

Pierce Arrow Inc.

5, 7.5, 10 T Dump Kit Owner's Manual



Log on to www.youtube.com/piercearrowinc or use your QR code reader to view the following videos of a 5T installation:



1 View how to begin your installation.



2 View how to wire your installation.



3 View how to finish your installation.



4 Customer testimonial.

Pierce Hefty Hoist Instructions

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.

WARNINGS

-  Read the installation manual before proceeding.
-  Disconnect the vehicle battery before welding.
-  All wires must be supported by the truck frame. Wires connected to the bed are hazardous.
-  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.
-  Never exceed the weight limit of your equipment. Refer to your vehicle's owner's manual for more information.
-  Install a safety cut-off switch to prevent electrical shorts.
-  Secure all electrical lines every 12"-16" with zip ties.

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VIDEO INSTRUCTIONS

Log on to www.youtube.com/piercearrowinc and click on the dump kit play list for the hefty hoist installation three part series.

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Before beginning . . .

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

1. What is the bed length?
2. How much overhang past the frame can I have?
3. What is the optimal dump angle for my application?

Desired bed height and lift capacity are determined by the placement of the crossmember. Chassis construction may dictate crossmember location.

CHOOSING THE LIFT ANGLE

The bed length and overhang length effect the capacity of your kit. For example, if you require the maximum capacity for a 7.5 T kit you must have:

8' bed with 12" overhang

- or -

10' bed with 24" overhang

- or -

12' bed with 36" overhang

Refer to the table to the right for more information.

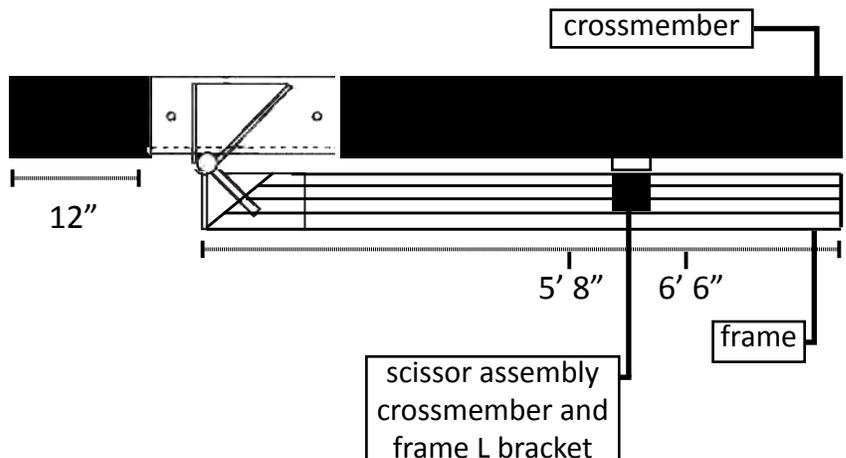
5 T KIT				
	8' BED	10' BED	12' BED	
OVERHANG	0"	4.75 T	3.75 T	3
12"	5 T	4.75 T	3	
24"	-	5 T	4.75 T	
36"	-	-	5 T	

7.5 T KIT				
	8' BED	10' BED	12' BED	
OVERHANG	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	

10 T KIT					
	10' BED	12' BED	14' BED	16' BED	
OVERHANG	0"	10 T	9 T	8 T	7 T
12"	-	10 T	9 T	8 T	
24"	-	-	10 T	9 T	
36"	-	-	-	9 T	

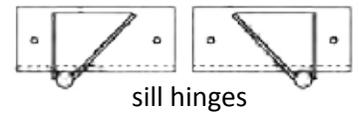
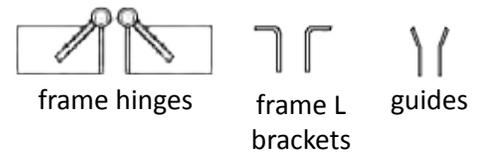
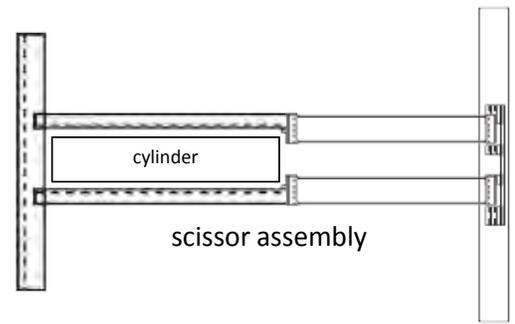
CHOOSING THE SCISSOR PLACEMENT

Measure from the frame hinge pin toward the cab. Mark 5' 8" and 6" 6". The scissor assembly **crossmember** and **frame L bracket** can be placed within this area.



5T	7.5T	10T	Part	QTY.
Scissor Assembly (Pre-Assembled)				
B231	A496	A481	Scissor Top	1
A218	A5003	A4802	Scissor Lower Arm Left and Right	2
B230	B478	B478X	Crossmember	1
A2282	A4735	A4851	Shaft A	1
A2283	A4734	A4733	Shaft B	1
A2285	A4731X	A4731X	Shaft C	1
P05314	P046514	P046516	Tie-Rod Cylinder	1
-	-	-	7/32" x 2.5" Roll Pin	6
Chassis Frame Parts				
A4952	A5012	A4742	Left Frame Hinge	1
A4953	A5013	A4743	Right Frame Hinge	1
A492	A492X	A464	Frame L Bracket	2
A494	A494X	A463	Guides	2
A2286	A4734	A4732	Shaft D	2
Sill Parts				
B2292	B5022	B4912	Left Sill Hinge	1
B2293	B5013	B4913	Right Sill Hinge	1
A219	A219X	A488	Sill Supports	2
Hardware				
-	-	-	3/8" - 16 x 1.25" G5 Hex head Bolts	2
-	-	-	1/2" - 16 x 3" G8 Hexhead Bolts	8
-	-	-	1/2" Flatwasher	8
-	-	-	1/2" - 13 Locknut	8
-	-	-	3/8" Lockwasher	2
-	-	-	7/32" x 2.5" Roll Pin	4
Electrical Parts				
PS501	"	"	#4 Welding Cable - Black	12'
PS501R	"	"	#4 Welding Cable - Red	12'
PS006	"	"	5/16" Battery Eye	4
PS525	"	"	On-Off-On Toggle Switch	1
A502	"	"	18/3 Ribbon Wire	12'
-	-	-	#4 5/16" Terminals	2
-	-	-	#10 Crimp-on Terminals	1
-	-	-	5/16" Crimp-on Terminals	3
-	-	-	1/4" Female Disconnect	1
-	-	-	Butt Connector Terminal	1
Hydraulic Parts				
P19414	"	"	3/4" x 1/4" 90° Swivel O-Ring Fitting	1
143	"	"	3/8" Male x 1/4" Female 90° Swivel Fitting	1
P050H	"	"	Hydraulic Hose	5'
PM3196P	"	"	12V Monarch Pump	1

Dump Kit Contents



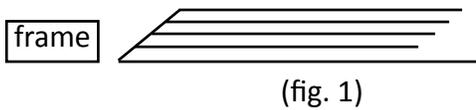
Installation Instructions

1. 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.

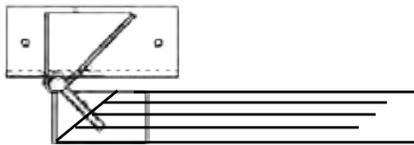
2. CHASSIS SHORTENING & REAR HINGE PLACEMENT

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



(fig. 1)

- There should be enough metal to tack weld the **frame hinge** to the truck chassis frame.
- Connect the **sill hinge** to the tack welded **frame hinge** using a 9.25" x 1.25" **shaft**. Secure with 7/32" x 2 1/2" **roll pins** (fig. 2).



(fig. 2)

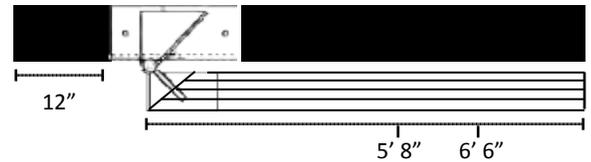
NOTE: Only weld at the rear of the chassis frame. Do not weld anywhere forward of the rear spring hangers in order to prevent cracks from developing in the frame and possible weak spots during the welding process.

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

3. 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. Mark 5' 8" and 6' 6". The scissor assembly **crossmember** and **frame L bracket** can be placed within this area. Keep in mind an 8' bed must overhang at least 12" from the frame hinge to reach full capacity on a 7.5 T kit (fig. 3).

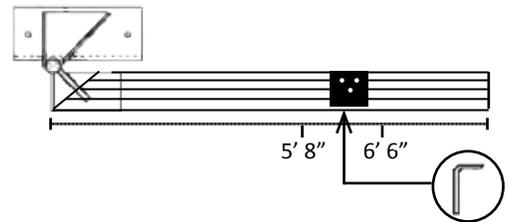
NOTE: Desired bed height and lift capacity



(fig. 3)

are determined by the placement of the crossmember. Chassis construction may dictate crossmember location.

- 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 (fig.4).



(fig. 4)

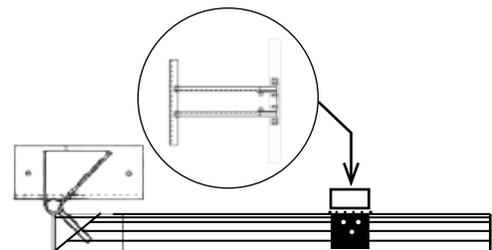
NOTE: The front filler hose may help determine scissor location and bed height.

4. BED HEIGHT - CHEVY INSTALLATIONS ONLY

- Installations to a Chevy may require several considerations. The location of the scissor assembly will be determined by the front filler hose.
- Also, the thickness of the hose will require that the bed be installed with two or more inches of clearance.

5. 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.
- Tack weld the **crossmember** to the **frame L bracket**. Do not weld the crossmember directly to the chassis frame (fig. 5).



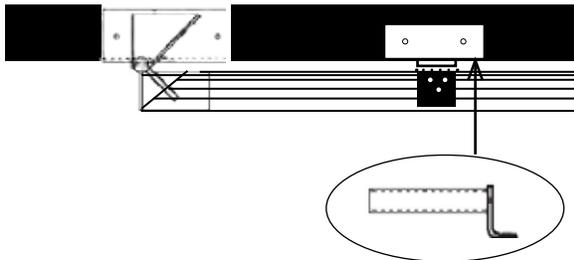
(fig. 5)

6. SILL SUPPORT INSTALLATION

- **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 (fig. 6). Modification may be required. Examples include:
 - A. Notching - the bed crossmembers may interfere with the kit.
 - B. Cutting - if bed height is an issue, cut the sill support to fit within the sill.

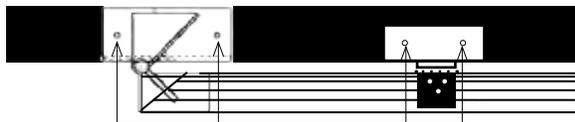
NOTE: Do not weld the sill supports to the sill.

7. DRY FIT AND UNDER BED MODIFICATIONS



(fig. 6)

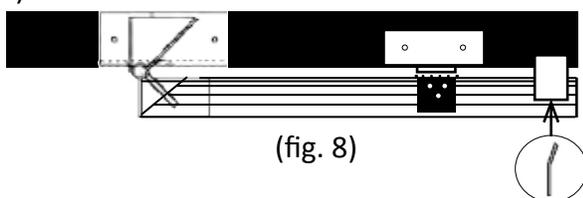
- Before final welding, dry fit the bed to ensure proper bed alignment and any clearance issues.
- If you have a 10' bed with a 60" cab to axle or a 12' bed with a 84" cab to axle, under bed crossmember trimming will be required. A dry fit will determine any issues.
- During the dry fit, notch the **sill support** and **sill hinge** holes for drilling (fig. 7).
- Remove the bed, drill the **sill support** and **sill hinge** holes.
- Dry fit again to ensure bolt hole alignment.



(fig. 7)

8. FINAL WELDING AND BOLTING

- Complete the welding of the **crossmember** to the **frame L bracket**.
- Bolt the **sill support** to the truck sill 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 (fig. 8).



(fig. 8)

Hydraulic & Electrical Connections

PUMP LOCATION

- The included pump can be installed within the cab or bolted to the frame using a fabricated mount.
- To bolt, secure the pump using two 3/8" x 1 1/4" bolts and 3/8" lock washers.

NOTE: Be sure the hydraulic hose can reach the pump.

HYDRAULIC CONNECTIONS

- Unscrew and remove the coil on the pump.
- Use Teflon paste (do not use Teflon tape) around the fitting threads.
- Connect one fitting to the pump and one to the cylinder.

NOTE: Be sure the pump fitting faces the cylinder fitting. This will ensure the hose does not contact any moving parts.

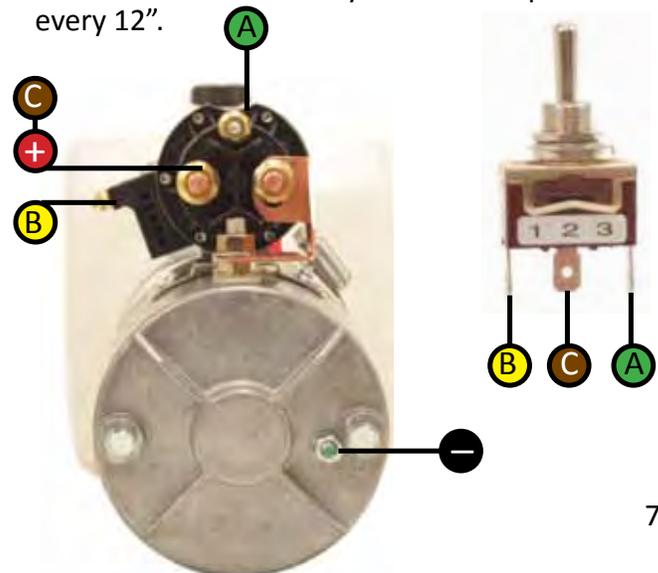
- Run the hydraulic hose to the cylinder fitting and pump fitting.
- Return the coil to the pump.
- Fill the pump with automatic transmission fluid in warm climates. In colder climates, fill with military standard MIL-H-5606 fluid.

ELECTRIC CONNECTIONS

- Ⓐ GREEN to the small solenoid post
- Ⓑ YELLOW to the pump coil
- Ⓒ BROWN to the positive solenoid post
- ⊕ RED to the + battery
- ⊖ BLACK to the - battery

Installation of a PS025 safety cut off switch is highly recommended.

NOTE: Secure the battery cable with zip ties every 12".



Pierce Arrow Product Limited Warranty

Pierce Arrow Inc. warrants to the original purchaser only (whether a wholesale, OEM or retail customer) that the goods, equipment, and merchandise manufactured by Pierce Arrow are free from defects in material and workmanship. The Pierce Arrow limited warranty on parts covers such items for a period of one year on mechanical and electrical from the date of shipment by Pierce Arrow. All warranties cover only the product or product parts, and are nontransferable.

OBTAINING WARRANTY SERVICE

Pierce Arrow must be notified promptly in writing about the defect before any means of repair have been made. The merchandise must be delivered by the purchaser to Pierce Arrow in Henrietta, Texas at the purchaser's expense. Pierce Arrow reserves the right to repair or replace the merchandise proved to be defective. The purchaser is responsible for the cost of repairs made by Pierce Arrow if the repairs are not covered by the Pierce Arrow warranty.

EXCLUSIONS

The Pierce Arrow warranty is not intended to cover normal maintenance parts including but not limited to: wear pads, bushings, mud flaps, fender flares, light bulbs, oil filters, oil leakage, wire rope and remote holdings. Nor is the warranty intended to cover any change or defect due to accident; misuse; improper; inadequate or unauthorized repair; failure to provide maintenance or uses for which the equipment was not intended; and normal deterioration due to weather or road conditions. Reference the owner's manual for safety, installation, operation and maintenance guidelines.

The warranty does not bear the cost of labor, transportation, shipping damages, claimed 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.

Pierce Arrow makes no warranty, expressed or implied, to finished products manufactured or supplied by other manufacturers, and supplied from Pierce Arrow to the purchaser, including but not limited to, any vehicle to which our products is affixed to, and any accessories.

Merchandise manufactured by Pierce Arrow 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.

CONDITIONS OF SALE

RETURNS: No returns are accepted without prior authorization. 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.

CLAIMS: Claims for breakage or damages must be made to the carrier. We, the shipper, cannot file a claim for purchasers. When placing an order with Pierce Sales, the terms and conditions of payment, shipping, delivery and claims, create an agreement between the purchaser and Pierce Sales. The agreement is to be performed in Clay County, Texas. Pierce Sales is not responsible for, and has no liability for, damage in shipment, during assembly, installation, erection, or that arising from accidents, abuse or improper operation of goods, equipment or merchandise.

Merchandise sold by Pierce Sales, but not manufactured, is subject to the manufacturer's warranty only. The manufacturer's warranty is available upon request.

All warranties cover only the product or product parts, not labor costs, transport costs nor the installation or removal or the product.

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