

Hydraulic Pallet Forks

Operation and Maintenance Manual



Register your
WARRANTY
within 30 days
of purchase



888-376-7027 | BlueDiamondAttachments.com



BD-092

Introduction: Owner Information

Thank you for your decision to purchase a Blue Diamond® Hydraulic Pallet Forks. To ensure maximum performance of your equipment, it is mandatory that you thoroughly study the Operator's Manual and follow the recommendations. Proper operation and maintenance are essential to maximize equipment life and prevent personal injury.

Operate and maintain this equipment in a safe manner and in accordance with all applicable local, state, and federal codes, regulations and /or laws. Follow all on-product labeling and instructions.

Make sure that all personnel have read this Operator's Manual and thoroughly understand safe and correct operating, installation and maintenance procedures.

Blue Diamond® is continually working to improve its products. Blue Diamond® reserves the right to make any improvements or changes as deemed practical and possible without incurring any responsibility or obligation to make any changes or additions to equipment sold previously.

Although great care has been taken to ensure the accuracy of this publication, Blue Diamond® makes no warranty or guarantee of any kind, written or expressed, implied or otherwise with regard to the information contained within this manual. Blue Diamond® assumes no responsibility for any errors that may appear in this manual and shall not be liable under any circumstances for incidental, consequential or punitive damages in connection with, or arising from the use of this manual.

Keep this manual available for frequent reference. All new operators or owners must review the manual before using the equipment and annually thereafter. Contact your Blue Diamond® Attachments Dealer for assistance, information, or additional copies of the manual. Contact www.bluediamondattachments.com or call 888-376-7027 for a complete list of dealers in your area.

Serial Number Location:

Please record attachment information in the space provided for future reference.



Model Number: _____

Serial Number: _____

Dealer Name: _____

Dealer Number: _____

Date of Purchase: _____

The serial number plate can be located on the top or side of the frame.

Always use your serial number when requesting information or when ordering parts.

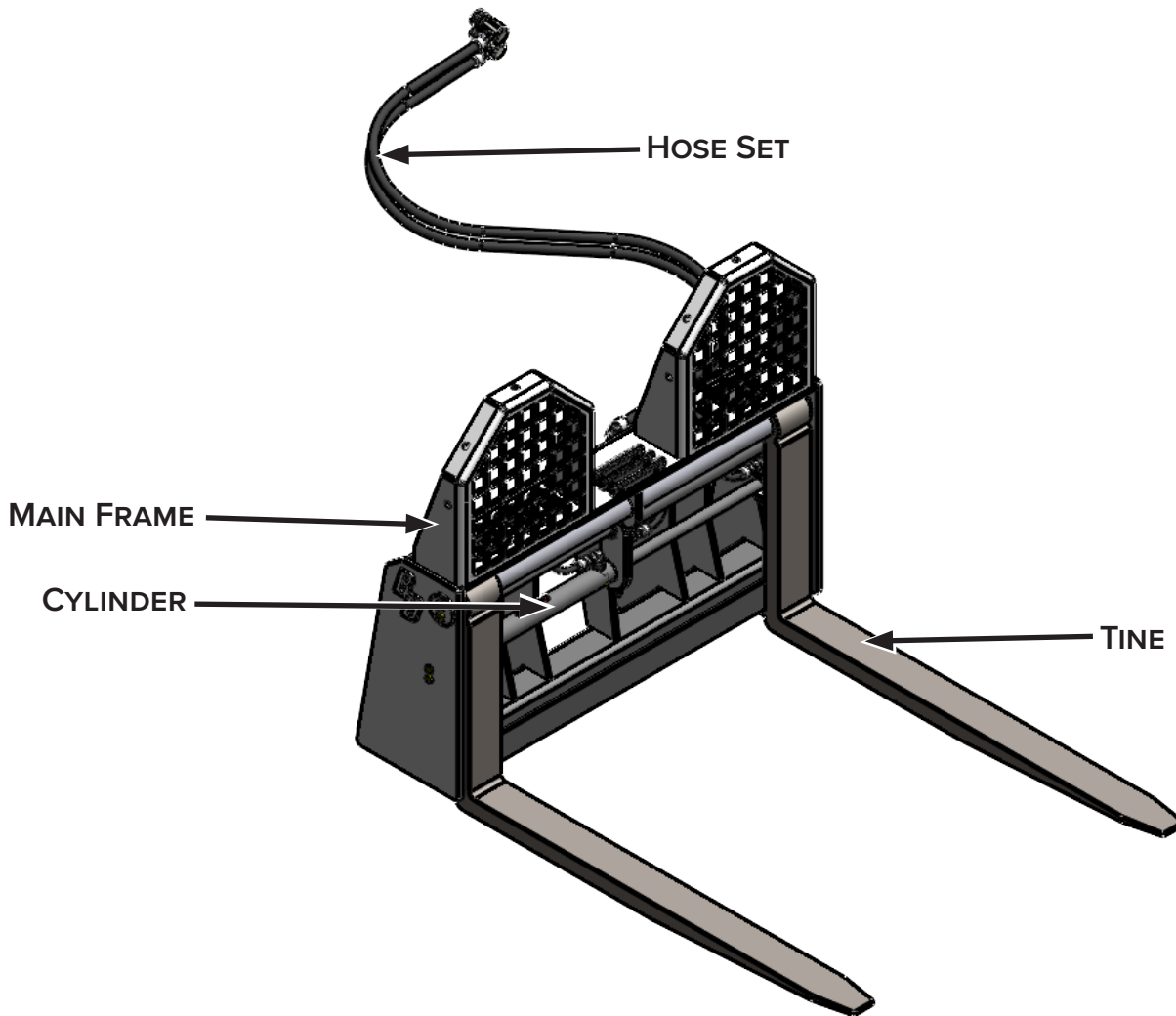
NOTE: The directions left, right, front, and rear, as mentioned throughout this manual, are as viewed from the operator's position.

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1. Introduction

1.1 Attachment Identification



1.2 About this Attachment

Blue Diamond® Hydraulic Pallet Forks, whether heavy duty or severe duty, are a must-have for any skid steer owner that loads or moves pallets. This attachment is built to save the operator time by being able to adjust the fork tines from the comfort of the cab. This increases productivity, making it a staple for warehouse settings.

1.3 Attachment Model Numbers

MODEL NUMBER	DUTY	TINE SIZE	LIFT CAPACITY
114045	Heavy	48"	4,000 lbs
114047	Heavy	60"	4,000 lbs
114050	Severe	48"	6,000 lbs
114055	Severe	60"	6,000 lbs
114057	Severe	72"	6,000 lbs.
114050-2	Severe	48"	6,000 lbs
114055-2	Severe	60"	6,000 lbs
114057-2	Severe	72"	6,000 lbs.

*Universal skid steer mount; other mount options are available upon request.

2. Safety

2.1 General Safety Information



This **SAFETY ALERT SYMBOL** identifies important safety messages on the equipment and in the owner's manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.



The signal word **IMPORTANT** identifies procedures which must be followed to avoid damage to the machine.



The signal word **DANGER** on the machine and in the manuals indicates a hazardous situation which, if not avoided, will result in death or serious injury.



The signal word **WARNING** on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



The signal word **CAUTION** on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTE: Notes are used to indicate important information. This information may be repeated in other areas of the manual.

Operating Safety

- Read and follow instructions in this manual and the machine's Operator's Manual before operating.
- The manual must always remain with the machine. In case of loss or damage, request a new copy from your dealer or from Blue Diamond®.
- Strictly follow all rules prescribed by the safety pictograms/decals applied to the machine. Ensure that all safety pictograms/decals are legible. If pictograms/decals are worn, they must be replaced with new ones obtained from Blue Diamond® and placed in the position indicated by this manual.
- Before using the machine, make sure that all safety devices are installed and in good working condition.
- It is absolutely forbidden to remove or alter safety devices and/or safety precautions
- Pay maximum attention to avoid any accidental contact with moving parts of the machine.
- If the use of the machine is required at night or in conditions of reduced visibility, use the lighting system of the prime mover and an auxiliary lighting system if required.

2. Safety

2.2 Operators

Qualified Operators

The operator is a person suited to the work and who is physically and psychologically able to withstand the demands connected with operating the equipment for its intended use. The operator must not allow anyone to approach the machine while it is working and must not allow external personnel to operate the machine or attachment.

The operator is to follow the given instructions in this manual and the machine operator's manual in order to obtain maximum performance, minimal fuel consumption, and maximum safety for himself and for others.

The operator is responsible for scrupulously observing all the instructions given in this manual.



DANGER



AVOID SERIOUS INJURY OR DEATH

Operators must receive instructions before operating the machine. Untrained operators can cause serious injury or death.

For an operator to be qualified, he or she must not use drugs or alcoholic drinks which impair alertness or coordination while working. An operator who is taking prescription drugs must get medical advice to determine if he or she can safely operate a machine and the equipment. For an operator to be qualified, he or she must have read and understood the instructions of this manual, he or she must make adequate preparation for the proper use of the machine, and he or she must hold a driving license.

In case of doubt regarding the use of the machine and/or the interpretation of this manual, the operator must contact either their dealer or Blue Diamond®.

Operator Training

- Check the rules and regulations at your location. The rules may include an employer's work safety requirements. Regulations may apply to local driving requirements or use of a Slow Moving Vehicle (SMV) emblem. Regulations may identify a hazard such as a utility line.
- The new operator must start in an area without bystanders and use all the controls until he or she can operate the machine safely under all conditions of the work area.

Operator Safety

- Before starting, and during operation of the attachment, make sure there are no people or animals in the operation area; the machine can project material from the back with risks of serious injury or death.
- During operation, adjustment, maintenance, repairing, or transportation of the machine, the operator must always use appropriate Personal Protective Equipment (PPE) including but not limited to safety glasses, working gloves, dust mask, safety helmet, and hearing protection.
- Do not operate the attachment or machine while wearing loose fitting clothing that can be entangled or caught in parts of the machine.
- Do not operate the implement when tired, not in good condition, or under the influence of alcohol or drugs.

2. Safety

2.3 Safety Guidelines

Operating Safety

- Read and follow instructions in this manual and the machine's Operator's Manual before operating.
- Under no circumstances should young children be allowed to work with this equipment.
- This equipment is dangerous to persons unfamiliar with its operation.
- Check for overhead and / or underground lines before operating equipment (if applicable).
- In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of equipment.
- Check that the attachment is securely fastened to the machine.
- Make sure all the machine controls are in the NEUTRAL before starting the machine.
- Operate the equipment only from the operator's position.
- Operate the equipment according to the Operator's Manual.
- When learning to operate the equipment, do it at a slow rate in an area clear of bystanders.
- Do not permit personnel to be in the work area when operating the equipment.
- The equipment must be used **ONLY** on approved machines.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and / or safety and could affect the life of the equipment.
- Do not make any adjustments or repairs on the equipment while the machine is running.
- **DO NOT** operate equipment in poor visibility conditions such as fog, darkness, or any conditions that limit clear visibility less than 300 feet (100 m) in front of and to the sides of the equipment.
- When conditions make it necessary to slow ground speed, shift to a lower gear rather than reducing engine speed. The engine will maintain rated speed and keep cutter running at optimum cutting speed.
- **DO NOT** operate in a work area that has not been inspected for foreign debris and obstacles.
- Remove any foreign objects and clearly mark any objects that cannot be removed.
- Wear safety glasses, gloves, hearing protection, and other protective clothing when required.

Machine Requirements and Capabilities

- Keep bystanders clear of moving parts and the work area. Keep children away.
- Use caution on slopes and near banks and ditches to prevent overturn.

Fire Prevention Safety

- Flammable debris (leaves, grass, etc.) must be removed regularly. If flammable debris is allowed to accumulate, it can cause a fire hazard. Clean often to avoid this accumulation.
- All fuels, most lubricants, and some coolant mixtures are flammable. Flammable fluids that are leaking or spilled onto hot surfaces or onto electrical components can cause a fire.

2. Safety

2.3 Safety Guidelines Cont'd

Transporting Safety

- Comply with state and local laws governing highway safety and movement of machinery on public roads.
- Check local laws for all highway lighting and marking requirements.
- Always yield to oncoming traffic and move to the side of the road so any following traffic may pass.
- Never allow riders on either machine or equipment.
- If transporting the equipment on a truck or trailer, make sure the equipment is properly secured to the transport vehicle.

Hydraulic System

- Check hydraulic tubes, hoses, and fittings for damage and leakage. Never use open flame or bare skin to check for leaks. Hydraulic tubes and hoses must be properly routed and have adequate support and secure clamps. Tighten or replace any parts that show leakage.
- Always clean fluid spills. Do not use gasoline or diesel fuel for cleaning parts. Use commercial nonflammable solvents.



WARNING



Leaking fluids under pressure can enter the skin and cause serious injury or death. Immediate medical attention is required.
Wear goggles. Use cardboard to check for leaks.

Personal Protective Equipment



Proper Work Clothes: To help ensure your safety as a designated operator wear proper work clothes including tight fitting clothes, protective gloves, and shoes.



Hand Protection: To help ensure your safety as a designated operator wear protective gloves.



Protective Shoes: To help ensure your safety as a designated operator wear protective shoes.



Safety Helmet: To help ensure your safety as a designated operator wear a safety helmet.



Safety Helmet and Eye/Ear Protection: To help ensure your safety as a designated operator wear a safety helmet and eye/ear protection.

Maintenance Safety

- Follow all safety information stated thus far.
- Before working or doing maintenance on the machine or attachment, shut off the engine and remove the key. Make sure the machine's wheels are blocked.
- Disconnect the battery (both terminals) before welding any part of the machine. Failure to do so may cause damage to electrical components.
- Always relieve hydraulic system pressure before repairing, adjusting, or disconnecting.
- When replacement parts are necessary, contact Blue Diamond® Product Support. Blue Diamond® is not responsible for failure of replacement parts provided by an outside source.

3. Operation

3.1 Pre–Operation Inspection

Before operating the attachment for the first time and each time thereafter, use the following list as a guideline during equipment inspections.

When in the operator’s position, lower safety seat bar, start the engine, and release the parking brake.



WARNING



AVOID SERIOUS INJURY OR DEATH

Disengage the machine’s auxiliary hydraulics, engage the machine’s parking brake, stop the engine, and make sure all moving components are completely stopped before connecting, disconnecting, adjusting, or cleaning the equipment.

SEE MACHINE’S OPERATOR’S MANUAL FOR ADDITIONAL INFORMATION.

- Lubricate the attachment per schedule outlined in the Maintenance Section. See “4.1 Service Schedule” on page 13.
- Check the pallet fork mounting frame for damage or cracks.
- Check for loose bolts and tighten them if necessary.
- Check all welds on the attachment for wear and damaged each time the attachment is removed from the machine. Check for damaged or missing safety decals. Replace if necessary.
- Inspect the machine’s mounting frame. (See the machine’s Operator’s Manual for inspecting the mounting frame. Replace any parts that are damaged, bent, or missing. Keep all fasteners tight. Look for cracked welds.
- Verify that the attachment is properly connected to the machine.
- Check the condition of all hydraulic components for leaks. Repair as required.

NOTE: Do not operate with hydraulic leaks.



WARNING



Leaking fluids under pressure can enter the skin and cause serious injury or death. Immediate medical attention is required.

Wear goggles. Use cardboard to check for leaks.

3. Operation

3.2 Attachment Installation

IMPORTANT



See the machine's Operator's Manual for detailed information on operating the loader.

Entering The Operator's Position

Use the attachment safety treads, handles and steps (on the machine) to enter the operator's position.

When in the operator's position, lower safety seat bar, start the engine, and release the parking brake.

Leaving The Operator's Position

WARNING

AVOID SERIOUS INJURY OR DEATH

- Always park on a flat, level surface.
- Lower lift arms, and place attachment flat on the ground.
- Place all controls in **NEUTRAL**.
- Engage the parking brake.
- Stop the engine, and remove the key.
- Wait for all moving parts to stop.

SEE MACHINE'S OPERATOR'S MANUAL FOR ADDITIONAL INFORMATION.

Park the machine / attachment on a flat, level surface.

Place all controls in neutral, engage the parking brake, stop the engine, and wait for all moving parts to stop. Leave the operator's position.

Connecting Attachment To The Machine

WARNING



CRUSH HAZARD

- Before moving the machine, look in all directions and make sure no bystanders, especially small children are in the work area. Do not allow anyone between the machine and attachment when approaching the attachment for connecting.
- Keep fingers and hands out of pinch points when connecting and disconnecting the attachment.

Before connecting to the attachment, inspect the machine's mounting plate. (See the machine's Operator's Manual for inspecting the mounting frame).

Enter the operator's position. See "Entering The Operator's Position" on page 10.

Drive the machine slowly forward, until the top edge of the machine's mounting plate is under the top flange of the attachment mounting frame.

Slowly tilt the machine's mounting plate back until the attachment mounting frame fully contacts the front of the machine's mounting plate.

Leave the operator's position. See "Leaving The Operator's Position" on page 10.

WARNING

AVOID SERIOUS INJURY OR DEATH

The locking pins / wedges must extend through the holes in the attachment mounting frame. Failure to secure locking pins / wedges can allow the attachment to come off.

SEE MACHINE'S OPERATOR'S MANUAL FOR ADDITIONAL INFORMATION.

3. Operation

3.2 Attachment Installation Cont'd

Connecting Attachment to the Machine Cont'd

Engage attachment locking pins / wedges (See the machine's Operator's Manual for detailed information).

Connecting Hydraulic Hoses



Thoroughly clean the quick couplers before making connections. Dirt can quickly damage the hydraulic system.

Remove dirt or debris from the male and female couplers. Visually inspect the couplers for corroding, cracking, damage, or excessive wear. Replace as needed.

Connect the attachment hydraulic hoses to the machine. Pull on each hose to verify full connection is made.

Disconnecting Hydraulic Hoses



AVOID SERIOUS INJURY OR DEATH

Hydraulic fluid, tubes, fittings, and quick couplers can get hot during operation. Be careful when connecting and disconnecting hydraulic hoses.

Relieve auxiliary hydraulic pressure. (See the machine's Operator's Manual for correct procedure.)

Disconnect attachment hydraulic hoses from the machine.

Disconnecting Attachment From the Machine

Relieve auxiliary hydraulic pressure. (See the machine's Operator's Manual for correct procedure.)

Park the machine and attachment on a flat level surface. Lower the attachment flat on the ground.

Leave the operator's position. See "Leaving The Operator's Position" on page 10.

Disconnect attachment hydraulic hoses from the machine.

Disengage locking pins / wedges. (See the machine's Operator's Manual for correct procedure.)

Enter the operator's position. See "Entering The Operator's Position" on page 10.

Slowly tilt the machine's mounting plate forward until the attachment mounting frame is free from the machine's mounting plate.

Drive the machine slowly backward, away from the attachment.

3. Operation

3.3 Operating the Attachment

Machine Requirements

- The pallet fork attachment can be used for transporting loads up to 4,000 lbs or 6,000 lbs. See “1.3 Attachment Model Numbers” on page 4 to see the weight capacity for each model number.



WARNING



Never allow riders on the attachment.

- Only use the pallet forks on compatible machines.
- Refer to the machine’s Operator’s Manual for flow and pressure specifications.

Operating the Pallet Forks

Install the pallet forks onto the machine. See “Connecting Attachment To The Machine” on page 10.

Enter the operator’s position. See “Entering The Operator’s Position” on page 10.

Raise the pallet forks slightly off the ground.

Cycle the pallet fork cylinders several times to purge the hydraulic system of air.

Adjust the fork tine spacing to accommodate the pallet being lifted.

For transporting, carry the load as close to the attachment as possible for stability and to maximize the life of the attachment.

NOTE: DO NOT transport a load at the end of the tines. Place the load at the end of the tines for load placement only.



WARNING



Before moving a load, check all directions for people and obstructions. If the load blocks your view, travel in reverse.

4. Maintenance

General Maintenance

To ensure efficient operation, inspect, lubricate, and make necessary adjustments and repairs at regular intervals. Keep good maintenance records and adequately clean the machine after each use.

Proper maintenance and lubrication is important. Follow instructions in the service schedule below.



WARNING



Never work under the machine or attachment unless the machine or equipment is blocked or securely supported.



IMPORTANT



Fluid, such as hydraulic fluid, grease, coolants, etc., must be disposed of in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local, state, and federal regulations for correct disposal.

4.1 Service Schedule

DESCRIPTION	SERVICE PROCEDURES		
	Check	Clean	Lube
Daily Maintenance (or every 8 hours)			
Hydraulic Fittings	•		
Hydraulic Hoses	•		
All Hardware	•		
Frame	•	•	
Weekly Maintenance (or every 40 hours)			
Hydraulic Fittings	•		
Hydraulic Hoses	•		
All Hardware	•		
Frame	•		
Slide Bar			•
Hydraulic Cylinder			•
Safety Decals	•		

*Check the attachment for the correct function after adjustments, repairs, or service.

4. Maintenance

4.2 Maintenance Schedule

Daily Inspection

NOTE: Inspect the attachment by performing a walk-around daily before and after use.

Check the following items after every 8 hours of operation:

- Verify that the attachment is properly connected to the machine.
- Check hydraulic lines, connections, and fittings for hydraulic oil leaks. Repair or replace damaged parts if necessary.
- Check the attachment mounting hardware for wear or damage. Inspect the pins and the mount (on the attachment) for wear or damage. Repair or replace damaged parts if necessary.

Weekly Inspection

Check the following items after every 40 hours of operation:

- Check all bolts for tightness.
- Check hydraulic tubes, hoses, and fittings for wear, damage, and leakage.
- Inspect the frame and forks for cracks, bends, or damage.
- Check for damaged and / or missing decals. Replace if necessary.
- Lubricate as required.

4.3 Storing the Attachment

Storage

Sometimes it may be necessary to store your pallet forks for an extended period of time. Below is a list of items to perform before storage:

- Make sure the hydraulic hose couplers are capped, plugged, or connected to each other.
- Thoroughly wash the attachment before storing for long periods.
- Coat the exposed portion of the hydraulic cylinder with grease.
- Check for loose hardware and / or damaged parts.
- Check for damaged and / or missing decals. Replace if necessary.
- Place the attachment flat on the ground in a dry, protected shelter.

NOTE: In muddy conditions or to prevent the attachment from freezing to the ground, put the attachment on planks or blocks before removing the attachment from the machine.

Return to Service

After the attachment has been in storage, it is necessary to follow a list of items to return the attachment to service:

- Lubricate the hydraulic cylinder.
- Install and lubricate the pallet fork tines, and check for the correct function.
- Check for leaks. Repair as needed.

4. Maintenance

4.4 Troubleshooting

PROBLEM	CAUSE	SOLUTION
Hydraulic oil level goes down during operation.	Leak at hoses on the attachment	Investigate and repair.
	Leak in the prime mover hydraulic system	Investigate and repair.
Tines do not open or close.	Quick disconnects not connected	Check and recouple quick disconnects.
	Hoses damaged	Check for a smashed or kinked hose. Replace if found.
	Skid steer auxiliary circuit inoperative	Investigate and repair.
Tines move abnormally slow.	Restricted hose	Check for damaged hose between skid steer and cylinder. If damaged, replace the hose.
	Bad circuit relief on skid steer	Investigate and repair.
	Auxiliary valve spool on skid steer not shifting properly	Investigate and repair.
	Cylinder seals bypassing	Have cylinder repacked or replaced.
Tines move jerkily.	Too much friction on the slide bars	Grease the slide bars.
	Bent or broken components	Repair or replace affected components.
	Low hydraulic oil	Check and fill the machine's hydraulic oil tank.

5. Parts

5.1 Revisions — Heavy Duty Models Only

Blue Diamond® strives to always provide the best quality possible to its customers. With this in mind, some of our attachments need revisions to achieve the standard of quality Blue Diamond® is known for.

Below is a list of revisions that have occurred to our Heavy Duty Series of Hydraulic Pallet Forks, model numbers 114045 and 114047.

If you have any questions, please contact Blue Diamond® Product Support for more information.

Revision 002

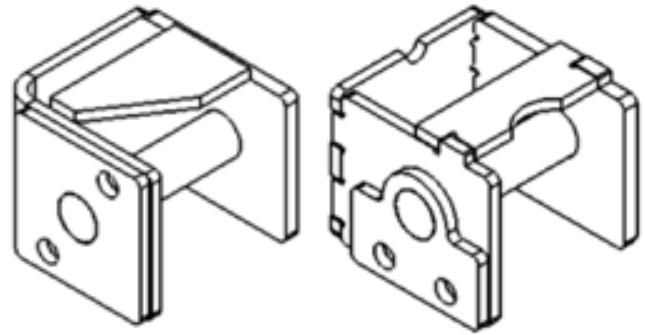
- Cylinder Pin 1
- Bulkhead Connection — Top

Revision 001

- Cylinder Pin 2
- Bulkhead Connection — Top

Revision 000

- Cylinder Pin 1
- Bulkhead Connection — Bottom

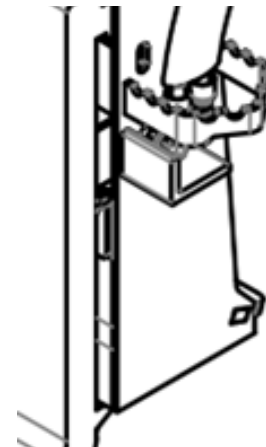


Cylinder Pin 1

Cylinder Pin 2



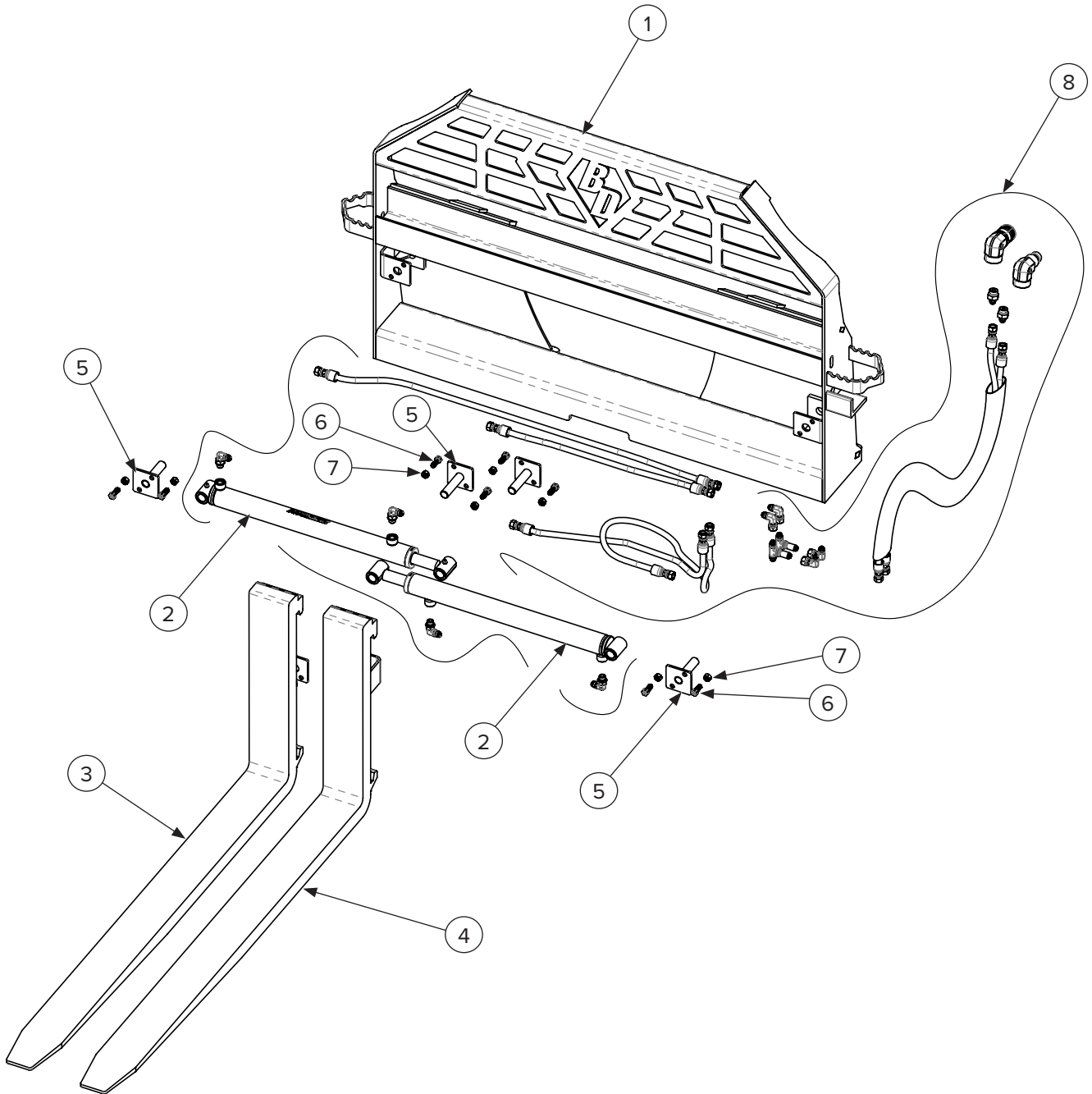
Machine Hose Set Bulkhead Connection
Bottom



Machine Hose Set Bulkhead Connection
Top

5. Parts

5.2 Main Components — Heavy Duty Models



5. Parts

5.2 Main Components – Heavy Duty Models Cont'd

Revision 002

ITEM	PART NUMBER	DESCRIPTION	QTY
1	214120	Frame, Universal Skid Steer Mount	1
	214120-25	Frame, Mini Universal Skid Steer Mount	
	214120-26	Frame, Bobcat MT Mount	
2	214059	Hydraulic Cylinder 1 1/2" Bore 16.0" Stroke 1.0" Rod	2
3	214055	48" Right Tine	1
	214057	60" Right Tine	1
4	214056	48" Left Tine	1
	214058	60" Left Tine	1
5	214111	Cylinder Pin	4
6	299423	3/8"–16 x 1.0" Bolt Hex Head	8
7	208550	3/8" Stover Lock Nut	8
8	See page 20	Hydraulic System	—

Revision 001

ITEM	PART NUMBER	DESCRIPTION	QTY
1	214119	Frame, Universal Skid Steer Mount	1
	214119-14	Frame, John Deere 400/500 Mount	
	214119-16	Frame, Euro Ag Mount	
	214119-25	Frame, Mini Universal Skid Steer Mount	
	214119-26	Frame, Bobcat MT Mount	
2	214108	Cylinder	2
3	214041	48" Right Tine	1
	214043	60" Right Tine	1
4	214042	48" Left Tine	1
	214044	60" Left Tine	1
5	214114	Cylinder Pin	4
6	299423	3/8"–16 x 1.0" Bolt Hex Head	8
7	208550	3/8" Stover Lock Nut	8
8	See page 20	Hydraulic System	—

5. Parts

5.2 Main Components – Heavy Duty Models Cont'd

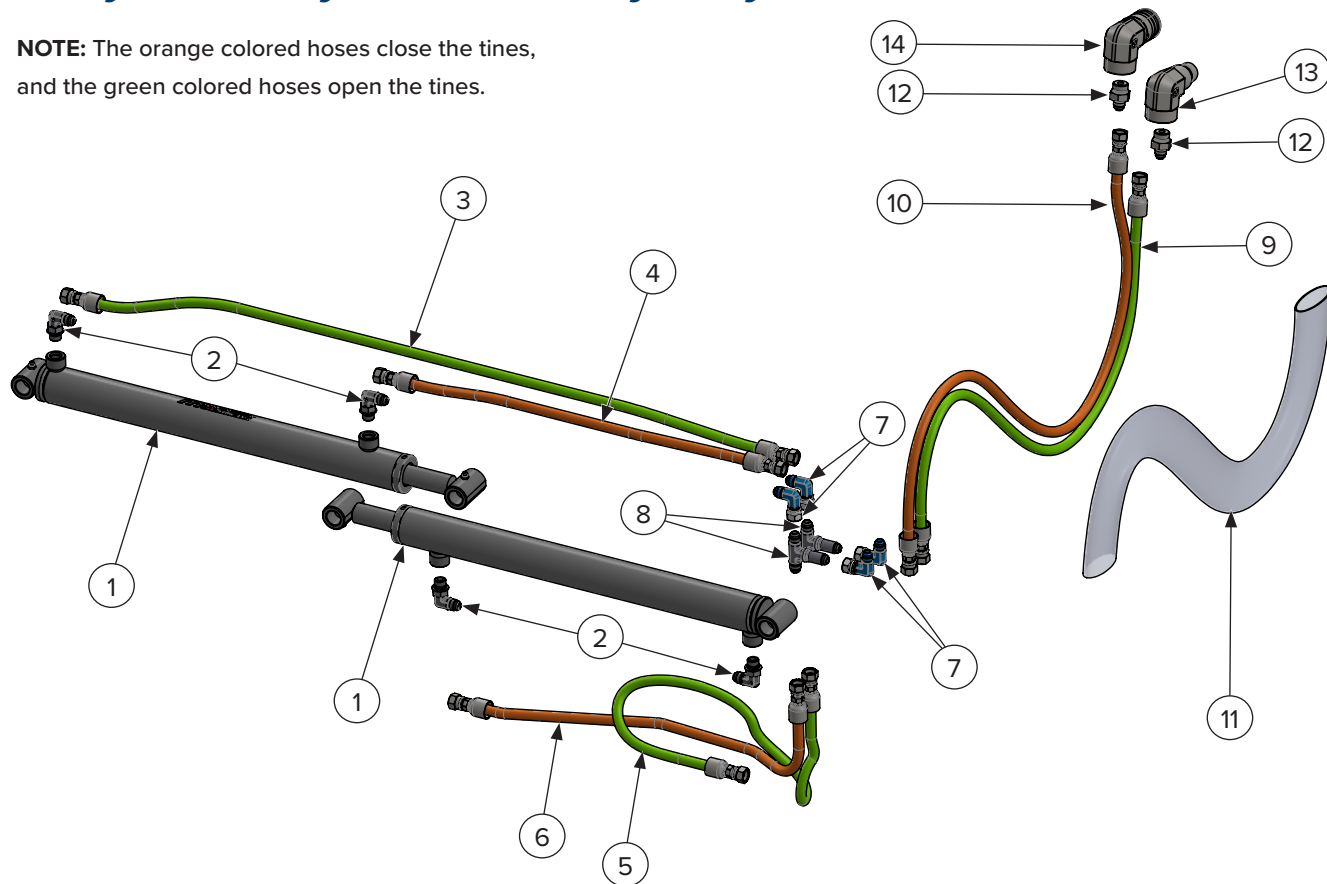
Revision 000

ITEM	PART NUMBER	DESCRIPTION	QTY
1	214118	Frame, Universal Skid Steer Mount	1
	214118-14	Frame, John Deere 400/500 Mount	
	214118-16	Frame, Euro Ag Mount	
	214118-25	Frame, Mini Universal Skid Steer Mount	
	214118-26	Frame, Bobcat MT Mount	
2	214108	Cylinder	2
3	214055	48" Right Tine	1
	214057	60" Right Tine	1
4	214056	48" Left Tine	1
	214058	60" Left Tine	1
5	214111	Cylinder Pin	4
6	299423	3/8"-16 x 1.0" Bolt Hex Head	8
7	208550	3/8" Stover Lock Nut	8
8	See page 20	Hydraulic System	—

5. Parts

5.3 Hydraulic System – Heavy Duty Models

NOTE: The orange colored hoses close the tines, and the green colored hoses open the tines.



Revision 002

ITEM	PART NUMBER	DESCRIPTION	QTY
1	214059	Hydraulic Cylinder 1 1/2" Bore 16.0" Stroke 1.0" Rod	2
2	295030-M06ORB-M06JIC	Hydraulic 90 Degree Fitting Male #6 O-Ring Boss x Male #6 JIC	4
3	214070	Right Cylinder Extend Hose 41.0" OAL 1/4" ID Female #6 JIC Swivel Both End	1
4	206056	Right Cylinder Retract Hose 25.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
5		Left Cylinder Extend Hose 25.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
6	208716	Left Cylinder Retract Hose 31.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
7	295030-M06JIC-F06JICS	Hydraulic 90 Degree Fitting Male #6 JIC x Female #6 JIC Swivel	4
8	206355	Bulkhead Branch Tee Fitting Male #6 JIC to Male #6 JIC to Male #6 JIC	2
9	206093	Machine Hose Set with Couplers and Hose Wrap 2 Hoses 75.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	2
10			1
11			1
12	295010-M06JIC-M08ORB	Hydraulic Straight Fitting Male #6 JIC x Male #8 O-Ring Boss	2
13	224016	Coupler Male Flat Face 1/2" O-Ring Thread with 90 Degree Angle	1
14	224015	Coupler Female Flat Face 1/2" O-Ring Thread with 90 Degree Angle	1

5. Parts

5.3 Hydraulic System – Heavy Duty Models Cont'd

Revision 001

ITEM	PART NUMBER	DESCRIPTION	QTY
1	214108	Cylinder	2
2	295030-M06JIC-M04ORB	Hydraulic 90 Degree Fitting Male #6 JIC x Male #4 O–Ring Boss	4
3	214073	Right Cylinder Extend Hose 42.0" OAL 1/4" ID Straight Female #6 JIC Swivel to 90 Degree Female #6 JIC Swivel	1
4	214074	Right Cylinder Retract Hose 25.0" OAL 1/4" ID Straight Female #6 JIC Swivel to 90 Degree Female #6 JIC Swivel	1
5	214075	Left Cylinder Extend Hose 22.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
6	214076	Left Cylinder Retract Hose 26.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
7	295030-M06JIC-F06JICS	Hydraulic 90 Degree Fitting Male #6 JIC x Female #6 JIC Swivel	4
8	206355	Bulkhead Branch Tee Fitting Male #6 JIC to Male #6 JIC to Male #6 JIC	2
9	206093	Machine Hose Set with Couplers and Hose Wrap 2 Hoses 75.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	2
10			1
11			1
12	295010-M06JIC-M08ORB	Hydraulic Straight Fitting Male #6 JIC x Male #8 O–Ring Boss	2
13	224016	Coupler Male Flat Face 1/2" O–Ring Thread with 90 Degree Angle	1
14	224015	Coupler Female Flat Face 1/2" O–Ring Thread with 90 Degree Angle	1

Revision 000

ITEM	PART NUMBER	DESCRIPTION	QTY
1	214108	Cylinder	2
2	295030-M06JIC-M04ORB	Hydraulic 90 Degree Fitting Male #6 JIC x Male #4 O–Ring Boss	4
3	214071	Right Cylinder Extend Hose 48.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
4	208716	Right Cylinder Retract Hose 31.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
5	214072	Left Cylinder Extend Hose 21.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
6	214072	Left Cylinder Retract Hose 21.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
7	295030-M06JIC-F06JICS	Hydraulic 90 Degree Fitting Male #6 JIC x Female #6 JIC Swivel	2
8	206355	Bulkhead Branch Tee Fitting Male #6 JIC to Male #6 JIC to Male #6 JIC	2
9	214113	Machine Hose Set with Couplers and Hose Wrap 2 Hoses 80.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	2
10			1
11			1
12	295010-M06JIC-M08ORB	Hydraulic Straight Fitting Male #6 JIC x Male #8 O–Ring Boss	2
13	224016	Coupler Male Flat Face 1/2" O–Ring Thread with 90 Degree Angle	1
14	224015	Coupler Female Flat Face 1/2" O–Ring Thread with 90 Degree Angle	1

5. Parts

5.4 Revisions — Severe Duty Models Only

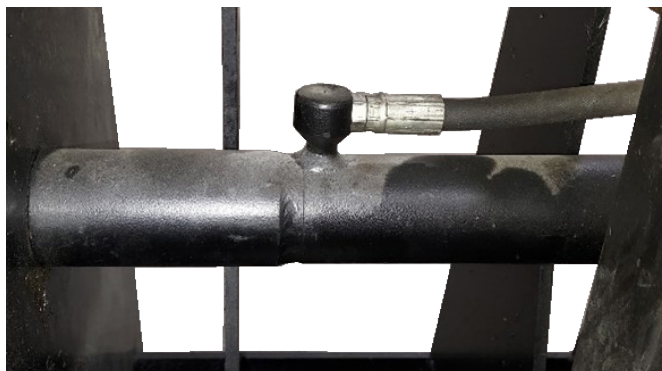
Blue Diamond® strives to always provide the best quality possible to its customers. With this in mind, some of our attachments need revisions to achieve the standard of quality Blue Diamond® is known for.

Below is a list of revisions that have occurred to our Severe Duty Series of Hydraulic Pallet Forks, model numbers 114050, 114055, 114057, 114050-2, 114055-2, and 114057-2.

If you have any questions, please contact Blue Diamond® Product Support for more information.

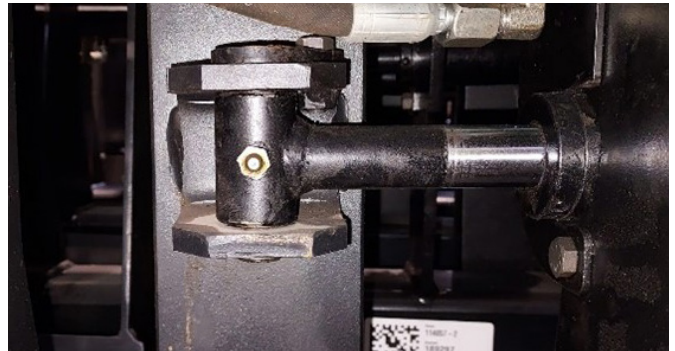
Series 1

- Cylinders are bolted to the frame, have a threaded rod end secured to the tines, and have a 90 degree #4 ORB ports.



Series 2 Revision 002

- Cylinders are pinned to brackets on the frame and tines and have straight #6 ORB ports with a 90 degree adapter to JIC.

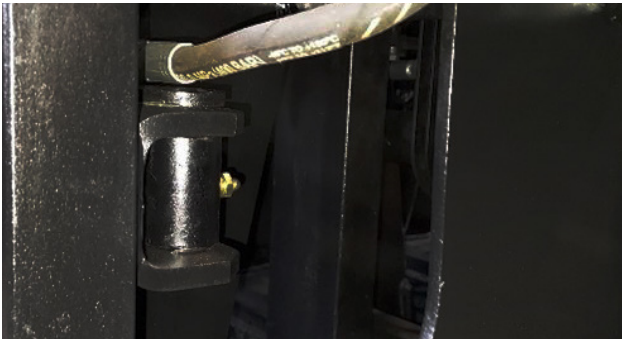
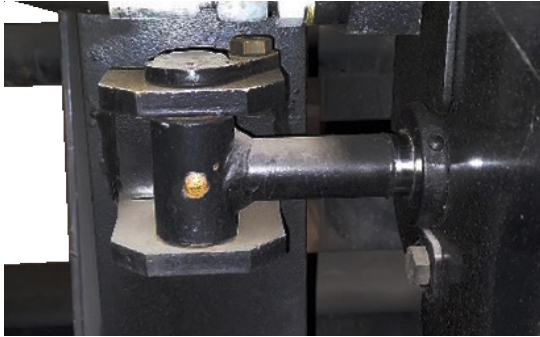


5. Parts

5.4 Revisions — Severe Duty Models Only Cont'd

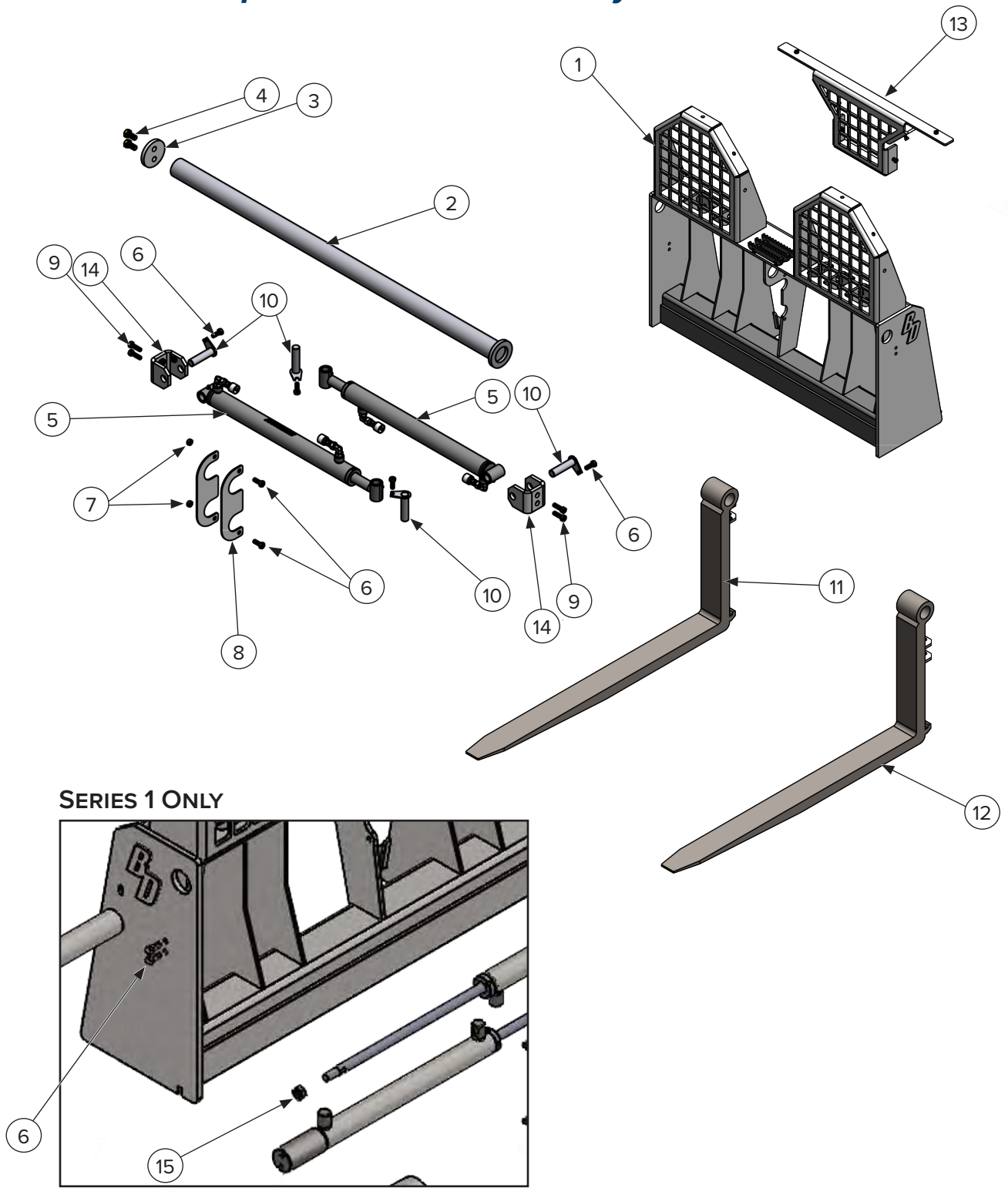
Series 2 Revision 001/000

- Cylinders are pinned to brackets on the frame and tines and have 90 degree #6 BSPP ports with a straight adapter to JIC.



5. Parts

5.5 Main Components — Severe Duty Models



5. Parts

5.5 Main Components – Severe Duty Models Cont'd Series 2

ITEM	PART NUMBER	DESCRIPTION	QTY
1	214051	Main Frame Weldment	1
2	214050	Glide Rod	1
3	214060	Glide Rod End Cap	1
4	299431	1/2"–13 x 1.0" Bolt Hex Head	2
5	214059	Revision 002 Cylinder, 1 1/2" Bore x 16.0" Stroke Flush #6 O–Ring Boss Ports	2
	214067	Revision 001 & 000 Cylinder 1 1/2" Bore x 16.0" Stroke 90 Degree #6 BSPP Ports	2
6	299423	3/8"–16 x 1.0" Bolt Hex Head	6
7	299655	3/8"–16 Stover Nut	2
8	214109	Cylinder Brace	2
9	299426	3/8"–16 x 1 1/4" Bolt Hex Head	4
10	214052	Cylinder Pin	4
11	214045-2	1 3/4" x 4.0" x 48" Right Tine	1
	214045-2-60	1 3/4" x 4.0" x 60" Right Tine	
	214045-2-72	1 3/4" x 4.0" x 72" Right Tine	
12	214046-2	1 3/4" x 4.0" x 48" Left Tine	1
	214046-2-60	1 3/4" x 4.0" x 60" Left Tine	
	214046-2-72	1 3/4" x 4.0" x 72" Right Tine	
13	214053	Center Load Support Option	1
14	214054	Cylinder Pin Bracket	2

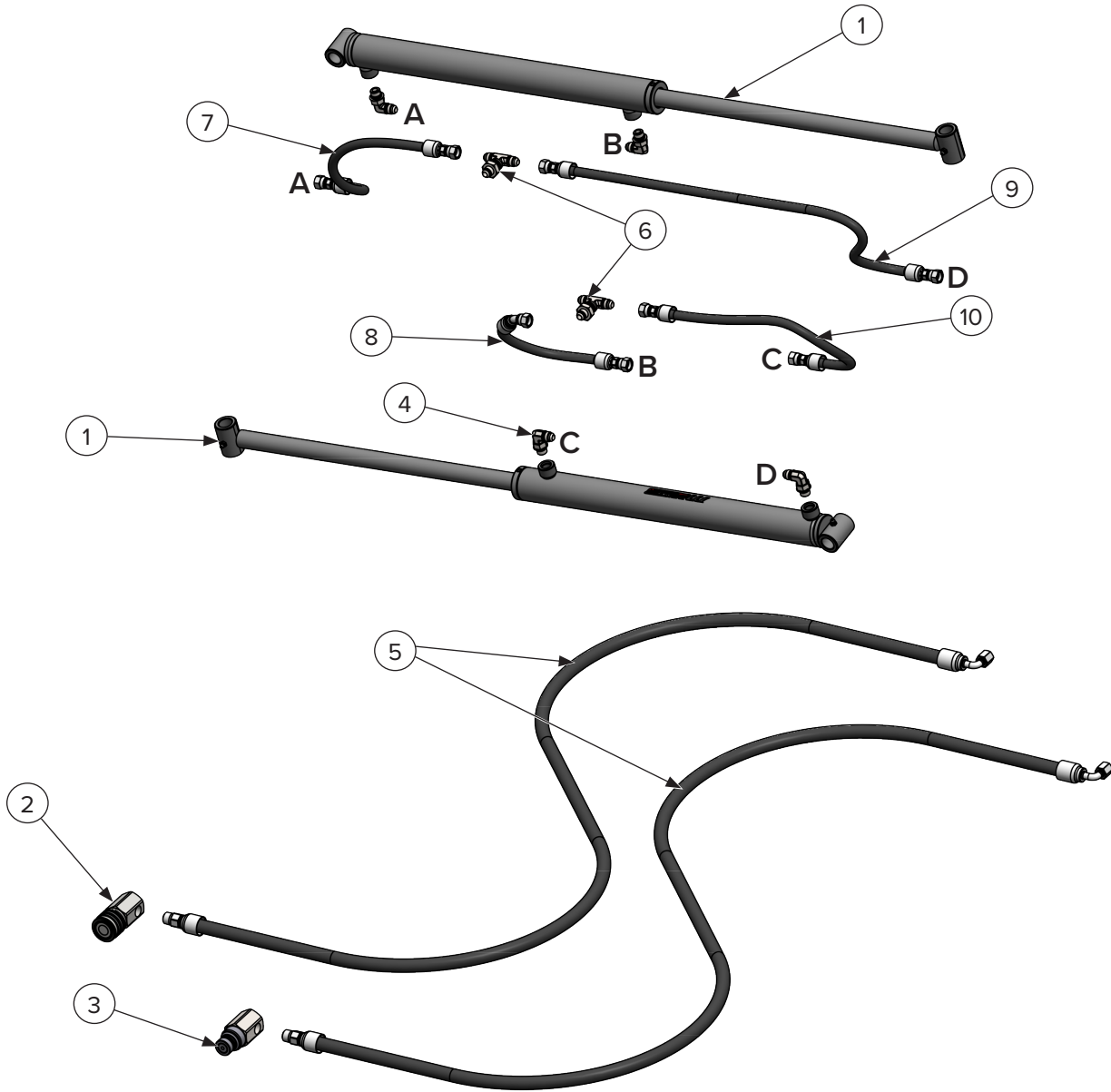
5. Parts

5.5 Main Components – Severe Duty Models Cont'd Series 1

ITEM	PART NUMBER	DESCRIPTION	QTY
1	214039	Main Frame Weldment	1
2	214050	Glide Rod	1
3	214060	Glide Rod End Cap	1
4	299431	1/2"–13 x 1.0" Bolt Hex Head	2
5	214105	Cylinder	2
6	299423	3/8"–16 x 1.0" Bolt Hex Head	6
7	299655	3/8"–16 Stover Nut	2
8	214107	Cylinder Brace	2
11	214045	1 3/4" x 4.0" x 48" Right Tine	1
	214045-60	1 3/4" x 4.0" x 60" Right Tine	
	214045-72	1 3/4" x 4.0" x 72" Right Tine	
12	214046	1 3/4" x 4.0" x 48" Left Tine	1
	214046-60	1 3/4" x 4.0" x 60" Left Tine	
	214046-72	1 3/4" x 4.0" x 72" Right Tine	
15	109177	5/8"–11 Stover Nut	2

5. Parts

5.6 Hydraulic System — Severe Duty Models



***Port lettering is used to route hoses.**

5. Parts

5.6 Hydraulic System – Severe Duty Models Cont'd

Series 2 Revision 002

ITEM	PART NUMBER	DESCRIPTION	QTY
1	214059	Cylinder 1.5" Bore x 16" Stroke Flush #6 ORB Ports	2
2	224070	Female Coupler	1
3	224072	Male Coupler	1
NS	295030-M06JIC-M06NPT	Coupler 90 Degree Fitting Male #6 JIC to Male #6 NPT	2
4	295030-M06ORB-M06JIC	90 Degree Fitting Male #6 O-Ring Boss to Male #6 JIC	4
5	214077	Machine Hose Set 2 Hoses 78.0" OAL 3/8" ID 90 Degree Female #6 JIC Swivel to Straight Female #6 JIC Swivel	1
6	206355	Bulkhead Branch Tee Fitting Male #6 JIC to Male #6 JIC to Male #6 JIC Bulkhead	2
7	214062	Left Cylinder Extend Hose 20.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
8	214063	Left Cylinder Retract Hose 18.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
9	208715	Right Cylinder Extend Hose 27.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
10	214063	Right Cylinder Retract Hose 18.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1

Series 2 Revision 001

ITEM	PART NUMBER	DESCRIPTION	QTY
1	214067	Cylinder 1 1/2" Bore x 16.0" Stroke 90 Degree #6 BSPP Ports	2
2	224070	Female Coupler	1
3	224072	Male Coupler	1
NS	295030-M06JIC-M06NPT	Coupler 90 Degree Fitting Male #6 JIC to Male #6 NPT	2
4	295010-M06JIC-M06BSPP	Straight Male #6 JIC to Male #6 British Pipe Parallel Thread Washer Seal	4
5	214077	Machine Hose Set 2 Hoses 78.0" OAL 3/8" ID 90 Degree Female #6 JIC Swivel to Straight Female #6 JIC Swivel	1
6	206355	Bulkhead Branch Tee Fitting Male #6 JIC to Male #6 JIC to Male #6 JIC Bulkhead	2
7	214063	Left Cylinder Extend Hose 18.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
8	214065	Left Cylinder Retract Hose 16.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
9	216064	Right Cylinder Extend Hose 33.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
10	214063	Right Cylinder Retract Hose 18.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1

5. Parts

5.6 Hydraulic System – Severe Duty Models Cont'd

Series 2 Revision 000

ITEM	PART NUMBER	DESCRIPTION	QTY
1	214067	Cylinder 1 1/2" Bore x 16.0" Stroke 90 Degree #6 BSPP Ports	2
2	224007	Female Coupler	1
3	224008	Male Coupler	1
4	295010-M06JIC-M06BSPP	Straight Male #6 JIC to Male #6 British Pipe Parallel Thread Washer Seal	2
5	214061	Machine Hose Set with Hose Wrap	4
6	206355	Bulkhead Branch Tee Fitting Male #6 JIC to Male #6 JIC to Male #6 JIC Bulkhead	1
7	214063	Left Cylinder Extend Hose 18.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
8	214065	Left Cylinder Retract Hose 16.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
9	216064	Right Cylinder Extend Hose 33.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1
10	214063	Right Cylinder Retract Hose 18.0" OAL 1/4" ID Straight Female #6 JIC Swivel Both Ends	1

Series 1

ITEM	PART NUMBER	DESCRIPTION	QTY
1	214105	Cylinder	2
2	224007	Female Coupler	1
3	224008	Male Coupler	1
5	214102	Machine Hose Set with Couplers and Hose Wrap	1
6	206355	Bulkhead Tee	2
7	214096	Left Cylinder Extend Hose 12.0" OAL 1/4 ID Straight Male #4 O-Ring Boss to Straight Female #6 JIC Swivel	1
8	214097	Left Cylinder Retract Hose 14.0" OAL 1/4 ID Straight Male #4 O-Ring Boss to Straight Female #6 JIC Swivel	1
9	214098	Right Cylinder Extend Hose 27.0" OAL 1/4 ID Straight Male #4 O-Ring Boss to Straight Female #6 JIC Swivel	1
10	214099	Right Cylinder Retract Hose 19.0" OAL 1/4 ID Straight Male #4 O-Ring Boss to Straight Female #6 JIC Swivel	1

5. Parts

5.7 Safety Decals

1



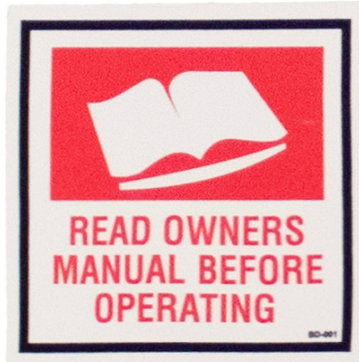
2



3



4



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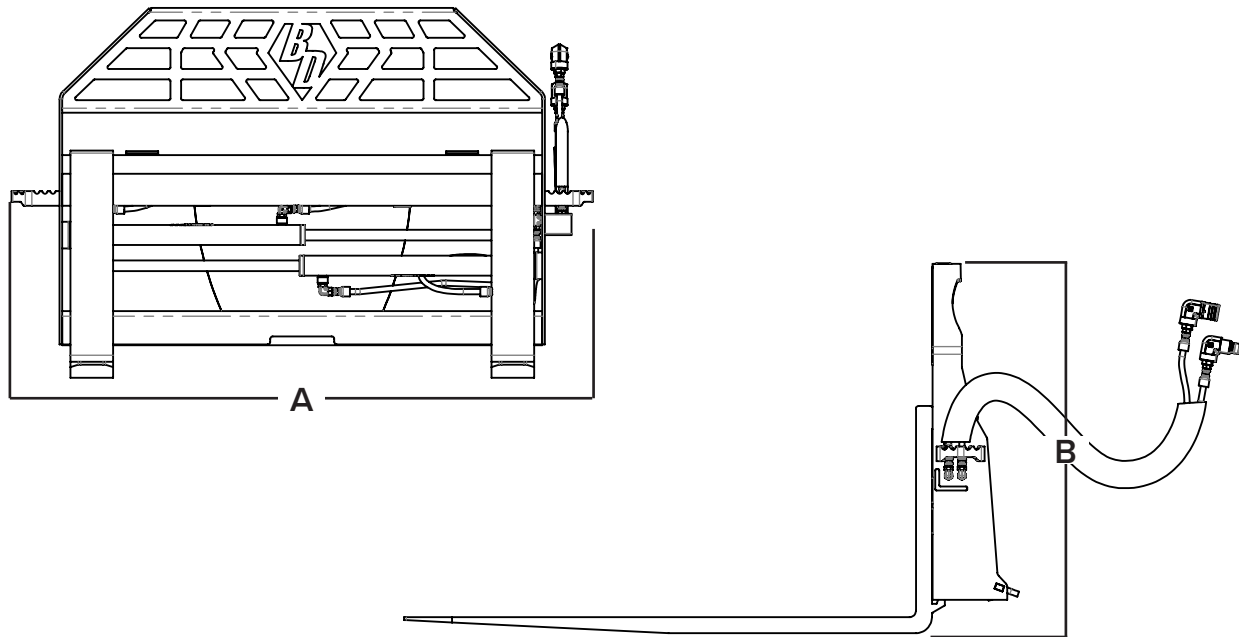


ITEM	PART NUMBER	DESCRIPTION	QTY
1	BD-060	2.4375" x 3.375" Decal, Blue Diamond Attachments	2
2	BD-004	2.0" x 4.0" Decal, Grease All Fitting Every 8 Hours	1
3	BD-123	3.0" x 3.0" Decal, High Pressure Fluid Hazard	1
4	BD-001	3.0" x 3.0" Decal, Read Owner's Manual	1
5	BD-092	1.5" x 2.0" Decal, Warranty Registration QR	1

6. Specifications

6.1 Attachment Specifications

Heavy Duty Models

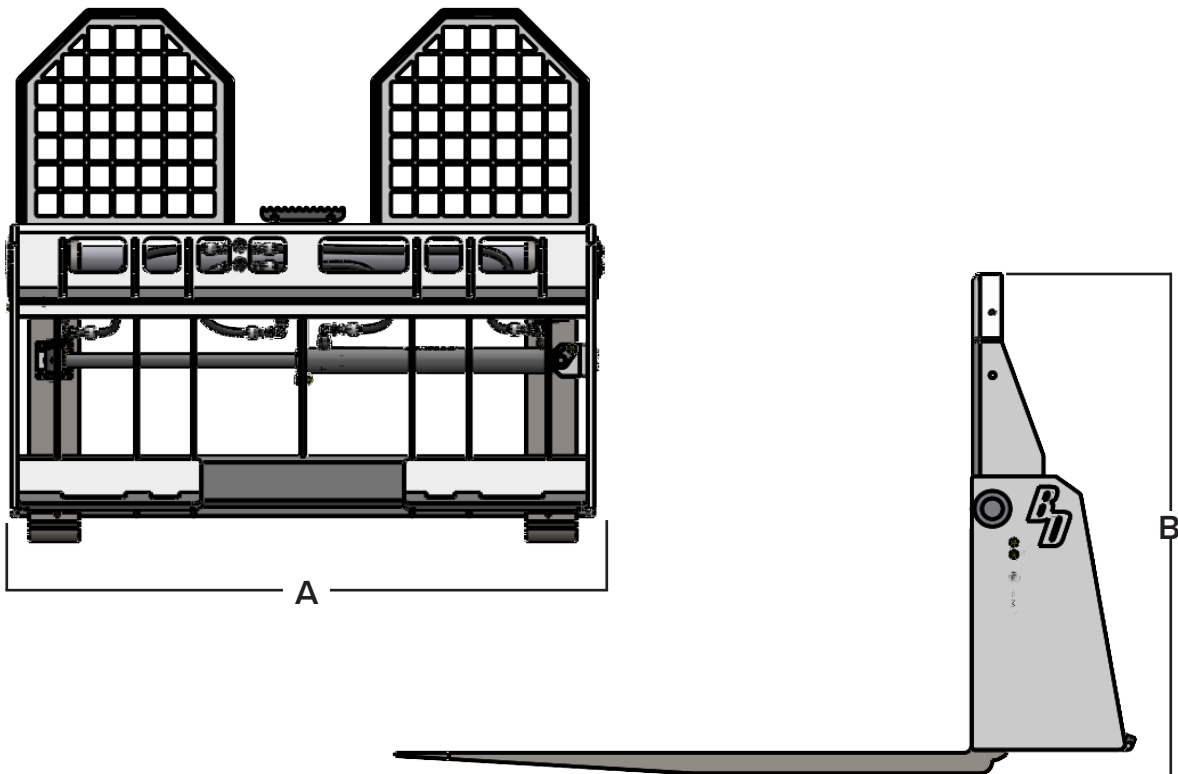


DESCRIPTION	114045	114047
Overall Width (A)	55 in.	
Overall Height (B)	35 in.	
Overall Length	58 in.	70 in.
Tine Length	48 in.	60 in.
Fork Opening, Fully Open	43 in.	
Fork Opening, Fully Closed	11 in.	
Weight	420 lbs.	460 lbs.
Maximum Load	4,000 lbs	
Maximum Pressure	3200 PSI	

6. Specifications

6.1 Attachment Specifications Cont'd

Severe Duty Models



DESCRIPTION	114050	114055	114057
	114050-2	114055-2	114057-2
Overall Width (A)	46 in.		
Overall Height (B)	42 in.		
Overall Length	62 in.	74 in.	86 in.
Tine Length	48 in.	60 in.	72 in.
Fork Opening, Fully Open	43 in.		
Fork Opening, Fully Closed	11 in.		
Weight	624 lbs.	672 lbs.	700 lbs.
Maximum Load	6,000 lbs		
Maximum Pressure	3200 PSI		

6. Specifications

6.2 Torque Specifications

Standard Hardware and Lock Nuts

BOLT TYPE	SAE GRADE 5		SAE GRADE 8		LOCK NUTS			
	Nominal Size	Plated or Unplated Silver	Plated W/ ZnCr Gold	Plated or Unplated Silver	Plated W/ ZnCr Gold	Plated or Unplated Silver	Plated W/ ZnCr Gold	W/ Grade 5 Bolt
1/4	55 in / lb (6.2 N•m)	72 in / lb (8.1 N•m)	86 in / lb (9.7 N•m)	112 in / lb (12.6 N•m)	121 in / lb (13.6 N•m)	157 in / lb (17.7 N•m)	61 in / lb (6.9 N•m)	86 in / lb (9.8 N•m)
5/16	115 in / lb (13 N•m)	149 in / lb (17 N•m)	178 in / lb (20 N•m)	229 in / lb (26 N•m)	250 in / lb (28 N•m)	325 in / lb (37 N•m)	125 in / lb (14 N•m)	176 in / lb (20 N•m)
3/8	17 ft / lb (23 N•m)	22 ft / lb (30 N•m)	26 ft / lb (35 N•m)	34 ft / lb (46 N•m)	37 ft / lb (50 N•m)	48 ft / lb (65 N•m)	19 ft / lb (26 N•m)	26 ft / lb (35 N•m)
7/16	27 ft / lb (37 N•m)	35 ft / lb (47 N•m)	42 ft / lb (57 N•m)	54 ft / lb (73 N•m)	59 ft / lb (80 N•m)	77 ft / lb (104 N•m)	30 ft / lb (41 N•m)	42 ft / lb (57 N•m)
1/2	42 ft / lb (57 N•m)	54 ft / lb (73 N•m)	64 ft / lb (87 N•m)	83 ft / lb (113 N•m)	91 ft / lb (123 N•m)	117 ft / lb (159 N•m)	45 ft / lb (61 N•m)	64 ft / lb (88 N•m)
9/16	60 ft / lb (81 N•m)	77 ft / lb (104 N•m)	92 ft / lb (125 N•m)	120 ft / lb (163 N•m)	130 ft / lb (176 N•m)	169 ft / lb (229 N•m)	65 ft / lb (88 N•m)	92 ft / lb (125 N•m)
5/8	83 ft / lb (112 N•m)	107 ft / lb (145 N•m)	128 ft / lb (174 N•m)	165 ft / lb (224 N•m)	180 ft / lb (244 N•m)	233 ft / lb (316 N•m)	90 ft / lb (122 N•m)	127 ft / lb (172 N•m)
3/4	146 ft / lb (198 N•m)	189 ft / lb (256 N•m)	226 ft / lb (306 N•m)	293 ft / lb (397 N•m)	319 ft / lb (432 N•m)	413 ft / lb (560 N•m)	160 ft / lb (217 N•m)	226 ft / lb (306 N•m)
7/8	142 ft / lb (193 N•m)	183 ft / lb (248 N•m)	365 ft / lb (495 N•m)	473 ft / lb (641 N•m)	515 ft / lb (698 N•m)	667 ft / lb (904 N•m)	258 ft / lb (350 N•m)	364 ft / lb (494 N•m)
1	213 ft / lb (289 N•m)	275 ft / lb (373 N•m)	547 ft / lb (742 N•m)	708 ft / lb (960 N•m)	773 ft / lb (1048 N•m)	1000 ft / lb (1356 N•m)	386 ft / lb (523 N•m)	545 ft / lb (739 N•m)

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Warranty

MANUFACTURER'S LIMITED WARRANTY

BLUE DIAMOND® ATTACHMENTS, a manufacturer of quality attachments, warrants new BLUE DIAMOND® ATTACHMENTS products and/or attachments at the time of delivery to the original purchaser, to be free from defects in material and workmanship when properly set up and operated in accordance with the recommendations set forth by BLUE DIAMOND® ATTACHMENTS, LLC.

BLUE DIAMOND® ATTACHMENTS liability for any defect with respect to accepted goods shall be limited to repairing the goods at a BLUE DIAMOND® ATTACHMENTS designated location or at an authorized dealer location, or replacing them, as BLUE DIAMOND® ATTACHMENTS shall elect. The above shall be in accordance with BLUE DIAMOND® ATTACHMENTS warranty adjustment policies. BLUE DIAMOND® ATTACHMENTS obligation shall terminate twelve (12) months for the Hydraulic Pallet Forks after the delivery of the goods to original purchaser.

This warranty shall not apply to any machine or attachment which shall have been repaired or altered outside the BLUE DIAMOND® ATTACHMENTS factory or authorized BLUE DIAMOND® ATTACHMENTS dealership or in any way so as in BLUE DIAMOND® ATTACHMENTS judgment, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident beyond the company recommended machine rated capacity.

WARRANTY CLAIM

To submit a warranty claim, a claim must be filed with BLUE DIAMOND® ATTACHMENTS before work is performed. The BLUE DIAMOND® PRODUCT SUPPORT TEAM will advise repairs and applicable parts exchanges. Tampering with the failed part may void the warranty. This warranty does not include freight or delivery charges incurred when returning machinery for servicing. Dealer mileage, service calls, and pickup/delivery charges are the customers' responsibility.

EXCLUSIONS OF WARRANTY

Except as otherwise expressly stated herein, BLUE DIAMOND® ATTACHMENTS makes no representation or warranty of any kind, expressed or implied, AND MAKES NO WARRANTY OF MERCHANTABILITY IN RESPECT TO ITS MACHINERY AND/OR ATTACHMENTS ARE FIT FOR ANY PARTICULAR PURPOSE. BLUE DIAMOND® ATTACHMENTS shall not be liable for incidental or consequential damages for any breach or warranty, including but not limited to inconvenience, rental of replacement equipment, loss of profits or other commercial loss. Upon purchase, the buyer assumes all liability for all personal injury and property resulting from the handling, possession, or use of the goods by the buyer.

No agent, employee, or representative of BLUE DIAMOND® ATTACHMENTS has any authority to bind BLUE DIAMOND® ATTACHMENTS to any affirmation, representation, or warranty concerning its machinery and/or attachments except as specifically set forth herein.

This warranty policy supersedes any previous documents. Please see bluediamondattachments.com/warranty-policies for the most up to date warranty information.

NOTE: Blue Diamond® Attachments is a trademark of BLUE DIAMOND® ATTACHMENTS



QUALITY | DEPENDABILITY | INTEGRITY

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