

PIERCE[®]

PULLING FOR YOU

OWNER'S MANUAL
DUMP KITS
DKLKPD / DKMKPD / DKHKPD



REGISTER YOUR PRODUCT!

In order for us to best serve you,
please register your product at
www.piercearrowinc.com/warranty/product-registration

LM-01-00-0001 v2.0

Why register?

- receive product updates via email
- receive maintenance reminders via email
- receive quick technical service help if you encounter a problem

DISCLAIMER

The Pierce Dump Kit is a powerful machine and must be used with extreme care. Deviating from the manual's instructions may cause personal injury. You may lose your warranty if you do not follow the precautions and guidelines outlined in this manual. Keep this manual in a safe place to reference safety and installation instructions, maintenance guidelines and operating recommendations. The owner, operator, and installer must read the entire owner's manual before operating the dump kit. For a digital copy of the manual visit <https://www.piercearrowinc.com/document-type/user-manual/>. This is a universal kit designed to fit most aftermarket beds with minor modifications.

SAFETY WARNINGS

- Read the installation manual before proceeding.
- Disconnect the vehicle battery before beginning installation.
- All wires must be supported by the truck frame. Use caution with any wire connected to the bed.
- Never exceed the weight limit of your equipment. Refer to your vehicle's owner's manual for more information.
- Installation of the included 200 amp breaker is required to prevent electrical shorts.
- Stay back during operation
- Do not tow vehicle with the bed.
- When raising the bed, use an overhead hoist or body props. Be aware, injury can occur if the bed is not properly secured.
- Only weld at the rear of the chassis frame. Do not weld anywhere forward of the rear spring hangers in order to prevent cracks from developing in the frame and possible weak spots during the welding process.
- Secure all electrical lines every 12"-16" with zip ties.
- Cover fuel tank and brake lines when drilling, cutting or welding
- Do not exceed kit rating based on your bed length and overhang
- Always evenly distribute the load

VIDEO GUIDE

Sometimes you need more than an installation guide to show you how the install is done. We hope our four part video guide on YouTube will help answer many of your questions. If you need extra assistance or just have a question, feel free to call us at 800-658-6301.

1

View how to begin your installation.



3

View how to finish your installation.



2

View how to wire your installation.



4

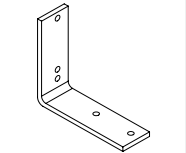
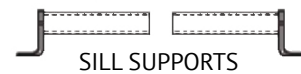
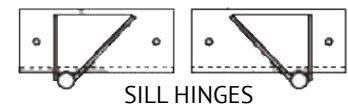
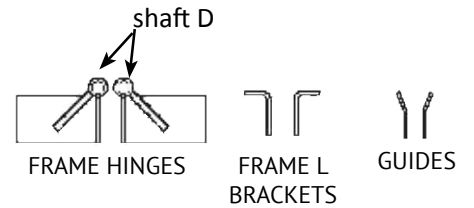
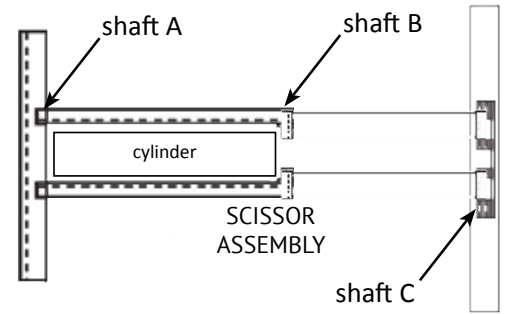
View a customer testimonial.



VISIT [YOUTUBE.COM/PIERCEARROWINC](https://www.youtube.com/piercearrowinc) FOR THE 4-PART INSTALLATION VIDEO SERIES

DUMP KIT CONTENTS

	DKLKPD	DKMKPD	DKHKPD	PART	QTY
SCISSOR ASSEMBLY (PRE-ASSEMBLED)	B231	A496	A481	Scissor Top	1
	A218	A5003	A4802	Scissor Lower Arm Driver and Passenger Side	2
	B230	B478	B478X	Crossmember	1
	A2283	A4734	A4733	Shaft A [DKLK - 7.5"][DKMK - 9.25"][DKHK - 22.25"]	1
	A2285	A4731	A4731	Shaft B [DKLK - 13.5"][DKMK - 15"][DKHK - 14"]	1
	A2282	A4735	-	Shaft C [DKLK - 19.5"] [DKMK - 21.5"]	1
	P05314BW	P046514	P046516	Hydraulic Cylinder	1
	SPRP221	SPRP221	SPRP221	7/32" x 2" Roll Pin	6
CHASSIS FRAME PARTS	A4952	A5012	A4742	Driver Side Frame Hinge	1
	A4953	A5013	A4743	Passenger Side Frame Hinge	1
	A492	A492	A464	Frame L Bracket	2
	A494	A494	A463	Guides	2
	A2286	A4734	A4736	Shaft D [DKLK - 9.5"][DKMK - 9.25"][DKHK - 13.75"]	2
	2DKPBV2	2DKPBV2	2DKPBV2	Pump Bracket	1
SILL PARTS	B300	B300	B300	Scissor Support Bar	1
	B2292	B5022	A4912	Driver Side Sill Hinge	1
	B2293	B5023	A4913	Passenger Side Sill Hinge	1
HARDWARE	A219	A219	A488	Sill Supports	2
	-	-	15315	5/8" - 3" G8 Hex Head Bolt	16
	-	-	0169088	5/8" - 11 G8 Locknut	16
	0115107	0115107	0115107	3/8" - 16 x 1.25" G5 Hex Head Bolts	2
	0144580	0144580	-	1/2" - 16 x 3" G8 Hex Head Bolts	8
	1133861	1133861	-	1/2" Flatwasher	10
	1137187	1137187	1137187	1/2" - 13 Locknut	12 (4)
	PS544	PS544	PS544	3/8" Lockwasher	2
	SPRP221	SPRP221	-	7/32" x 2" Roll Pin	4
	-	-	SPRP-64227	7/32" x 2.5" Roll Pin	4
	15209	15209	15209	1/2" - 13 x 1.5" G8 Hex Head Bolt	2 (4)
	15207	15207	-	1/2" - 13 1-1/4" Grade 8 Hex Head Bolt	2
	0168218	0168218	-	1/2" - 13 x 8" G8 Hex Head Bolt	2
	PS545	PS545	PS545	3/8" x 1" G8 Hex Head Bolt	2
	1137185	1137185	0169084	3/8" Locknut	2
	1133815	1133815	1133815	3/8" Flatwasher	2
	0115363	0115363	0115363	3/4" - 10 x 2.5" G8 Hex Head Bolts	1
	1137190	1137190	1137190	3/4" G8 Locknut	1
	1133820	1133820	1133820	3/4" Flatwasher	2 (1)
P046PROPLV2	P046PROPLV2	P046PROPLV2	Safety Prop Leg	1	
P046PROPC	P046PROPC	P046PROPC	Safety Prop Cup	1	
9629	9629	9629	8" Zip Tie Black UV	12	
ELECTRICAL PARTS HYDRAULIC PARTS	76631	76631	76631	200 amp Breaker	1
	PS501	PS501	PS501	#4 Welding Cable - Black	20'
	PS501R	PS501R	PS501R	#4 Welding Cable - Red	20'
	PS006	PS006	PS006	5/16" Battery Eye	6
	CP077K	CP077K	CP077K	2 Button Remote without Plug	1
	P19414	P19414	P19414	3/4" x 1/4" 90° Swivel O-Ring Fitting	1
	14490	14490	14490	3/8" Male x 1/4" Female 90° Swivel Fitting	2
	1214018*	1214018*	1214018*	#8 Straight O-ring Male to 1/4" Female Pipe Fitting	1*
	P050H	P050H	P050H-58	5' Hydraulic Hose	5'
	P050H2*	P050H2	P050H2-58	7' Hydraulic Hose	7'
	PM3551*	PM3551*	PM3551*	12V Monarch Pump	1



HARDWARE



BREAKER



TWIST LOCK



FITTINGS



SAFETY PROP



PUMP

*Quantities in (#) are the quantities for the DKHKPD

INSTALLATION

BEFORE BEGINNING

To reach maximum kit capacity and lift, a few questions must be asked:

- What is the bed length?
- How much overhang past the frame can I have?

LIFTING CAPACITY

The bed length and overhang length effect the capacity of your kit. Refer to the table below.

	OVERHANG	8' BED	10' BED	12' BED	14' BED	16' BED
DKLKPD	0"	4.75 T	3.75 T	3 T	-	-
	12"	5 T	4.75 T	3 T	-	-
	24"	-	5 T	4.75 T	-	-
	36"	-	-	5 T	-	-
DKMKPD	0"	7 T	6.5 T	6 T	-	-
	12"	7.5 T	7 T	6.5 T	-	-
	24"	-	7.5 T	7 T	-	-
	36"	-	-	7.5 T	-	-
DKHKPD	0	-	10 T	9T	8T	7T
	12"	-	-	10T	9T	8T
	24"	-	-	-	10T	9T
	36"	-	-	-	-	10T

Example: If you require the maximum capacity for a medium duty kit, you must have:

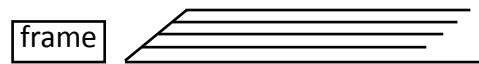
- 8' bed with 12" overhang, *or...*
- 10' bed with 24" overhang, *or...*
- 12' bed with 36" overhang

REMOVE WIRING AND ATTACHMENTS

- Remove all attachments holding the sill and bed to the truck frame including electrical wiring, fuel, hydraulic or air lines.
- All wires must be supported by the truck frame.

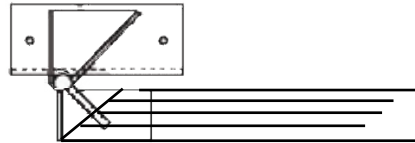
CHASSIS SHORTENING & REAR HINGE PLACEMENT

- Shorten the chassis in order to create as much overhang as possible. A greater overhang past the hinges gives a counter lever effect and makes, in essence, the dump kit stronger.
- Cut the frame at a 45° angle so that there is hinge pin clearance above the cut. (*figure 1*)



↑ *figure 1: Cut frame at 45° angle.*

- There should be enough metal to bolt or tack weld the frame hinge to the truck chassis frame.
- Connect the sill hinge to the frame hinge using shaft D. Secure with roll pins. (*figure 2*)



↑ *figure 2: Connect sill hinge to frame hinge.*

NOTE: Only weld at the rear of the chassis frame. Do not weld anywhere forward of the rear spring hangers in order to prevent cracks from developing in the frame and possible weak spots during the welding process.

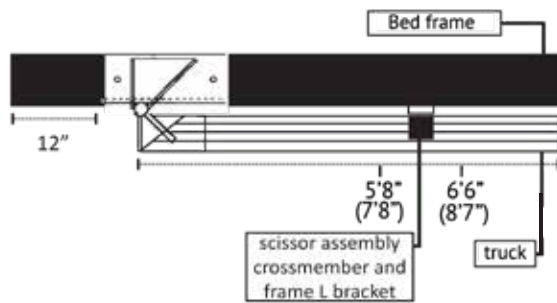
NOTE: From the front rear spring hanger to the cab, all parts must be bolted to the frame.

SCISSOR ASSEMBLY PLACEMENT

Now that the frame hinge location is determined, the scissor assembly (pre-assembled) placement must be evaluated.

- Measure from the frame hinge pin toward the cab. For Light (DKLKPD) and Medium Duty (DKMKPD) mark 5'8" and 6'6". For Heavy Duty (DKHKPD) mark 7'8" and 8' 7" The scissor assembly crossmember and frame L brackets can be placed within this area. (*figure 3, next page*)

INSTALLATION (continued)



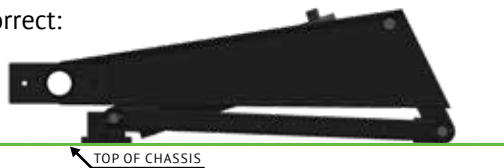
↑ figure 3: Choose the scissor placement.

- Keep in mind an 8' bed must overhang at least 12" from the frame hinge to reach full capacity on a medium duty kit.

NOTE: Desired bed height and lift capacity are determined by the placement of the crossmember. Chassis construction may dictate crossmember location. Moving outside of these parameters will change the lift angle and lifting capacity

NOTE: Do not let the rear end of the lower scissor arms drop below the cross member bracket.

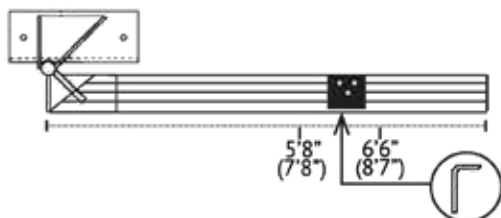
Correct:



Incorrect:



- Bolt the frame L brackets to the chassis frame at the center of your measurement using grade 8, 1/2" bolts and self locking nuts. (figure 4)

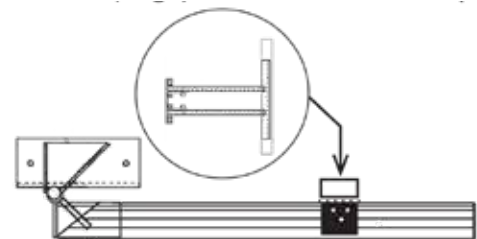


↑ figure 4: Bolt L brackets to chassis frame.

NOTE: The front filler hose may help determine scissor location and bed height.

CROSSMEMBER MODIFICATIONS

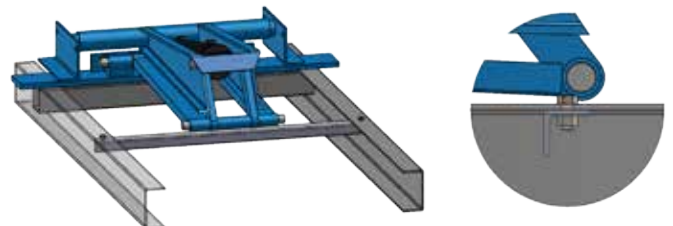
- The scissor assembly crossmember comes extra long to fit various chassis widths.
- Cut the crossmember with enough room to run a welding bead to the 'L' bracket, if welding.
- Bolt or weld the crossmember to the frame L bracket. **Do not** weld the crossmember directly to the chassis frame. (figure 5)



↑ figure 5: Bolt or weld crossmember to L bracket.

SUPPORT ANGLE INSTALLATION

- The Support Angle comes cut at 41°. The Support Angle will be placed under the rear of the scissor for support when it's in the resting position.
- You will have to cut the angle to fit the chassis. On a C-frame chassis you will find a clear location in the chassis to bolt the angle to the top flange of the chassis. (figure 6)



↑ figure 6: Bolt angle under top of chassis frame.

SUPPORT ANGLE INSTALLATION

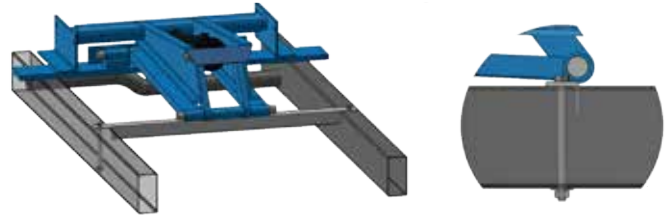
(continued on next page)

INSTALLATION (continued)

SUPPORT ANGLE INSTALLATION (continued)

- To install the Support Angle on a Tube Frame Chassis you will cut the Support Angle to fit the outside of the Chassis. (figure 7)
- Once cut you will notch one leg of the Support Angle at both ends. This will allow the lip to rest on the top of the chassis and the remaining leg to hang between the inside chassis frame rails.
- Position in a clear spot in the chassis under the scissor assembly. Bolt through the Support Angle and the chassis frame.

NOTE: If the rear of your scissor lands on a factory crossmember and is being supported you will not need to use the Support Angle.



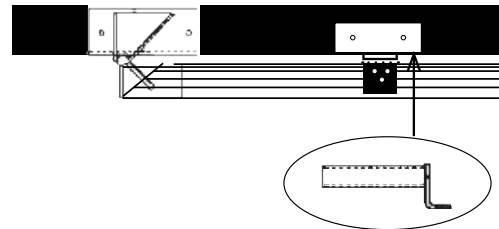
↑ figure 7: Bolt angle to top of chassis frame.

SILL SUPPORT INSTALLATION

Grease sill support before installing. Sill supports slip into the scissor assembly tubing and support the truck bed. Sill support bolt location is determined by the bed's sill construction. (figure 8) Modification may be required. Examples include:

- **Notching:** The bed crossmembers may interfere with the kit.
- **Cutting:** If bed height is an issue, cut the sill support to fit within the sill.

NOTE: Do not weld the sill supports to the sill.



↑ figure 8: Install sill supports.

DRY FIT & UNDER BED MODIFICATIONS

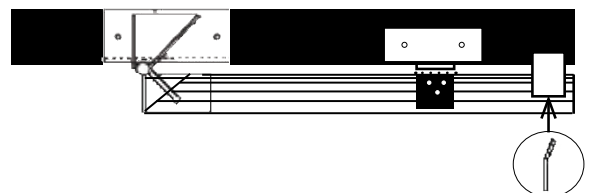
- Before final welding, dry fit the bed to ensure proper bed alignment and any clearance issues.
- If you have a 10' bed with a 60" cab to axle, or a 12' bed with a 84" cab to axle, under bed crossmember trimming will be required. A dry fit will determine any issues.
- During the dry fit, notch the sill support and sill hinge holes for drilling. (figure 9)
- Remove the bed, drill the sill support and sill hinge holes.
- Dry fit again to ensure bolt hole alignment.



↑ figure 9: Notch sill support and hinge holes.

FINAL WELDING & BOLTING

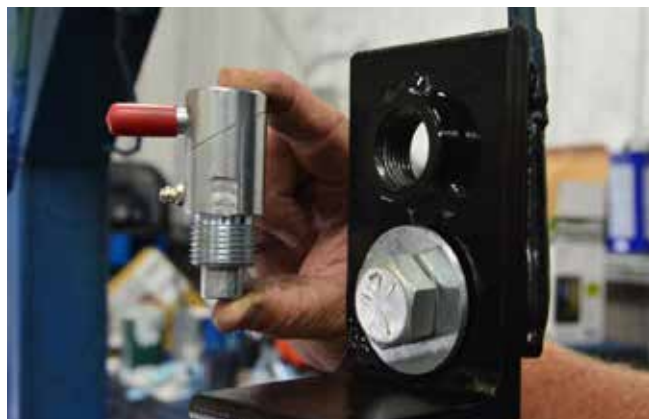
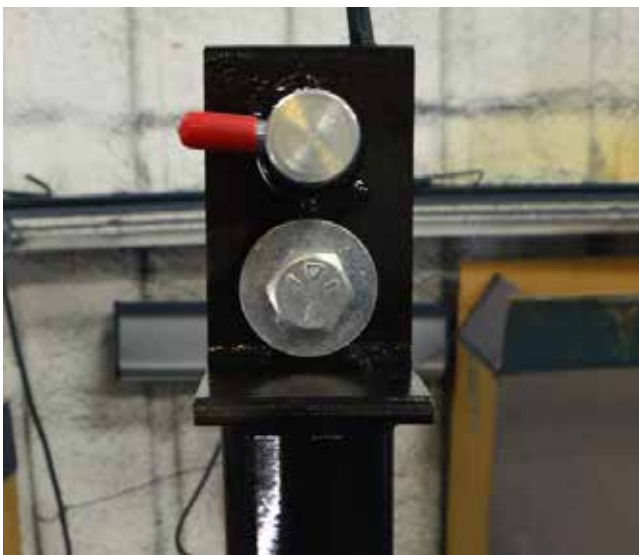
- Complete the bolting or welding of the crossmember to the frame L bracket.
- Bolt the sill support to the bed frame using the 1/2" bolts, flat washers and locking nuts.
- Bolt guides to the truck frame or weld to accessory but do not weld to the frame. (figure 10)



↑ figure 10: Bolt guides to truck frame.

SAFETY PROP INSTALLATION

- Install the safety prop with the bed in the up position so that you can adjust where the prop needs to mount.
- The safety prop base will bolt to the main frame of the bed using two 1/2" G8 bolts (supplied).
- Allow the prop to hang and lower the bed until the prop reaches where the base would mount. This will ensure that the base is going to line up with safety prop.
- Prop is only intended for use on an empty bed.



WIRING

PUMP INSTALLATION

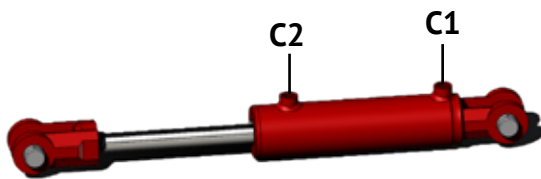
- Mount the pump to the outside of the right frame, just forward of the rear spring hanger using the 8" x 7" L-bracket.
- The pump should be mounted level, with the vent/filler up, using (2) 3/8"-16 x 1" screws.

NOTE: Pump location can vary. This is only the recommended location, not required. The pump can mount to any "safe" location

NOTE: You may have to remove the magnetic coil in order to attach the adapter fitting to the pump body

CYLINDER PUMP CONNECTIONS

- Power Up Power Down kits are O-ring and do not require sealer.
- Install the pump fitting and attach the hydraulic hose. Attach the opposite end of the hydraulic hose to the base end of the hydraulic cylinder (C1). On power down kits, the pump will have (2) ports. The port marked C1 is the high-pressure port. The port marked C2 is the low pressure (return) port. (figure 9)
- On gravity down kits unscrew and remove the coil on the pump. There will be only one hose. Attach the opposite end of the hydraulic hose to the base end of the hydraulic cylinder (C1). There is a vent in C2
- Use Teflon paste (do not use Teflon tape) around the fitting threads.
- Return the coil to the pump



↑ figure 9: power up power down ports

PUMP RESERVOIR

- The pump's reservoir is supplied with a temporary plastic plug in the fill opening. Fill with up to 1.5-2 gallons of automatic transmission fluid (Actual amount will vary by pump supplied).
- After filling the reservoir, install the vented plastic plug into the fill opening. The vented plug is packed in the pump box, or in a false hole at the front of the reservoir.

REMOTE WIRING

- The power wire (green) on the pendant control will connect to the large power terminal on the solenoid.
- The "start" wire (black) will connect to the small terminal on the solenoid.
- The "up" wire (white) will connect to the small terminal on the magnetic coil on the C1 port.
- The "down" wire (red) will connect to the magnetic coil on the C2 port.

POSITIVE

- Mount the circuit breaker as close as possible to the battery. Cut the #4 gauge red wire so there is enough cable to reach from the battery's positive terminal to the circuit breaker with a little slack.
- Connect the short cable to the positive terminal and the circuit breaker terminal marked "BAT LINE". Using the remainder of the red wire, connect from the circuit breaker terminal marked "AUX LOAD" to the large terminal on the pump solenoid. Be sure that the red wire does not rub on anything that has a sharp edge, generates heat, or has moving parts.

NEGATIVE

- Connect the #4 gauge black wire to the mounting bolt on the side of the pump labeled "GND". Route the black wire back to the battery. Connect the black wire directly to the negative terminal of the battery. The ground wire **MUST** be attached as described to the pump and to the battery. Do **NOT** cut the black wire short and ground to the frame.

NOTE: Be sure not to connect any wire to the solenoid terminal that has a large copper buss bar connecting to the single pump motor terminal. Do not allow any wiring to touch the buss bar, or its connections. It is **NOT** a ground, it is the final connection to the motor.

WIRING DIAGRAMS

Control Wiring

All PIERCE dump kits come with a power up / power down Bucher pump.

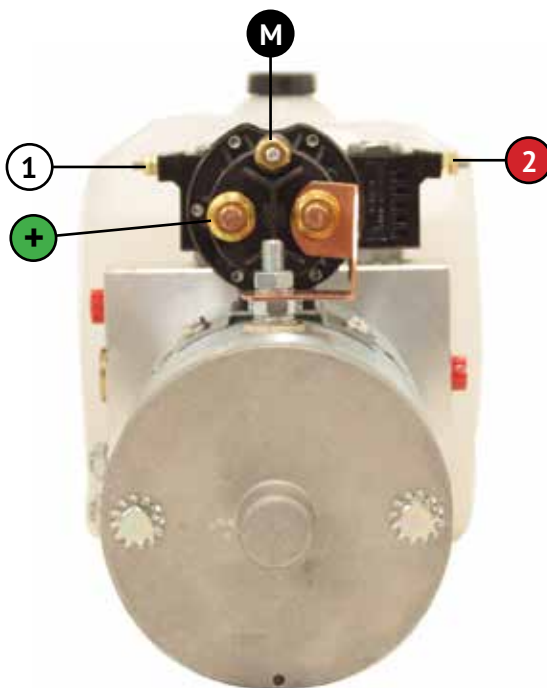
SPECIFICATIONS

PRESSURE	2,500 PSI and 500 PSI
TANK CAPACITY	2 gal. (6.7"x6.7"x15")
RESERVOIR MATERIAL	Polyethylene
OVERALL DIMENSIONS	23.125" x 6.7" x 7.84"
HOSE CONNECTION	#6 SAE
VOLTAGE	12 V
TYPE OF FLUID	Automatic Transmission Fluid
FUNCTIONS	2-way

Installation of the 200 amp breaker (76631) is required.

Use #4 or larger wire for all power connections. Remote is 18 gauge wire

Secure the battery cable with zip ties every 12".



- + 12V
- 1 COIL 1
- 2 COIL 2
- M MASTER



CP077K Remote

WIRING HARNESS CONNECTION

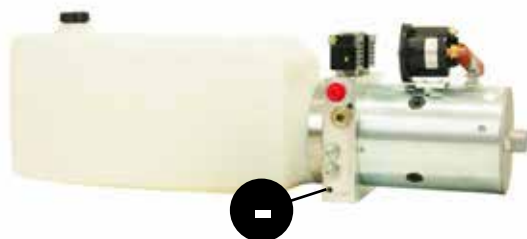
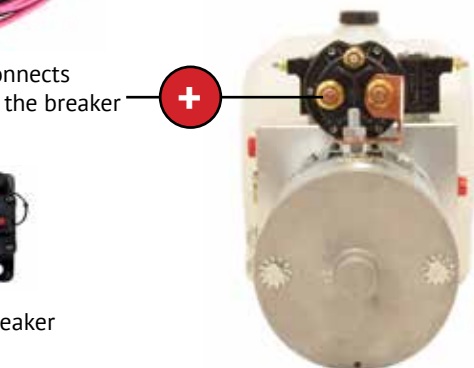


- + POSITIVE
- NEGATIVE

Connects to the breaker +



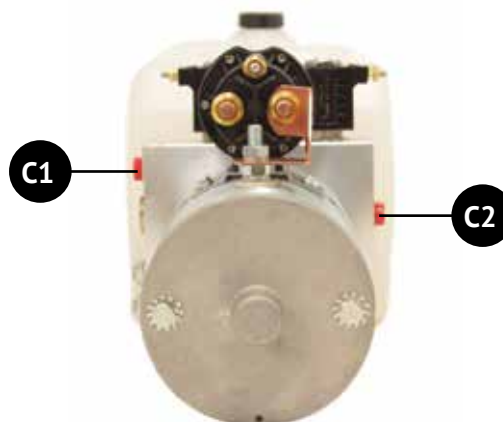
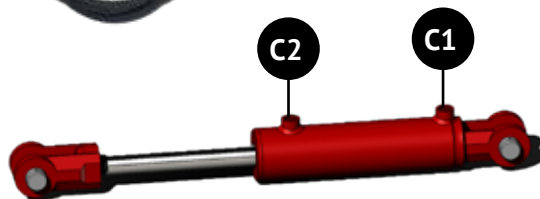
76631 Breaker



HYDRAULIC HOSE CONNECTION



- C1 High Pressure Port
- C2 Low Pressure Port



TOWING

Trailers should NOT be towed by the bed. Receiver hitches should be removed before installing your hoist kit. Upon completion, raise the bed to the highest point, place your receiver hitch near the frame where it is clear of the bed and tailboard. You will need to cut and modify the receiver hitch to fit in this new, closer to the front, location. The receiver should be reinforced and welded in place. Note that any modification to the receiver hitch MUST result in a unit that is as strong as in its original configuration. A longer ball mount may be required. Check for clearance; This way the bed cannot be inadvertently raised and damaged by the ball mount.

TROUBLESHOOTING

BED WILL NOT LIFT

First, make sure that the pump is plumbed properly. The PM-3551 pump has two hydraulic ports. The port labeled C1 should be plumbed to the base end of the cylinder. The port labeled C2 should be plumbed to the rod end of the cylinder. Then check your voltage at the pump. Make sure that there is 12V at the solenoid terminal. Operate the pump and check the voltage again. Power should stay near 12V, but should not drop below 12V. If this is not achieved, check all wiring and all connections.

PUMP IS SLOW

First, check your voltage at the pump. Make sure that there is 12V at the solenoid terminal. Operate the pump and check the voltage again. Power should stay near 12V, but should not drop below 12V. If this is not achieved, check all wiring and all connections. Check suction tube filter for blockage.

LEAKS

If fluid is leaking from any fittings or hose, simply tighten the fitting. **DO NOT** use pipe thread sealant tape on any fittings. Only use pipe thread sealant paste. Tape can break loose and cause blockages in the hydraulic system.

CALL

If these steps do not fix your pump, call us at 940-538-5643 and see what other options are available.

LIMITED WARRANTY

Pierce Arrow Inc. warrants that the goods, equipment, and merchandise manufactured by Pierce Arrow Inc. are free from defects in material and workmanship. The limited warranty includes replacement or repair of defective mechanical and electrical parts for a period of two years from the date of shipment by Pierce Arrow Inc.

OBTAINING WARRANTY SERVICE

Pierce Arrow Inc. must be notified of any defect before repair or replacement may be granted. The merchandise must be delivered by the purchaser to Pierce Arrow Inc. in Henrietta, Texas at the purchaser's expense. Any repairs not made by Pierce Arrow Inc. are not covered by the limited warranty and are the responsibility of the purchaser.

Pierce Arrow Inc. reserves the right to repair or replace defective parts or products in its sole discretion. The cost of any repairs not covered by the warranty will be charged to the purchaser.

EXCLUSIONS

All Pierce products are manufactured for a specific intended purpose. The Pierce Arrow Inc. limited warranty does not cover, and Pierce Arrow Inc. is not liable for, damage arising from any use other than the specific intended use of each product.

The Pierce Arrow Inc. limited warranty does not cover:

- Ongoing maintenance parts or repair due to normal wear and tear, and
- Any change or defect due to accident, misuse or any use for which the equipment was not intended, improper or unauthorized repair, failure to provide regular maintenance, and deterioration due to weather or road conditions.

Purchasers should consult their owner's manual for safety, installation, operation, and maintenance guidelines.

The Pierce Arrow Inc. limited warranty does not cover purchaser's cost of labor, transportation, shipping damages, installation or removal costs, down time, loss of profit or goodwill, or any other special, incidental, indirect, or consequential damages, concerning or related to any product or part, whether based upon negligence, strict liability, breach of contract, breach of warranty, misrepresentation, or any other legal theory.

Merchandise manufactured by Pierce Arrow Inc. is not designed or intended for the movement of people and are not to be used in the operation of elevators or other improper uses. Any improper use of the product may void the warranty.

OTHER MANUFACTURERS' WARRANTIES

Pierce Arrow Inc. makes no warranty, expressed or implied, to finished products manufactured or supplied by other manufacturers, and sold by Pierce Arrow Inc. to the purchaser, including but not limited to, any vehicle to which our product is affixed and any accessories. Such merchandise is subject to the manufacturer's warranty only, which will be provided upon request.

CONDITIONS OF SALE

When placing an order with Pierce Arrow Inc., the terms and conditions provided for payment, shipping, delivery and claims create an agreement between the purchaser and Pierce Arrow Inc. The agreement is to be performed in Clay County, Texas.

RETURNS: No returns are accepted without prior authorization. All items must be returned in their entirety. Please contact a sales representative for authorization. Upon authorization, returns must be shipped freight prepaid and may be subject to a 20% restocking fee. Please do not send returns COD. No returns will be accepted later than 30 days from the date of invoice.

DAMAGED GOODS: Pierce Arrow Inc. is not responsible for, and has no liability for:

- Damage arising during shipment
- Any change or defect due to accident, misuse or any use for which the equipment was not intended, improper or unauthorized repair, failure to provide regular maintenance, and deterioration due to weather or road conditions.

CLAIMS: Claims for breakage or damages during shipment must be made to the carrier at the time of delivery. If a signature is required, you must notify the driver and sign that there was damage. You must notify Pierce Arrow Inc. of the damage promptly so that a claim can be filed.



Thank you for choosing PIERCE!

We strive for 100% customer satisfaction. We are committed to excellent customer service because we are *pulling for you.*

SHARE YOUR FEEDBACK

Are you 100% satisfied?

- **If YES:** Please leave us a review on Google at www.piercearrowinc.com
- **If NO:** Call us at 800-658-6301 or let us know how we can help at www.piercearrowinc.com/contact-us

LEARN MORE ABOUT PIERCE PRODUCTS

We'd be happy to send you a catalog. Or call our team today with further questions. Check out our resource library to access Pierce specification sheets, wiring diagrams, and manuals.

<https://www.piercearrowinc.com/documents/>

KEEP IN CONTACT

Pierce Arrow Inc.	Toll Free:(800) 658-6301
549 US Highway 287 South	Local: (940) 538-5643
Henrietta, Texas 76365	Fax: (940) 538-4382

www.piercearrowinc.com
www.youtube.com/piercearrowinc

Contact us – call, email, fax, telegraph, morse code.
Our sales team and technical service reps are ready and here to help you.

Open Monday – Friday 8 a.m. – 5 p.m. CST.

SHIPPING INFORMATION

All orders placed over the weekend will ship the following Monday unless it's a holiday.
Orders placed during holidays will ship when we return for work.