

**DK2UCSB99KPD**

**PIERCE**

**CHEVY/GM 1999-2017 SHORT BED  
2-TON DUMP HOIST**

## **Installation Instructions & Owner's Manual**

Please thoroughly read all instructions before beginning installation.

For technical help, call the tech support office at 800-658-6301

Monday-Friday 8:00AM to 5:00PM Central Time

**[WWW.PIERCEARROWINC.COM](http://WWW.PIERCEARROWINC.COM)**



# DK2UCSB99KPD Parts Listing

1 PM-3551 Hydraulic Pump (gravity down option will contain PM-319 Hydraulic Pump)

1 Scissor Assembly (Contains black scissor frame and hydraulic cylinder)

1 Upper Frame (Maroon 22" x 18")

1 Lower Frame (Maroon 10" x 8")

2 Bed Vertical Reinforcement Tubing (Maroon 2" x 2" x 43")

1 Bed Vertical Upper Frame Reinforcement Tubing (Maroon 2" x 2" x 14-1/8")

1 Bed Vertical Upper Frame Reinforcement Tubing (Maroon 2" x 2" x 14.25")

1 Bed Upper Horizontal Reinforcement Tubing (Maroon 2" x 2" x 57")

1 Bed Lower Horizontal Reinforcement Tubing (Maroon 2" x 2" x 36")

1 Fuel Filler Pipe (7" x 28" aluminum pipe)

1 Parts box

- Installation/Owner's Manual
- Electrical/Hydraulic/Hardware Bag

## Electrical

- 20' #4 Black Wire
- 20' #4 Red Wire
- 6x 5/16" Battery Eye
- 1x 200 Amp Breaker
- 1x 2-Button Pendant Control

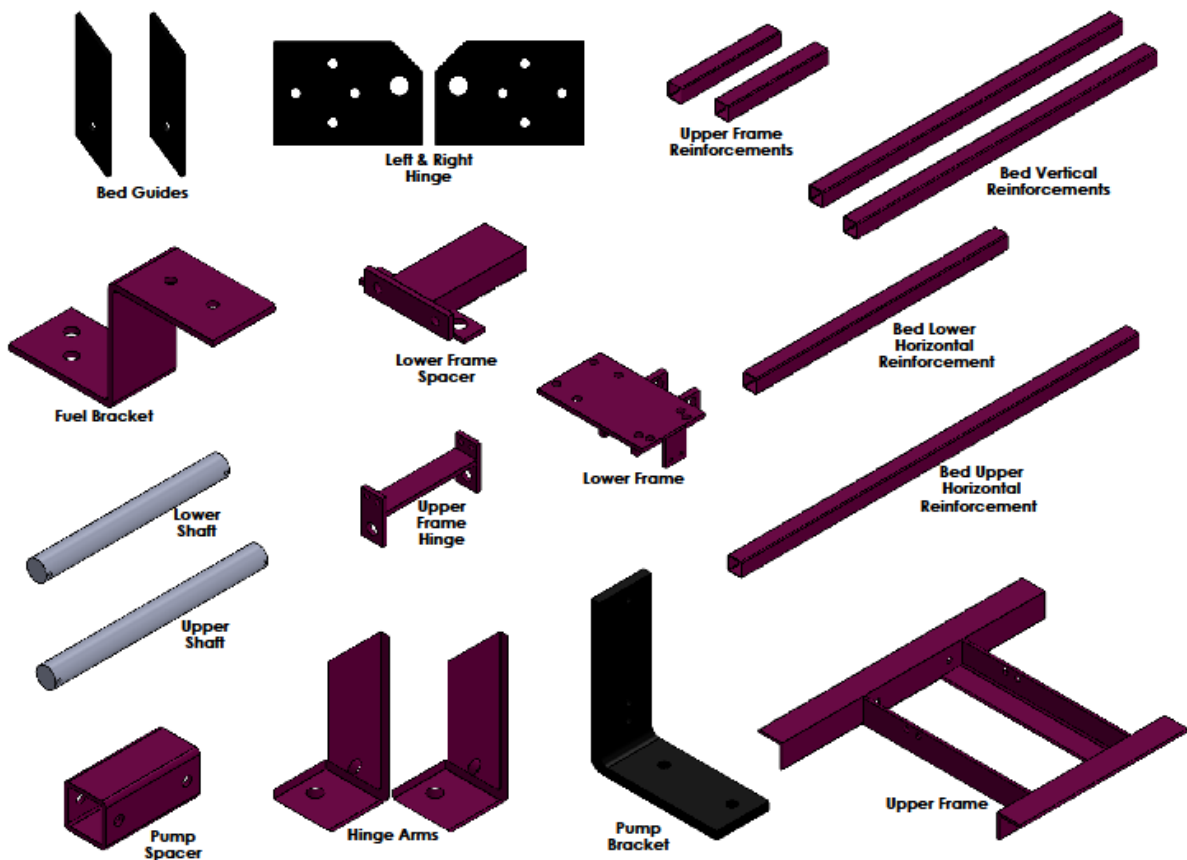
## Hydraulic

- 1x 5' Hydraulic Hose
- 1x 7' Hydraulic Hose
- 1x 90° 1/4" Pipe Pump Fitting (Standard only with gravity down kits)
- 2x 90° O-Ring Pump Fitting

## Hardware

- 2x Hex Screw, 5/8"-11 x 2-1/2" Grade 8
- 2x Flat Washer, 5/8"
- 2x Lock Nut, 5/8"-11 Grade 8
- 18x Hex Screw, 3/8"-16 x 1" Grade 8
- 4x Hex Screw, 3/8"-16 x 5"
- 2x Hex Screw, 3/8" x 3"
- 2x Hex Screw, 3/8"-16 x 3.5"
- 22x Lock Nut, 3/8"
- 6x Flat Washer, 3/8"
- 2x Hex Screw, 5/16"-18 x 1"
- 2x Lock Nut, 5/16"
- 2x 3.5" U-Bolt
- 2x 3" U-Bolt
- 4x Lock Nut, 1/2"
- 4x Flat Washer, 1/2"
- 1x 3" Hose Clamp
- 2x 2" Hose Clamp
- 4x Cotter Pin, 1/8" x 2"
- 2x 1/8" Cable Clamp
- 2x Rubber Bumper
- 1x Scissor Support Cable
- Steel Parts Assortment
  - 1x Right Hinge (Black, 5" x 3.5", w/Welded Pipe)
  - 1x Left Hinge (Black, 5" x 3.5", w/Welded Pipe)
  - 2x Hinge Arm (Maroon, L-Bracket, 7" x 3")
  - 1x Upper Frame Hinge (Maroon, 9-3/8" x 4")

- 1x Lower Frame (Maroon, 10" x 7.7" x 3")
- 1x Lower Frame Spacer (Maroon, 4.75" x 5" x 1")
- 1x Lower Shaft (15/16" x 8.75")
- 1x Upper Shaft (15/16" 10-1/8")
- 2x Guides (Black, Parallelogram, 6" x 1.5")
- 1x Pump Bracket (Black, L-Bracket, 7" x 6")
- 1x Pump Spacer (Maroon, 2" x 2" x 4.5")
- 1x Filler Bracket (Maroon, Z-Bracket 5" x 5" x 5")



**DK2UCSB99K Parts Break Down**

# Important Safety Rules

- Follow all safety rules provided with the power tools used to install your kit.
- Use correctly sized lifting equipment to raise the bed of your truck.
- Always have a backup device in place when working under the bed on your truck. This is in addition to the primary hoist or prop mechanism.
- Wear safety glasses.
- Use UL rated grounded electrical cords and tools.
- Your gas tank is located very close to the scissors and other kit components. Cover with a fireproof tarp and do not allow any sparks in this area. Clean any spills with water.
- Check bed clearance after the hinges are installed to ensure that the bed will not hit the cab during operation.
- Always level the load in your bed.
- Be sure no one is close enough to be injured when you dump the load from your bed.
- Do not exceed the cargo capacity as listed by the truck manufacturer. The kit will lift a level, evenly distributed load of 4000 lbs., including the weight of the bed.
- Dump the load in your truck when your truck is level.
- Grease pins and all moving components monthly.
- Tow trailers only with an appropriated classified receiver hitch. Do not use the bumper for any towing.

# Tools and Equipment

Hacksaw or reciprocating saw

Welder or weld shop availability

Correctly rated hoist or lifting device

Cutting torch

Portable electric drill and various sized drill bits

Various Sockets, wrenches, and a slotted screwdriver

Tape measure

C Clamps and vise grips

Safety glasses

Welders mask/helmet

1 gallon of automatic transmission fluid

## INSTALLATION OVERVIEW

Read all safety rules. Check the parts list. Disconnect the battery. Remove your bumper. Remove the gas filler from the bed. Disconnect or remove wiring between the frame and the bed. Remove or shorten any spare tire lowering device that would interfere with bed rotation. Remove the bolts holding the bed to the frame. It is not necessary to completely remove your bed. It must be raised high enough in the rear to install the hinges safely. Install the hinges per the directions provided later in this manual. Install the upper frame between the two bed cross members located directly above the main frame. The main frame cross member is located near the front spring hangers for the rear suspension. The left to right position for the upper frame should be as close to the truck centerline as possible, but offset enough that the scissors assembly will clear the gas tank by  $\frac{1}{2}$ " or more. See the directions provided later. The scissors will extend forward of the differential assembly. Move any brake lines from the top of the differential to a point lower than the top surface of the differential. This will prevent any accidental damage to your brake system. Always check clearance of brake lines and electrical components to prevent any accidental damage. The position of the scissor assembly will be adjusted up and down by either moving the scissor assembly fore or aft. When the bed is down, the scissor assembly is about level. We provide a cable to support the back end of the scissor to prevent excess movement up/down when your truck hits bumps.

# INSTRUCTIONS FOR 1999-2017 CHEVY/GM SHORT BED HOIST

## **NOTE\***

Some 1999-2001 models were produced using the channel frame used in 1988-1998 trucks. These models will use the DK2UCSBK kit rather than the DK2UCSB99K kit. Parts are NOT interchangeable. This kit fits all 1999 and newer GM and Chevrolet short bed trucks with the round tubular cross member frame. If you are not sure, look at your rear wheel well. Just forward of the rear wheel on the side of the main fore and aft frame is a 3" or 3.5" diameter hole where the round cross member is welded to the main frame. If you have a channel frame, please call to report this issue so corrective action may be taken.

## **REAR HINGES:**

The bed must be installed 1" rearward from the original location to prevent bed/cab interference when raising the bed. Remove the gas filler assembly from the bed. Mark the original position of the bed on the frame. Remove the spare tire lowering mechanism from the bumper. Remove the rear bumper. Disconnect the wiring to the bed. Remove the bed to frame bolts. Raise the rear of the bed 7 or 8 inches above the frame. Cut a notch from the top of the frame, 5/8" down and 2" front to back from the rear edge of the frame on both sides. Using the original bed to frame bolts, attach the hinge arms to the bed. The vertical part of the hinge arm will be outside the frame and parallel. Lower the bed and move it rearward 1" from its original location. Keep the bed centered and straight with the truck frame. The hinges will attach to the inside of the frame with the welded pipe aligned with the pivot hole on the hinge arms. You will need to cut the frame where the welded pipe projects toward the pivot hole. Note\* For boxed frames, you will need to weld a 3/16" thick plate, about 7"-8" long on the outside of the frame for support. Place a washer between the welded pipe and the hinge arm to space the arm far enough from the bolt head. Insert the 5/8" pivot bolt through the hinge arm pivot hole and the welded pipe on the hinge. Install the 5/8" locknut until there is no play, but the bolt can still rotate. Mark the frame for "hinge to frame" bolt holes. Drill the frame for (4) 3/8" x 1" bolts at each hinge. Install the bolts with the bolt heads on the outside of the frame with the locknuts on the hinge side. The bed will now pivot. Check bed-cab clearance first to ensure the bed will not hit the cab during lift. If the hinge arms are straight and there is no binding by a chain lift or cherry picker, then the hinge arms should be welded to the bed frame. This will enhance the hinge arm to bed connection. All pivot points should be heavily greased at final assembly. Reconnect the wiring.





### Frame Modifications for Hinge

1999 Chevy/GM  
C99S  
scale 20



1. Cut out 5/8" x 2" notch
2. Attach hinge arms to rear most bed to frame bolts
3. Lower bed hinge arms to 1" rearward of original location
4. Mark through pivot hole on vertical portion of hinge arm on the frame
5. Cut a 1 1/4" diameter clearance for hinge welded nut in frame below notch

Side View  
GM6



**PROPRIETARY AND CONFIDENTIAL**  
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UNLESS OTHERWISE SPECIFIED:	NAME	DATE	TITLE:		
DIMENSIONS ARE IN INCHES	AF	5/10/2017	Frame Modifications for Hinge		
TOLERANCES:	CHECKED				
FRACTIONAL: ±	ENG APPR.				
ANGULAR: MACHS ± BEND ±	MFG APPR.				
TWO PLACE DECIMAL: ±	Q.A.				
THREE PLACE DECIMAL: ±	COMMENTS:		SIZE	DWG. NO.	REV
INTERPRET GEOMETRIC TOLERANCING PER:			A		
MATERIAL:			SCALE: 1:5	WEIGHT:	SHEET 1 OF 1
FRESH					
DO NOT SCALE DRAWING					

## **EVAPORATIVE EMISSION CONTROL SYSTEM RELOCATION:**

In 2004, GM Added a tab to the rear of the frame cross member at the rear of the cab. They moved the evaporative control components (charcoal can, purge valve, etc.) onto this tab. This tab interferes with our scissor and must be removed to install the hoist to 2004 and newer GM and Chevy trucks. Thus the evap. components must be moved to where GM placed them from 1999 to 2003. This can be relocated by removing the charcoal canister from the tab. When removing your hoses from the canister, mark your hoses for identification later. Once the charcoal canister is removed you will cut the tab off the cross member 1" behind the clips that hold the canister to the tab. The new location for the tab will be in front of the cross member behind the rear end. Use 6" of 1 1/2" x 1 1/2" x 1/8" angle on each side of the tab to connect to the cross member. Before welding completely, mount the canister back to the tab, lower the bed, and check for clearance. Check clearance below the tab to make sure you are not rubbing against any brake lines. Once the tab is fully welded and the canister is remounted you can plumb the canister back to the fuel tank. Looking at the canister, the nipple closest to the driver's side will be plumbed using 1/2" PVC pipe with all-purpose glue. This will run back to the hose that was unplugged from this location. The nipple on this end will need to be cut 1/8" behind the ridge and a 1/2" 90° PVC fitting will be glued to it using all-purpose glue. The fitting will need to be as close to the fuel tank as possible to clear the scissor. It will need to go to a 45° angle and run between the bracket that holds the strap for the fuel tank. The middle nipple on the canister will be plumbed using clear 3/8" plastic hose. Run with the PVC pipe and mount both ends using hose clamps. The nipple furthest from the driver side will be plumbed using 1/2" heater hose. Run along with PVC pipe back to the hose that was unplugged, and mount both ends using hose clamps.

2011-2017 2500 and 3500 series trucks do not have this tab. Some earlier trucks have the tab, but nothing is mounted on it. In this case, merely cut off the tab. Some diesels have the tab, but just a small device is mounted on the tab. Relocate the device to the front of the tab and cut off the rest of the tab. The scissor assembly should now clear.



## LOWER FRAME:

The main frame cross member (MFCM) has an offset up and down just to the right of the fuel tank on most models. On 2011-2014 2500 and 3500 series Chevys, the MFCM has no offset. It is straight and is 3.5" in diameter. The lower frame mounts to the MFCM with (2) 3.5" U-bolts on these trucks. No spacer to correct for the offset is used. On models with the 3" diameter MFCM, (2) 3.0" U-bolts and a spacer for the offset is used. The spacer is held by the 3" U-bolts closest to the fuel tank. The U-bolts will clamp tightly to the MFCM preventing any rotation under load. There are two 5/16" screws also ensuring that the lower frame (LF) does not rotate under a load. On models with a 3" MFCM, the 5/16" screws pass through the vertical lip on the LF spacer and through the fuel tank strap support bracket. You will drill the 5/16" holes in the fuel tank strap support bracket, using the spacer holes as a guide. The vertical lip on the spacer also locates the lower frame from side to side. When the scissor is attached to the lower frame it will clear the fuel tank and be as close to the truck center line as possible. On models with the 3.5" MFCM, the spacer is not used, but there are holes for (2) 5/16" screws in the vertical tab attached to the end of the LF closest to the fuel tank strap bracket attached to the LF.

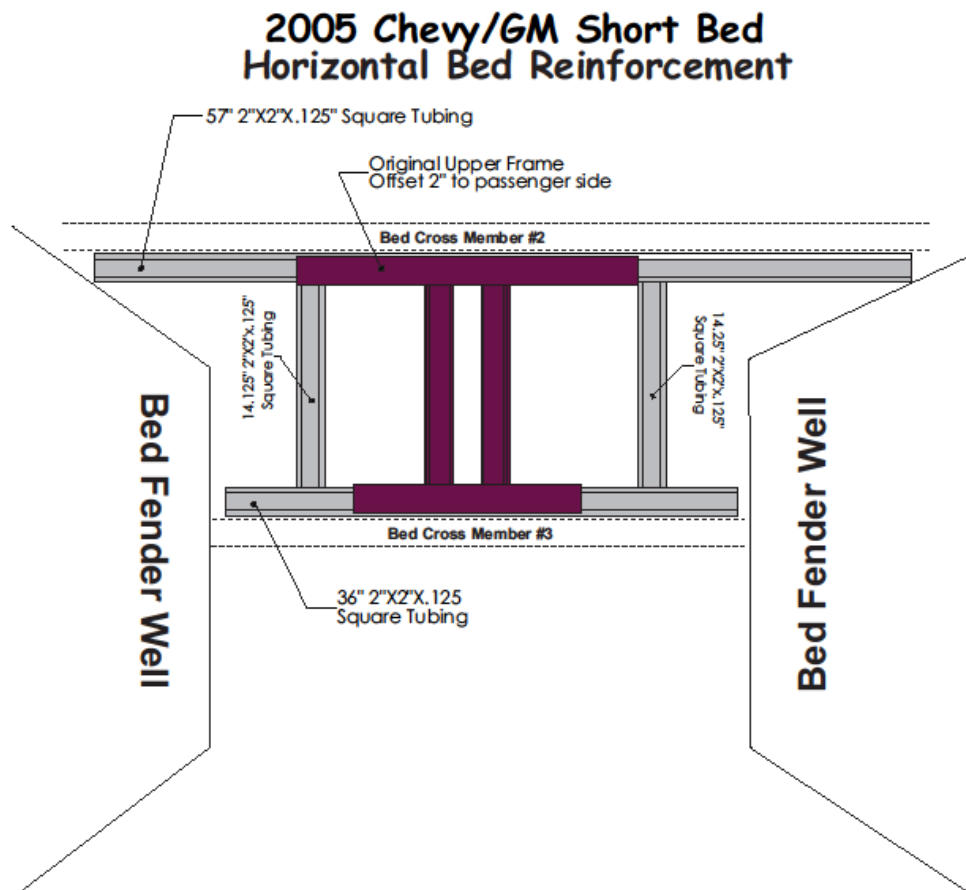
The LF should be attached so the 5/16" holes align with the tank strap bracket. The LF ears will be horizontal and pointing toward the rear end. Install and tighten the two 5/16" screws and lock nuts. Use (4) 1/2"-13 lock nuts and (4) 1/2" flat washers to secure the two U-bolts holding the LF to the MFCM. Torque to 75 foot pounds. If you see the U-bolts starting to indent into the MFCM, stop tightening. The nuts are self-locking and will not shake loose.



## UPPER FRAME & HORIZONTAL BED REINFORCEMENT:

Remove the heat shields in the front two bed sections.

Just forward of the #3 bed cross member and contacting #3 bed cross member, install the 36" maroon tubing across the width of the bed between the wheel wells. Use the 2" x 2" x 1/8" wall tube and tack-weld it to the bed cross member. Repeat with the other full bed width 2" x 2" x 57" tubing just rearward of cross member #2, contacting cross member #2. You will need to cut or grind the bed seam in front of the wheel well to allow this piece of tubing to lay in the correct position. These two beams will strengthen the factory bed from side to side. Install the upper frame (UF) with the UF hinge assembly above the LF. Move the UF from side to side so that a line from the center of the LF mounting ears to the center of the UF hinge mounting points is parallel with the fore and aft centerline of the truck. It will be offset from the center of the truck about 2", so the scissors properly clear the fuel tank. Clamp the upper frame in place. Mark and drill holes to match the location of the bolt hole on the upper frame. Drill holes and use the bolts supplied with the upper frame to pass through the 2" x 2" reinforcing tubing, the bed cross member and the upper frame. Place the maroon 2" x 2" x 14.125" tubing in between the horizontal reinforcement tubing of the passenger's side at the end of, but on, the upper frame and tack in place. Place the maroon 2" x 2" x 14.25" tubing on the driver's side at the end of the upper frame and tack in place. Refer to the diagram to ensure proper placement, then weld in place.

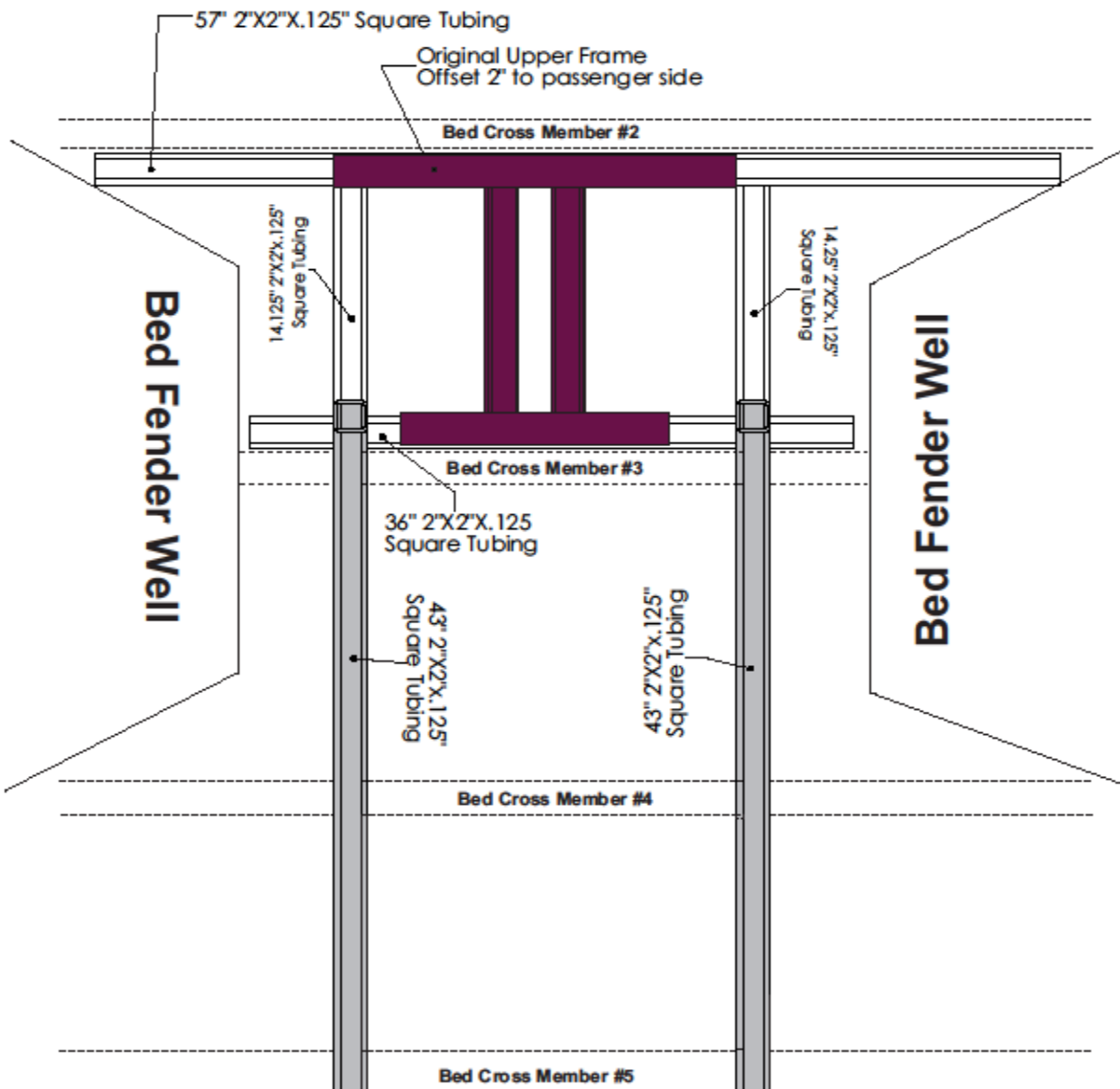


## VERTICAL BED REINFORCEMENT:

From the rear hinges forward, weld the 2" x 2" x 43" tube (both sides) from the hinge area forward, connecting to the rear cross beam installed to strengthen the bed from side to side. At the rear end weld the 2" x 2" x 43" tube to the rear-most bed cross member or the hinge arm. These will provide support to the hinge area of the factory bed and add strength longitudinally (front to rear).

Note\* You may have to cut and re-weld this tubing to clear the frame cross members

### 2005 Chevy/GM Short Bed Vertical Bed Reinforcement



### **SCISSOR ASSEMBLY:**

Attach the bottom section of the scissor assembly to the lower frame using the 15/16" x 8.75" pin. Remove the plastic plug from the hydraulic port and open the scissor assembly. Attach the top portion of the scissor assembly to the upper frame and secure with the 15/16" x 10-1/8" pin.

### **RUBBER BUMPER PADS:**

The bed should contact these for a quieter operation. Clean off the desired location on the truck or bed frame, near the front of the bed. Remove the adhesive back, and attach the rubber bumper pads.

### **FUEL FILLER:**

The fuel filler can be shortened and left in place at the front of the bed. Simple, but requires raising the bed a short distance to add fuel. The alternative is to install the filler in the wheel well, as high as possible and clear of the wheel. You will need to use the 7" x 28" fuel filler pipe to extend the filler neck to the wheel well.

Cut the rubber hose between the fuel tank and the filler so there is enough hose at the tank end for the short end of the elbow to enter the hose 1.5" and clamp with a hose clamp. Attach the filler and remaining hose to the long end of the rear wheel well so the filler cap extends just past the two holes in the Z-bracket. You must shorten the hose for an exact fit. The filler should be in the upper forward part of the wheel well opening, at an angle to meet a fuel pump nozzle from a fuel pump. The filler must be located so the tire will not touch it at any point. Use a large hose clamp to pass through the holes in the Z-bracket and around the filler. The vent hose must also be extended from the tank to the filler. The third small vent hose can be relocated to the back of the cab where it will not interfere with movement of the bed when dumping.



## **SUPPORT CABLE:**

There is some slack in the scissor assembly when installed. The provided cable can go under the scissors, attaching to both left and right main longitudinal frame members. Alternatively, a 1/4" x 2" flat bar (not included) can be welded to both left and right frame members toward the end of the scissors furthest from the lower frame. A covering of rubber or hose will prevent rattles. This supports the weight of the scissors and unloads the hinge pins. This will also help to keep the scissor assembly from hitting the rear differential.

## **PUMP:**

It is recommended that the pump mount to the outside of the right frame, just forward of the rear spring hanger (This is only recommended, not required. The pump can mount to any "safe" location) 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.

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

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. If the pump ports are not labelled, the port on the left-hand side (with the motor pointing towards you, and the reservoir pointing away from you) is the high-pressure port, and the port on the right side is the low-pressure (return) port

The pump's reservoir is supplied with a temporary plastic plug in the fill opening. Fill with up to 1.5 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.

Note\* Some pumps interfere with the vertical frame when the pump bracket is bolted to the frame. A 2" x 2" x 4" spacer is provided to space the pump bracket out from the frame for clearance. It generally will not be used.

## **GUIDES:**

The guides are the 2 parallelogram shaped pieces that attach to the bed and provide alignment of the bed to the truck, side to side. They attach to the front of the bed and contact the frame, either inside or outside. They also prevent any side to side movement when the bed is down. The bottom of the guides are pointed, so be sure that they do not contact anything other than the edge of the left and right frames.



## **WIRING:**

Wired pendant control:

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 “down” wire (white) will connect to the small terminal on the magnetic coil on the C1 port.

On power down pumps, the “up” wire (red) will connect to the magnetic coil on the C2 port.

\*To install a wireless remote, refer to the manufacturer’s installation instructions.

Optional In-Cab Toggle Switch Wiring:

Mount the switch in the dash, or somewhere convenient from the driver’s seat. The switch will mount in a ½” hole. Orient the switch so it moves up and down, vertically. Using the 18/3 ribbon wire, connect the brown wire to the center terminal on your toggle switch. The yellow wire will mount to the top terminal, and the green wire will connect to the bottom terminal.

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.

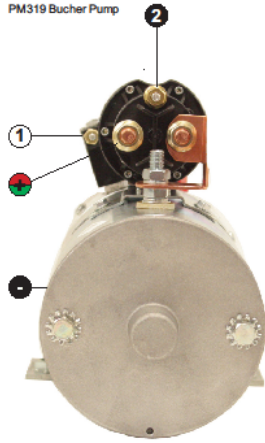
Negative:

Connect the #4 gauge black wire to the mounting bolt on the side of the pump labelled “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 it’s connections. It is NOT a ground, it is the final connection to the motor.

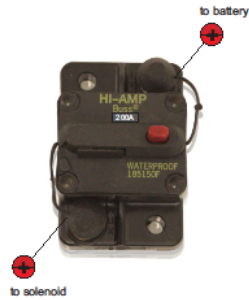
## BUCHER PUMP to BREAKER

PM319 Bucher Pump



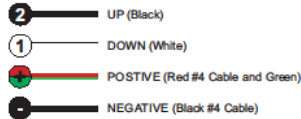
76631 Breaker

To protect your pump, please use a safety cutoff switch or ampere breaker.



### REMOTE CONNECTIONS

Pierce wired or wireless remotes including the P040 and CP271 connect to a PM319. Wired remotes will have three wires whereas the wireless connections will have four.



## PIERCE

Pierce Arrow Inc. • www.piercearrowinc.com • 1-800-658-6301  
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CATEGORY PUMP

PART NO. PM319

### PRODUCT DESCRIPTION

Bucher Pump to Breaker & Remote

### WIRING DESCRIPTION

This chart depicts wiring from a Bucher PM319 pump to the Pierce breaker.

NOTE: Place breaker as close to battery as install allows. Use #4 gauge cable for all connections. Use a 5/16-18" x 3/4" bolt for the ground connection. Wiring not included.

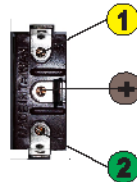
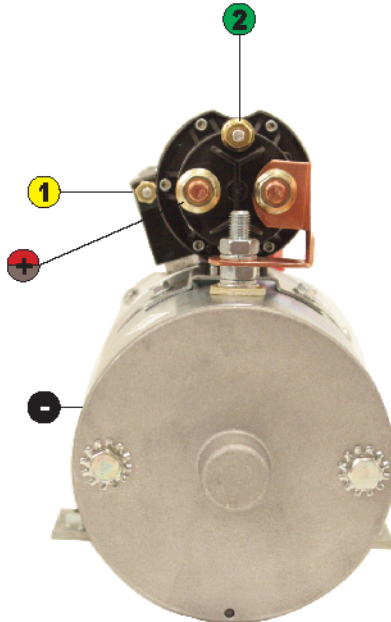
### WIRING CHART

Connect the wires to the corresponding signs.

- POSITIVE (Red #4 Cable and Green)
- NEGATIVE (Black #4 Cable)
- 1 DOWN (White)
- 2 UP (Black)

## BUCHER PUMP

Pm319 Bucher Pump to PS525 Toggle Switch



## PIERCE

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CATEGORY PUMP

PART NO. Pm319, PM3196P

### PRODUCT DESCRIPTION

Bucher Pump to Toggle Switch

### WIRING DESCRIPTION

This chart depicts wiring from a Bucher PM319 pump to the Pierce PS525 Toggle Switch.

NOTE: Place breaker as close to battery as install allows. Use #4 gauge cable for all connections. Use a 5/16-18" x 3/4" bolt for the ground connection. Wiring not included.

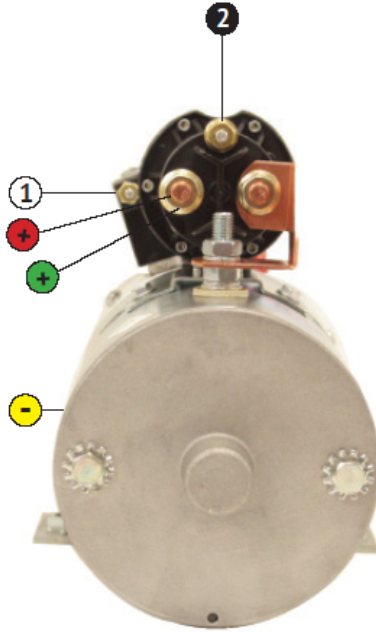
### WIRING CHART

Connect the wires to the corresponding signs.

- POSITIVE (red #4 Cable and Brown)
- NEGATIVE (Black #4 Cable)
- 1 DOWN (Yellow)
- 2 UP (Green)

## BUCHER PUMP

PM319 Bucher Pump



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CATEGORY PUMP

PART NO. PM319

### PRODUCT DESCRIPTION

Bucher Pump

### WIRING DESCRIPTION

This chart depicts wiring from a Bucher PM319 pump to the Pierce CP271MTE.  
NOTE: Place breaker as close to battery as install allows. Use #4 gauge cable for all connections. Use a 5/16-18" x 3/4" bolt for the ground connection. Wiring not included.

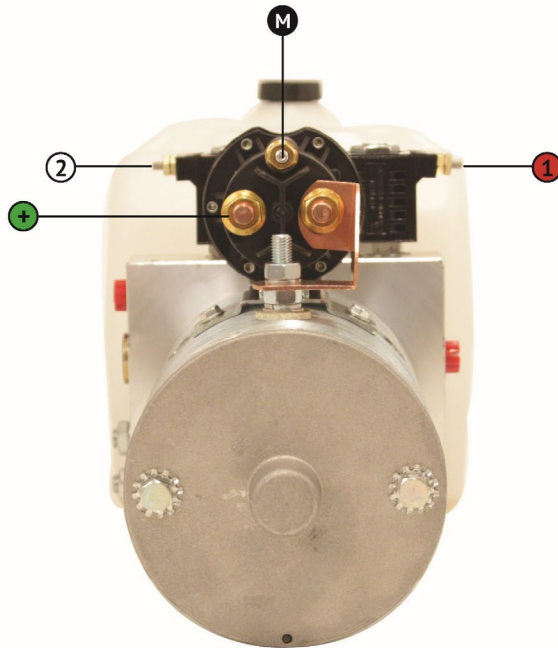
### WIRING CHART

Connect the wires to the corresponding signs.

- + POSITIVE (red to the remote)
- + POSITIVE (green to main power)
- NEGATIVE (yellow to the main ground)
- ① DOWN (white to the remote)
- ② UP (black to the remote)

## BUCHER PUMP with TWO-WAY VALVE

PM-3551 Bucher Pump with CP077K wired control



## PIERCE®

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549 U.S. HWY 287 S. • Henrietta, Texas 76365

CATEGORY PUMP

PART NO. PM-3551

### PRODUCT DESCRIPTION

Bucher Pump with Two-way Valve

### WIRING DESCRIPTION

This chart depicts wiring of a Bucher PM-3551 pump.  
NOTE: Use #16 or #18 gauge wires for all connections. Use a 5/16-18" x 1/2" bolt for the ground connection. Wiring not included.

### WIRING CHART

Connect the wires to the corresponding signs.

- + 12V (green)
- 1 RIGHT COIL (red)
- ② LEFT COIL (white)
- M MASTER (black)  
Compatible with CP077K, 38901155

## **REAR BUMPER:**

The rear bumper is only decorative and provides no function when the hoist kit is installed. Trailers should NOT be towed by the bumper. If there is no receiver hitch, the bumper brackets should be welded to the hinge arms so the bumper will rotate with the bed. The warning label provided with the kit should be applied to the bumper where it is clear and visible.

## **TOWING:**

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 bumper. 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 must be purchased or fabricated from a 2" x 2" flat bar. Check for clearance; This way the bed cannot be inadvertently raised and damaged by the ball mount.

Alternate options:

- Leave receiver hitch in the original location. Remove the OE bumper.
- Leave receiver hitch in the original location. Remove the OE bumper. Fabricate a 1/3 length bumper for the left and right, attach to the hinge arms. The center 1/3 is open to clear the receiver hitch.
- Leave the receiver hitch in the original location. Remove the OE bumper. Install a 2" x 4" rectangular tube just above the receiver hitch and weld it to the frame. It will be a stationary bumper. The 2" dimension is up/down, the 4" dimension is left/right. This choice results in the strongest bumper system and does not interfere with any towing function.

## **MAINTENANCE:**

- Grease all pins, scissor assembly and hinges monthly.
- Fluid should be changed yearly. Once the reservoir is drained, remove the reservoir. Using a mild solvent, clean the screen filter on the suction tube. While the reservoir is off, clean out any debris. Re-install the reservoir, making sure to lubricate the sealing o-ring with hydraulic oil before seating to assist in re-installation. Tighten all screws/hose

clamps.

- Check wiring, all connections, terminals and battery yearly. Corrosion will cause voltage drops. When corrosion is found, remove any corroded wire and replace any terminals when necessary. If any wire is found frayed or cut, it must be replaced.

## **TROUBLESHOOTING:**

- Bed will not lift:
  - 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.
  - On Power down pumps, make sure that the pump is plumbed properly. The PM-3551 pump has two hydraulic ports. The port labelled C1 should be plumbed to the base end of the cylinder. The port labelled C2 should be plumbed to the rod end of the cylinder.
- 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 (refer to maintenance).
- Leaks
  - Upon installation, there may be a bit of fluid seeping from the cylinder vent. This is not a leak, but merely residual fluid from pressure testing the cylinder.
  - 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 Pierce
  - In the event you need any assistance please call 800-658-6301.

## **Official Pierce Arrow Inc. Product 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 PIERCE 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 products 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 15% 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, damage arising during purchaser's assembly, installation, or construction of or with the products, and damage arising from accident, misuse or any use for which the equipment was not intended, improper or unauthorized repair, or 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.



