

OPERATOR'S AND PARTS MANUAL

BLADES

MODEL BL60 – 60"

MODEL BL72 – 72"

MODEL BL84 – 84"

SERIAL NO. LHT04515 AND MORE

**OM 0372BL-A
08/07**



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INTRODUCTION

TO THE PURCHASER

All products are designed to give safe, dependable service if they are operated and maintained according to instructions. **Read and understand this manual before operation.**

This manual has been prepared to assist the owner and operators in the safe operation and suitable maintenance of the equipment. The information is applicable to products at the time of manufacture and does not include modifications made afterwards.

Read and understand this operator's manual before attempting to put equipment into service. Familiarize yourself with the operating instructions and all the safety recommendations contained in this manual and those labeled on the equipment and on the tractor. Follow the safety recommendations and make sure that those with whom you work follow them.

Illustrations

The illustrations may not necessarily reproduce the full detail and the exact shape of the parts or depict the actual models, but are intended for reference only.

Direction Reference

All references to right and left, forward or rearward, are from the operator's seat, facing the steering wheel.

To assist your dealer in handling your needs, please record hereafter the model number and serial number of your equipment and tractor. It is also advisable to supply them to your insurance company. It will be helpful in the event that equipment or tractor is lost or stolen.

TRACTOR

BLADE

MODEL:

SERIAL NUMBER:

DATE OF PURCHASE:


DEALER NAME:


SAFETY PRECAUTIONS




SAFETY FIRST

This symbol, the industry's "Safety Alert Symbol", is used throughout this manual and on labels on the machine itself to warn of the possibility of personal injury. Read these instructions carefully. It is essential that you read the instructions and safety regulations before you attempt to assemble or use this unit.

 **DANGER :** Indicates an immediate hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING :** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION :** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

IMPORTANT : Indicates that equipment or property damage could result if instructions are not followed.

NOTE : Gives helpful information.

All products are designed to give safe, dependable service if they are operated and maintained according to instructions. **Read and understand this manual before operation.** It is the owner's responsibility to be certain anyone operating this product reads this manual, and all other applicable manuals, to become familiar with this equipment and all safety precautions. Failure to do so could result in serious personal injury or equipment damage. If you have any questions, consult your dealer.

BEFORE OPERATION

Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are generally attracted to machines and the work being done. Never assume children will remain where you last saw them.

1. Keep children out of the operating area and under the watchful eye of another responsible adult.
2. Be alert and turn machine off if children enter the work area.
3. Before and when backing, look behind for small children.

4. Never carry children while operating the machine. They may fall off and be seriously injured or interfere with the safe operation of the machine.
5. Never allow children to play on the machine or attachment even when they are turned off.
6. Never allow children to operate the machine even under adult supervision.
7. Use extra care when approaching blind corners, shrubs, trees, or other obstructions that might hide children from sight.

SAFETY PRECAUTIONS - continued

NOTICE

A safe operator is the best assurance against accidents. All operators, no matter how experienced they may be, should read this operator's manual and all other related manuals before attempting to operate the equipment. Please read the following section and pay particular attention to all safety recommendations contained in this manual and those labeled on the equipment and on the tractor.

BLADE

Before Operation

1. Read and understand both the tractor and this operator's manual before operating the equipment. Know how to operate all controls and how to stop the unit and disengage the controls quickly. Lack of knowledge could lead to accidents.
2. Never wear loose, torn, or bulky clothing around the tractor and the blade. It may catch on moving parts or controls, causing injury.
3. Before and during seasons, thoroughly inspect the area where the equipment is to be used and remove all objects that may cause damage to the equipment.
4. Do not operate equipment in wintertime without wearing adequate winter garments. Always wear protective clothing.
5. Never attempt to make any adjustments while engine is running. Read this manual carefully to acquaint yourself with the equipment as well as the tractor operator's manual. Working with unfamiliar equipment can lead to accidents. Be thoroughly familiar with the controls and proper use of the equipment.
6. Keep all safety guards in place and verify hardware for proper tightening.
7. Check for moving parts excessive wear regularly. Replace worn parts with genuine parts.
8. Replace all missing, illegible, or damaged safety and warning decals. See list of decals in operator's manual.
9. Keep safety decals clean of dirt and grime.
10. Do not modify or alter this equipment or any of its components, or any equipment function without first consulting your dealer.
11. Make sure the tractor is counterweighted as recommended by your dealer. Weights provide the necessary balance to improve stability, traction and steering.

SAFETY PRECAUTIONS - continued

Blade Operation

1. Before leaving the tractor unattended, take all possible precautions. Park the tractor on level ground, set the parking brake, lower the equipment to the ground, place all levers including auxiliary control levers in neutral, shut off the engine and remove the ignition key.
2. Prior to operation, clear work area of all objects that can damage the blade. Mark all curbs, pipes, etc. that cannot be moved.
3. Be sure the PTO switch/lever is in OFF/disengaged position before starting engine.
4. Exercise extreme caution when operating on or crossing a gravel drive, walks, or roads. Stay alert for hidden hazards or traffic.
5. Do not carry passengers.
6. Keep clear of all rotating parts. Do not put hands or feet under the blade.
7. Park the tractor/blade on level ground, set the parking brake, lower the equipment to the ground, place all control levers in neutral, shut off the engine, remove the ignition key and allow the rotating parts to stop **BEFORE** making any repairs, adjustments or inspections.
8. For your safety, do not work under any hydraulically supported machine elements, they can settle suddenly, leak down or be accidentally lowered.
9. Do not run the engine indoors except when starting engine and transporting attachment in or out of building. Carbon monoxide gas is colorless, odorless and deadly.
10. Never operate blade without guards, and other safety protective devices in place. All tractor and equipment shields and covers must be correctly installed at all times. When necessary to remove these, they must be reinstalled immediately.
11. Never operate machine at high transport speeds on a slippery surface.
12. Use extra caution when backing up.
13. Never operate the blade without good visibility and lighting.
14. Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable noises.
15. Never allow anyone near the work area.
16. Never allow anyone to operate the blade until they have read the manual completely and are thoroughly familiar with basic tractor and blade operation.
17. Make sure the tractor is counterweighted as recommended by your dealer. Weights provide the necessary balance to improve stability, traction and steering.
18. Always make sure all blade components are properly installed and securely fastened **BEFORE** operation.
19. Set skid shoes height to allow enough ground clearance on gravel or crushed rocks surfaces.

SAFETY PRECAUTIONS - continued

MAINTENANCE

ALWAYS USE GENUINE PARTS WHEN REPLACEMENT PARTS ARE REQUIRED

1. Keep the tractor and blade properly maintained.
2. Park the tractor/blade on level ground, set the parking brake, lower the blade to the ground, place all control levers in neutral, shut off the engine and remove the ignition key and allow the rotating parts to stop BEFORE making any blade adjustments.
3. To avoid injury, do not adjust or service the blade with the tractor engine running. Make sure rotating components have completely stopped before leaving the operator's seat.
4. Keep the tractor/blade clean. Snow, dirt or ice build-up can lead to malfunction or personal injury from thawing and refreezing in garage.
5. Always wear eye protection when cleaning or servicing the blade.
6. DO NOT service the tractor while the engine is running or hot, or if the unit is in motion. Always lower blade to the ground. If necessary to service blade in raised position, securely support with stands or suitable blocking before working underneath. Do not rely on support devices already on the tractor for your safety. They can settle suddenly, leak down or be accidentally lowered.
7. Do not attempt to service machine with the engine running. Always shut off engine and allow all motion to cease.
8. The manufacturer will not claim responsibility for fitment of unapproved parts and/or accessories and any damages as a result of their use.
9. Make sure all shields and guards are securely in place following all service, cleaning, or repair work.
10. Do not modify or alter this blade or any of its components or operating functions. If you have questions concerning modifications, consult with your dealer.
11. Do not operate a unit that is defective or has missing parts. Make sure that all recommended maintenance procedures are completed before operating the unit.
12. Check all controls regularly and adjust where necessary. Make sure that the brakes are evenly adjusted.
13. Periodically check all nuts and bolts for tightness, especially wheel hub and rim nuts.
14. To avoid serious personal injury: Escaping hydraulic/diesel fluid under pressure can penetrate the skin causing serious injury. Do not use your hands to check for leaks. Use a piece of cardboard or paper to search for leaks. If you are injured by escaping high pressure fluid, see a medical doctor at once.
15. Stop engine and relieve pressure before connecting or disconnecting hydraulic hoses. Tighten all connections before starting engine or pressurizing hoses.

SAFETY PRECAUTIONS - continued

STORAGE

Before storing the blade, certain precautions should be taken to protect it from deterioration.

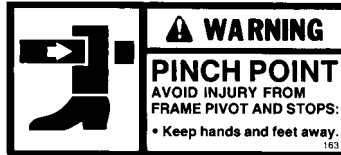
1. Clean the blade thoroughly.
2. Make all the necessary repairs.
3. Replace all safety decals that are damaged, lost, or otherwise become illegible. If a part to be replaced has a sign on it, obtain a new safety sign from your dealer and install it in the same place as on the removed part.
4. Repaint all parts from which paint has worn or peeled.
5. Lubricate the blade as instructed under "**Lubrication**" section.
6. When the blade is dry, oil all moving parts. Apply oil liberally to all surfaces to protect against rust.
7. Store in a dry place.
8. If the blade is equipped with hydraulic components, install dust caps and plugs on the quick couplers.

DECALS

Replace immediately if damaged



(2500308)



(658710)



(2500400)



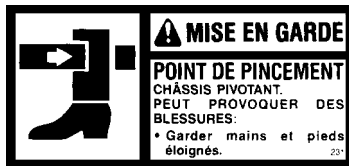
(657503)



(657506)



(664391)



(660990)



(664391)

BL60-2500639
 BL72-2500640
 BL84-2500641



(657524)



(657525)

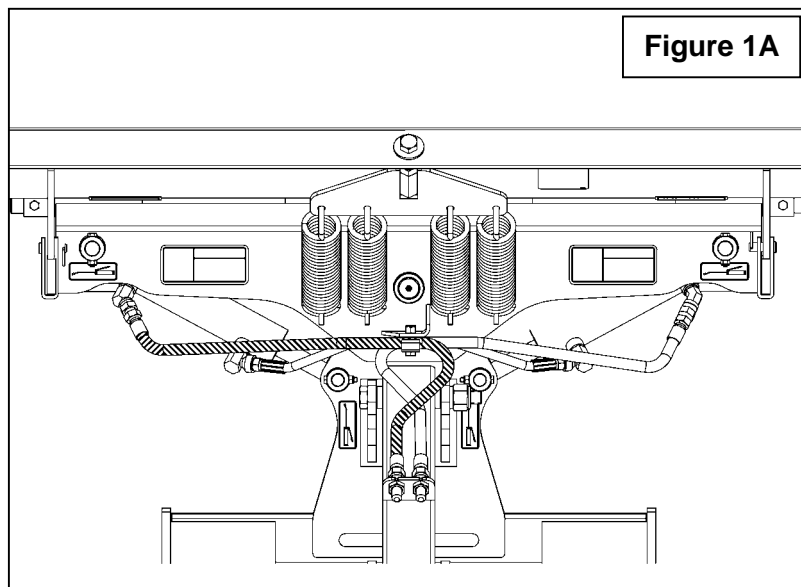
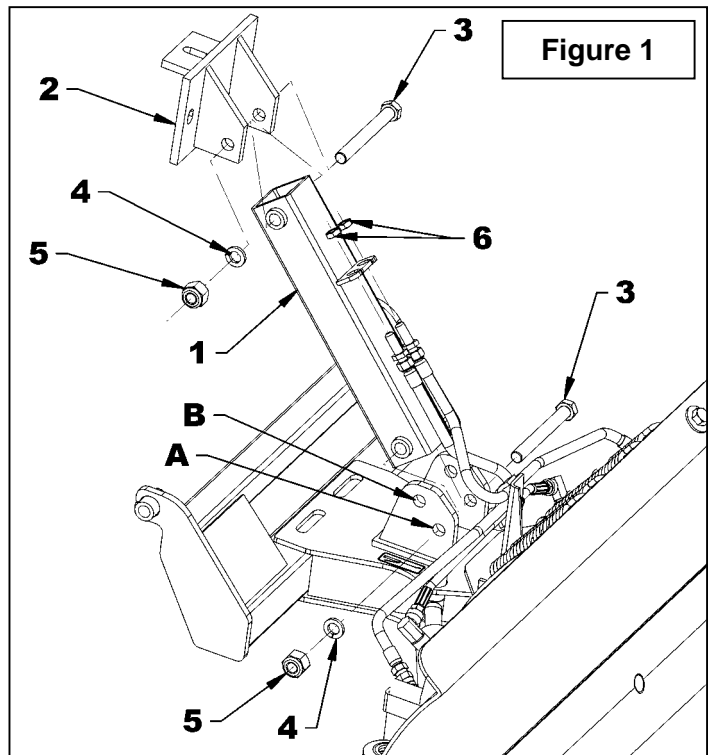
ASSEMBLY

BLADE ASSEMBLY

The blade is pre-assembled at the factory, however, parts contained in the bag and the box must be installed. Use the present manual and lay out all parts for assembly. Separate bolts and nuts into various sizes. After assembly, torque all the bolts according to the Torque Specification Table enclosed at the end of the manual.

Blade Assembly (Figure 1-1A)

1. Attach the upper bracket (item 2) to the hitch arm (item 1) with a 3/4" NC x 6 1/2" lg hex. bolt (item 3), lockwasher and nylon insert nut (items 4-5). Do not tighten immediately.
2. Attach the hitch arm (item 1) in hole "A" if you own a "Skid Steer" mount kit #8153 or in hole "B" if you own a universal mount kit for front loader #8161 with a 3/4" x 6 1/2" lg hex. bolt (item 3), lockwasher and nylon insert nut (items 4-5). Do not tighten immediately.
3. Attach the two hoses to the hitch arm (item 1) by removing the two nuts (item 6) and inserting the left cylinder hose (shown in gray in figure 1A) in the left hole of the hitch arm plate (item 1) and the right cylinder hose in the right. Secure in place with the two nuts (item 6)

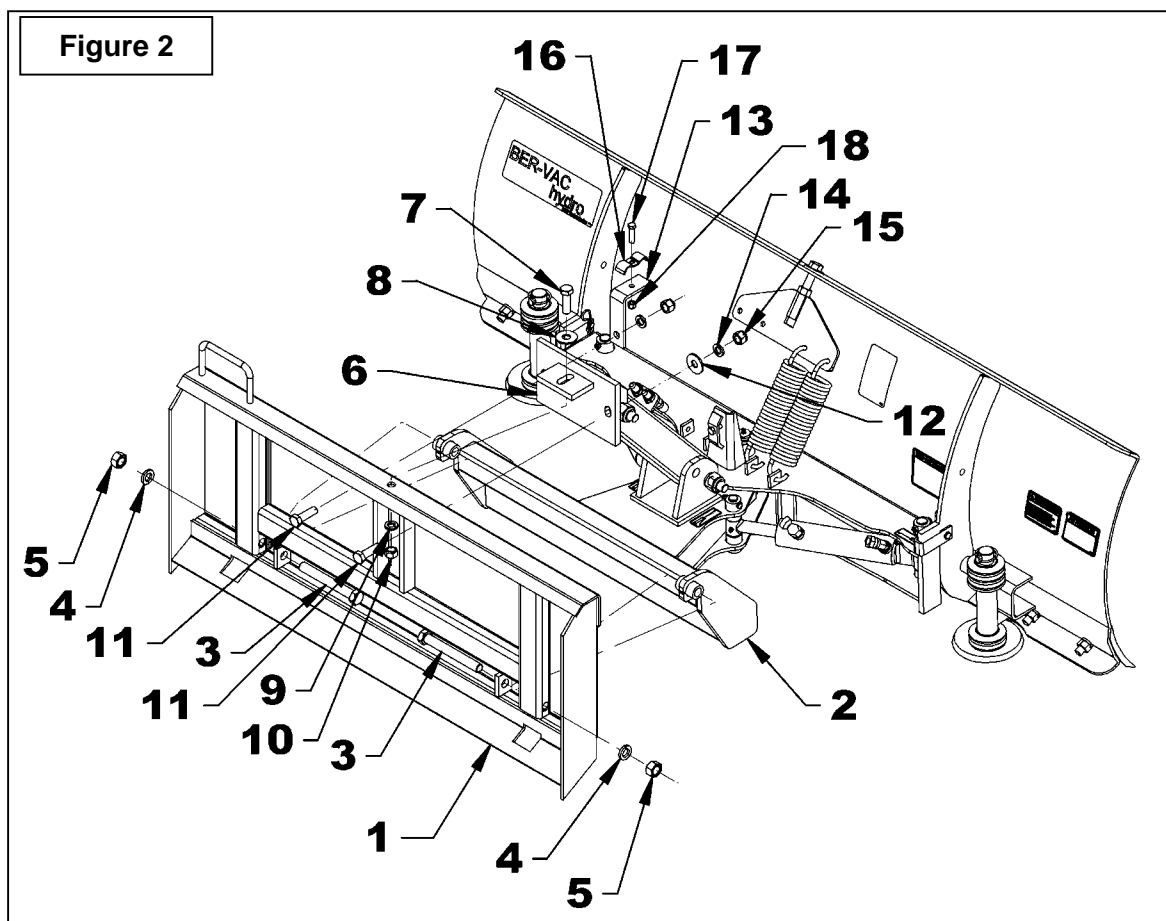


ASSEMBLAGE

Installation with "Skid Steer" Mount Kit # 8153

(Figure 2)

1. Attach the hitch (item 1) to the blade hitch (item 2) with a 3/4" NC x 6" lg hex. bolt (item 3) supplied with mount kit #8153, two lockwashers and nuts (items 4-5) as illustrated. Do not tighten immediately.
2. Attach the upper bracket (item 6) to the hitch (item 1) with a 5/8" NC x 2" lg hex. bolt (item 7) supplied with mount kit #8153, a 11/16" dia. hole flat washer (item 8), lockwasher and nut (items 9-10). Do not tighten immediately.
3. Continue to attach the upper bracket (item 6) with two 5/8" NC x 2" lg hex bolts (item 11) placing the bolt heads on the hitch side (item 1) and the hose support (item 13) behind the upper bracket as illustrated. Secure everything with a lockwasher and nylon insert nut (items 14-15) on the hose support side and a 11/16" dia. hole, lockwasher and nylon insert nut, (items 12-14-15) on the other side.
4. Tighten the bolts installed up to now according to the "Torque Specification Table" located at the end of the manual.
5. Install the hose clamp (item 16) to the hose support (item 13) with a 3/8" x 1 1/2" lg hex. bolt and a nylon insert nut (items 17-18) without tightening.

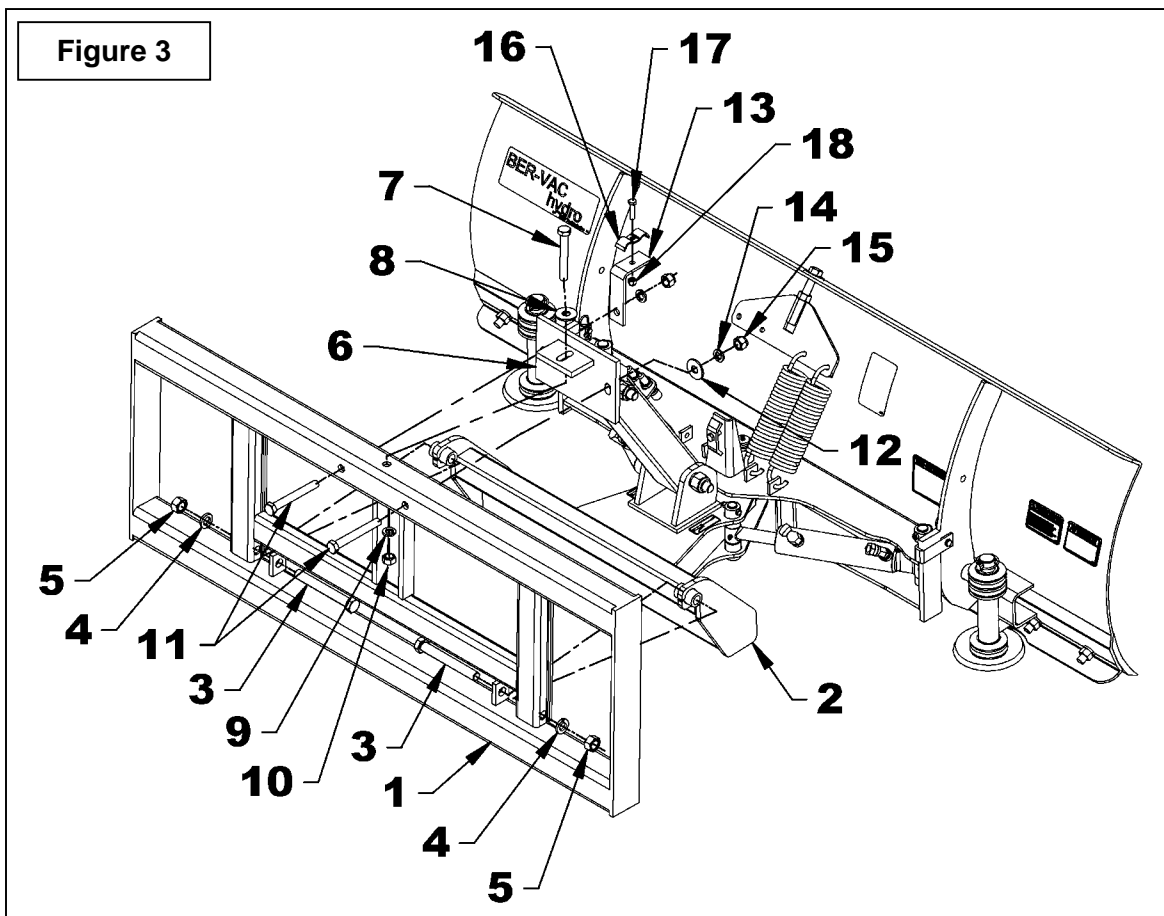


ASSEMBLAGE

Installation with Universal Mount Kit for Front Loader #8161

(Figure 3)

1. Attach the hitch (item 1) to the blade hitch (item 2) with a 3/4" NC x 6" lg hex. bolt (item 3) supplied with mount kit #8161 two lockwashers and nuts (items 4-5) as illustrated. Do not tighten immediately.
2. Attach the upper bracket (item 6) to the hitch (item 1) with a 5/8" NC x 5" lg hex. bolt (item 7) supplied with mount kit #8161, a 11/16" dia. hole flat washer (item 8), lockwasher and nut (items 9-10). Do not tighten immediately.
3. Continue to attach the upper bracket (item 6) with two 5/8" NC x 5" lg hex bolts (item 11) placing the bolt heads on the hitch side (item 1) and the hose support (item 13) behind the upper bracket as illustrated. Secure everything with a lockwasher and nylon insert nut (items 14-15) on the hose support side and a 11/16" dia. hole, lockwasher and nylon insert nut, (items 12-14-15) on the other side
4. Tighten the bolts installed up to now according to the "Torque Specification Table" located at the end of the manual.
5. Install the hose clamp (item 16) to the hose support (item 13) with a 3/8" x 1 1/2" lg hex. bolt and a nylon insert nut (items 17-18) without tightening.



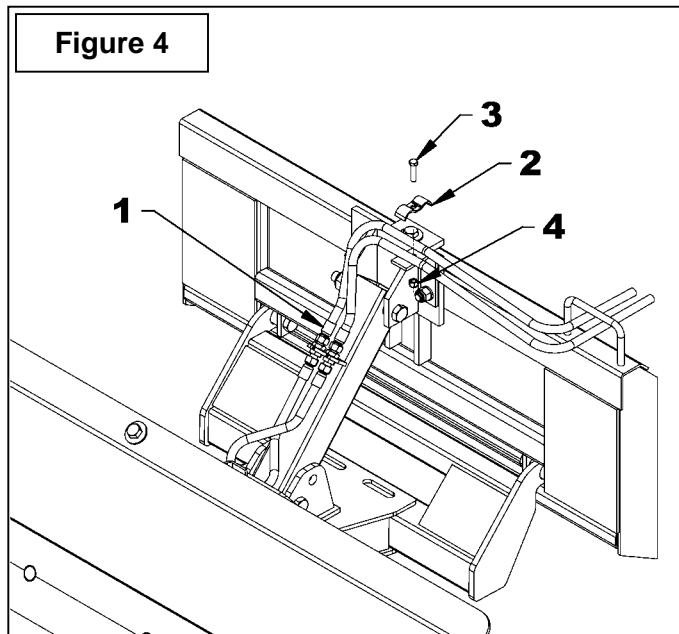
ASSEMBLAGE

Connecting the Hoses

(Figure 4)

NOTE: The hoses connecting the blade to the tractor (item 1, not included) must adapt to a 9/16" – 18 JIC fitting.

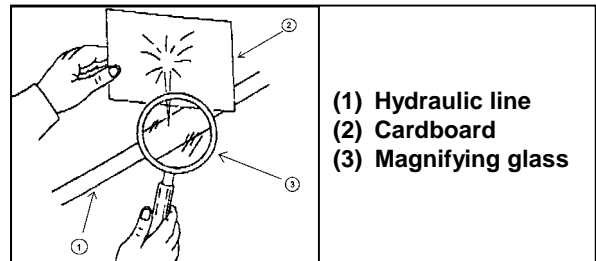
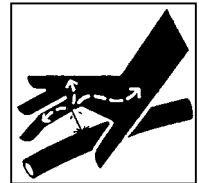
1. Connect the tractor hoses (item 1, not included) to the hydraulic adapters attached to the hitch arm.
2. Slip the hoses under the hose clamp (item 2) and secure in place by tightening the bolt and nut (items 3-4) while taking care not to crush the hoses.



WARNING

To avoid serious personal injury: Escaping hydraulic/diesel fluid under pressure can penetrate the skin causing serious injury.

- Do not use your hands to check for leaks. Use a piece of cardboard or paper to search for leaks.



- Stop engine and relieve pressure before connecting or disconnecting lines.
- Tighten all connections before starting engine or pressurizing lines.
- If any fluid is injected into the skin, obtain medical attention immediately or gangrene may result.

ASSEMBLY

Removing the Blade from the Tractor

1. Set the tractor parking brake, stop the engine and remove the ignition key. Place the lift lever in float position and relieve the hydraulic pressure by moving the hydraulic valve lever in all directions.
2. Disconnect the blade hydraulic hoses from the tractor.

OPERATION - MAINTENANCE

BLADE OPERATION

This front blade has been designed to trip from its normal working position when striking large rocks, tree stumps etc. The blade will tip forward to lessen the shock to the operator and tractor. Once the blade clears the obstacle, it will spring back to its working position.

Raising & Lowering the Blade

The hydraulic valve lever is located to the right of the tractor steering wheel. Pulling the lever backward raises the blade, pushing the lever forward lowers the blade and pushing the lever fully forward sets the blade in float action.



WARNING:

To avoid serious personal injury due to hot, high-pressure oil, always relieve hydraulic pressure by moving the hydraulic valve lever in all directions prior to disconnecting the hydraulic hoses.



WARNING: To avoid serious personal injury:

- Do not allow bystanders near working area.
- Do not allow anyone to ride on blade or quick hitch.
- Before cleaning, adjusting or repairing the front blade: bring the tractor to a complete stop, shut off the engine and remove the ignition key.
- Never put any part of your body under the blade while making adjustments.

Skid Shoe Adjustment

(Figure 5)

Park the tractor/equipment on level ground, place the transmission in neutral, set the parking brake, raise the blade to transport position (provide adequate blocking before working on the blade), shut off the engine and remove the ignition key. Remove the linch pin (item 1) from both skid shoes (item 2).

Remove or add spacers, placing more spacers below the support brackets for more clearance. (There must always be a total of 8 spacers below and above the support brackets.) Set both skid shoes at the same height. Reinstall the linch pins (item 1).

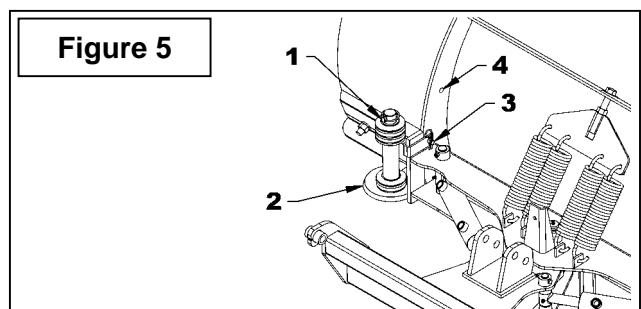
Rigid Blade Operation

(Figure 5)

To obtain rigid blade operation, move the trip spring lockouts (item 3) to the lower holes as shown on figure 6. Lock in place with the 1/2" x 1 27/64" pins and secure with 1/8" x 2 9/16" hairpins. To allow the blade to tip, move the trip spring lockouts to the upper holes (item 4).



CAUTION: To avoid personal injuries: Use rigid blade operation only for low ground speeds up to 2 mph.

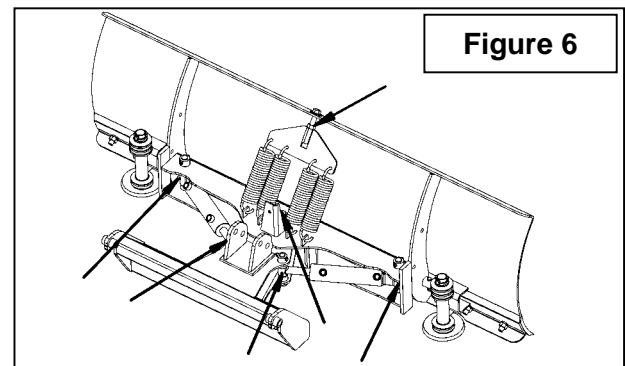


BLADE MAINTENANCE

Remove dirt from pivot points and angling cylinders every 4 hours of operation, especially in cold weather.

Lubrication

- Lubricate all points indicated on Figure 6 every 8 hours of operation.
- Lubricate all moving parts every month.
- Lubricate the inside of the nut.



PARTS

INTRODUCTION

All parts are illustrated in "exploded views" which show the individual parts in their normal relationship to each other. Reference numbers are used in the illustrations. These numbers correspond to those in the "Reference Number" (REF) column, and are followed by the description and quantity required.

O/L - "Obtain Locally" in the part number column indicates common hardware that is available at your local hardware supply.

All reference to right and left, forward or rearward, are from the operator seat, looking at the machine while operating.

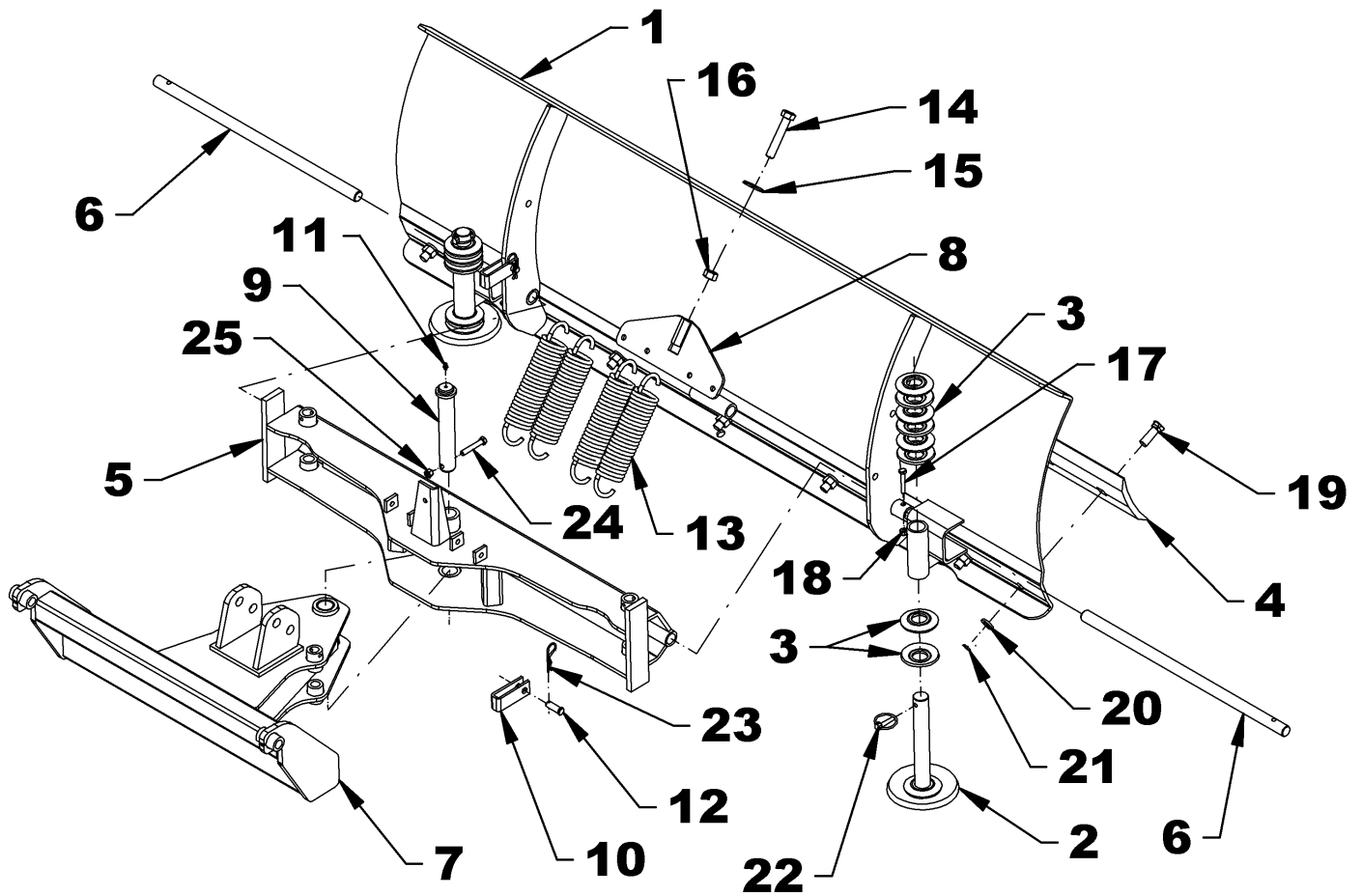
Orders must give the complete description, correct part number, the total amount required, the serial number, the method of shipment and the shipping address.

The manufacturer reserves the rights to change, modify, or eliminate from time to time, for technical or other reasons, certain or all data, specifications, or the product or products themselves, without any liability or obligation.

The parts listed here are available through your local dealer.

PARTS

BLADE ASSEMBLY BL60 – BL72 – BL84



PARTS

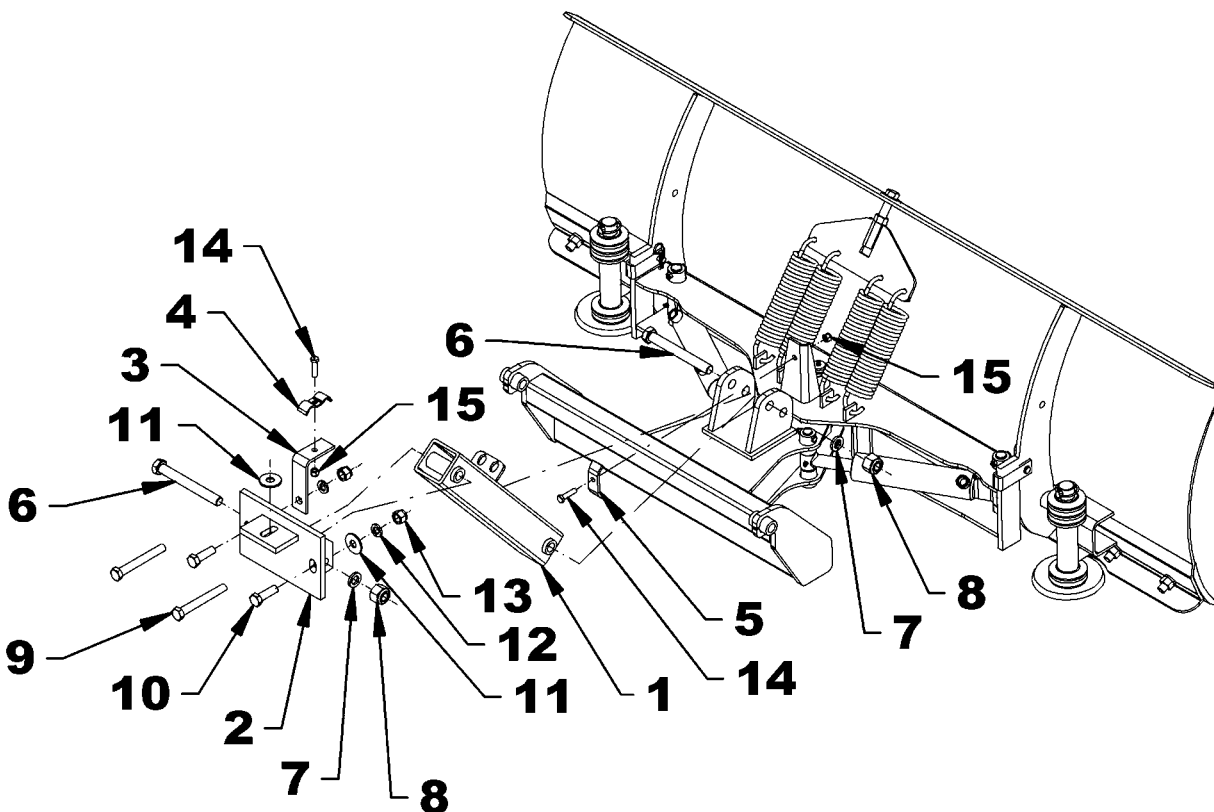
BLADE ASSEMBLY BL60 – BL72 – BL84

REF.	DESCRIPTION	QTY	PART #
1	Welded blade BL60	1	665272
	Welded blade BL72	1	665185
	Welded blade BL84	1	666369
2	Skid shoe	2	664564
3	Spacer	16	659393
4	Cutting edge 60"	1	659761
	Cutting edge 72"	1	661724
	Cutting edge 84"	1	666370
5	Adjustable hitch	1	666722
6	Blade pin	2	664959
7	Female hitch	1	668202
8	Spring plate	1	665197
9	Pivot pin	1	665252
10	Trip spring lockout	2	667405
11	Grease fitting 1/4" NF	1	654106
12	Pin 1/2" x 1 27/64" PTD	2	4600028
13	Tension spring	4	31205
14	Bolt hex. 5/8" NC x 3 1/2" gr. 5, PTD	1	665002
15	Flatwasher 11/16", PTD	1	O/L
16	Nut hex. 5/8" NC, PTD	1	O/L
17	Bolt hex. 5/16" NC x 2" gr 5, PTD	2	O/L
18	Nylon insert locknut 5/16" NC, PTD	2	O/L
19	Cutting edge bolt 5/8" NC x 2" gr. 5, PTD for BL60	7	0400008
	Cutting edge bolt 5/8" NC x 2" gr. 5, PTD for BL72	9	0400008
	Cutting edge bolt 5/8" NC x 2" gr. 5, PTD for BL84	11	0400008
20	Lockwasher 5/8" for BL60	7	O/L
	Lockwasher 5/8" for BL72	9	O/L
	Lockwasher 5/8" for BL84	11	O/L
21	Nut hex. 5/8" NC, PTD for BL60	7	O/L
	Nut hex. 5/8" NC, PTD for BL72	9	O/L
	Nut hex. 5/8" NC, PTD for BL84	11	O/L
22	Linch pin 5/16"	2	O/L
23	Hairpin 1/8" x 2 9/16", PTD	2	O/L
24	Bolt hex. 3/8" NC x 2 1/4", PTD	1	O/L
25	Nylon insert locknut 3/8" NC, PTD	1	O/L

PARTS

BLADE ASSEMBLY BL60 – BL72 – BL84

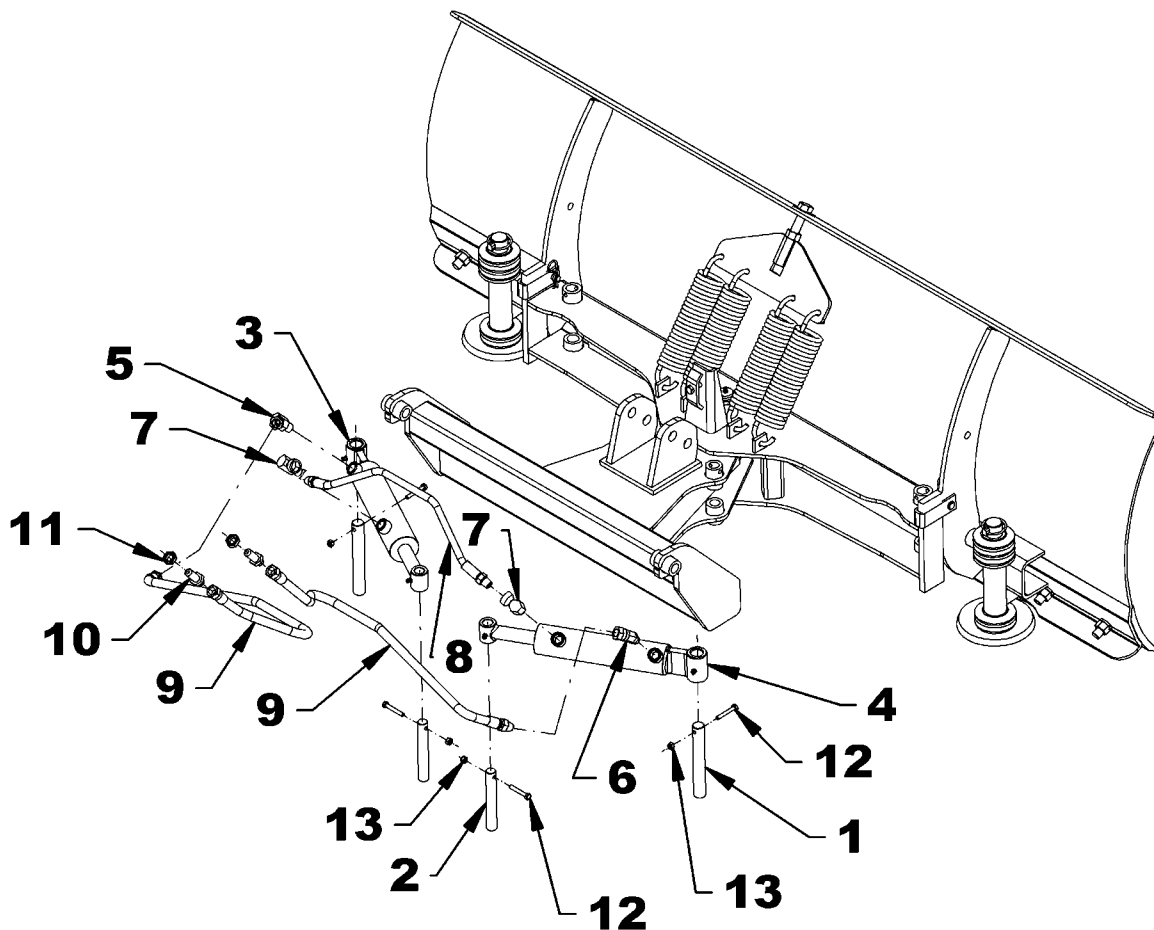
REF.	DESCRIPTION	QTY	PART #
1	Hitch arm	1	668203
2	Upper bracket	1	668204
3	Hose support	1	668206
4	Hose clamp – 2 hoses	1	660440
5	Hose clamp – 3 hoses	1	668205
6	Bolt hex. 3/4" NC x 6 1/2", gr.5, PTD	2	O/L
7	Lockwasher 3/4" PTD	2	O/L
8	Nut nylon insert 3/4" NC, PTD	2	O/L
9	Bolt hex. 5/8" NC x 5", gr.5, PTD (with #8161 mount kit)	2	O/L
10	Bolt hex. 5/8" NC x 2", gr.5, PTD (with #8153 mount kit)	2	O/L
11	Flat washer 11/16" dia. hole PTD	2	O/L
12	Lockwasher 5/8" PTD (with #8153 & #8161 mount kits)	2	O/L
13	Nut hex. 5/8" NC, PTD (with #8153 & #8161 mount kits)	2	O/L
14	Bolt hex. 3/8" NC x 1 1/2", gr.5, PTD	2	O/L
15	Nut nylon insert 3/4" NC, PTD	2	O/L



PARTS

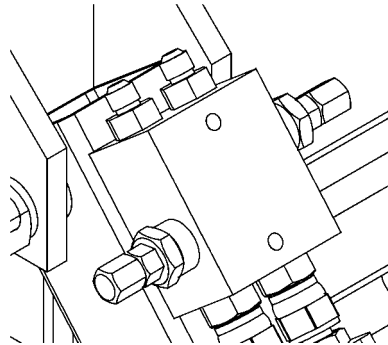
HYDRAULIC SYSTEM BL60, BL72 & BL84

REF.	DESCRIPTION	QTY	PART #
1	Pin 7/8" dia. x 6 5/16" lg., PTD	2	664993
2	Pin 3/4" dia. x 5 3/16" lg., PTD	2	664994
3	Cylinder 2" x 6 1/2"-left	1	661404
4	Cylinder 2" x 6 1/2"-right	1	661289
	Seal kit	1	665017
5	Elbow 45° flow restrictor 0.063" hole	1	3900095
6	Elbow 45°, 3/8" NPT R.M. x 3/8" NPT P.F.	1	655269
7	Elbow 90°, 3/8" NPT R.M. x 3/8" NPT P.F.	2	654557
8	Hose hyd. 1/4" x 19" lg.	1	663417
9	Hose hyd. 3/8" x 36" lg.	2	3700128
10	Adapter bulkhead 9/16" JIC M. x 9/16" JIC M.	2	2600085
11	Nut bulkhead 9/16" JIC	2	2600073
12	Bolt hex. 1/4" NC x 1 3/4", gr.5, PTD	2	O/L
13	Nut nylon insert 1/4" NC, PTD	2	O/L



AVAILABLE OPTION

CROSS OVER RELIEF VALVE



BER0007

TORQUE SPECIFICATION TABLE

GENERAL SPECIFICATION TABLE

Use the following torques when special torques are not given. Note: These values apply to fasteners as received from supplier, when dry. These values do not apply if lubricants are used.

BOLT SIZES (SAE)	TORQUE	
INCHES	Pounds-Foot	Newtons-Meter
1/4	5	7
5/16	10	14
3/8	20	27
7/16	25	41
1/2	88	119
5/8	165	224
3/4	297	403
9/16	121	164
7/8	440	597
1	638	865
1 1/8	840	1139
1 1/4	1180	1600
1 3/8	1570	2129
1 1/2	2070	2807

BOLT SIZES (METRIC)	TORQUE	
MILLIMETERS	Pounds-Foot	Newtons-Meter
M6	10	13
M8	22	30
M10	40	54
M12	59	80
M14	93	126
M16	130	176
M18	168	228
M20	205	278

Manufactured by:



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