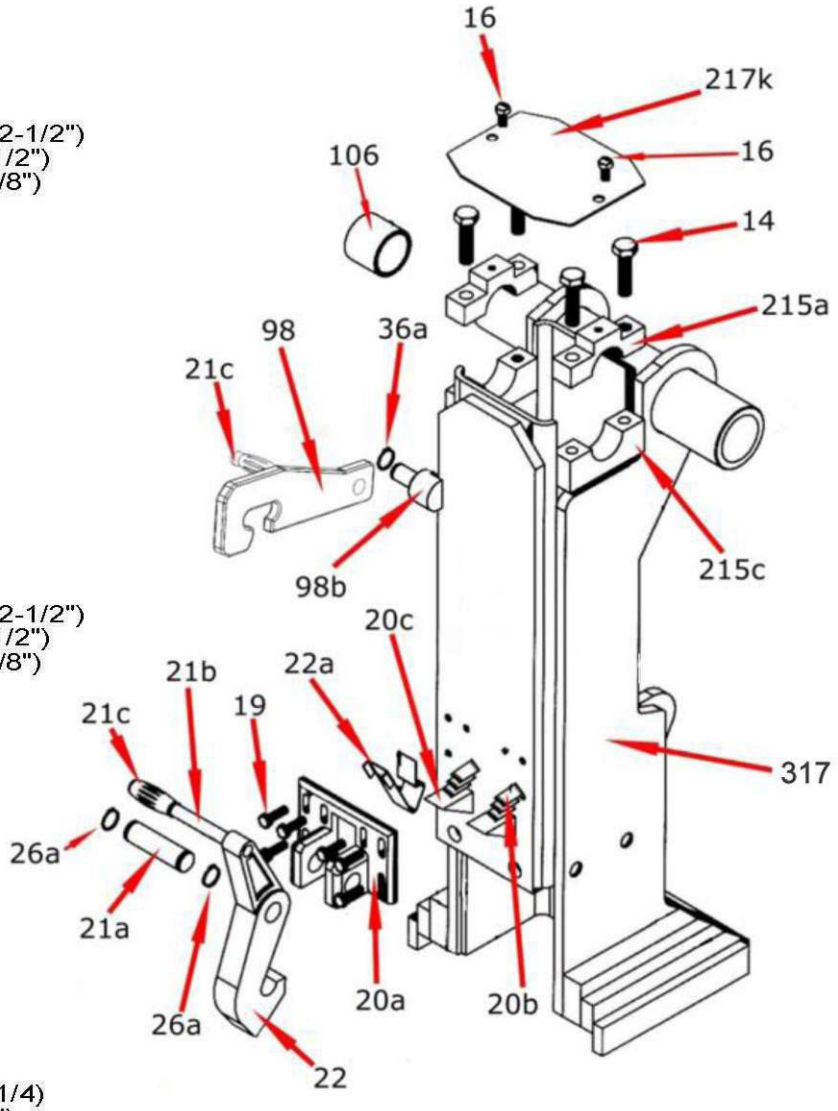
Part#
Z1304-14b 3/4-10 x 3" Hex Bolts Grade 8
Z1304-16 1/2-13 x 1" Hex Bolt Grade 8
Z130-19 1/2-13 x 1-1/4" Hex Bolt Grade 8
Z30-20a Safety Lock Plate
Z130-20b Safety Lock Shim Set (1/8 x 1 x 2-1/2")
Z130-20c Safety Lock **Pyramid** (1-1/2 x 2-1/2")
Z30-21a Safety Lock Pivot Pin (1-1/4 x 4-5/8")
Z1304-21b 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 Pin
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 Pin
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 Pin
Z1304-106 Main Pivot Pin Bushing
Z4-215a Upper Lift Cylinder Block
Z4-215c Lower Lift Cylinder Block
Z4-317 Main Body



Z18: Z1-217k Main Body Top Plate
Z30 & Z303: Z1-217k Main Body Top Plate (9 x 9 - 1/8 inch)
Z403: Z1-217k Main Body Top Plate (10 x 10 - 1/8 inch)

Inner Main Parts Identification

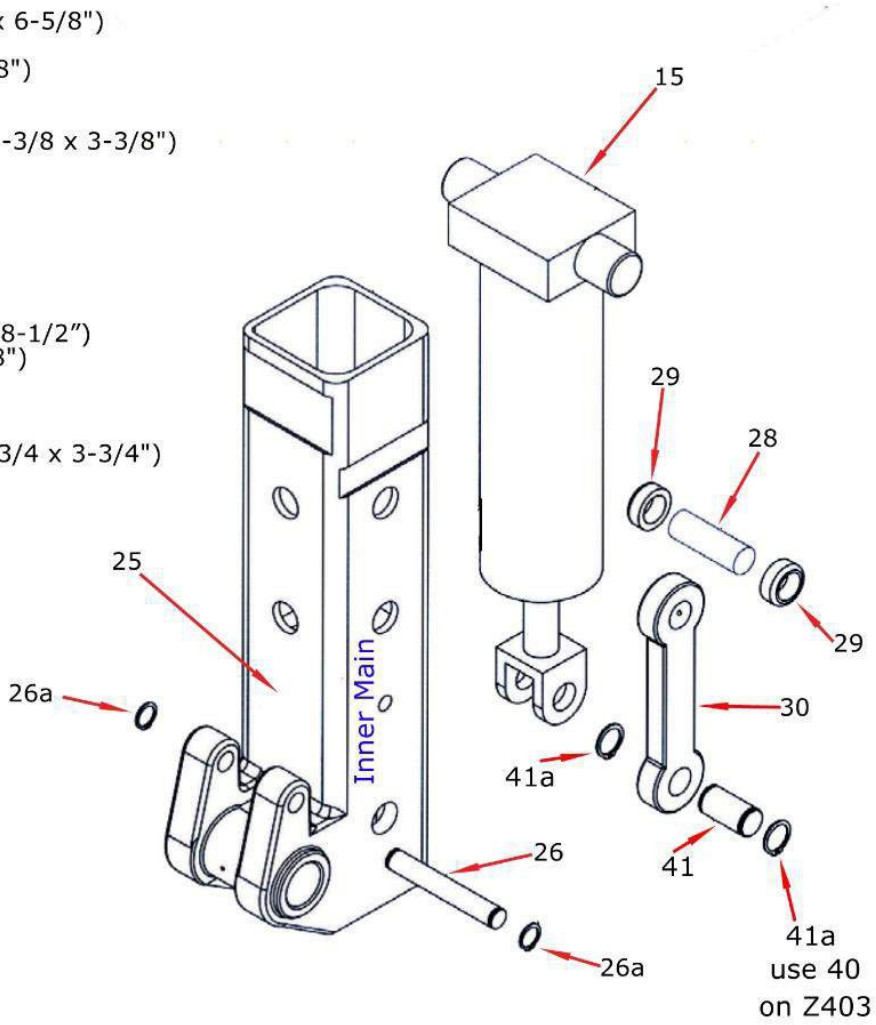
Inner Main/Z18,30,303,403

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")

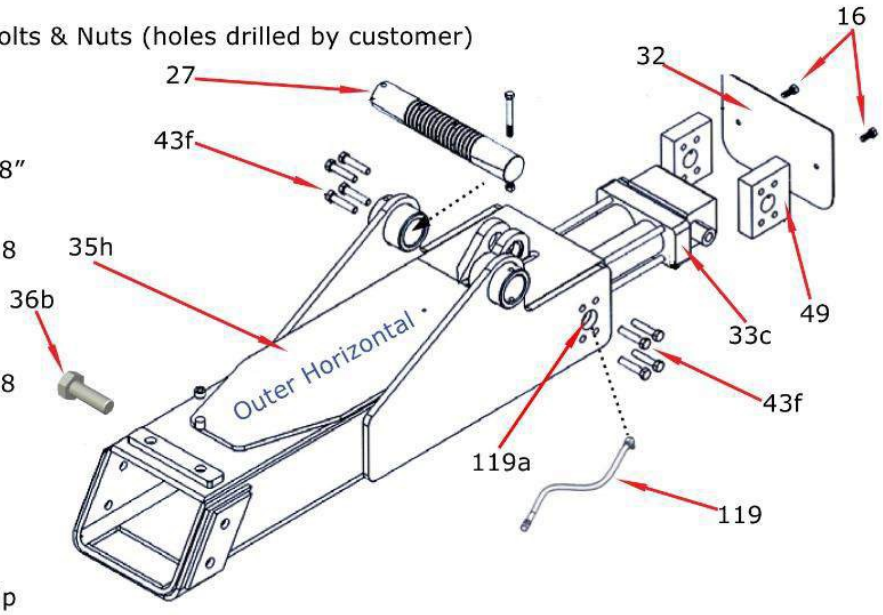


Horizontal Parts Identification

Outer Horizontal, Mid Section, Stinger/Z303,403

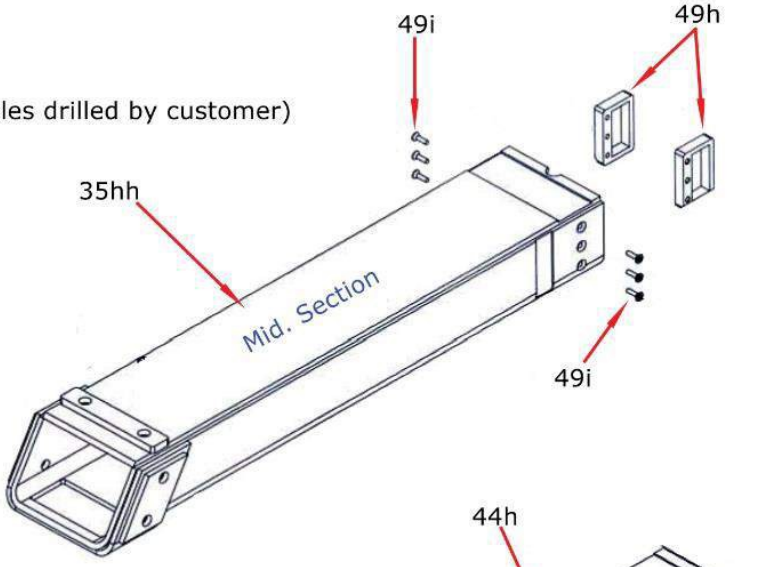
Z303:

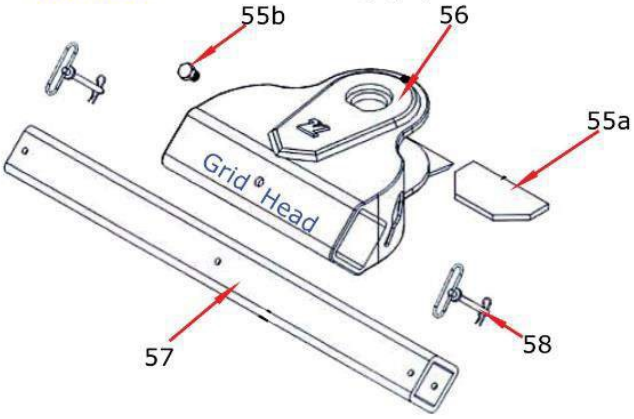
Part # Z1304-16 1/2-13 x 1" Hex Bolt Grade 5
Z0-27 2-1/2 x 17-1/8" with two 4-1/2" Bolts & Nuts (holes drilled by customer)
Z0-32 Horizontal End Plate
Z0-33c Horizontal Extend Cylinder
Z0-35h Outer Horizontal Extend Tube
Z0-35hh Mid. Horizontal Extend Tube
Z30-36 Extend Cylinder Pin 1-1/4 x 10-1/8"
Z304-36b 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)

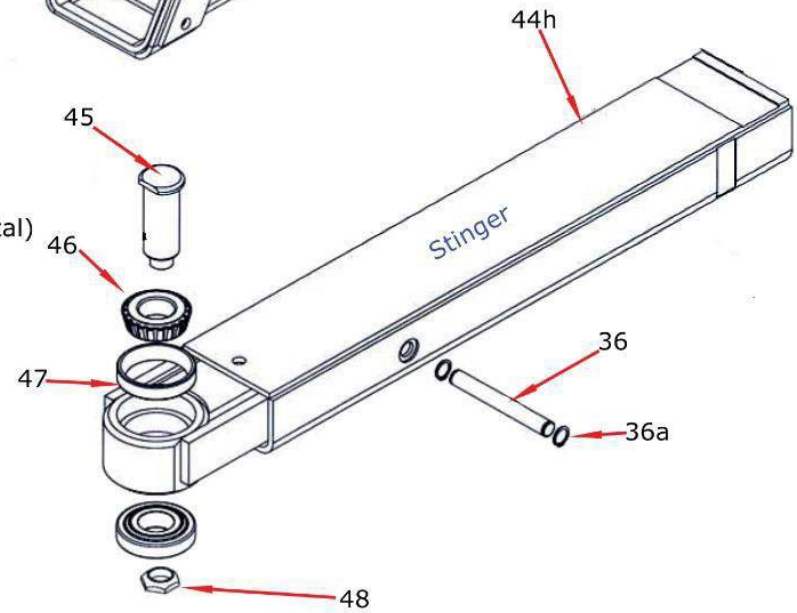


Z403:

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)





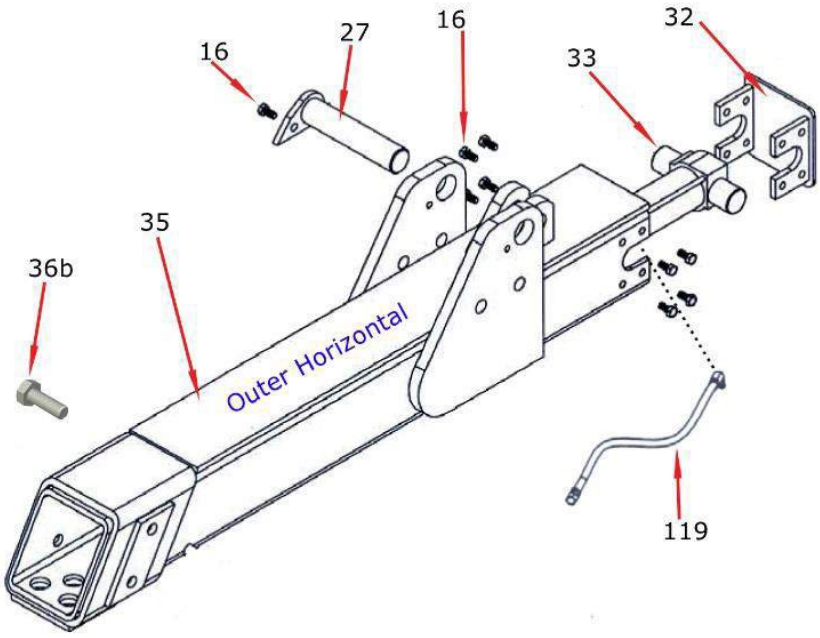


Horizontal Parts Identification

Outer Horizontal, Stinger/Z18,30

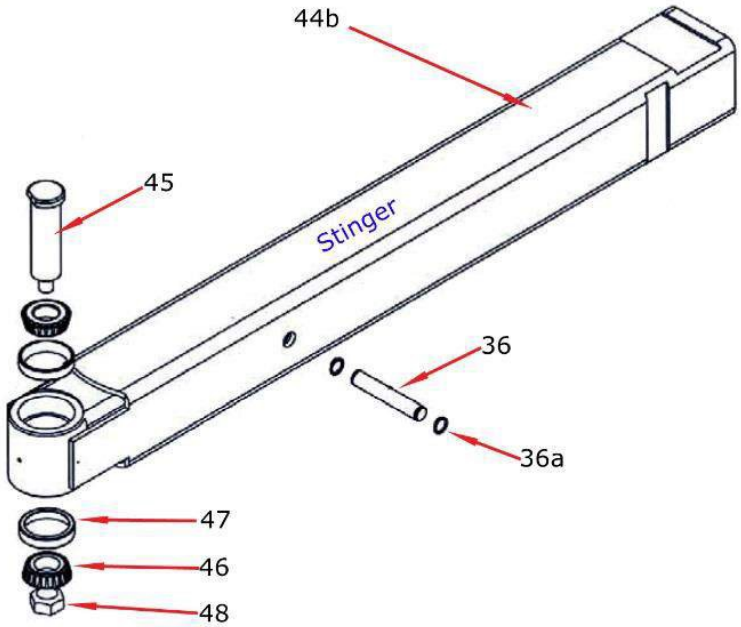
Z18:

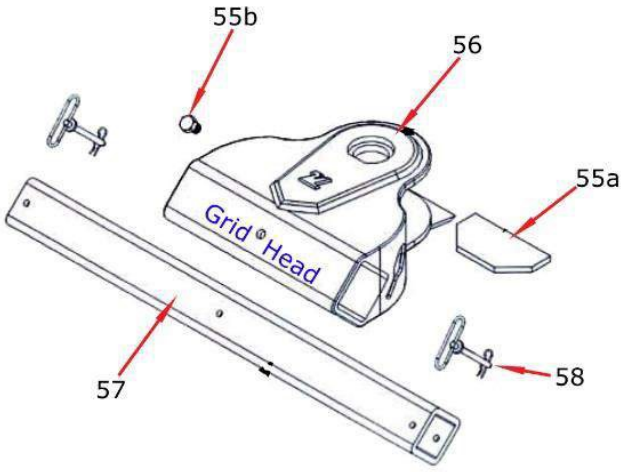
Part # Z1304-16 1/2-13 x 1" Hex Bolt Grade 5
Z1-27 Exend Arm Pivot Pin (2 x 8-3/8") with 1 bolts & Tear Drop Plate
Z1-32 Horizontal End Plate
Z13-33 Horizontal Extend Cylinder
Z1-35 Outer Horizontal Extend Tube
Z1-36 Extend Cylinder Pin 1 x 5"
Z1-36b Folding Lock Latch Bolt
Z1304-36a 1" Snap Ring
Z1-44b 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



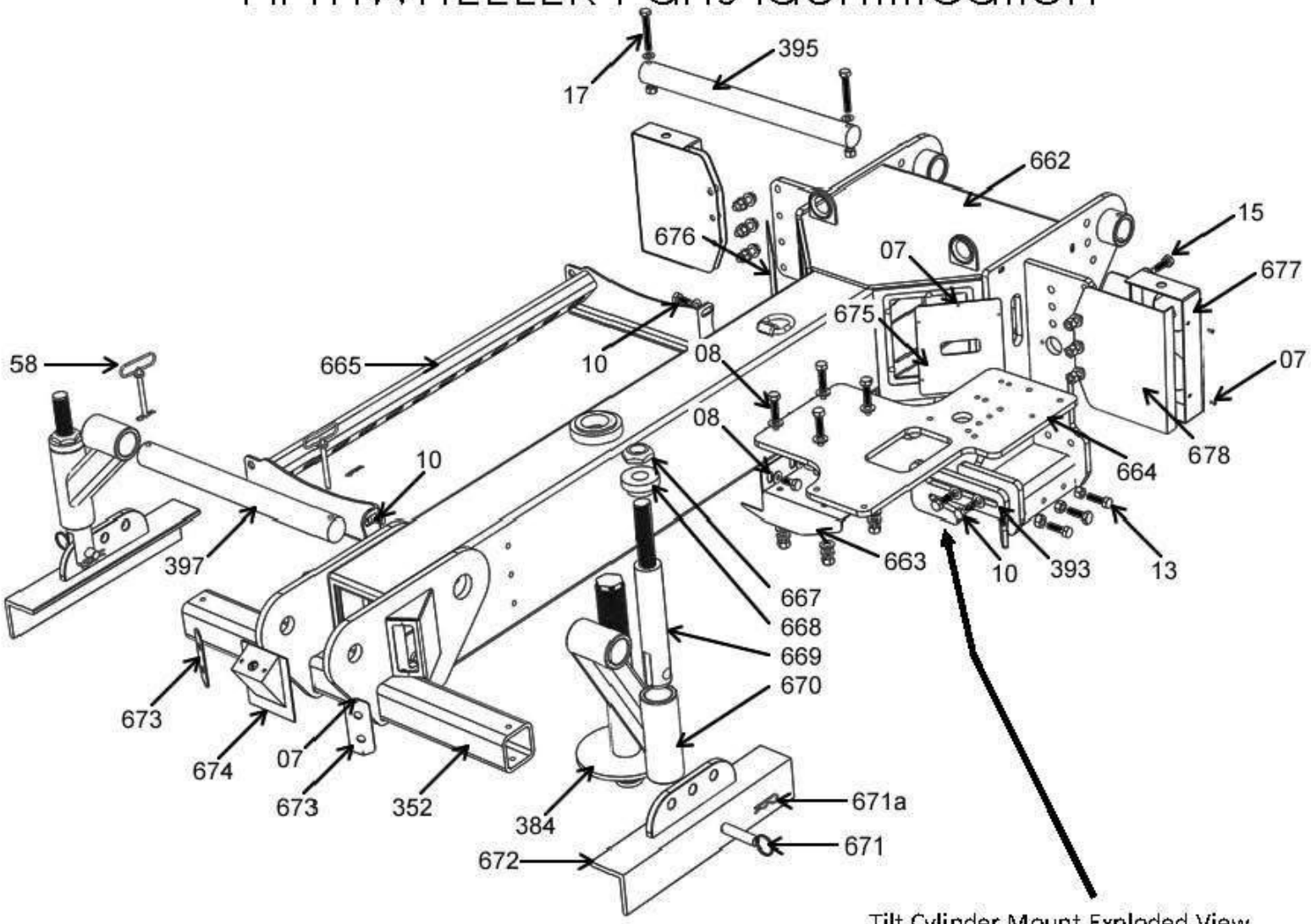
Z30:

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

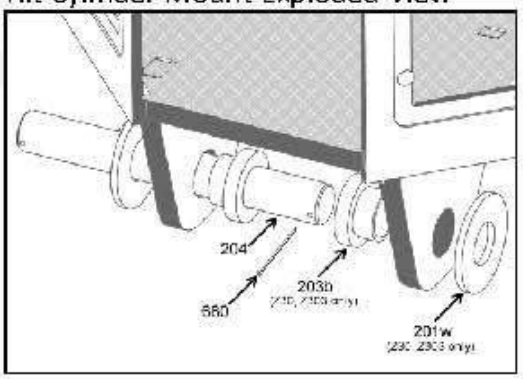




FIFTHWHEELER Parts Identification



Tilt Cylinder Mount Exploded View



FIFTHWHEELER Body Parts

Part Number	Description
Z130-203b	Upper Tilt Cylinder Bushing for Z18, Z30 & Z303
Z5-352	3 x 3 inch FIFTHWHEELER Mounting Crossmember
Z5-393	FIFTHWHEELER Foot Frame Clamp
Z5-662	FIFTHWHEELER Beam Weldment
Z5-663	FIFTHWHEELER Valve Plate Mounting Bracket
Z57-664	Valve Body Mounting Plate
Z5-665	FIFTHWHEELER Fork Rack
Z5-667	Tensioning Lock Nut
Z5-668	Strut Tensioning Nut
Z5-669	Strut
Z5-670	Strut Mounting Arm
Z5-672	Strut Frame Tab
Z5-673	Hydraulic/Pneumatic Quick Disconnects Mounting Plate
Z5-674	Electrical 7-pin Mounting Plate
Z5-675	Internal Wiring Cover Plate (with opening)
Z5-676	Internal Wiring Cover Plate (no opening)
Z5-677	FIFTHWHEELER Taillight Housing
Z5-678	Taillight Housing Back Plate

Pins and Retaining Parts

Part Number	Description
Z1304-58	1/2 in x 4-1/4 in Hitch Pin with Cotter Hairpin
Z130-204	1-3/8 in x 11-1/4 in Upper Tilt Cylinder Pin w/2 Cotter Pins
Z4-204	1-3/4 in x 10-5/8 in Upper Tilt Cylinder Pin w/2 Cotter Pins
Z130-206	1-3/8 in x 6-1/4 in Lower Tilt Cylinder Pin
Z5-384	FIFTHWHEELER Adjustable Kingpin
Z5-395	2-1/2 in x 30 in Zacklift Main Pivot Pin
Z58-397	2-1/2 in x 27 in Strut Mount Pin
Z5-671	Strut Tab Pin
Z5-671a	Strut Tab Pin Hairpin

Nuts and Bolts for FIFTHWHEELER

Part Number	Description
Z5-07	#8 - 16 x 1/2 in Grade 18-8 Phillips Thread Rolling Screw
Z5-8	1/2 - 13 x 2 in Grade 8 Coarse Hex Bolt (SAE J429)
Z13045-10	5/8 - 11 x 2 in Grade 8 Coarse Hex Bolt (SAE J429)
Z45-13	5/8 - 11 x 3 in Grade 8 Coarse Hex Bolt (SAE J429)
Z13045-15	1/2 - 13 x 2-1/4 in Grade 8 Coarse Hex Bolt (SAE J429)
Z130-17	1/2 - 13 x 4-1/2 in Grade 8 Coarse Hex Bolt (SAE J429)

All washers are USS Flat washers with yellow zinc finish
All lock washers are medium split lock washers with yellow zinc finish
All nuts are Grade 8 with matching thread count and yellow zinc finish
All nylon nuts are NE Grade 8 with nylon insert lock nuts with yellow zinc finish

Decals for FIFTHWHEELER

Part Number	Description
Z5-411	FIFTHWHEELER Zacklift Beam Decal

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:

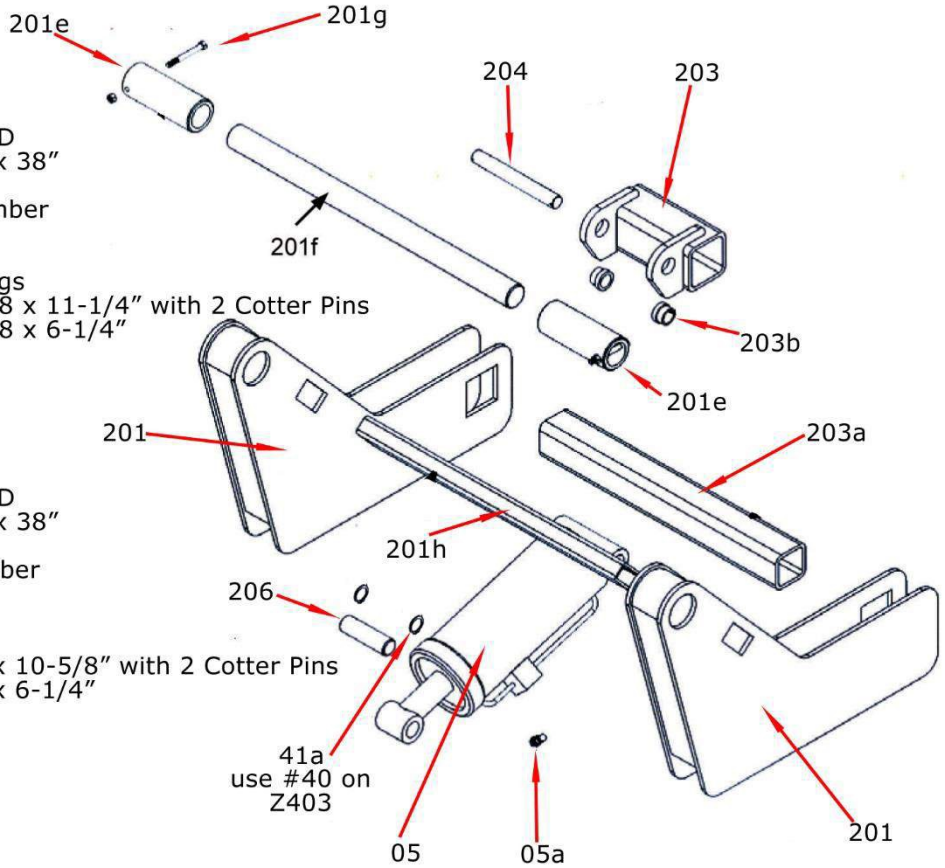
Part # Z30-05 6 x 11-3/4" Tilt Cylinder
Z1304-05a PO Check Valve
Z1304-41a 1-3/8" Snap Ring
Z1304-201 Mounting Ear
Z1304-201e Collar 2-1/2 ID x 3-1/2 OD
Z1304-201f Tilt Cylinder Shaft 2-1/2 x 38"
Z1304-201g 4-1/2" Bolt and Nut
Z1304-201h Reinforcement Crossmember
Z1304-203 Floating Crossmember
Z1304-203a 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.**

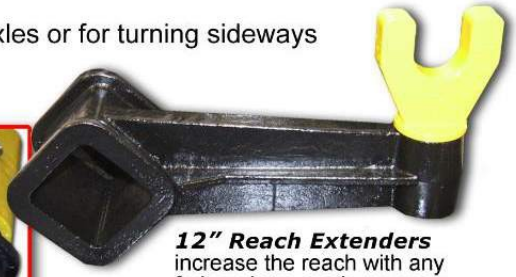
Chain Fork pair Slotted for 3/8" chain, provide a Tow-Bar like hook-up.

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.



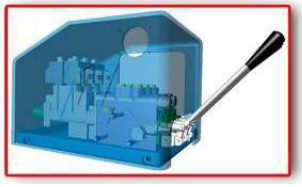
12" Reach Extenders increase the reach with any fork and move a large rear differential away from the underlift's crossbar.

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.

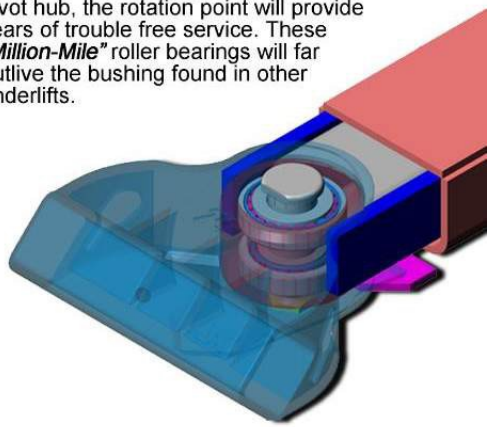
Zacklift's hydraulic components have been carefully selected for the highest quality,and most trouble-free, long-life service possible. The U.S. manufactured **sectional valve** features electric over hydraulic operation, not lower quality air operation. Additional sections may be conveniently added.

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.



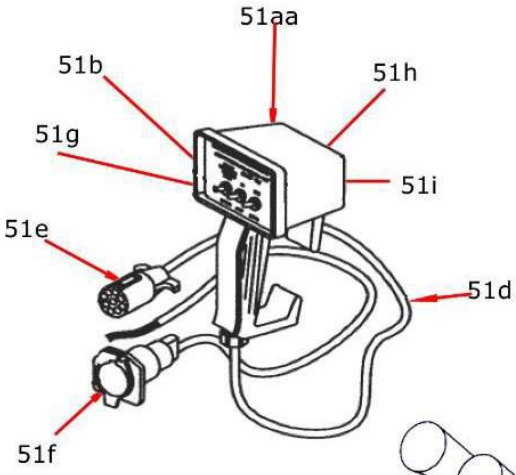
If self contained power is required, Zacklift offers a NO-CHARGE OPTION of a 12 Volt Electro-Hydraulic Power System 15' corded remote also included. Both choices also include a custom, **roto molded cover**.

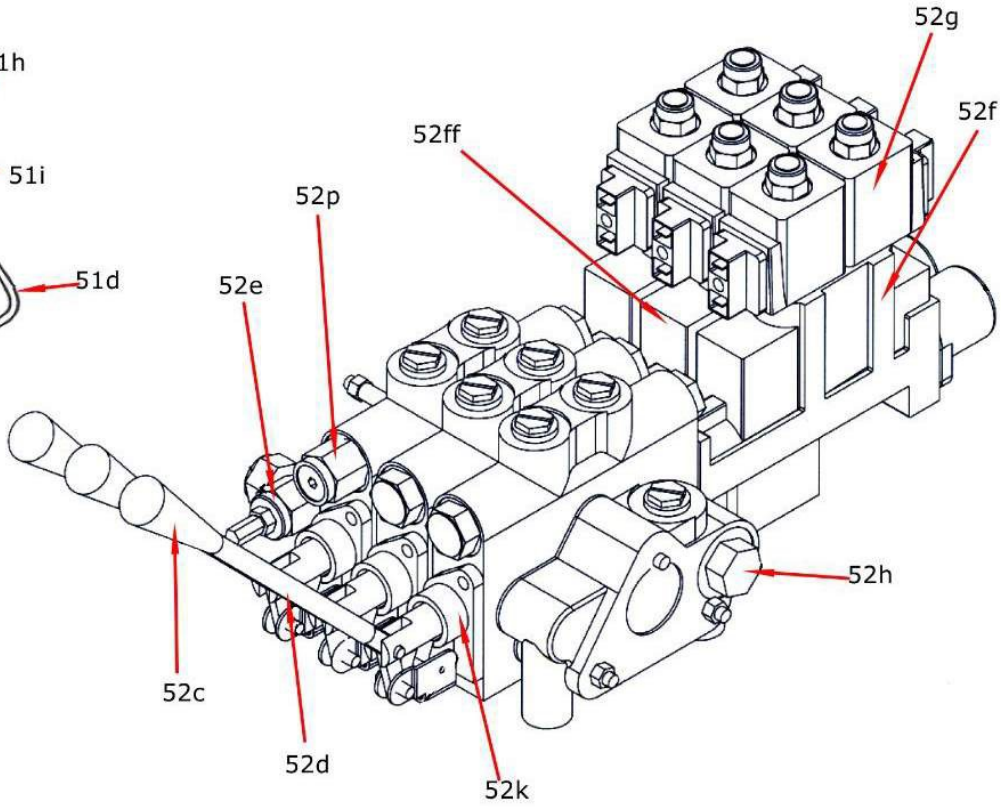
The exceptionally low profile of the Zacklift allows for more single picks under low bumpers and airfoiles. Engineered with ***Timken Roller Bearings*** in the critical pivot hub, the rotation point will provide years of trouble free service. These ***"Million-Mile"*** roller bearings will far outlive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

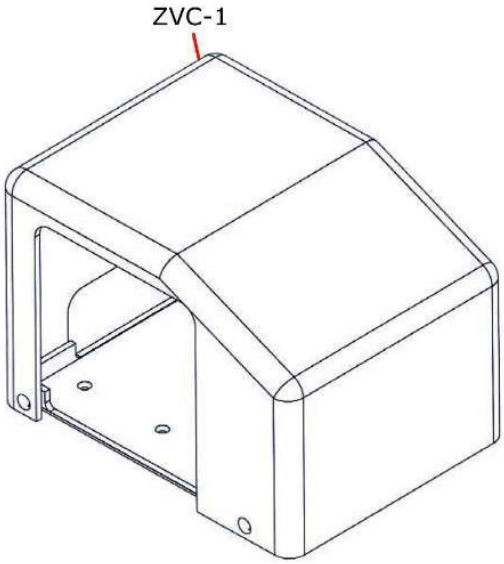


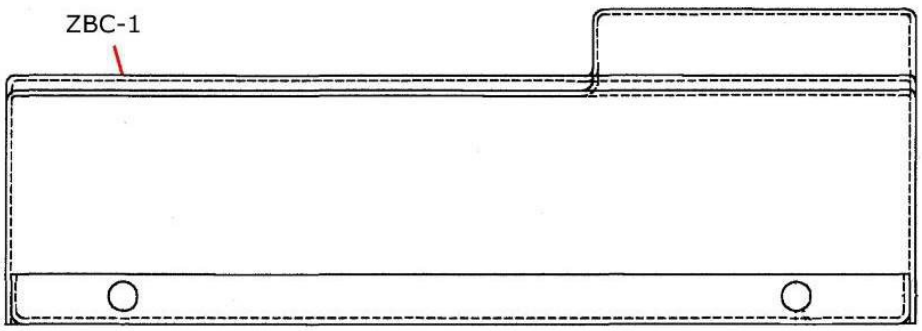
Standard Equipment Identification

Standard Equipment
Part # 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





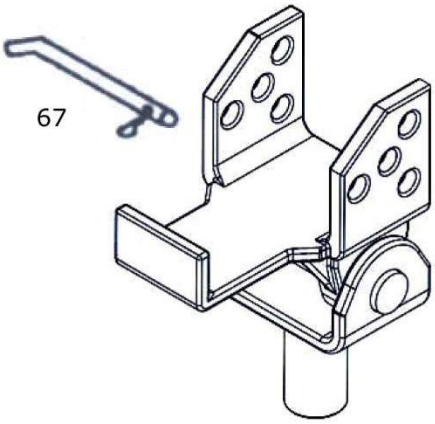




Optional Equipment Identification

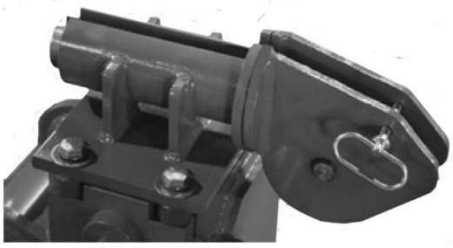
Optional Equipment
Part # Z1304-66 Spring Fork
Z1304-67 Spring Fork Pin
Z1304-81a 5" Height Extenders
Z1304-82 Mack Fork 8-3/4 wide x 6" deep
Z1304-82a Big Mack Fork 10-3/4 wide x 6-3/4" deep
Z1304-88 Scoop-n-Go Fork
Z1304-89 Steertek Fork 8-1/4 wide x 3" deep
Z10-1019A Cable Guide fits Z403
Z10-1019B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

88

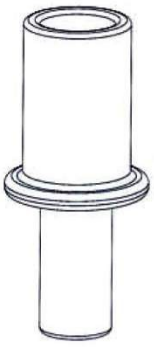


67

66



Z10-1019A
Z10-1019B
Z10-1019C



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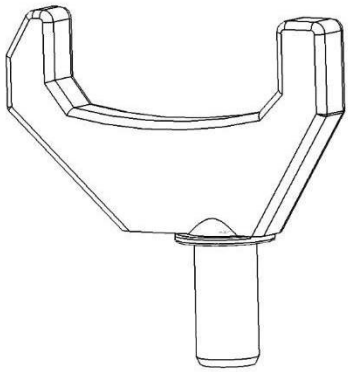

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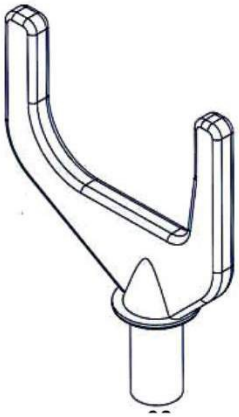

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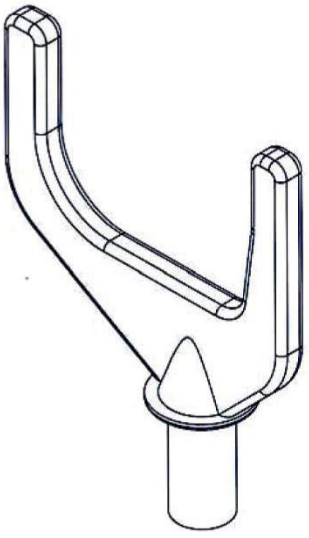
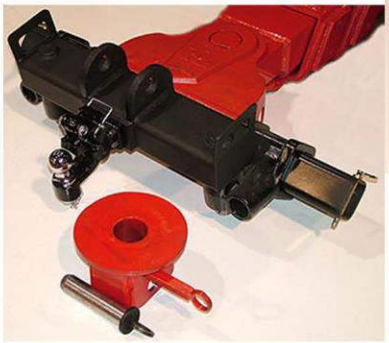


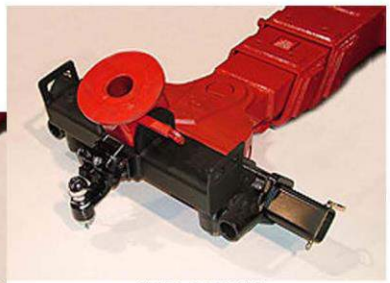
82a

Optional Equipment Identification

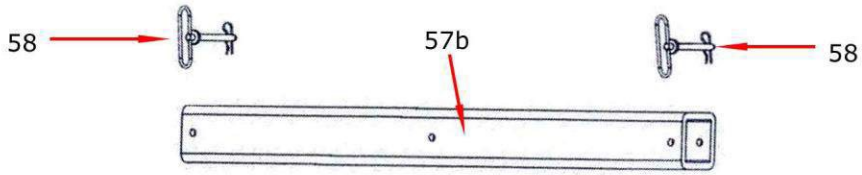
Optional Equipment
Part # Z1304-57b 4 x 4 x 60" Grid Bar
Z1304-58 4-1/2" Hitch Pin with Hair Pin Clip
Z1304-118a HDMP Wheel Lift Arm (Single)
Z1304-118b 3" Rachet
Z1304-118c 3" Strap
Z1304-118d HDMP Drivers Side Main Section
Z1304-118e HDMP Passengers Side Main Section
Z10-1025X Trailer Fifthwheel Hitch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

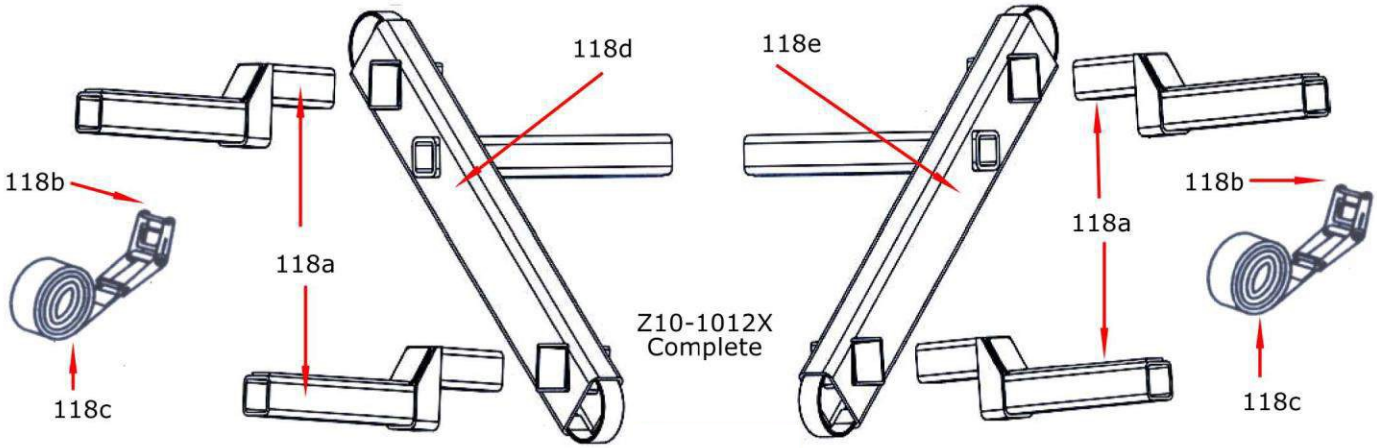
#10-1026X
Safety Chain Attachment Blocks





#10-1025X
Trailer/Fifthwheel Hitch Complete



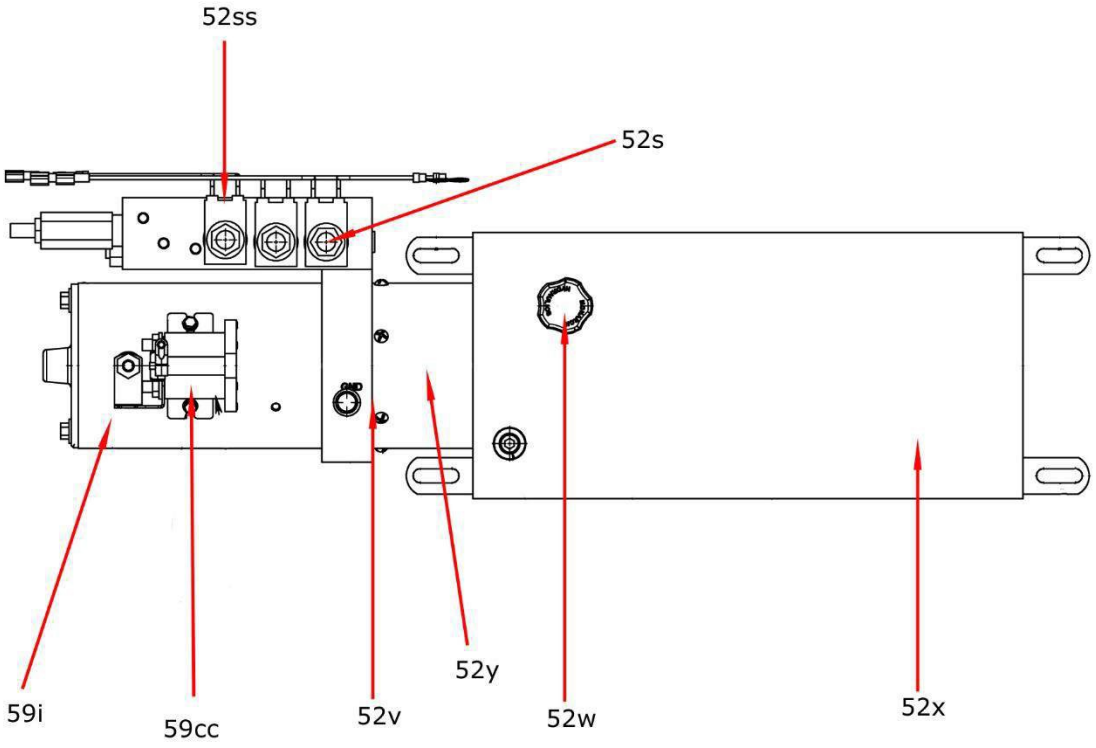


12 Volt Power Pack Parts Identification

12 Volt Power Pack (MCH)/Z30,303,403

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)

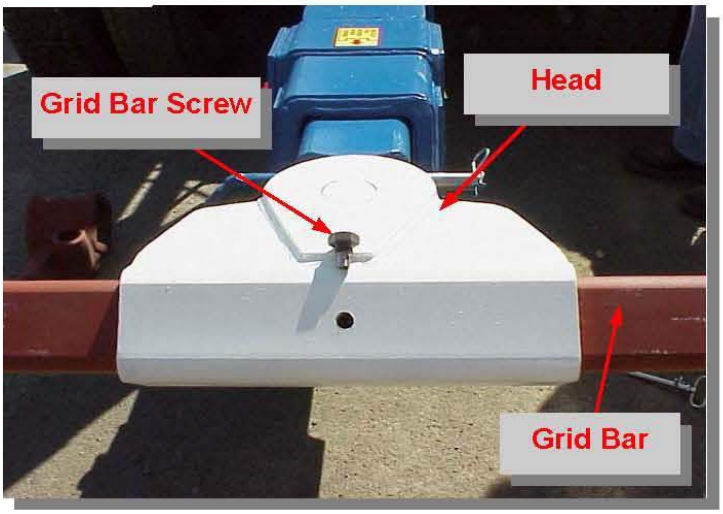
59m
Complete 12 Volt Power Pack



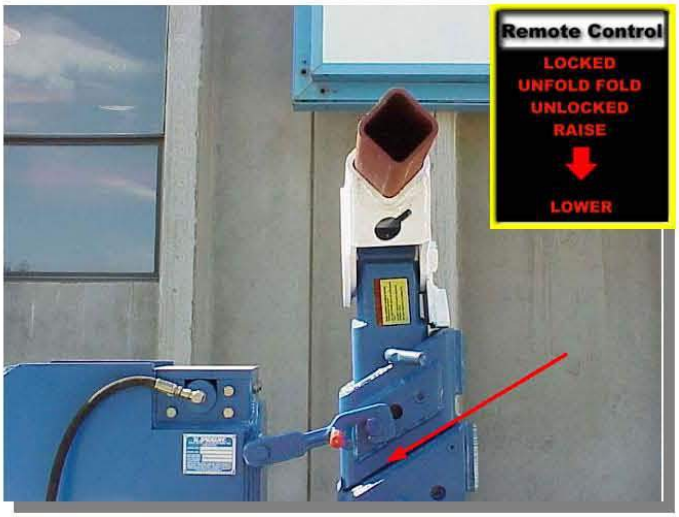
OPERATING YOUR ZACKLIFT

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.

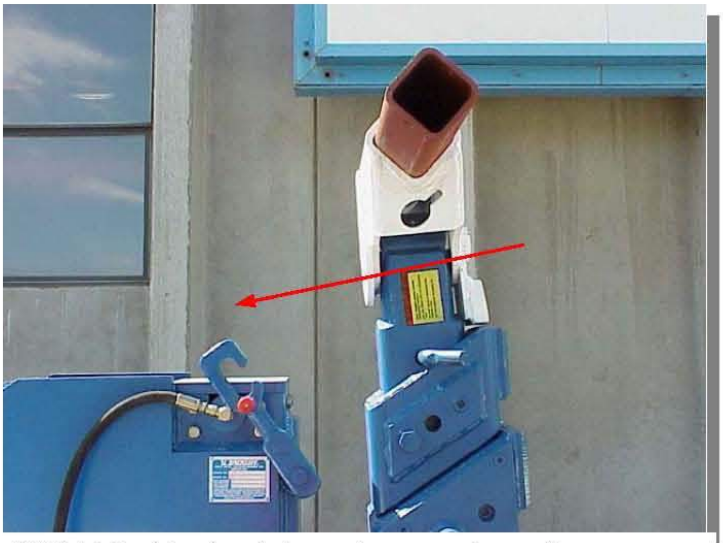
Frame Lifting Loading



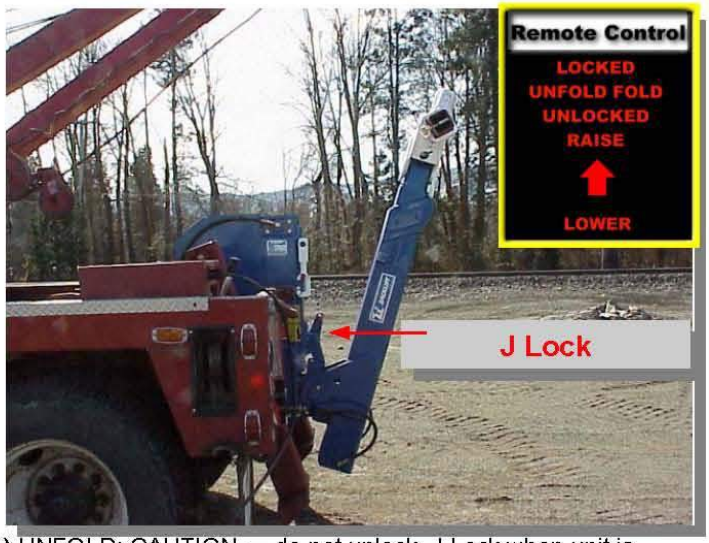
1) Check that Grid Bar is firmly attached to Head by Grid Bar Screw.



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

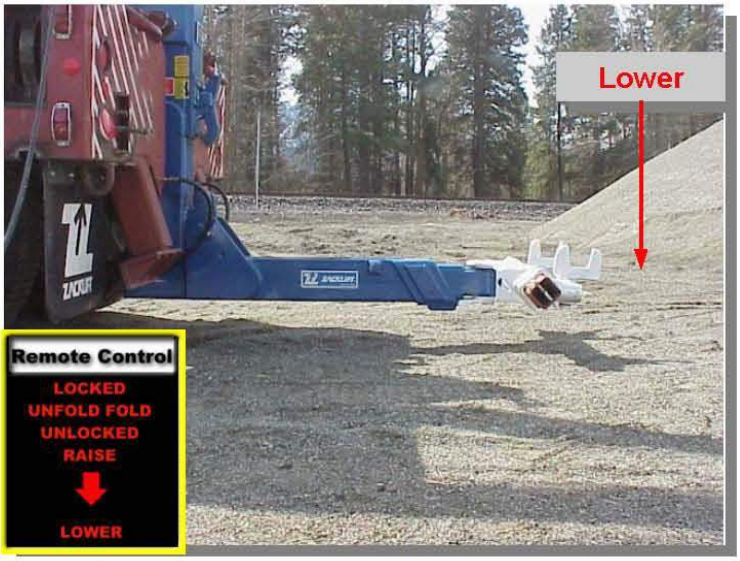


3) Tilt fold lock back out of operators way when not in use.



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

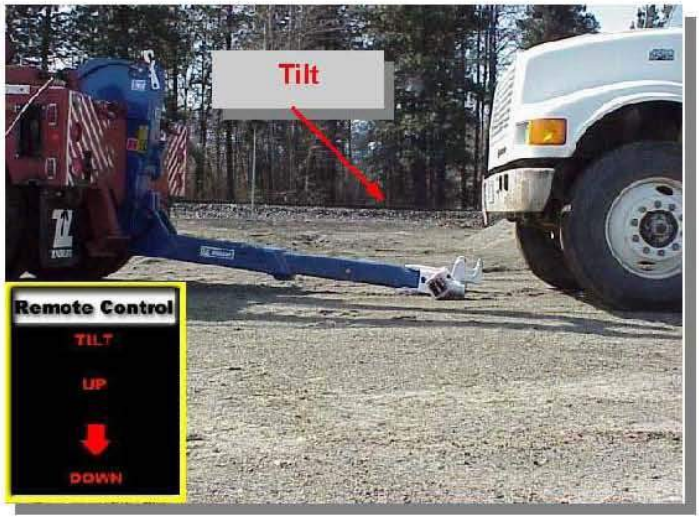
5) Unlock J Lock by pushing in towards vertical tube. May have to raise to clear J lock pin.



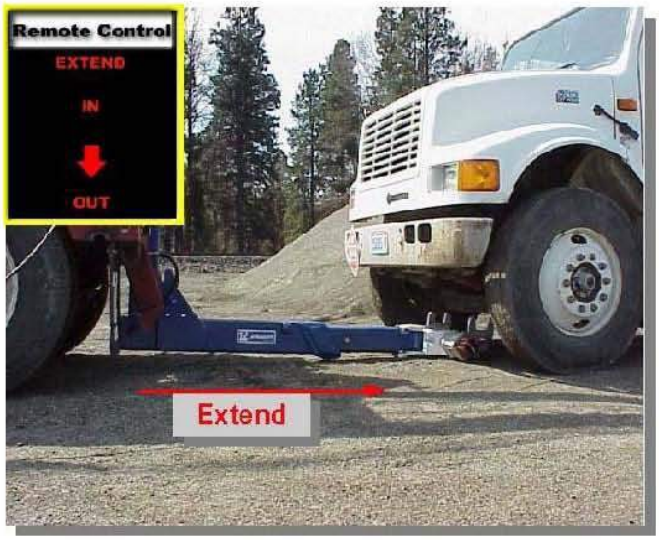
6) Lower Horizontal Tube until it is about 2" or 3" inches from the ground

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.

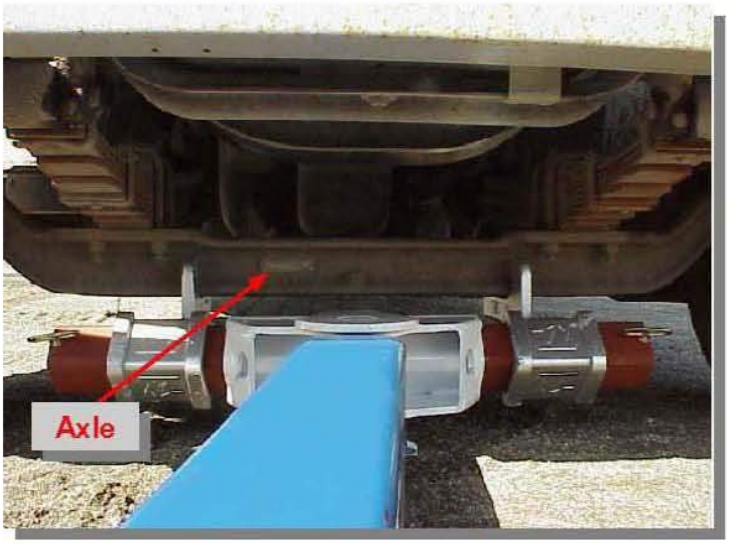
8) Select 1x2.5 Fork (#2) for sliding under low bumpers, 3x2.5 Torsion Bar Forks (#3) for bus torsion rod, 6x6.5 Rear Axle Forks for rear ends and 9x4 Forks (#5) for rear frame picks. Add 12" Extenders (#6) when extra reach is needed.



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 foile TILT Horizontal Extend Tube upward before lifting straight up.

Frame Lifting Loading

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.

Z18/Z30

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

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 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 vechicle 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

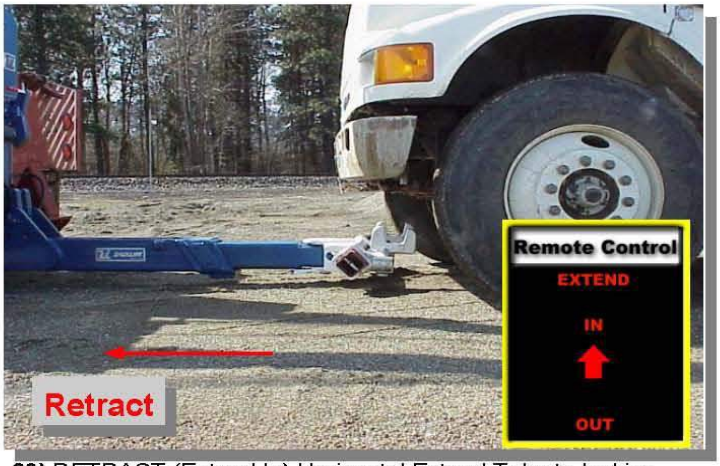
18) Remove Safety Chains.

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

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

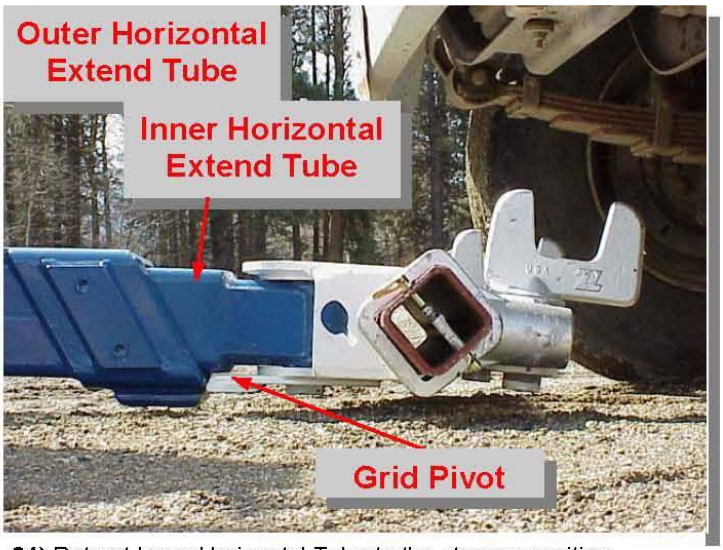
21) TILT down until tires touch the ground.

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

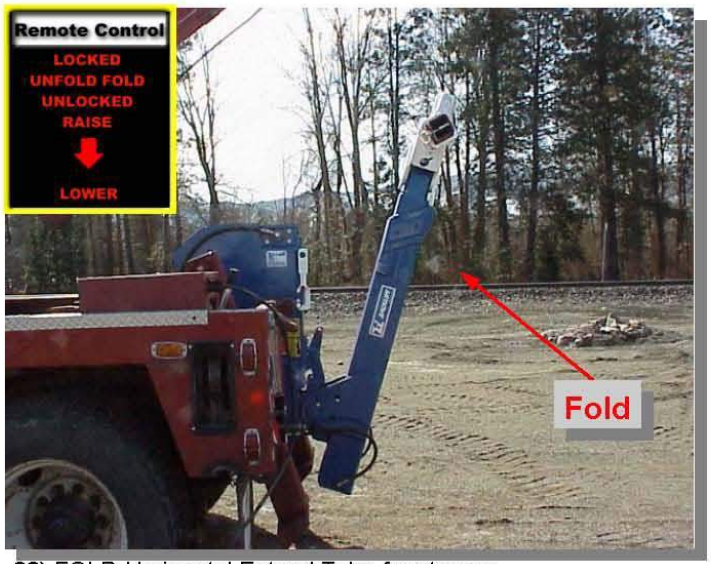


24) Retract Inner Horizontal Tube to the storage position. IMPORTANT: Retract the Head to butt against the Outer Horizontal to prevent tilting when not in use.

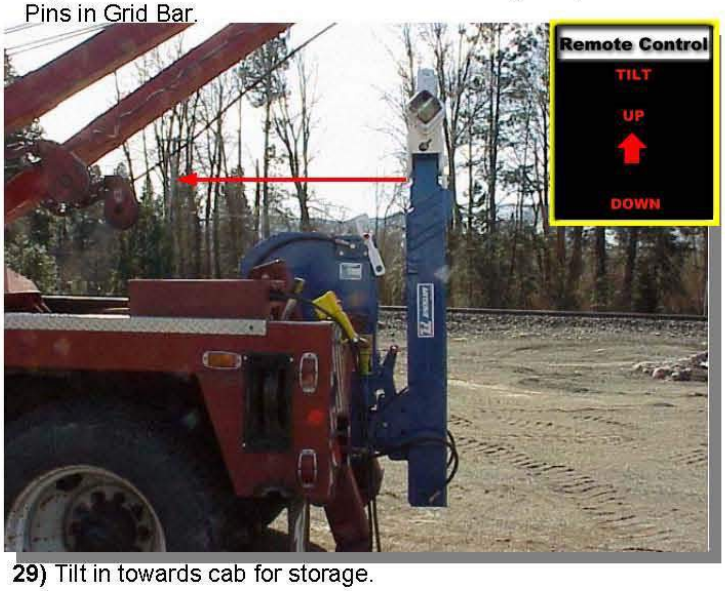
25) Raise Horizontal Extend Tube engaging J Lock.

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.

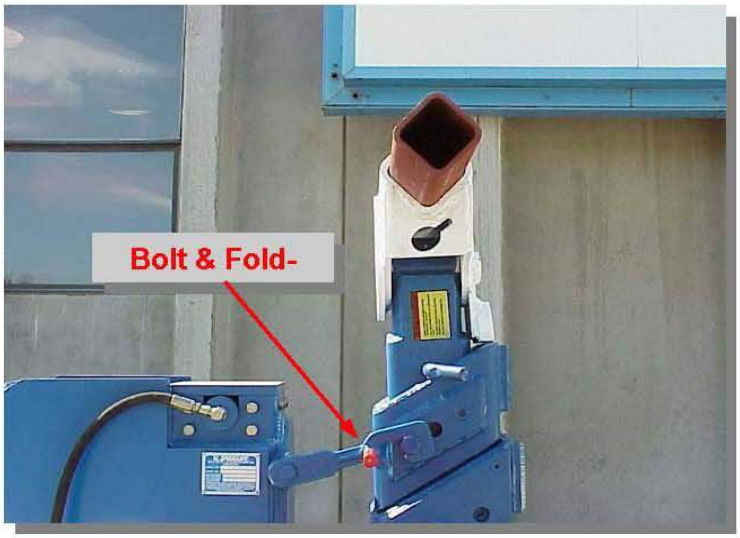


28) FOLD Horizontal Extend Tube for storage.



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.

Using the Heavy Duty Wheel Lift

For video demonstrations of the Heavy Duty Wheel Lift, go to www.zacklift.com and click on the video links.

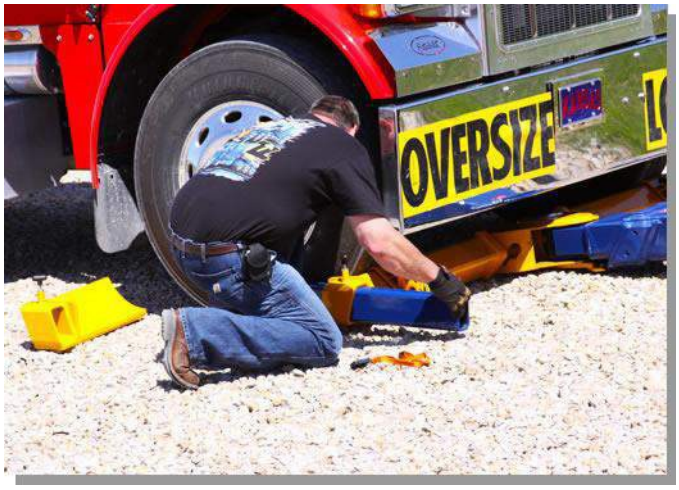
#1) UNFOLD CAUTION – Do not unlock J-Lock when Zacklift is folded. Unlocking when Zacklift is folded could result in injury or death.

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

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

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

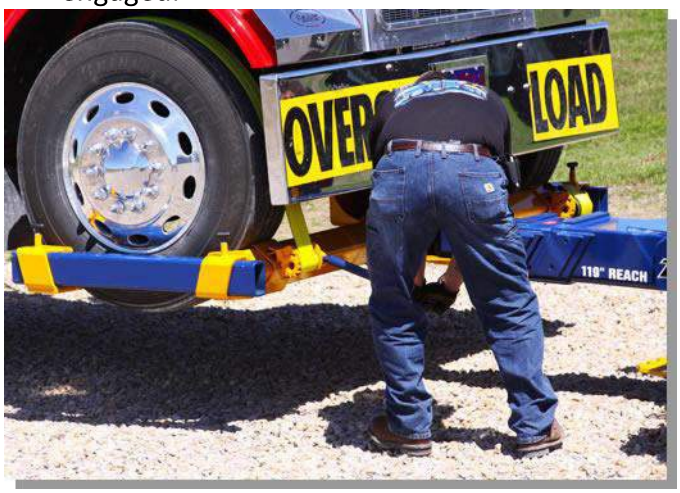
#5) Extend horizontal section till crossmember bumps tires.



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

#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.



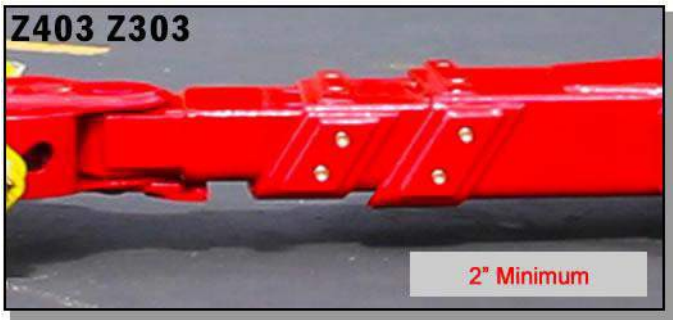
#9) Tighten strap with bar provided.

#10) Tilt up to get proper towing height.

#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.



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

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 cassis 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.

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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