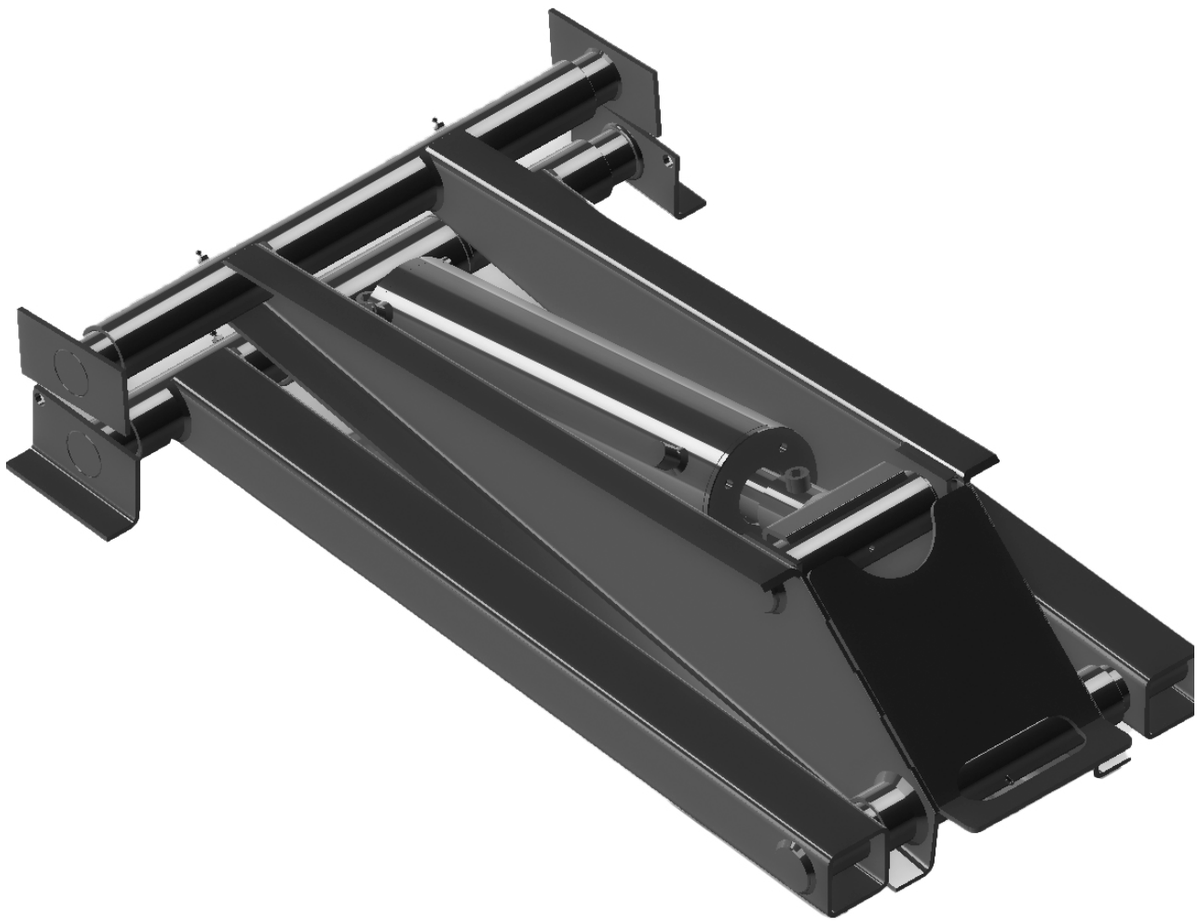
Maxim Scissor Hoists

PRODUCT MANUAL - 516 & 520 MODELS



Product Manual
Maxim Hoist 516 & 520 Models

Bailey International, LLC updates its product manuals from time to time. Before using the product, request the latest documentation from Bailey International or download it from the Bailey website (www.baileyhydraulics.com).

INTRODUCTION

ABOUT THIS USER MANUAL

This manual is intended for installers and users of a Maxim Hydraulic Scissor Hoist 516 or 520.

This manual provides installers and users with all the necessary information to ensure a correct, efficient and safe installation and use of the Maxim Hydraulic Scissor Hoist (during its lifetime), even in the event of foreseeable misuse.

This manual must be read carefully by installers and users and must be fully understood without leaving uncertainty prior to installation and use of the Maxim Hydraulic Scissor Hoist.

If you encounter any questions or need immediate assistance during the installation, please don't hesitate to reach out to our customer support team. You can contact us directly at 800-800-1810.

INTRODUCTION AND PURPOSE OF THE PRODUCT

The Maxim Hoist Kits are designed for use on dump trailer bodies. All necessary mounting hardware, the body prop components, and the hydraulic cylinder are included with the scissor assembly. Hoists offer a more significant mechanical advantage and articulation over the traditional single or dual-lift cylinders used on dump trailers.

Scissor hoists are less advantageous than a telescopic dump but can undoubtedly be a less expensive option. In summary, hoists are cost-effective versus a telescopic dump and add more value than a standard cylinder dump. Bailey offers the 516 and 520 hoist sizes in single and double-acting kits. 3D design drawings of these hoists and the replacement parts are available upon request.

Maxim hoist kits are designed for use on dump trailer bodies. All necessary mounting hardware, the body prop components, and the hydraulic cylinder are included with the scissor assembly.

TABLE OF CONTENTS

Maxim Scissor Hoists

SAFETY INSTRUCTIONS

Thank you for purchasing the Maxim Hydraulic Scissor Hoist. Before installing or using the Maxim Hydraulic Scissor Hoist, you must read carefully through this manual, to ensure that you install and use the Maxim Hydraulic Scissor Hoist correctly.

To ensure safety you must have fully understood this manual without leaving uncertainty prior to installation and use of the Maxim Hydraulic Scissor Hoist. If there still are questions and / or uncertainties after reading the manual, contact your supplier for clarification before installing or using the Maxim Hydraulic Scissor Hoist! This manual must also be included when this device is used by any third party. Improper operation, by NOT having read the user manual and having full understanding of it as well as how to use the device, can bring the operator, bystanders and other matters in danger, depending on its application-on, and may cause personal injury and / or damage to personal possessions as well as to the device.

NOTICE: The end user is responsible for determining the appropriate support member strength and weld sizes to make sure the load is supported properly. Illustrations are for instructional purposes only.

ABOUT THE SYMBOLS

Various symbols are used in this manual and on the product itself to ensure correct installation and usage, to prevent danger to the user and others, and to prevent property damage. The meanings of these symbols are described below. It is important that you read these descriptions carefully and fully understand the contents.

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

SAFETY PRECAUTIONS

- **DO NOT** leave packaging material lying around. This can be hazardous material for children.
- **WARNING:** Always use the support arm for UNLOADED bodies. The safety arm is only meant for the use of UNLOADED bodies.
- **WARNING:** Being under a raised body could result in serious injury or death should the body unexpectedly descend. Never position yourself or allow others to position themselves under a loaded body. Always support an unloaded body with the supplied safety arm. NEVER use the safety arm on a loaded body.

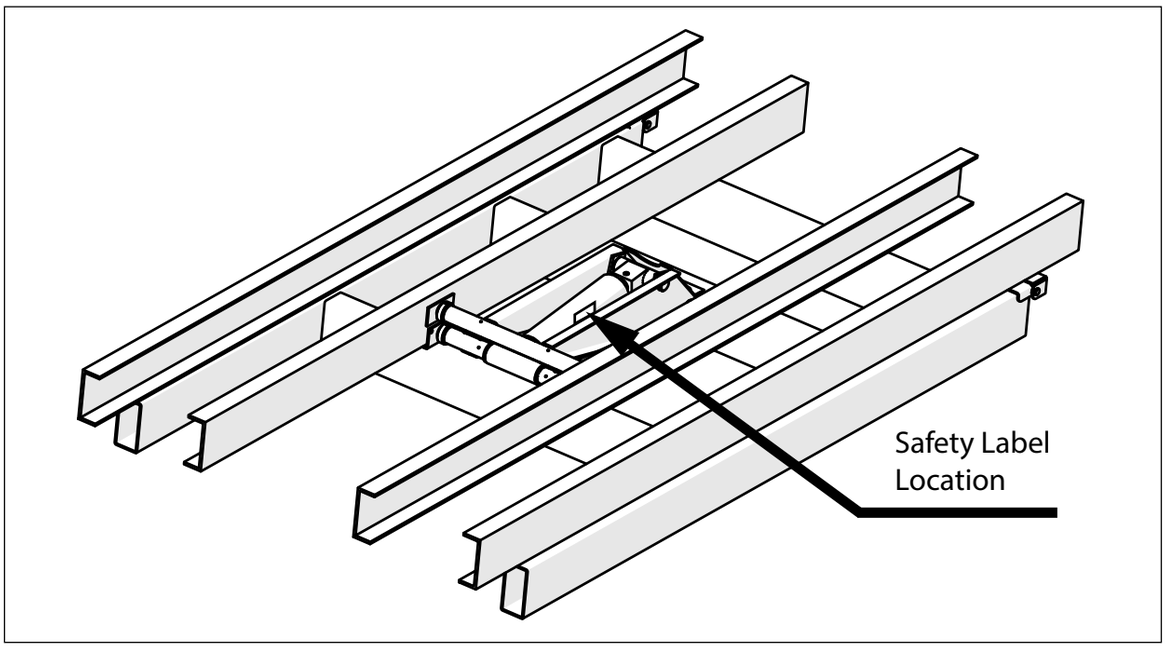
NOTES ON USE

- If the hoist does not extend or retract properly, please get in touch with a member of the Bailey Technical Service team at 1-800-800-1810.
- For troubleshooting, servicing, or information on using a Bailey-provided hydraulic power unit (HPU), you can request the HPU manual by calling 1-800-800-1810 or emailing Sales@BaileyHydraulics.com.

SAFETY LABELS

The trailer manufacturer or hoist installer is responsible for installing the proper warning and safety labels to the trailer frame in the area shown below.

NOTICE: Keep these signs clean and replace any lost or destroyed signs.



Maxim Scissor Hoists

KIT CONTENTS

516 HOIST - PART # 325038

The 516 Hoist is designed for dump trailers with 8–20-ton capacities and 8-12 ft. bodies.
This is the scissor assembly (not the complete kit):

- ☑ 516 scissor hoist (painted black) – Qty 1
- ☑ Installed 5” x 15.91” welded cylinder – Qty 1
- ☑ Steel zinc solid set screw clamping collars – qty 2
- ☑ L-shaped mounting bracket – Qty 2
- ☑ Flat mounting bracket – Qty 2
- ☑ Safety arm – Qty 1
- ☑ Safety arm catch cup – Qty 1
- ☑ Dump hinge – Qty 2

520 HOIST - PART # 325039

The 520 Hoist is designed for dump trailers with 10–20-ton capacities and 10-14 ft. bodies.
This is the scissor assembly (not the complete kit):

- ☑ 520 scissor hoist (painted black) – Qty 1
- ☑ Installed 5” x 21.5” welded cylinder – Qty 1
- ☑ Steel zinc solid set screw clamping collars – qty 2
- ☑ L-shaped mounting bracket – Qty 2
- ☑ Flat mounting bracket – Qty 2
- ☑ Safety arm – Qty 1
- ☑ Safety arm catch cup – Qty 1
- ☑ Dump hinge – Qty 2

KITTED ASSEMBLIES PART NUMBERS

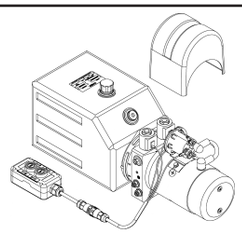
Kit-MaximHoist516 – 516 size with a double acting, 8qt. 12VDC HPU
Kit-MaximHoist516SA – 516 size with a single acting, 6qt. 12VDC HPU
Kit-MaximHoist520 – 520 size with a double acting, 8qt. 12VDC HPU

Kitted Assemblies come with the following:

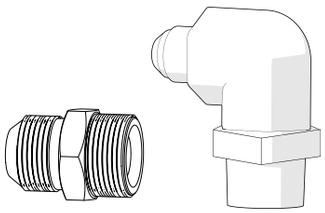
- ☑ Scissor hoist assembly with cylinder, mounting components, and safety arm components
- ☑ 12V DC hydraulic power unit – qty 1
- ☑ Pressure Compensated Flow Control Valve, 2 GPM, SAE 6 to JIC 6 – qty 1
- ☑ 20” battery cable, 4 GA, Red – qty 1
- ☑ 20” battery cable, 4 GA, Black – qty 1
- ☑ 15" rubber strap – qty 1
- ☑ SAE 6 male to JIC 6 90-degree male adapter – qty 2
- ☑ SAE 6 male to JIC 6 male straight adapter – qty 2

**Note that the assemblies are painted black.*

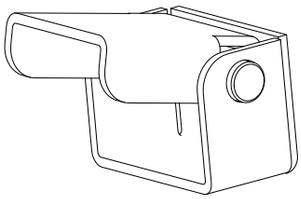
KIT CONTENTS



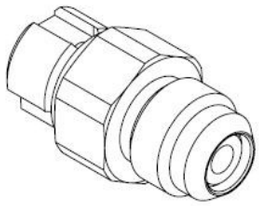
1



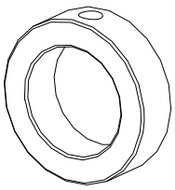
2



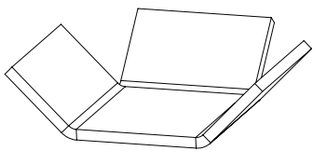
3



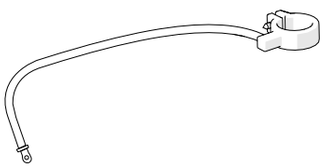
4



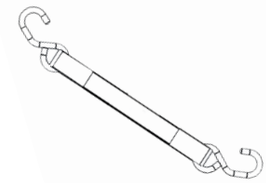
5



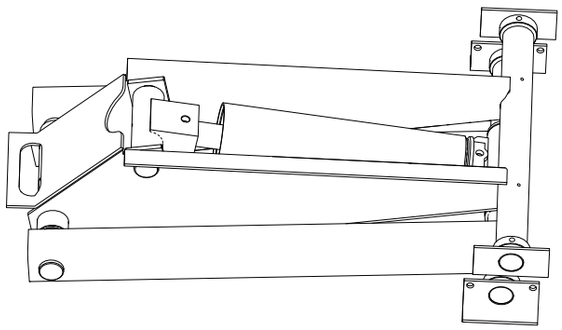
6



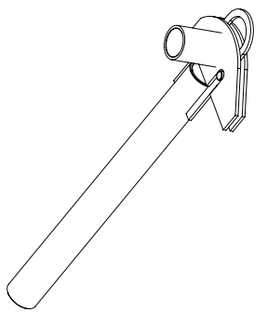
7



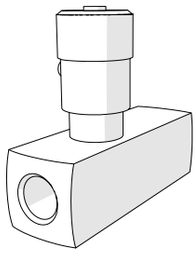
8



9



10



11

Ref	Part Description	Ref	Part Description
1	Hydraulic Power Unit (HPU)	6	Safety Arm Catch Up
2	Hose Fittings (hoses assemblies not included, made to order)	7	Battery Cables (Qty. 2; 1 red, 1 black)
3	Hinges	8	Battery Strap
4	Pressure Compensated Flow Control Valve (for cylinder extend port)	9	Hoist Assembly
5	Locking Collars	10	Safety Arm and Safety Arm Locking Bracket
11	In-line Flow Control Needle Valve (optional, not included)		

Maxim Scissor Hoists

PRODUCT SPECIFICATIONS

516 & 520 HOIST KIT SPECIFICATIONS

Bailey Part Number	Brand	Series	Capacity	Trailer Body	Cylinder Size	HPU	Type	Description	Weight
Kit-MaximHoist516	Maxim	516	8-20 Tons	8-12 ft.	5" x 15.57"	Double Acting, 12VDC, 1.2 gpm, 6 qt	Kit	Complete Kit	425 lbs.
Kit-MaximHoist516SA	Maxim	516	8-20 Tons	8-12 ft.	5" x 15.57"	Single Acting, 12VDC, 1.2 gpm, 6 qt	Kit	Complete Kit	420 lbs.
Kit-MaximHoist520	Maxim	520	10-20 Tons	10-14 ft.	5" X 21.50"	Double Acting, 12VDC, 1.2 gpm, 6 qt	Kit	Complete Kit	445 lbs.
325038	Maxim	516	8-20 Tons	8-12 ft.	5" x 15.57"	None	Assembly	516 Scissor Hoist Assembly ONLY	390 lbs.
325039	Maxim	520	10-20 Tons	10-14 ft.	5" X 21.50"	None	Assembly	520 Scissor Hoist Assembly ONLY	410 lbs.

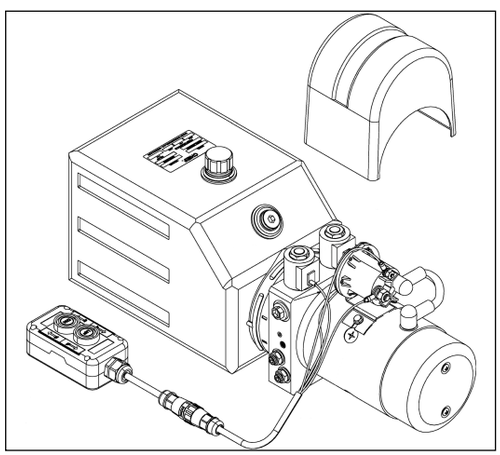
POWER UNIT SPECIFICATIONS

A double-acting hydraulic power unit with free flow in extend and controlled flow in return is recommended. The standard unit part number is #253343. It is offered with a 6-quart tank; larger tank sizes are available. Note that a hydraulic power unit product operating manual is available upon request.

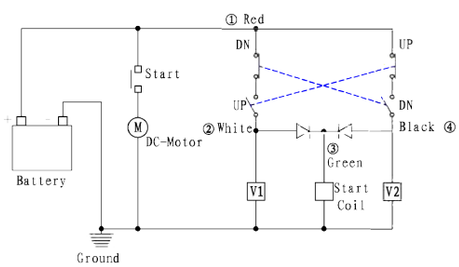
FEATURES:

- Flow: 1.2 GPM at 2,800 PSI
- Pump: 2.1 cc/rev.
- Maximum Pressure: 3,300 PSI
- Relief set to 1,500 PSI
- Circuit: Double acting
- Integrated reverse flow check valve
- Length: 20”
- Width: 7”
- Height: 7”

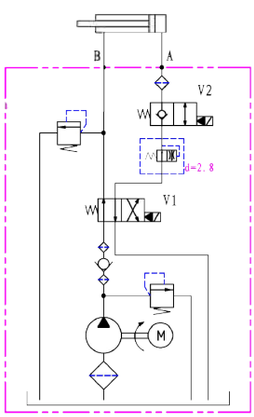
PART #253343



ELECTRICAL SCHEMATIC

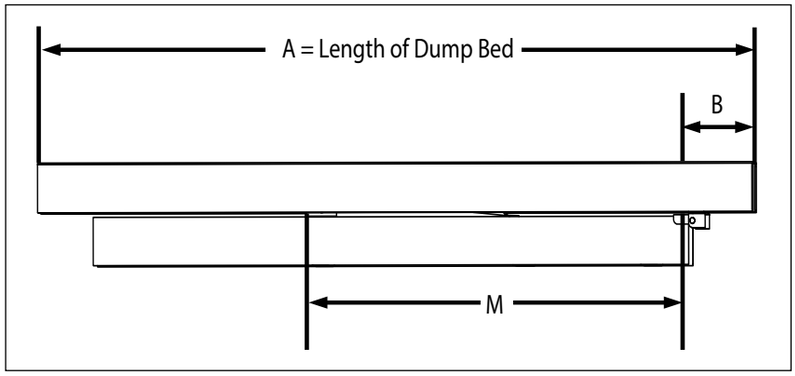


HYDRAULIC SCHEMATIC

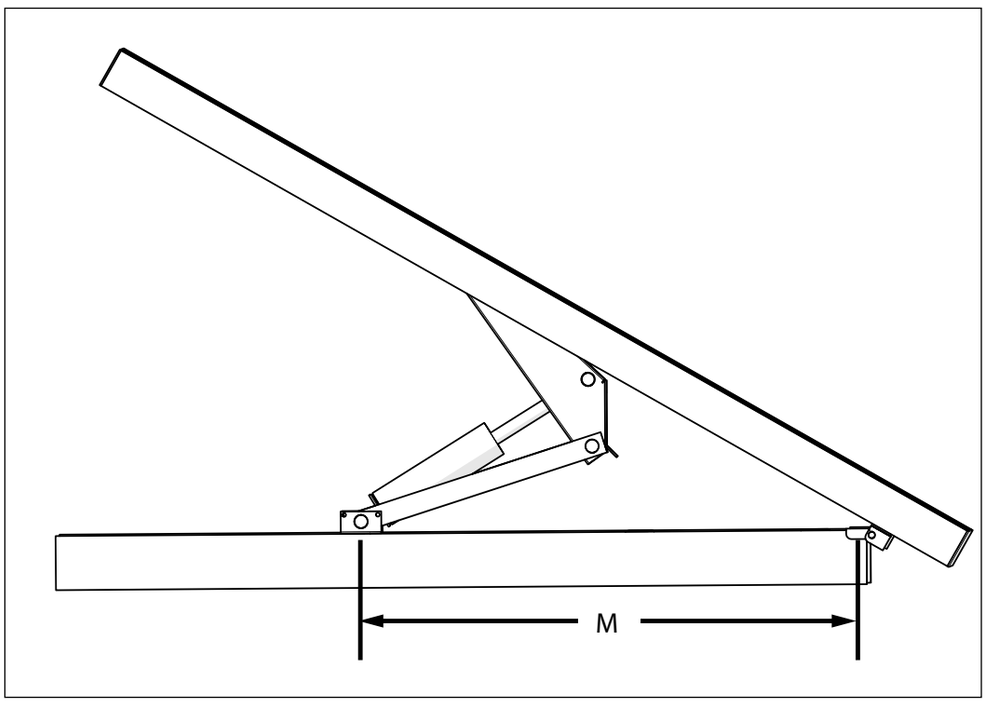


TECHNICAL SPECIFICATIONS - 516 HOISTS

516 Hoist Capacity (Tons)				
Length of Dump Bed	Overhang "B" (Inches)	40°	45°	50°
8	12	-	12.1	11.0
8	18	-	14.5	13.2
8	24	-	-	16.4
10	12	10.1	9.1	8.2
10	18	11.6	10.4	9.4
10	24	13.5	12.1	11.0
12	12	8.1	7.3	6.6
12	18	9.0	8.1	7.3
12	24	10.1	9.1	8.2

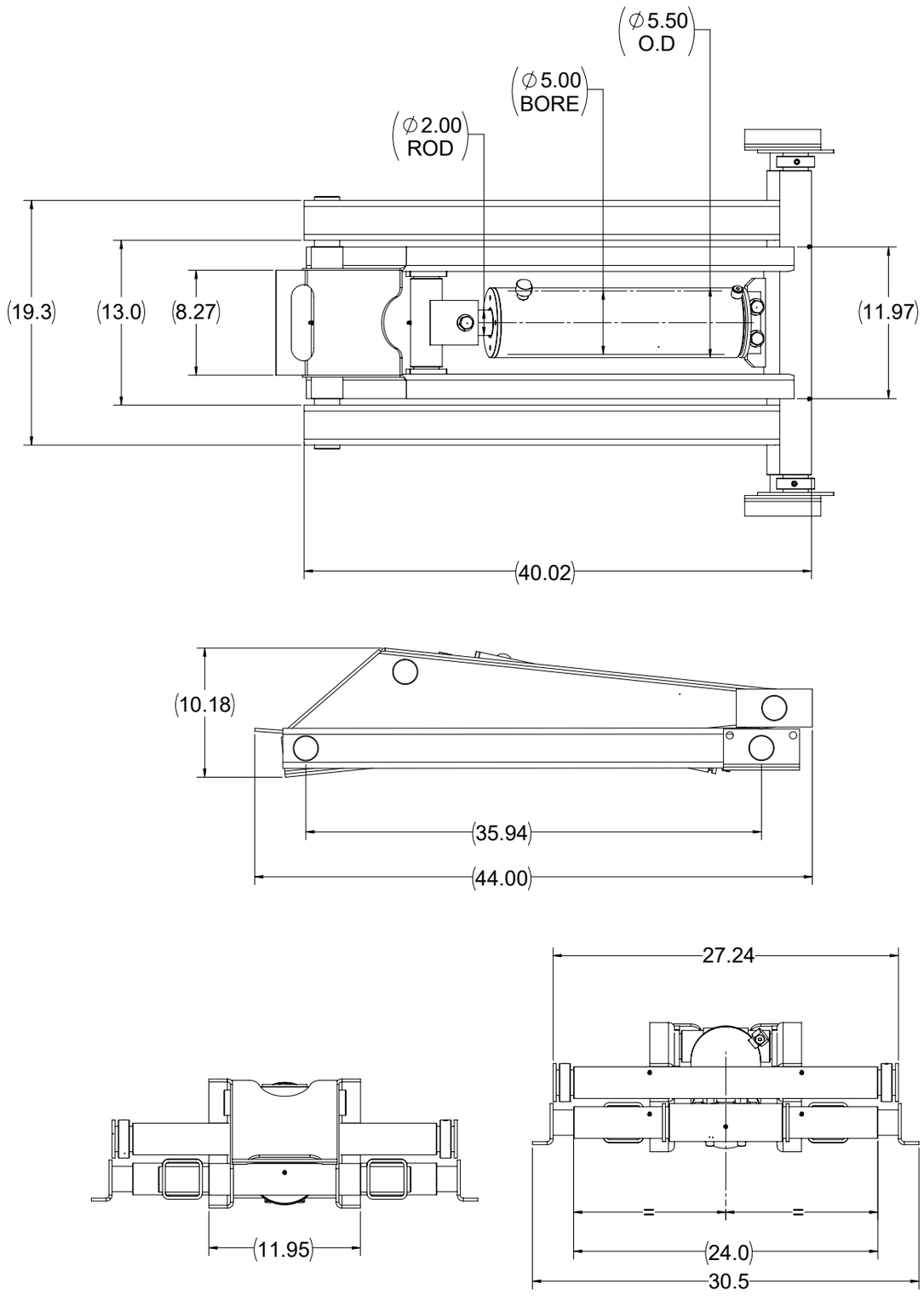


Maximum Dump Angle ± 2°	M
40°	84.0"
45°	75.0"
50°	68.0"



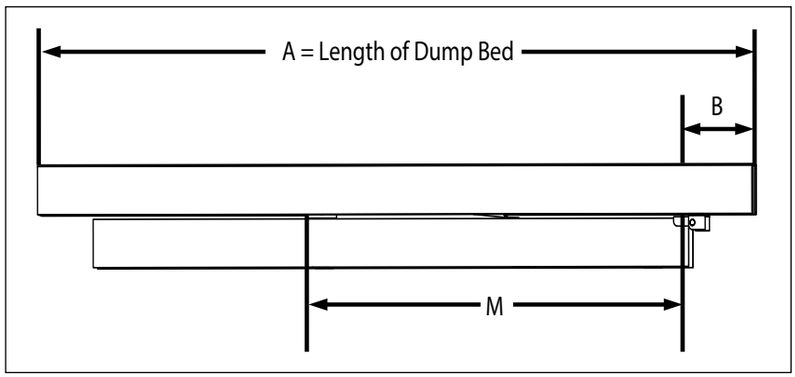
Maxim Scissor Hoists

TECHNICAL SPECIFICATIONS - 516 HOISTS

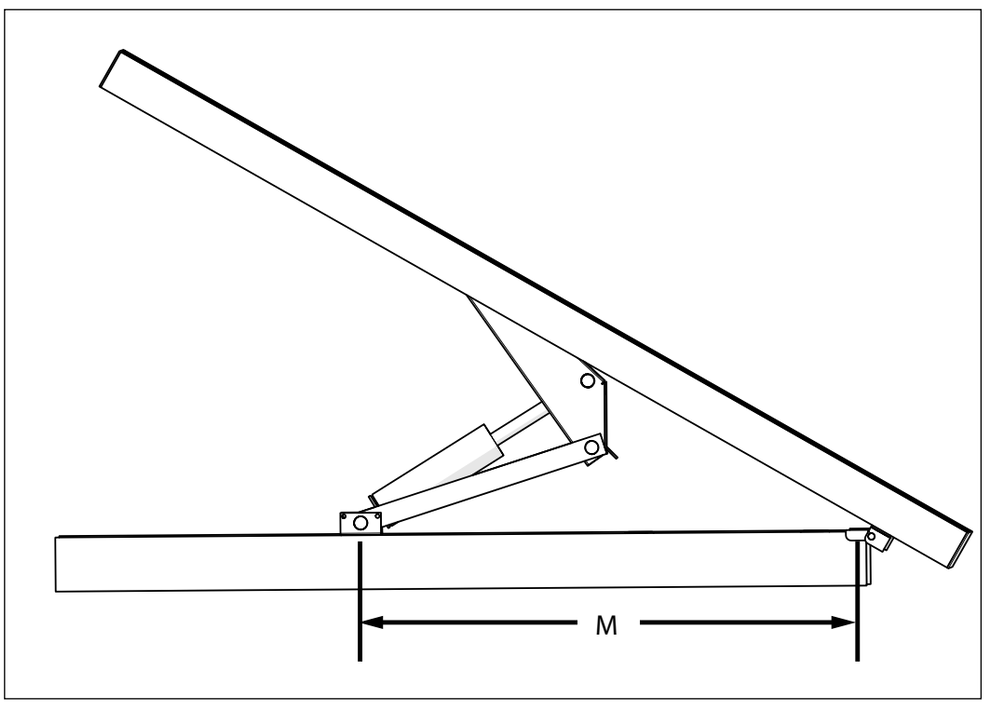


TECHNICAL SPECIFICATIONS - 520 HOISTS

520 Hoist Capacity (Tons)				
Length of Dump Bed	Overhang "B" (Inches)	40°	45°	50°
10	12	13.5	12.1	11.0
10	18	-	13.8	12.5
10	24	-	16.1	14.6
12	12	10.8	9.7	8.8
12	18	12.0	10.7	9.7
12	24	13.5	12.1	11.0
14	12	9.0	8.0	7.3
14	18	9.8	8.8	8.0
14	24	10.8	9.7	8.8

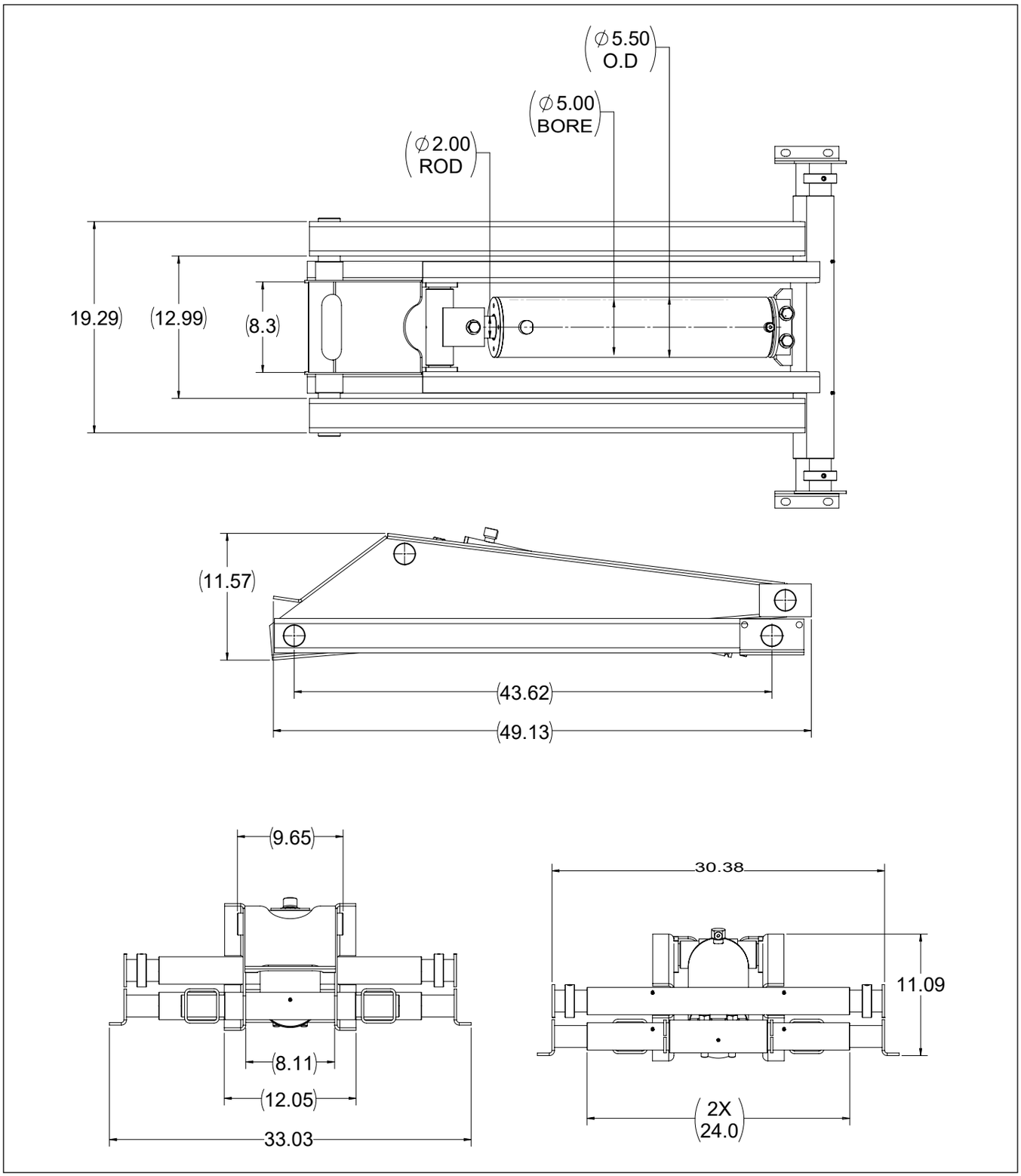


Maximum Dump Angle ± 2°	M
40°	103.5"
45°	92.5"
50°	84.0"



Maxim Scissor Hoists

TECHNICAL SPECIFICATIONS - 520 HOISTS

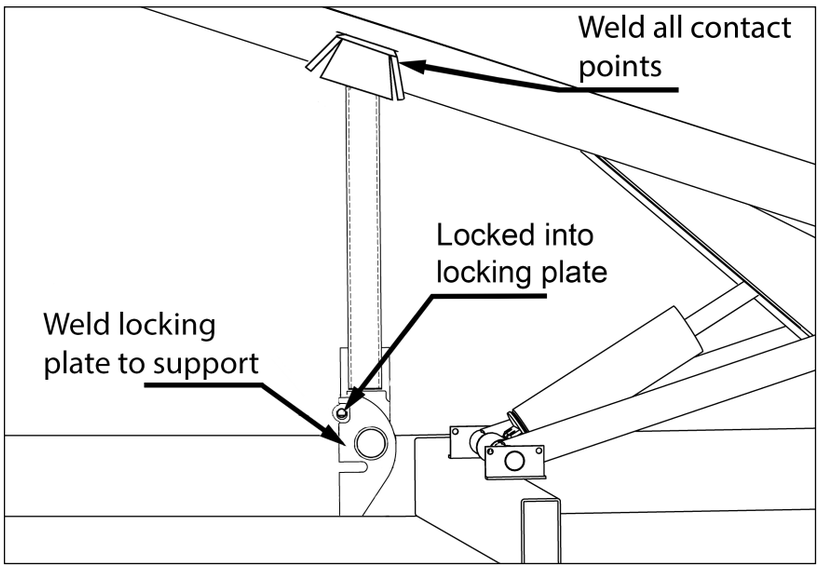


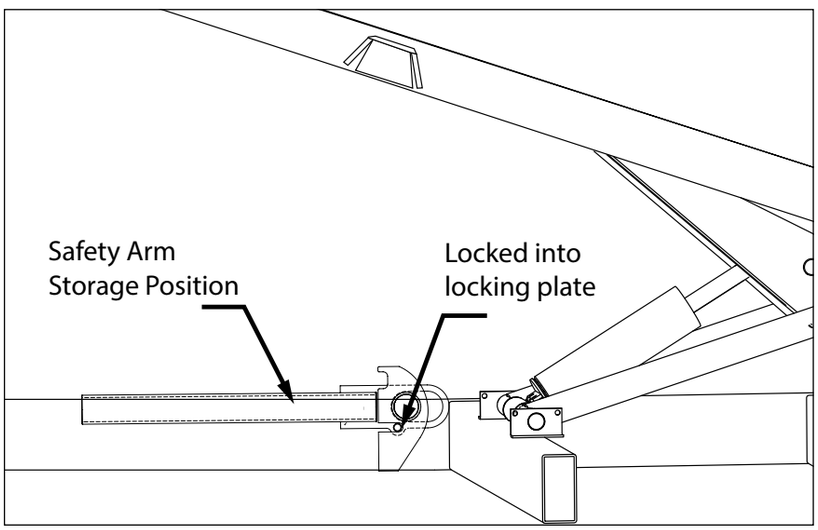
SAFETY ARM INSTALLATION & USE

WARNING: Always use the support arm for UNLOADED bodies. The safety arm is only meant for the use of UNLOADED bodies.

WARNING: Being under a raised body could result in serious injury or death should the body unexpectedly descend. Never position yourself or allow others to position themselves under a loaded body. Always support an unloaded body with the supplied safety arm. NEVER use the safety arm on a loaded body.

SAFETY ARM INSTALLATION





SAFETY ARM INSTALLATION & USE

SAFETY ARM USE

WARNING: Always use the support arm for UNLOADED bodies. The safety arm is only meant for the use of UNLOADED bodies.

WARNING: Being under a raised body could result in serious injury or death should the body unexpectedly descend. Never position yourself or allow others to position themselves under a loaded body. Always support an unloaded body with the supplied safety arm. NEVER use the safety arm on a loaded body.

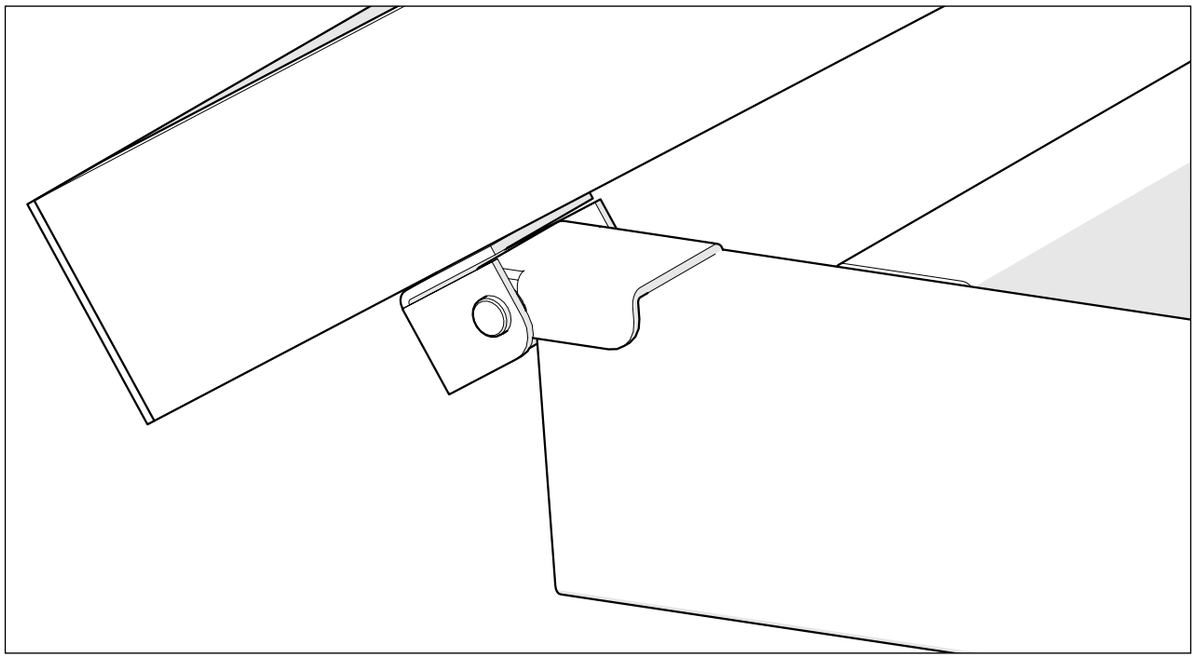
1. Raise trailer body to a sufficient height.
2. Grasp safety arm and rotate into the vertical, up position.
3. Once in a vertical position, push the arm down so it locks into place within the locking bracket.
4. SLOWLY lower the hoist and body until the saftey arm cup contacts the vertical face of the safety arm.
5. Reverse the above procedure to place arm back in its hanger for transport (be sure that the saftey arm is back in the hanger bracket and the hoist is fully lowered in it's down position).

MAXIMUM UNLOADED TILT BODY WEIGHT IN POUNDS USING ONE SAFETY ARM

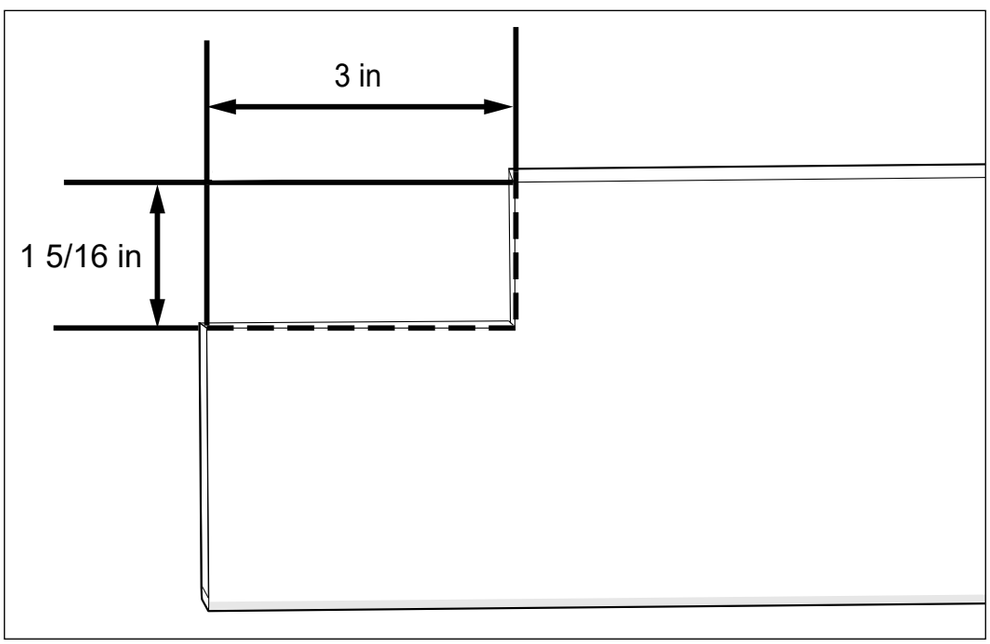
Distance between rear hinge and safety arm in inches	Trailer tilt body length in feet	
	16 ft.	20 ft.
50"	1,920 lbs.	1,540 lbs.
60"	2, 310 lbs.	1,850 lbs.
70"	2,690 lbs.	2,150 lbs.
80"	3,080 lbs.	2,465 lbs.
90"	3,460 lbs.	2,770 lbs.
100"	3,850 lbs.	3,080 lbs.
110"	4,240 lbs.	3,390 lbs.
120"	4,620 lbs.	3,700 lbs.
130"	5,010 lbs.	4,000 lbs.
140"	5,390 lbs.	4,310 lbs.
150"	5,780 lbs.	4,620 lbs.
160"	6,160 lbs.	4,930 lbs.
170"	6,550 lbs.	5,240 lbs.
180"	6,930 lbs.	5,550 lbs.
190"	7,320 lbs.	5,850 lbs.
200"		6,160 lbs.
210"		6,470 lbs.
220"		6,780 lbs.
230"		7,090 lbs.

HINGE INSTALLATION

Place hinge so it is centered on the support beam as shown. Weld to support at all contact surfaces.



Cut notch in support beam to allow hinge to move with upper frame member.

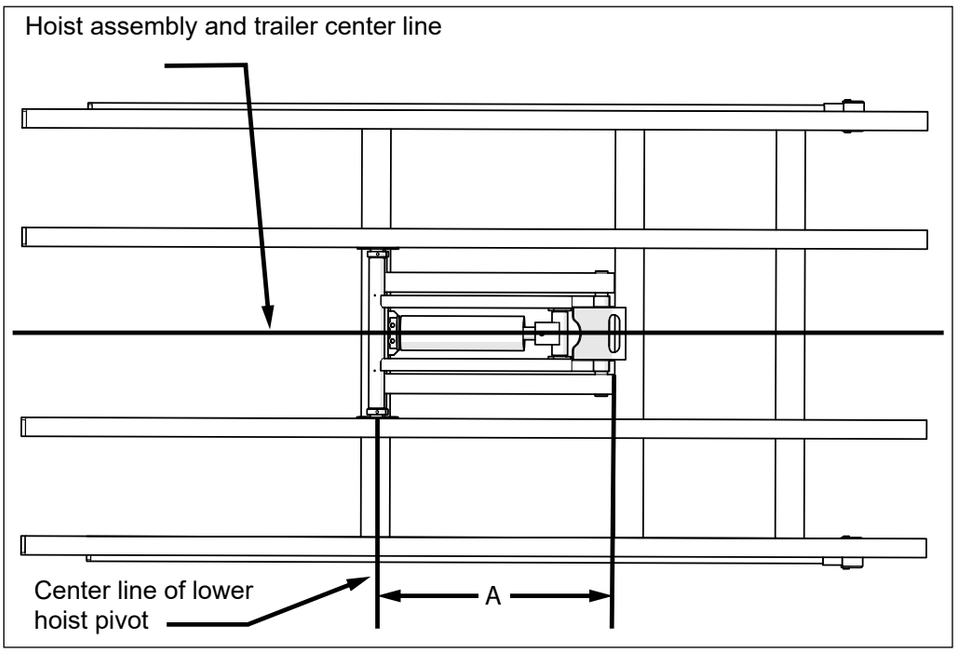


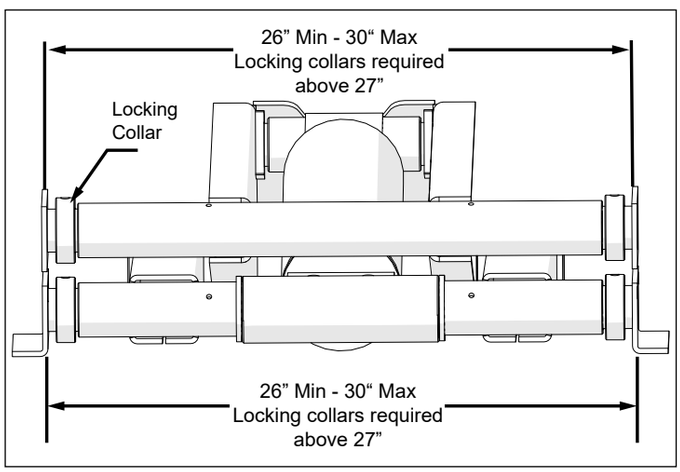
MOUNTING HOIST ON TRAILER

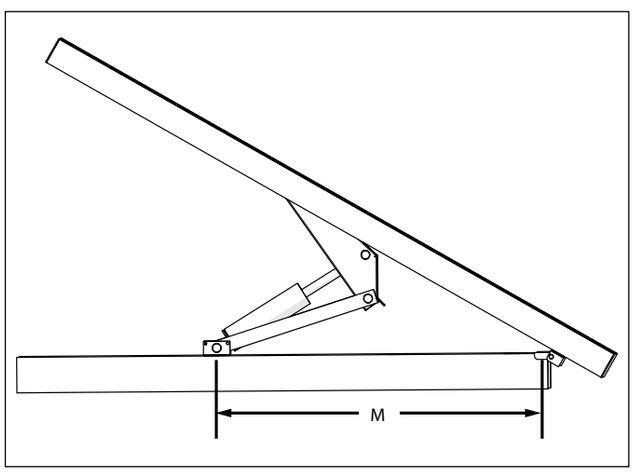
LOCATION

Hoist Model	A
516	44"
520	49"

Refer to "Technical Specifications" for specific hoist model.



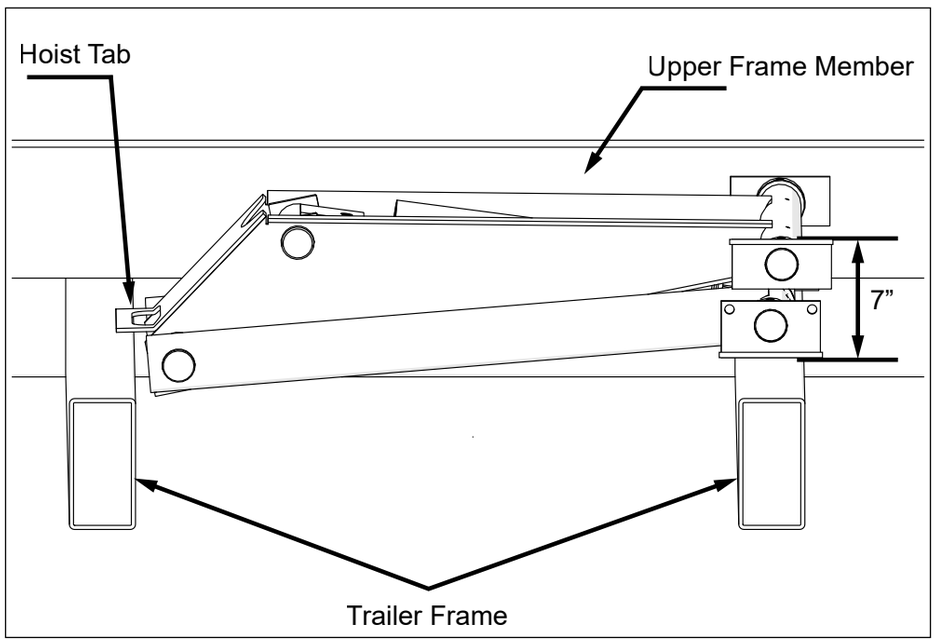




MOUNTING HOIST ON TRAILER

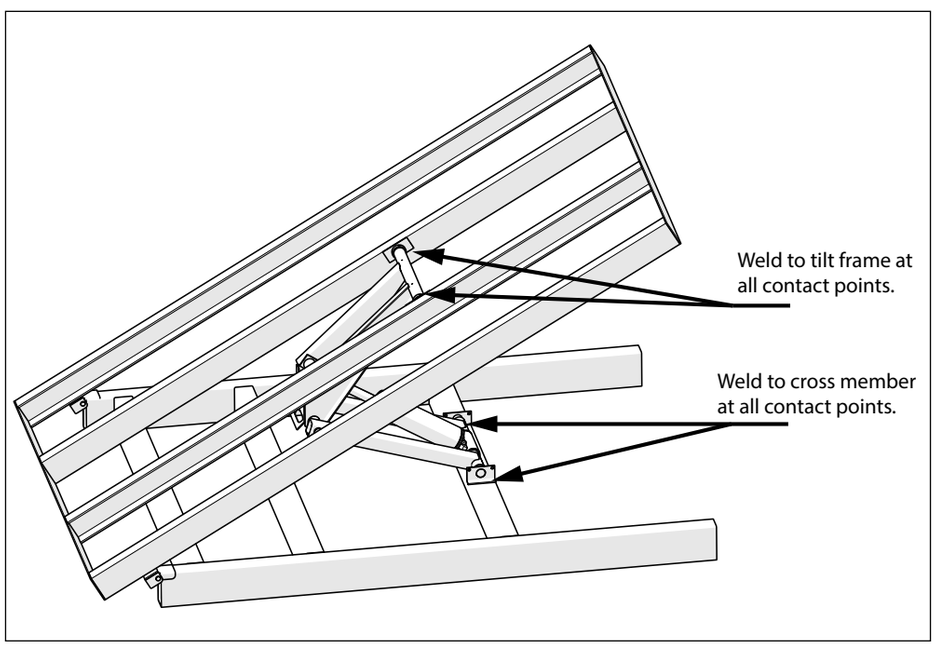
PLACEMENT

Place hoist on trailer frame. Tilt frame all the way down on its own supports.



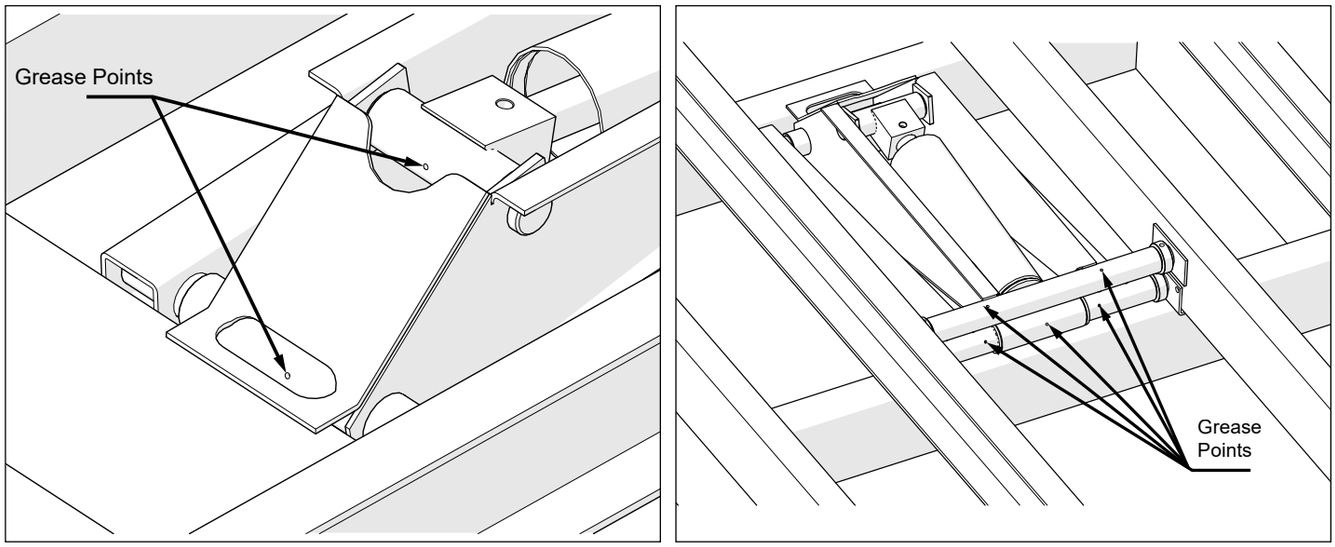
WELDING POINTS

Weld to frame supports at all contact points.



LUBRICATION

Lubricate the joint with EP3 grease every 6 months.



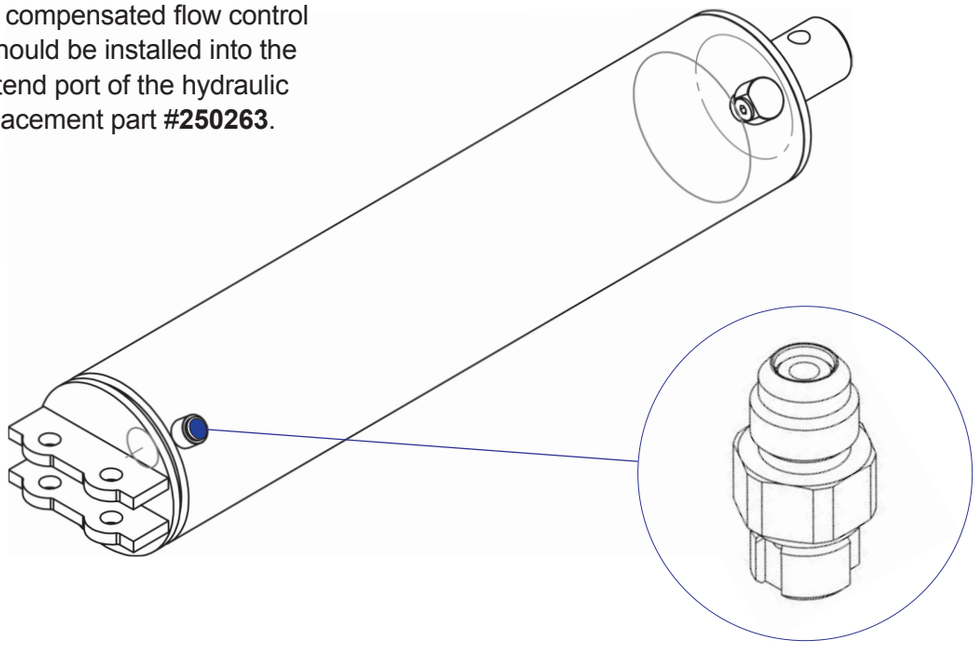
LUBRICATION MAINTENANCE LOG

Date	Technician	Notes

FLOW CONTROL & VENT LOCATIONS

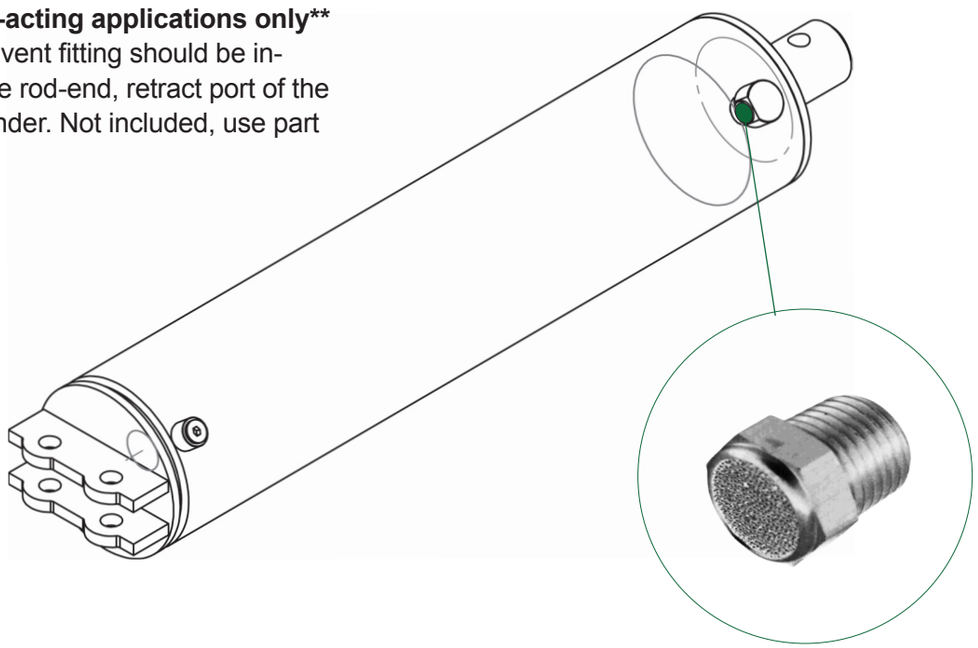
PRESS. COMP. FLOW CONTROL LOCATION

The pressure compensated flow control valve fitting should be installed into the base-end, extend port of the hydraulic cylinder. Replacement part **#250263**.



BREATHER VENT LOCATION

**** For single-acting applications only****
The breather vent fitting should be installed into the rod-end, retract port of the hydraulic cylinder. Not included, use part **#237256**.



GLOSSARY

12VDC: Refers to a 12-volt direct current electrical power source used to operate the hydraulic power unit.

Clamping Collars: A ring-shaped mechanical stop that clamps around shaft.

Dump Trailer Body: A type of trailer designed specifically for hauling and dumping materials.

EP3 Grease: Grease used for lubrication in the hoist assembly.

GPM (Gallons Per Minute): A measure of the flow rate of hydraulic fluid in the system.

Pressure Compensated Flow Control Valve: Regulates the flow at a constant rate.

In-Line Flow Control Valve: A valve used to control the flow rate of hydraulic fluid in the system.

Hydraulic Power Unit (HPU): A unit that provides hydraulic power to the hoist, consisting of a pump, motor, and hydraulic fluid reservoir.

Locking Bracket: A component used to secure the safety arm in place.

Safety Arm: A component designed to support the empty dump body when it is in the raised position to prevent accidental lowering.

Safety Arm Catch Cup: A cup used to catch and secure the safety arm in place when the hoist is in use.

Scissor Assembly: The component of the hoist that includes the cylinder and scissor mechanism.

Relief Valve: A valve that regulates the pressure in the hydraulic system to prevent overpressure.

90-Degree Adapter: A fitting used to connect hydraulic hoses or pipes at a right angle.

Revision notes from 07.28.2025_ds:

- Page 6 - Kit contents updated
- Page 7 - Kit cotents updated
- Page 8 - Product features updated
- Page 18 - Lubrication page updated
- Page 19 - Special fitting locations updated
- Page 20 - Glossary updated