Branson Front Loader (BL25R Series)



Owner's Manual Part Illustractions included



CONGRATULATIONS!

You have invested in the best implement of its type on the market today.

The care you give your Branson implement will greatly determine your satisfaction with its performance and its service life. We urge a careful study of this manual to provide you with a thorough understanding of your new implement before operating, as well as suggestions for operation and maintenance.

As an authorized Branson dealer, we stock genuine Branson parts which are manufactured with the same precision and skill as our original equipment. Our trained service personnel are well informed on methods required to service Branson equipment, and are ready and able to help you.

Should you require additional information or assistance, please contact us.

YOUR AUTHORIZED BRANSON DEALER

Branson reserves the rights to change the specifications. The models and specifications described here can be subjected to modifications for improvements without any prior notice by the manufacturer.

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RETAIL CUSTOMER'S RESPONSIBILITY UNDER THE BRANSON WARRANTY

It is the Retail Customer and/or Operator's responsibility to read the Operator's Manual, to operate, lubricate, maintain, and store the product in accordance with all instructions and safety procedures. Failure of the operator to read the Operator's Manual is a misuse of this equipment.

It is the Retail Customer and/or Operator's responsibility to inspect the product and to have any part(s) repaired or replaced when continued operation would cause damage or excessive wear to Other parts or Cause a safety hazard.

It is the Retail Customer's responsibility to deliver the product to the authorized Branson dealer from whom he purchased it, for service or replacement of defective parts which are covered by warranty. Repairs to be submitted for warranty consideration must be made within forty-five (45) days of failure.

It is the Retail Customer's responsibility for any cost incurred by the Dealer for traveling to or hauling of the product for the purpose of performing a warranty obligation or inspection.

UNDERSTAND SIGNAL WORDS

DANGER: Indicates an imminently hazardous situation which, if not avoided, death or serious injury. This signal word is to be limited to the most extreme situations. 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, will result in may result in minor or moderate injury. It may also be used to alert against unsafe practices

LIMITED WARRANTY

Replacement or repair parts installed in the equipment covered by this limited warranty are warranted for ninety (90) days from the date of purchase of such part or to the expiration of the applicable new equipment warranty period, whichever occurs later. Warranted parts shall be provided at no cost to the user at an authorized Branson dealer during regular working hours. Branson reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

DISCLAIMER OF IMPLIED WARRANTIES & CONSEQUENTIAL DAMAGES

Branson's obligation under this limited warranty, to the extent allowed by law, is in lieu of all warranties, implied or expressed. **INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE** and any liability for incidental and consequential damages with respect to the sale or use of the items warranted. Such incidental and consequential damages shall include but not be limited to: transportation charges other than normal freight charges; cost of installation other than cost approved by Branson; duty; taxes; charges for normal service or adjustment; loss of crops or any other loss of income; rental of substitute equipment, expenses due to loss, damage, detention or delay in the delivery of equipment or parts resulting from acts beyond the control of Branson.

THIS LIMITED WARRANTY SHALL NOT APPLY:

1. To vendor items which carry their own warranties, such as engines, tires, and tubes.

2. If the unit has been subjected to misapplication, abuse, misuse, negligence, fire or other accident.

- 3. If parts not made or supplied by Branson have been used in connection with the unit, if, in the sole judgement of Branson such use affects its performance, stability or reliability.
- 4. If the unit has been altered or repaired outside of an authorized Branson dealership in a manner which, in the sole judgement of Branson, affects its performance, stability or reliability.
- 5. To normal maintenance service and normal replacement items such as gearbox lubricant, hydraulic fluid, worn blades, or to normal deterioration of such things as belts and exterior finish due to use or exposure.
- 6. To expendable or wear items such as teeth, chains, sprockets, belts, springs and any other items that in the company's sole judgement is a wear item.

NO EMPLOYEE OR REPRESENTATIVE OF BRANSON IS AUTHORIZED TO CHANGE THIS LIMITED WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY UNLESS SUCH CHANGE IS MADE IN WRITING AND SIGNED BY BRANSON'S SERVICE MANAGER, SEOUL, KOREA

purchased. This information will be helpful to your	MODEL NUMBER
dealer if parts or service are required.	
MAKE CERTAIN THE WARRANTY REGISTRATION	SERIAL NUMBER
CARD HAS BEEN FILED WITH BRANSON/	
SEOUL, KOREA	DATE OF RETAIL SALE

DEALER PREPARATION CHECK LIST

BEFORE DELIVERING MACHINE – The following check list should be completed. Use the Operator's Manual as a guide.

- Machine properly assembled.
- All safety decais readable (See decai page).
- All bolts tightened to torque specifications given in torque chart.
- Machine operates properly.
- Customer has appropriate mounting kit for his tractor and loader.
- Operators manual has been delivered to owner and he has been instructed on the safe and proper use of the front end loader.



It is recommended that the tractor be equipped with Rollover Protection System (ROPS) and seat belt be used for all loader operations.

🔺 warning 🔺

To avoid serious injury or death, do not handle large heavy objects (large round bales, machinery, etc.) with this loader.

It is the responsibility of the dealer to complete the procedures listed above before delivery of this implement to the customer.

Dealer's Signature

THIS CHECKLIST TO REMAIN IN OWNER'S MANUAL

It is responsibility of the dealer to complete the procedures listed above before of this implement to the customer

IMPORTANT SAFETY PRECAUTIONS

This symbol is used to call attention to safety precautions that should be followed by the operator to avoid accidents. When you see this symbol, carefully read the message that follows and heed its advice. Failure to comply with safety precautions could result in serious bodily injury.



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 in the operation, transport, maintenance and storage of equipment. Lack of attention to safety can result in accident, personal injury, reduction of efficiency and worst of all-loss of life. Watch for safety hazards and correct deficiencies promptly. Use the following safety precautions as a general guide to safe operations when using this machine. Additional safety precautions are used throughout this manual for specific operating and maintenance procedures. Read this manual and review the safety precautions often until you know the limitations.

THE TRACTOR

- 1. Read the tractor operator's manual to learn how to operate your tractor safely. Failure to do so could result in serious injury or death and equipment damage.
- 2. It is recommended that tractor be equipped with Rollover Protective System (ROPS) and a seat belt be used for all loader operations.
- 3. When operating loader directly off tractor remotes always remove or lockout detent on tractor's hydraulic valves.

This allows levers return to neutral position when released.

- 4. Add wheel ballast or rear weight for stability.
- 5. Move wheels to the tractor manufacturer's widest recommended settings to increase stability.

6. For better stability, use tractor with wide front axle rather than tricycle front wheels.

- 7. Move and turn the tractor at low speeds.
- 8. Stop tractor engine, place transmission in park (or neutral), engage parking brake, lower loader arms to ground, cycle all hydraulic controls to relieve pressure, allow machine moving parts to stop, remove ignition key to prevent unauthorized person from starting engine before dismounting tractor or serving, repairing, or making adjustments to the equipment.
- 9. Wear personal protective equipment (PPE), such as, but not limited to, protection for eyes, ears, lungs, head, hands and feet when operating, servicing, or repairing equipment. Avoid wearing loose clothing or jewelry that may catch and entangle on equipment moving parts.

THE LOADER

- 1. Read the loader operator's manual to learn how to operate your loader safely. Failure to do so could result in serious injury or death and equipment damage.
- 2. Become familiar with all the machine's controls and all the caution, warning and danger decals affixed to the machine before attempting to start or operate.
- 3. Improper use of a loader can cause serious injury or death.
- 4. Do not lift or carry anybody on the loader or in the bucket or attachment.
- 5. Never allow anyone to get under the loader bucket or reach through the booms when the bucket is raised.
- 6. Do not walk or work under a raised loader bucket or attachment unless it is securely blocked or held in position.
- 7. Avoid overhead wires and obstacles when loader is raised. Contacting electrical lines can cause electrocution.
- 8. Make sure all parked loaders on stands are on a hard, level surface.
- 9. Use a piece of cardboard or wood rather than hands and wear eye protection when searching for hydraulic leaks.
 - Escaping hydraulic oil under pressure can penetrate skin. If oil is injected into skin, it must be surgically removed within a few hours by a doctor or gangrene may result.
- 10. Before disconnecting hydraulic lines, relieve all hydraulic pressure.

- 11. Do not tamper with the relief valve setting. The relief valve is preset at the factory. Changing the setting can cause overloading the loader and tractor and serious operator injury may result.
- 12. Always wear safety goggles when repairing or servicing machine.
- 13. When servicing or replacing pins in cylinder ends, buckets, etc., always use a brass drift and hammer. Failure to do so could result in injury from flying fragments.
- 14. Replace damaged or illegible safety decals. See decal page for required decals.
- 15. Do not modify or alter or permit anyone else to modify or alter the loader, any of its components or any loader function without first consulting your local dealer.

OPERATING THE LOADER

- 1. It is the loader owner's responsibility to instruct and have a person read operator's manual, safety decals and become familiar with machine controls before allowing them to operate loader.
- 2. Do not allow children to operate the loader.
- 3. Before starting or operating the equipment, make a walk around inspection and check for loose or damaged components. Correct any deficiency before starting.
- 4. Keep the area of operation clear of all persons, particularly small children. The operator should cease operation whenever anyone comes within the operating area.
- 5. Operate the loader from the "Operator's Seat Only."
- 6. Exercise caution when operating the loader with a raised loaded bucket or fork.
- 7. Avoid loose fill, rocks and holes. They can be dangerous for loader operation or movement.
- 8. Be extra careful when working on inclines.
- 9. Allow for the loader length when making turns.
- 10. Stop the loader arms gradually when lowering or lifting.
- 11. Use caution when handling loose or shiftable loads.
- 12. Carry loader arms at a low position during transport.
- 13. Lower loader arms, stop engine, and lock brakes before leaving the tractor seat.
- 14. Operate the loader controls only when properly seated at the controls.
- 15. Do not use loader for handling large, heavy objects such as logs, oil drums, etc.
- 16. Handling large, heavy objects is dangerous due to:
 - *Possibility of rolling the tractor over.
 - *Possibility of upending the tractor.
 - *Possibility of the object rolling or sliding down the loader arms onto the operator.
- 17. This is a Front End Loader. **"Not a buildozer"**. Do not fit front blade attachment or warranty for the tractor and front end loader will be void. !!!

IMPORTANT FEDERAL LAWS AND REGULATIONS* CONCERNING EMPLOYERS. EMPLOYEES AND OPERATIONS. *(This section is intended to explain in broad terms the concept and effect of the following federal laws and regulations. It is not intended as a legal interpretation of the laws and should not be considered as such). U.S. Public Law 91–596 (The Williams–Steiger Occupational and Health Act of 1970) OSHA This Act Seeks: "...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources..." DUTIES Sec. 5 (a) Each employer-(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees; (2) shall comply with occupational safety and health standards promulgated under this Act. (b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct. **OSHA** Regulations Current OSHA regulations state in part: "At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved." These will include (but are not limited to) instructions to:

Keep all guards in place when the machine is in operation;

Permit no riders on equipment;

Stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning or unclogging the equipment, except where the machine must be running to be properly serviced or maintained, in which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain the equipment.

Make sure everyone is clear of machinery before starting the engine, engaging power, or operating the machine.

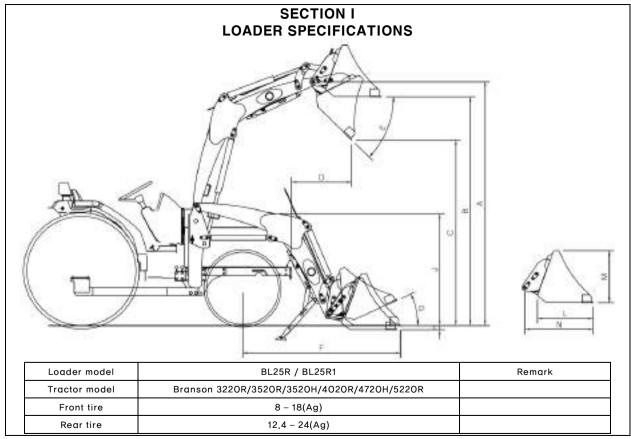
EMPLOYEE TRACTOR OPERATING INSTRUCTIONS:

- 1. Securely fasten your seat belt if the tractor has a ROPS.
- 2. Where possible, avoid operating the tractor near ditches, embankments, and holes.
- 3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
- 4. Stay off slopes too steep for safe operation.
- 5. Watch where you are going, especially at row ends, on roads, and around trees.
- 6. Do not permit others to ride.
- 7. Operate the tractor smoothly no jerky turns, starts, or stops.
- 8. Hitch only to the drawbar and hitch points recommended by tractor manufacturers.

9. When tractor is stopped, set brakes securely and use park lock if available

Child Labor Under 16 Years Old

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, and Child Labor Bulletin #102.)



А	Maximum Lift Height to pivot pin	103.8 in.	2636 mm
В	Clearance with Attachment Level	97.3 in.	2471 mm
С	Clearance with Attachment Dumped	78.9 in.	2004 mm
D	Reach at Maximum Height	25.6 in.	650 mm
Е	Maximum Dump Angle	44 degree	←
F	Reach with Attachment on Ground	67.3 in.	1709 mm
G	Maximum Rollback Angle	24.5 degree	←
н	Digging Depth Below Grade	1.96 in.	50 mm
J	Overall Height in Carry Position	47.6 in.	1209 mm
L	Depth of Attachment (to back of inner shell)	23.7 in.	601 mm
М	Height of Attachment	22.0 in.	461 mm
Ν	Depth of Attachment (to pivot pin)	29.0 in.	736 mm
	Lift Capacity to Full Height @ Pivot Pins	2089	lbs
Breakout Force @ Ground Level, pivot pin Relief Valve Setting (Loader Control Valve) Rated Flow(Tractor System) Bucket Size Weight(With Bucket)		3531	lbs
		2489 psi 8,24 GPM	
		1160 lbs	

Cycle Times	2,600 rpm(Full)	
Raise Boom Frame	4.4	
Lower Boom Frame	3.1	
Dump Bucket	2.9	
Retract Bucket	2.2	

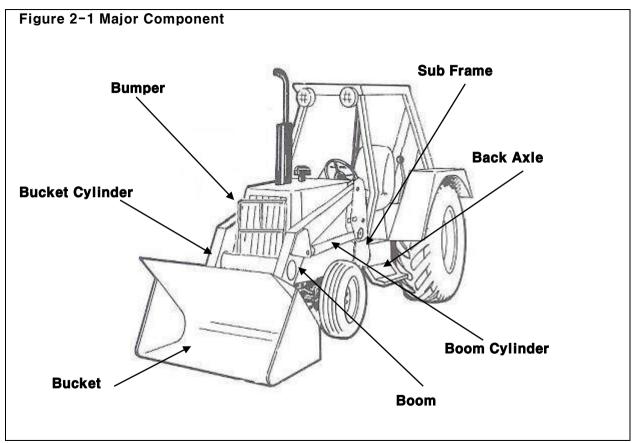
SECTION II INTRODUCTION AND DESCRIPTION

2-1 INTRODUCTION

We are pleased to have you as a Branson customer. Your Front end Loader has been carefully designed to give maximum service with minimum down time. This manual is provided to give you the necessary operating and maintenance instructions for keeping your loader in top operating condition. Please read this manual thoroughly. Understand what each control is for and how to use it. Observe all safety precautions decaled on the machine and noted throughout the manual for safe operation of implement. If any assistance or additional information is needed, contact your authorized Branson dealer.

2-2 DESCRIPTION

The Front End Loader is designed for four-wheel drive tractors. They are intended to lift only loose materials that will fit in the bucket. All cylinders are double-acting. Parking stands support loader so tractor can be "driven in" for quick attaching. Major components of loader are shown in Figure 2–1.



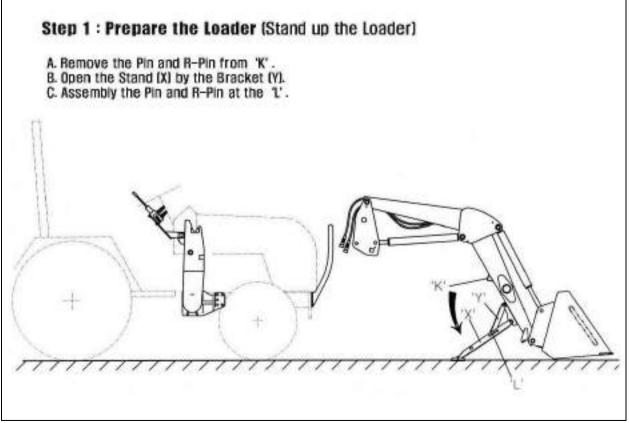
SECTION III PREPARATION FOR USE

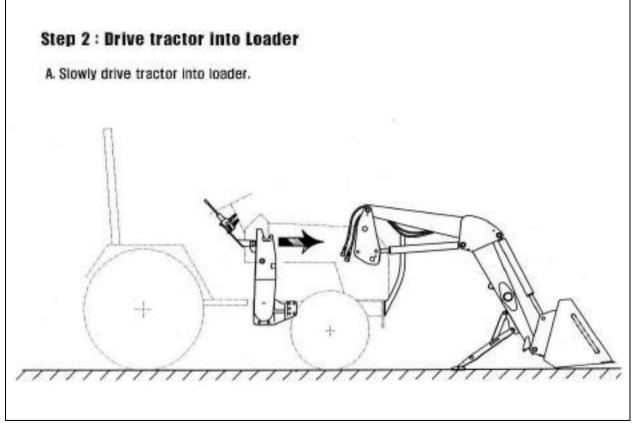
3-1 ATTACHING TO TRACTOR

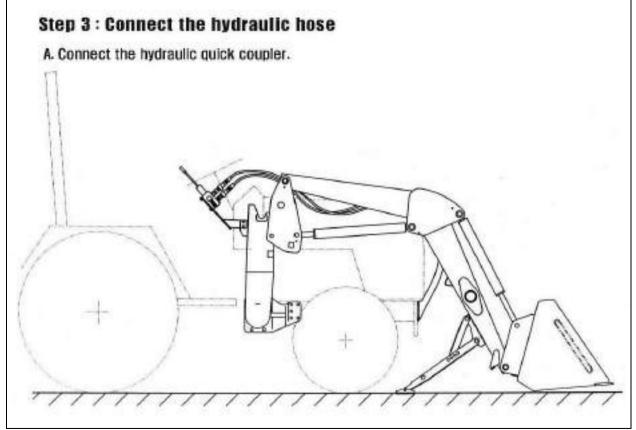
WEIGHT SHOULD BE APPLIED TO TRACTOR REAR WHEELS AND/OR 3-POINT HITCH TO INCREASE STABILITY.

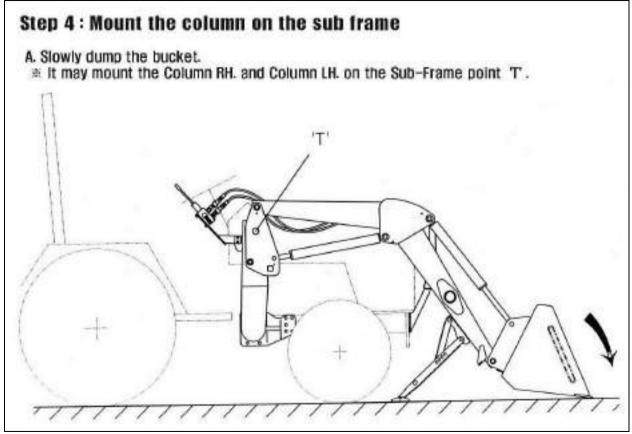
WARNING TO AVOID INJURY OR DEATH: ALWAYS CONNECT LOADER HOSES TO APPROPRIATE TRACTOR AUXILIARY OUTLET. ALWAYS REMOVE OR LOCKOUT TRACTOR'S HYDRAULIC VALVES DETENT POSITIONS FOR LEVER NEUTRAL RETURN WHEN RELEASED.

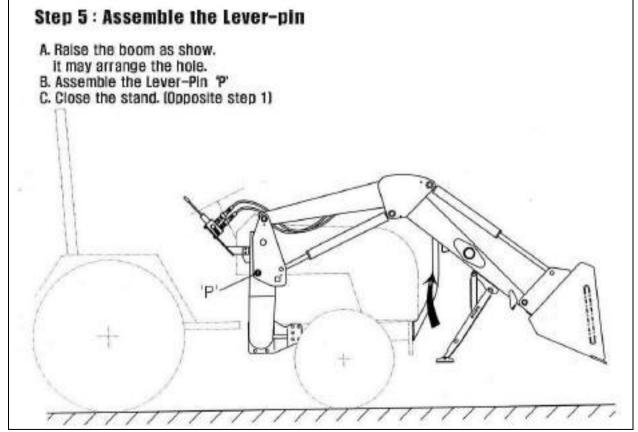
It is recommended that tractor wheels be moved to the widest setting and rear ballast be applied to increase tractor stability. Three point hitch mounted weights are available from your Branson dealer. Air pressure in front tires should be adequate for heavy loads. Refer to tractor owner's manual for further instructions. Attach loader to tractor as follows:

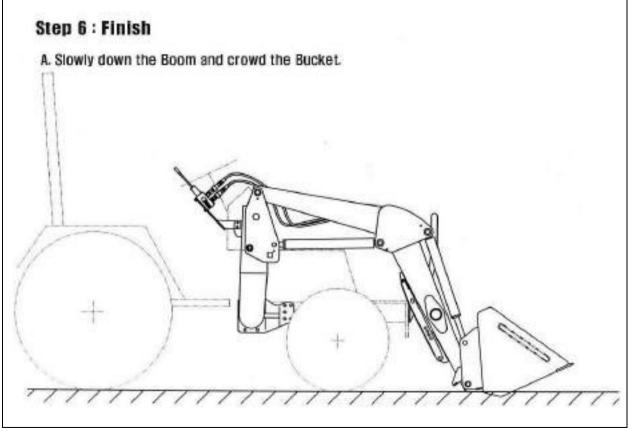












SECTION IV OPERATING INSTRUCTIONS

A CAUTION A DO NOT LIFT ROUND HAY BALES. ROUND BALES CAN ROLL DOWN LOADER ARMS CAUSING SERIOUS INJURY OR DEATH TO OPERATOR.

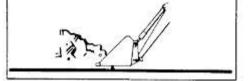
4-1 GENERAL SAFETY

Only qualified people familiar with this manual should operate this machine. Operator should wear hard hat, safety glasses and safety shoes. The operator should read, understand and practice all safety messages shown on the caution, warning and danger decals affixed to the loader to avoid serious injury or death. It is recommended that tractor be equipped with Rollover Protective System (ROPS) and a seat belt be used. Check for ditches, stumps, holes or other obstacles that could upset tractor or damage loader. Fluid and/or weights for rear tires is recommended for added stability. See tractor operator's manual. Three point hitch mounted weights are available from your Branson dealer. Always turn off tractor engine, set parking brake and lower loader to ground before dismounting tractor. See page 4 for additional safety precautions.

4-2 OPERATION

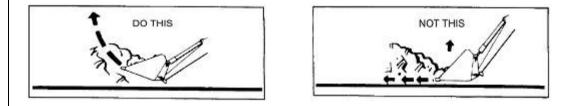
The loader should be operated with the tractor engine running at 1200–1700 rpm. Excessive speeds are dangerous and may cause bucket spillage and unnecessary strain on both the tractor and loader. The following text and illustrations offer suggested loader and tractor operating techniques.







The lift and rollback of the bucket will increase efficiency because a level bucket throughout the lifting cycle resists bucket lift and increases breakaway effort.



NOTE: Do not be concerned if the bucket is not completely filled during each pass. Maximum productivity is determined by the amount of material loaded in a given period of time. Time is lost if two or more attempts are made to fill the bucket on each pass

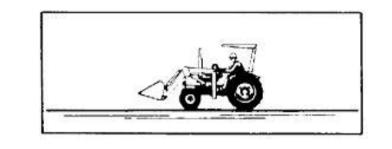
LIFTING THE LOAD

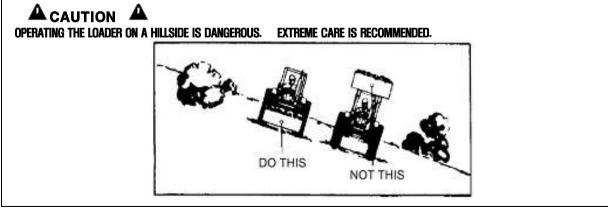
WARNING DO NOT LIFT OR CARRY ANYONE IN THE BUCKET OR ON ANY OTHER POSITION OF THE LOADER OR LOADER ATTACHMENT. INADVERTENT MOVEMENT OF THE LOADER OR ATTACHMENT COULD RESULT IN SERIOUS INJURY OR DEATH FROM FALLING OR CRUSHING. ▲ MAKE SURE MATERIAL IN BUCKET CANNOT ROLL OUT AND DOWN ON TRACTOR WHEN BUCKET IS RAISED TO FULL HEIGHT. KEEP CLEAR OF OVERHEAD OBSTRUCTIONS SUCH AS TREES, LIMBS OR POWER LINES WHEN RAISING THE BUCKET. When lifting the load, keep the bucket positioned to avoid spillage.

CARRYING THE LOAD

Position the bucket just below the level of the tractor hood for maximum stability and visibility, whether the bucket is loaded or empty.

Use extreme caution when operating the loader on a slope, keep the bucket as low as possible, this keeps the bucket and tractor center of gravity low and will provide maximum tractor stability.



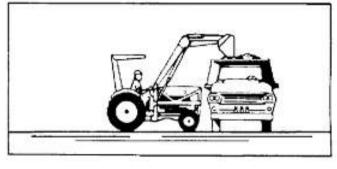


When transporting the load, keep the bucket as low as possible to avoid tipping, in case a wheel drops in a rut.



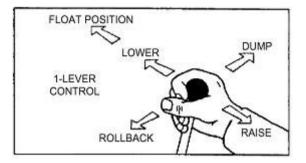
DUMPING THE BUCKET

Lift the bucket high enough to clear the side of the vehicle. Move the tractor in as close to the side of the vehicle as possible, then dump the bucket.



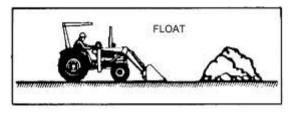
LOWERING THE BUCKET

After the bucket is dumped, back away from the vehicle while lowering and rolling back the bucket.

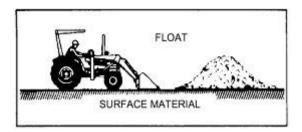


OPERATING WITH FLOAT CONTROL

During hard surface operation, keep the bucket level and put the lift control in the float position to permit the bucket to float on the working surface. If hydraulic down pressure is exerted on the bucket, it will wear faster than normal.

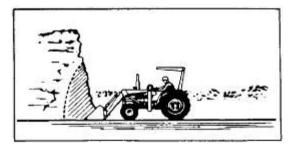


The float will also prevent the mixing of surface material with stockpile material. The float position will reduce the chance of surface gouging when removing snow or other material.

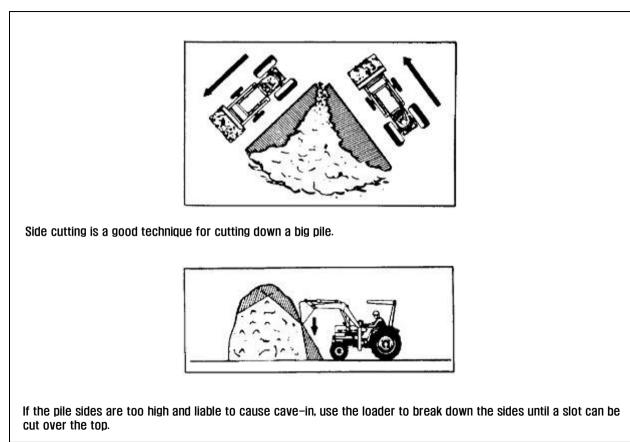


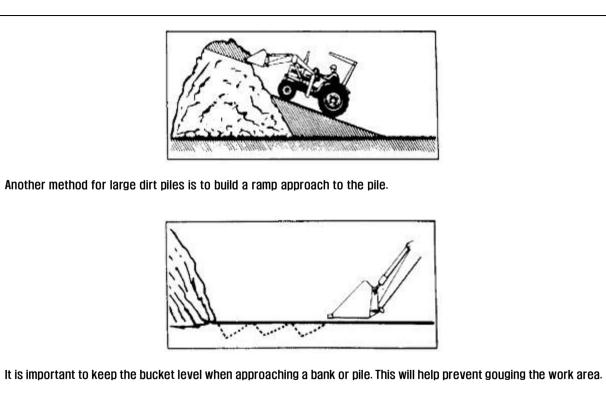
LOADING FROM A BANK

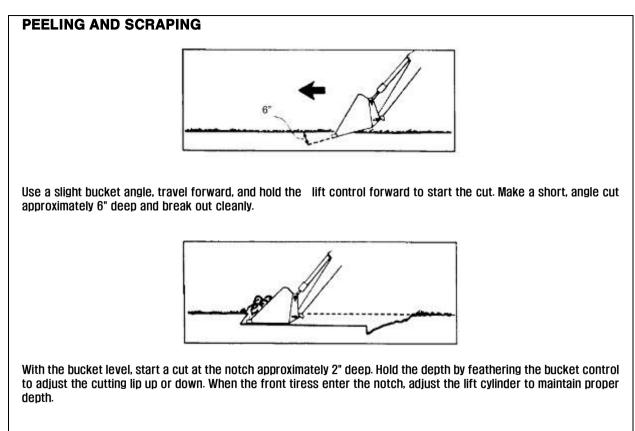
Choose a forward gear that provides sufficient ground speed for loading.

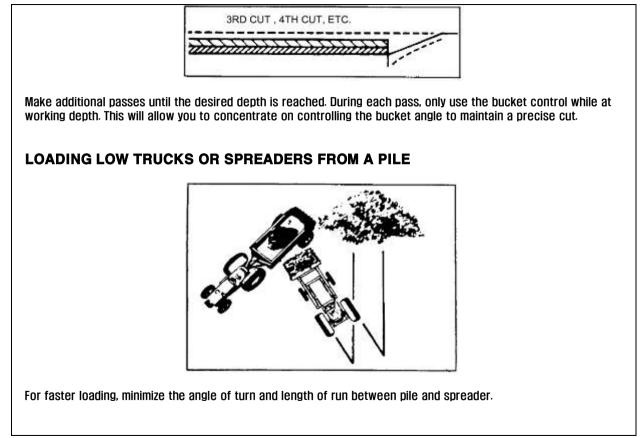


Exercise caution when undercutting high banks. Dirt slides can be dangerous. Load from as low as possible for maximum efficiency. Loader lift and breakaway capacity diminish as loading height is increased.

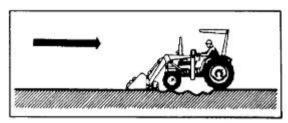








BACKFILLING

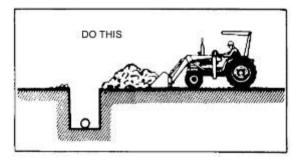


Backgrade occasionally with a loaded bucket to keep the working surface free of ruts and holes. Hold the lift control forward in **FLOAT POSITION so the full weight** of the bucket is scraping the ground. Use only the heel of the bucket while backgrading.

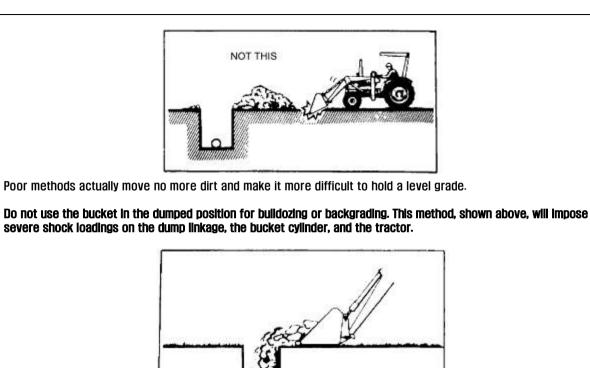
IMPORTANT: To prevent damage to cylinders:

(1) Do not backgrade with bucket cylinders extended.

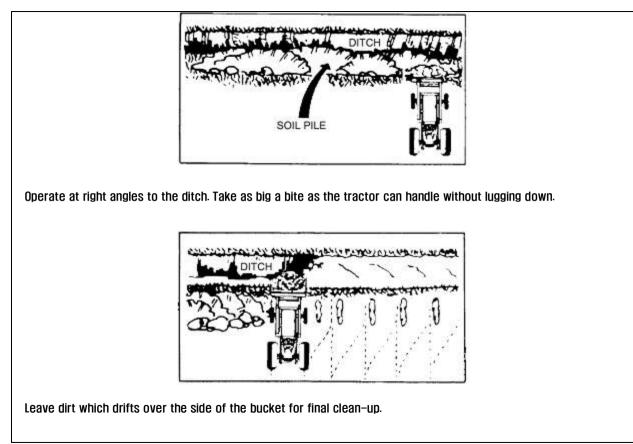
(2) Always backgrade with valve in float position.

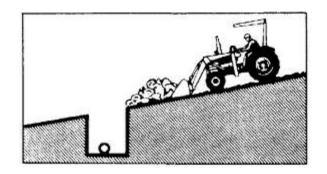


approach the pile with a flat bucket.



Leave dirt in the bucket because dumping on each pass wastes time.





Pile dirt on the high side for easier backfilling on a slope.

HANDLING LARGE HEAVY OBJECTS



Do not use front end loaders for handling large, heavy objects such as large, round or rectangular bales, logs and oil drums.

Handling large heavy objects can be extremely dangerous due to:

- Possibility of rolling the tractor over.
- Possibility of upending the tractor.
- · Possibility of the object rolling or sliding down the loader arms onto the operator.

4-3 TRANSPORTING

When transporting on road or highway, day or night, use tractor flashing warning lights unless prohibited by law. Carry load as low as possible maintaining adequate ground clearance and visibility. Reduce tractor ground speed when transporting a load. Take extra care when traveling over rough terrain or on slopes.

WHEN TRANSPORTING THE LOAD, KEEP THE BUCKET AS LOW AS POSSIBLE TO RESIST TIPPING, IN CASE A WHEEL DROPS IN A RUT. THIS WILL AVOID TIPPING AND POSSIBLE INJURY.

4-4 LOADER DETACHING AND STORAGE NOTE

When loader hydraulics are disconnected from tractor the tractor hydraulic circuit must be completed. Failure to do so will result in tractor hydraulic pump damage.

A. Remove parking stands from storage. Raise boom and install as shown in Figure 3-1.

A WARNING A

NEVER STAND UNDER LOADER WHILE INSTALLING/REMOVING PARKING STANDS.

B. Lower boom until parking stands contact ground.

C. Extend bucket cylinders (dump) until cutting edge of bucket is firmly on the ground.

D. Remove pin from front mounting bracket.

E. Remove nuts and clamps securing loader sub-frame to rear mounting bracket.

F. With tractor at IDLE SPEED carefully roll bucket back until sub-frame raises off rear bracket.

G. Carefully activate boom cylinders until cross tube is free of pressure within front bracket channel.

H. Disconnect hydraulic hoses.

I. Carefully back tractor out of loader.

J. Pin clamps back to sub-frame and place pin back in front mounting bracket for storage.

K. Clean dirt and debris from loader. Dirt will hold moisture and cause rust.

L. If loader is to be stored for an extended period of time, perform lubrication per paragraph 4–2 Also apply a coat of heavy grease to exposed cylinder rods to prevent rusting.

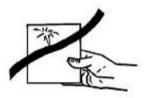
SECTION V MAINTENANCE

5-1 MAINTENANCE CHECK LIST

Perform scheduled maintenance as outlined below. Lower machine to ground, turn off tractor and set parking brake before doing maintenance inspections or work. All bolts should be torqued as recommended in torque chart on inside of back cover unless otherwise indicated.



USE A PIECE OF CARDBOARD OR WOOD RATHER THAN HANDS AND WEAR EYE PROTECTION WHEN SEARCHING FOR HYDRAULIC LEAKS. ESCAPING HYDRAULIC OIL UNDER PRESSURE CAN PENETRATE SKIN. IF OIL IS INJECTED INTO SKIN, IT MUST BE SURGICALLY REMOVED WITHIN A FEW HOURS BY A DOCTOR OR GANGRENE MAY RESULT.





THE LOADER CAN FALL FROM HYDRAULIC SYSTEM FAILURE. TO AVOID SERIOUS INJURY OR DEATH, SECURELY SUPPORT LOADER BEFORE WORKING UNDERNEATH.

BEFORE EACH USE

1. Inspect hydraulic lines and fittings for wear or leaks. Repair or replace if needed.

2. Inspect all pivot pins for wear. Make certain cotter pins are installed to retain each pivot pin.

3. Check all bolts for tightness.

4. Perform BEFORE EACH USE lubrication per paragraph 5-2.

5. During operation, listen for abnormal sounds which might indicate loose parts or other damage.

AFTER EACH USE

1. Clean all debris from machine.

5-2 LUBRICATION (Figure 5-1)

NOTE

The multipurpose grease referenced in this section is an NLGI Grade 2 type grease.

BEFORE EACH USE

1. Boom Pivot Pins- Apply multi-purpose grease to each fitting (1 fitting each side)

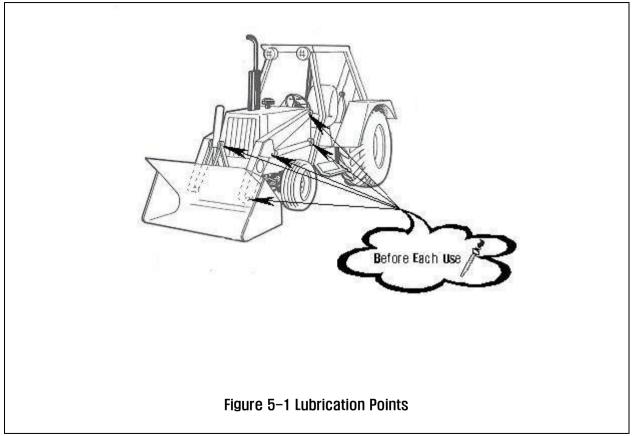
2. Boom Cylinders- Apply multi-purpose grease to each fitting (2 fittings each cylinder)

3. Bucket Cylinders- Apply multi-purpose grease to each fitting (2 fittings each cylinder)

4. Bucket Pivot Pin- Apply multi-purpose grease to each fitting (1 fitting each side)

5. Link Pivot Pin-Apply multi-purpose grease to each fitting (2 or 3 fitting each side)

6. Tractor Hydraulic Oil– Cycle boom and bucket cylinders 2 or 3 times before use then check tractor hydraulic oil level per tractor operator's manual.



5-3 HYDRAULIC SYSTEM PRESSURE REQUIREMENTS

A tractor hydraulic system pressure setting of 2400 psi is recommended for maximum efficiency and service. The Branson control valve is pre-set at factory and should not be adjusted

5-4 TROUBLESHOOTING

Troubleshooting procedures are listed in table 5–1. If the problem cannot be solved or replacement parts are necessary, contact your authorized Branson dealer. Please have ready your machine name, model number, serial number, purchase date, and exact cause or description of problem.

PROBLEM	POSSIBLE CAUSE	REMEDY
1. Loader slow and/or will not dump.	Hydraulic oil too heavy. Oil filter plugged. Hydraulic pump worn. Oil line restricted or leaking.	Change to proper oil. Clean or replace filter. Repair or replace pump. Check all hoses and tubes for leaks, damage or restrictions. Replace damaged or restricted
	Quick couplers not properly connected. Control valve does not shift properly. Air in hydraulic system.	hoses or tube lines. Check connection – Replace if necessary. Inspect, clean, repair or replace valve. Cycle lift cylinders and bucket cylinders several times to free system of air.
	Cylinder leaks internally. Faulty valve.	Replace seals. Replace or repair valve.

TABLE 5-1

PROBLEM	POSSIBLE CAUSE	REMEDY
2. Loader chatters or vibrates when raising or lowering.	Air leak in pump inlet line. Air in hydraulic system. Oil level too low.	Check, tighten or replace inlet. line. Cycle lift and bucket cylinders. Add oil as required.
3. Pump noisy.	Inlet line restricted or leaking. Oil level too low. Pump worn or damaged.	Check for air leaks restrictions or collapsed hose. Tighten or replace hose. Clean filter if necessary. Add oil as required. Repair or replace pump.
4. Oil leaks.	Defective fittings or hoses. Loose Connections. Worn or damaged O-ring or wiper seal in cylinder rod end. Worn or damaged O-rings in valve.	Replace defective parts. Tighten fittings. Install a seal repair kit. Install an O-ring repair kit.

PROBLEM	POSSIBLE CAUSE	REMEDY		
5. Insufficient lift capacity.	Improper hydraulic pump operation.	Repair or replace pump.		
	Load is greater than boom lift capacity.	Check loader specifications.		
	Internal boom cylinder leakage.	Replace any worn parts and install a seal repair kit.		
	Improper hydraulic valve operation.	Repair or replace valve.		
	Bucket is riding on cutting edge	Use boom "FLOAT" position or		
6. Excessive wear on bucket	instead of wear pads.	bucket level indicator to ensure bucket rides on wear pads.		
7. Slow leakdown.	Worn control valve. Worn cylinder piston seals.	Have authorized Branson dealer replace seals.		
8. Hydraulic cylinders inoperative.	Hose from control valve improperly connected.	Refer to plumbing diagrams in Section V.		
9. Loader lift and bucket tilt controls do	Hoses improperly connected.	Refer to plumbing diagrams in Section V and correct hose connections.		

SECTION VI INSTALL INSTRUCTION

THE FOLLOWING SAFETY PRECAUTIONS SHOULD BE THOROUGHLY UNDERSTOOD BEFORE ATTEMPTING MACHINE ASSEMBLY.

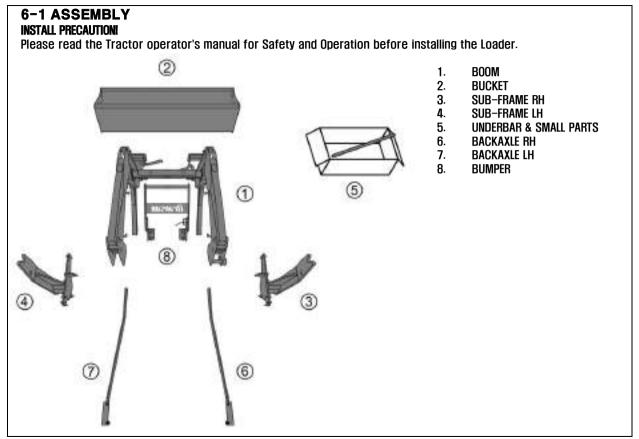
- 1. Do not lift heavy parts or assemblies. Use crane, jack, tackle, fork trucks, or other mechanical devices.
- 2. Select an area for assembly that is clean and free of any debris which might cause persons working on the assembly to trip.
- 3. Arrange parts to be assembled neatly in the work area and have tools and other mechanical assisting devices in easy reach.
- 4. Inspect all parts and assemblies thoroughly and remove any sharp edges, grease, oil, or dirt which might cause pieces to slip when handling.
- 5. Preview the assembly instructions in your operator's manual before proceeding further.
- 6. If the assembly instructions call for parts or assemblies to be blocked up, use only blocking material that is in good condition and is capable of handling the weight of the assembly to be blocked. Also, insure that the blocking material is on a clean, dry surface.
- 7. Never put hands or any other body under blocked up assemblies if at all possible.
- 8. Always wear goggles or safety glasses when hammering, grinding or drilling metal parts.
- 9. If the assembly calls for welding or cutting, be sure that there are no flammable materials close at hand and that bystanders have taken necessary precautions.

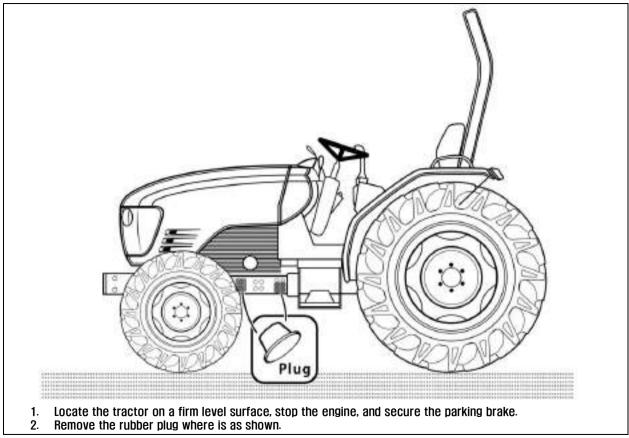
AFTER COMPLETING ANY ASSEMBLY STEP, THOROUGHLY READ THE NEXT STEP IN THE ASSEMBLY INSTRUCTIONS BEFORE PROCEEDING WITH THAT STEP.

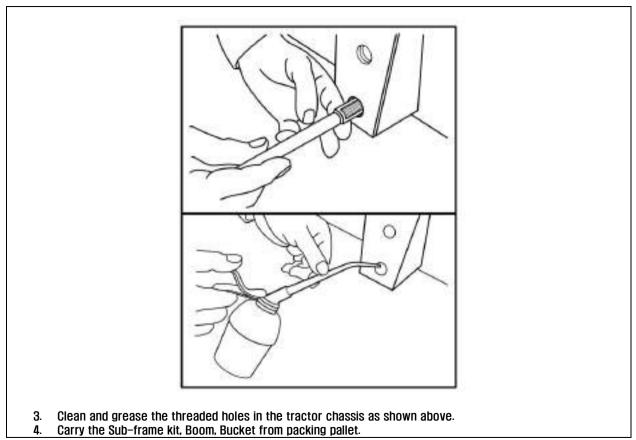
- 10. After completing assembly, thoroughly inspect the machine to be sure that all nuts, bolts, hydraulic fittings or any other fastened assemblies have been thoroughly tightened.
- 11. After completing assembly be sure that all safety locking devices or guards are in place.
- 12. Before operating the machine, thoroughly read the operation section of this manual.

- 13. Before operating, read the maintenance section of this manual to be sure that any parts requiring lubrication such as gearboxes are full to avoid any possible damage.
- 14. Wear personal protective equipment such as, but not limited to, protection for eyes, ears, feet, hands, lungs and head when assembling the equipment. Do not wear loose clothing or jewelry that may catch on equipment moving parts.

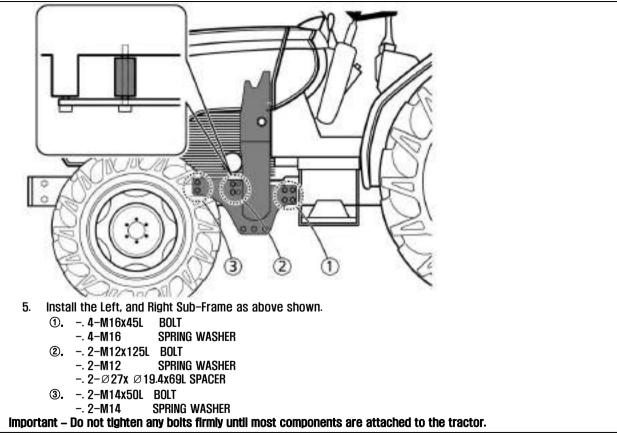
BEFORE OPERATING THE EQUIPMENT, IF YOU HAVE ANY QUESTIONS REGARDING THE PROPER ASSEMBLY OR OPERATION, CONTACT YOUR AUTHORIZED BRANSON DEALER OR REPRESENTATIVE.

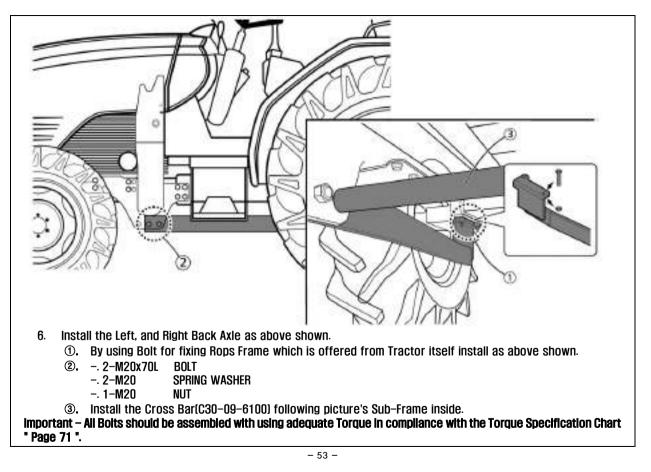


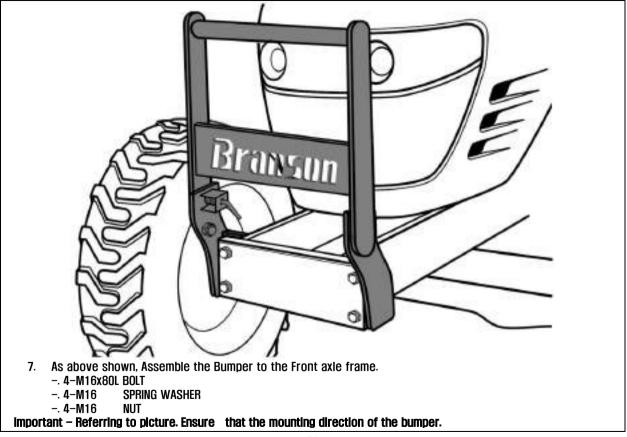




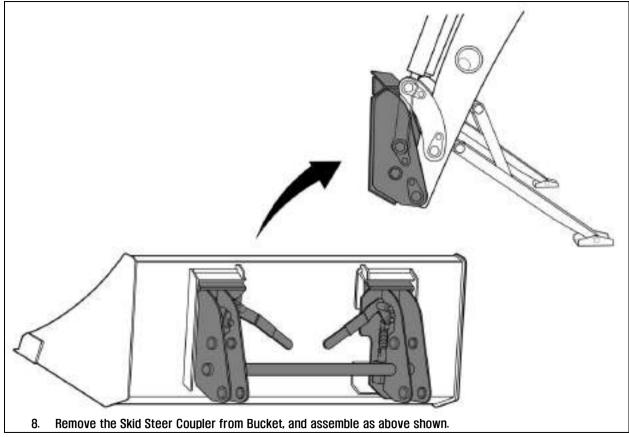
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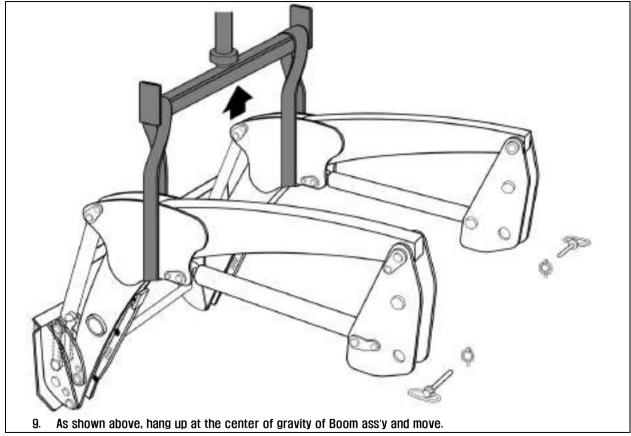


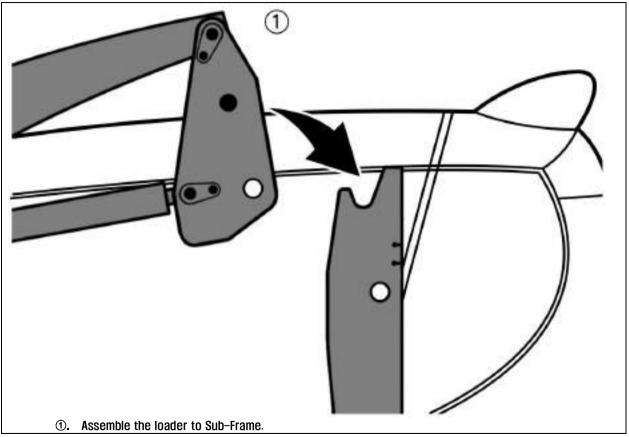


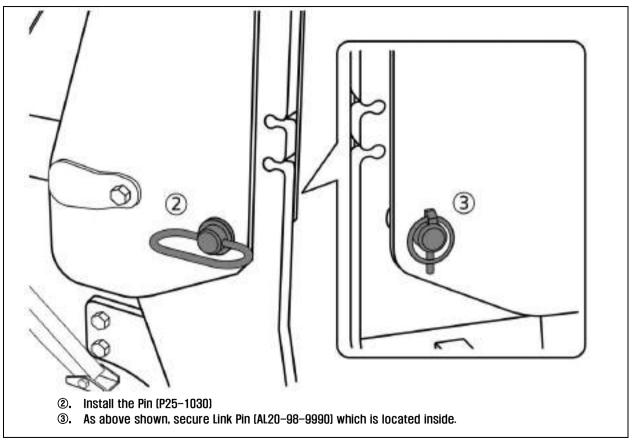


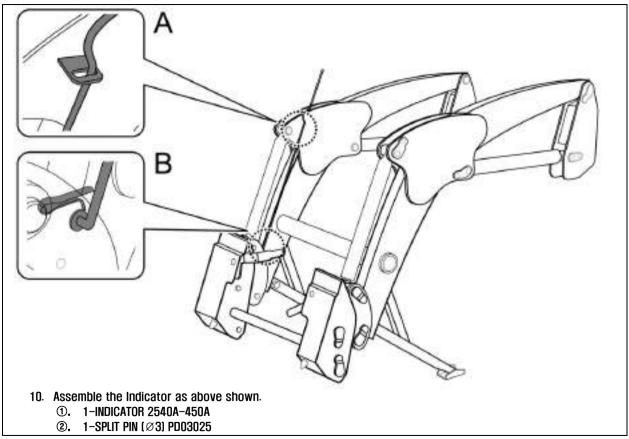
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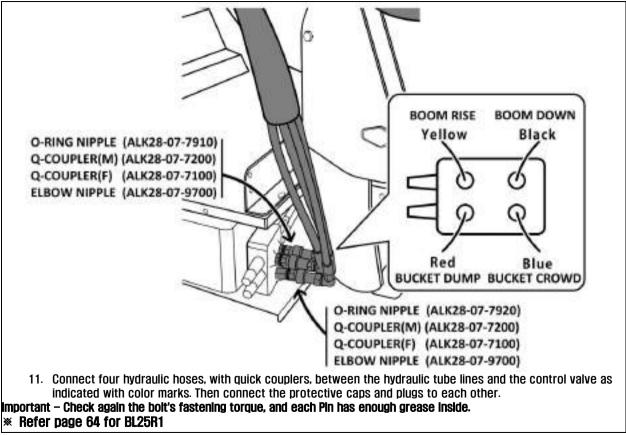


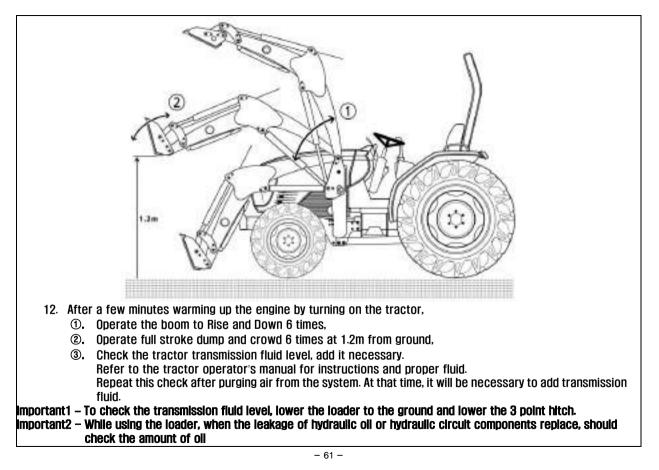


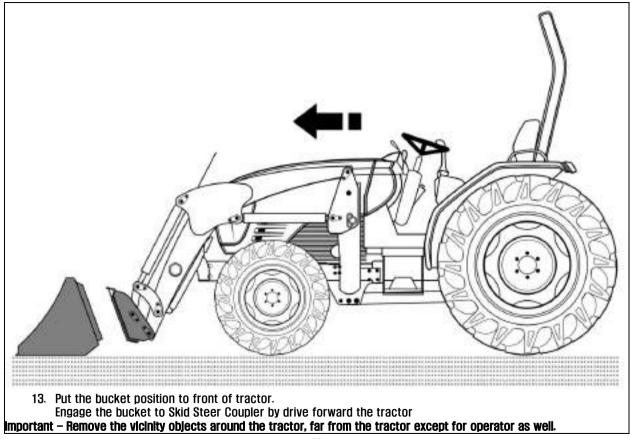


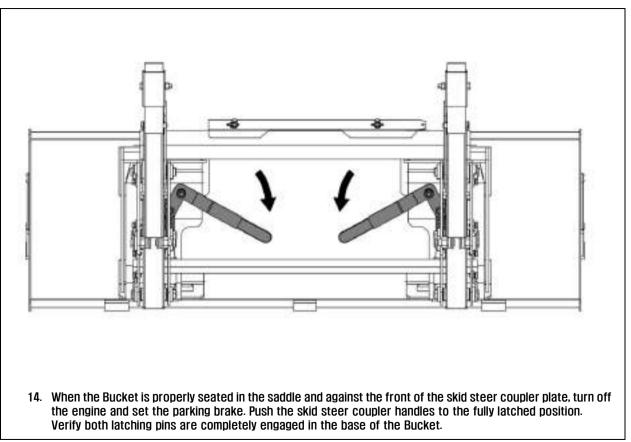


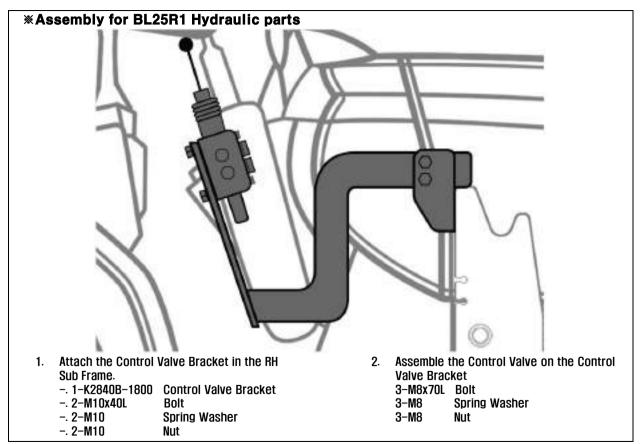


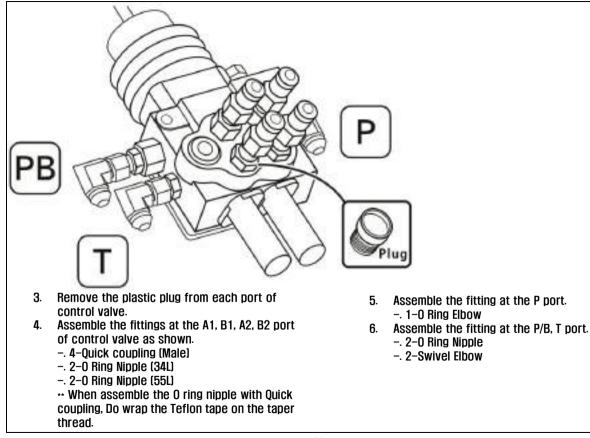


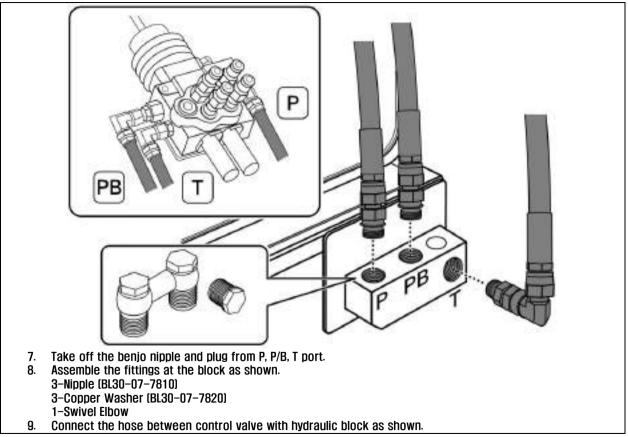


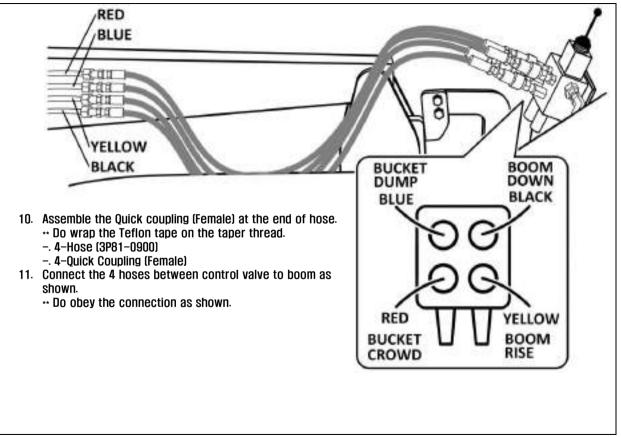






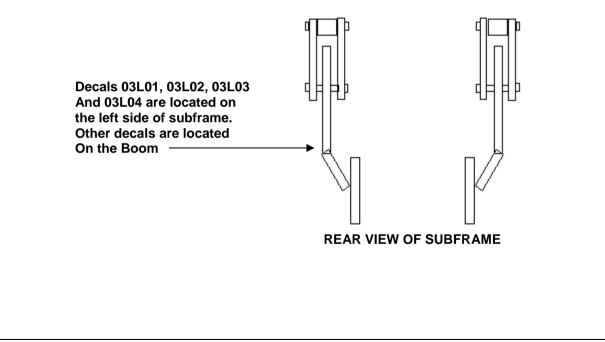






6-2 SAFETY DECALS

To promote safe operation, Branson supplies safety decals on all products manufactured. Because damages can occur to safety decals either through shipment, use or reconditioning, Branson will, upon request, provide safety decals for any of our products in the field at no charge. Contact your authorized Branson dealer for more information.







6-3 TORQUE SPECIFICATIONS

Proper torque for American fasteners used on Branson equipments. Recommended Torque in Foot Pounds(Newton Meter).*

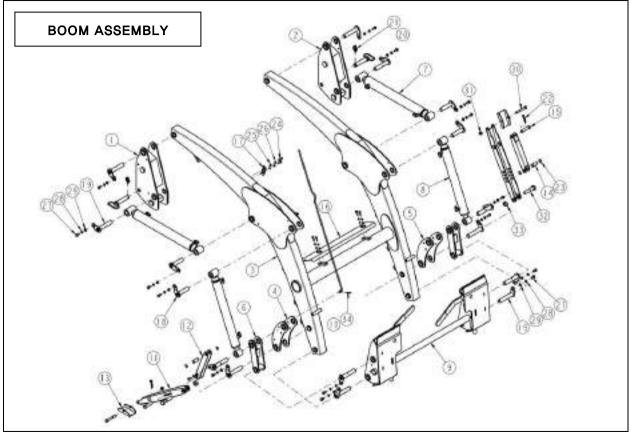
AMERICAN Bolt Head Markings	WRENCH Size(in.) "A"	Bolt Diameter (in.) "B" and Thread Size	SAE GRADE 2	sae Grade 5	SAE GRADE 8
	7/16	1/4 – 20 UNC	6(7)	8(11)	12(16)
<u></u>	7/16	1/4 - 28 UNF	6(8)	10(13)	14(18)
	1/2	5/16 - 18 UNC	11(15)	17(23)	25(33)
	1/2	5/16 - 24 UNF	13(17)	19(26)	27(37)
and the second sec	9/16	3/8 - 16 UNC	20(27)	31(42)	44(60)
	9/16	3/8 - 24 UNF	23(31)	35(47)	49(66)
	5/8	7/16 - 14 UNC	32(43)	49(66)	70(95)
SAE Grade 2	5/8	7/16 - 20 UNF	36(49)	55(75)	78(106)
(No Dashes)	3/4	1/2 - 13 UNC	49(66)	76(103)	106(144)
	3/4	1/2 - 20 UNF	55(75)	85(115)	120(163)
	7/8	9/16 - 12 UNC	70(95)	109(148)	153(207)
	7/8	9/16 - 18 UNF	79(107)	122(165)	172(233)
5	15/16	5/8 - 11 UNC	97(131)	150(203)	212(287)
SAE Grade 5 (3 Dashes)	15/16	5/8 - 18 UNF	110(149)	170(230)	240(325)
	1-1/8	3/4 - 10 UNC	144(195)	266(360)	376(509)
	1-1/8	3/4 - 16 UNF	192(260)	297(402)	420(569)
	1-5/16	7/8 – 9 UNC	166(225)	430(583)	606(821)
	1-5/16	7/8 - 14 UNF	184(249)	474(642)	668(905)
	1-1/2	1 – 8 UNC	250(339)	644(873)	909(1232
	1-1/2	1 - 12 UNF	274(371)	705(955)	995(1348
	1-1/2	1 - 14 UNF	280(379)	721(977)	1019(138)

Bolt Diameter 'B'	WRENCH Size(in.) " <i>f</i>		ID	SA Grae	-		Sae Ade 5	sae Grade 8
- Mur .	1-11/16	1-1/8 - 7 U	INC	354(4	180)	795	(1077)	1288(1745)
	1-11/16	1-1/8 - 12	UNF	397(5	538)		(1206)	1444(1957)
Wrench Size A	1-7/8	1-1/4 - 7 U		500(4	178)	1120)(1518)	1817(2462)
	1-7/8	1-1/4 - 12	UNF	553(7	749)	1241	(1682)	2013(2728)
A	2-1/16	1-3/8 - 6 U		655(8	387))(1992)	2382(3228)
SAE Grade 5	2-1/16	1-3/8 - 12	UNF	746(1	011)	1672	2(2266)	2712(3675)
[3 Dashes]	2-1/4	1-1/2 - 6 U	JNC	870(1	179]	1950)(2642)	3161(4283)
10 0 88/108/	2-1/4	1-1/2 - 12	UNF	979(1	327)	2194	1(2973)	3557(4820)
Proper torque fo					nents.		I	
Recomm	ended Torque	in Foot Pounds(N	ewton	Meter).*	r			F
	WRENCH	BOLT DIAMETER	AS	STM	AST	M	ASTM	ASTM
METRIC	SIZE(mm.) "A"	(mm.) "B"	4	1.6	8.8		9.8	10.9
24	8	5	1.8	(2.4)			5.1(6.9)	6.5(8.8)
Bolt Diameter 'B' 🔀	10	6		(4)			8.7(12)	11.1(15)
	13	8	7.3	3(10)			21.1(29)	27(37)
	16	10	14.	5(20)			42(57)	53(72)
	18	12	25	(34)	74(10	10)	73(99)	93(126)
	21	14	40	(54)	118(1	60)	116(157)	148(201)
Wrench Size 'A'	24	16	62	(84)	167(2)	26)	181(245)	230(312)
BB SIZE A	30	20	122	(165)	325(4	40)		449(608)
▲	33	22			443(6	00)		611(828)
Numbers appearing on bolt heads	36	24	211	(286)	563(7	63)		778(1054)
indicate ASTM class	41	27			821(11	12]		1138(1542)
	46	30	418	(566)	1119(1	516)		1547(2096)
Use 75% of the specified torque value for plate	d fasteners.	Use 85% of the s	pecifie	d torque	e value fo	r lubr	icated faste	eners
				-				

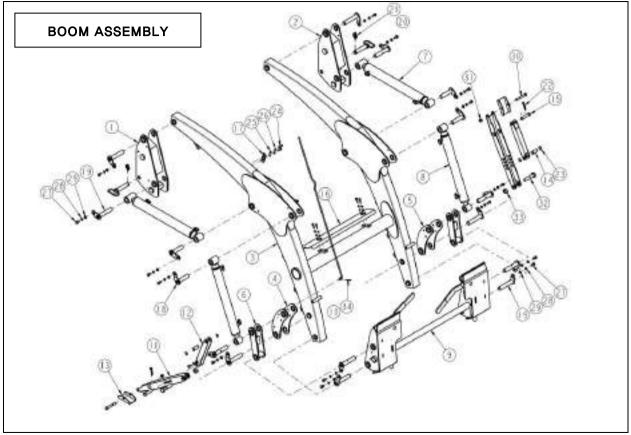
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BL25R / BL25R1

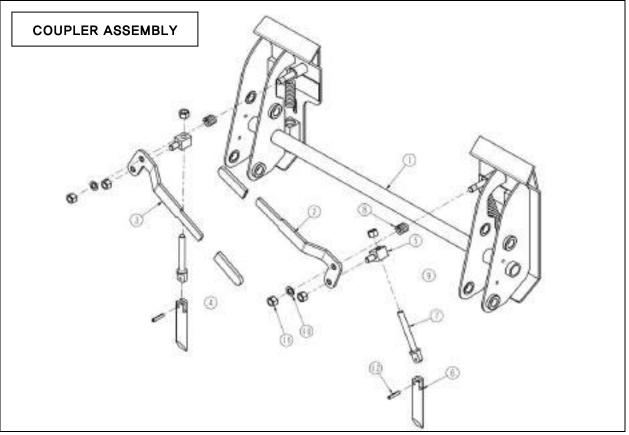
Boom Assembly	
Coupler Assembly 78	
Bucket	
Mounting Kit	
Bumper Assembly 88	
Cylinder Assembly 90	
Hydraulic Parts · · · · · · · · · · · 92	ı
Decal & Manual)0



воом	ASSEMBLY(P/N: C18	50D)			
NO	PART NUMBER	PART NAME	DESCRIPTON	Q'TY	REMARK
1	C1850A-3100	COLUMN, RH.		1	
2	C1850A-3200	COLUMN, LH.		1	
3	C1850A-0000	BOOM ASSY		1	
4	C1850A-6000	LINK BUCKET, RH.		1	
5	C1850A-7000	LINK BUCKET, LH.		1	
6	C1850A-4100	BUCKET ROD		2	
7	C1850D-8000	CYLINDER BOOM	Ø55xØ30x690LxST455	2	
8	C1850A-9000	BUCKET CYLINDER	Ø50xØ30x625LxST390	2	
9	B0945B-000B	COUPLER B/C		1	
10	2540A-450A	INDICATOR ASSY		1	
11	3045A-8100	STAND		2	
12	3045A-8200	BRACKET	4t	2	
13	4060A-8400	BRACKET	4t	2	
14	4060A-8520	PIN	Ø20*48L	2	
15	4060A-8530	PIN	Ø16*80L	2	
16	4060A-7010	COVER	2.3t	1	
17	ALN47-07-3100	COVER	4t	1	
18	P25A-105A	PIN	Ø25	4	
19	P25A-130A	PIN		12	
20	P25C-1030	PIN	Ø25	2	



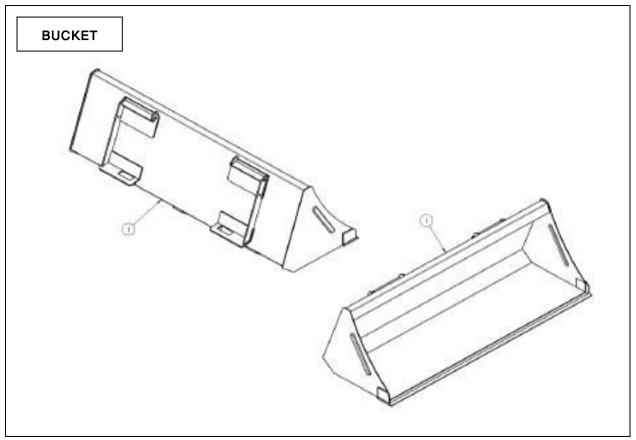
NO	PART NUMBER	PART NAME	DESCRIPTON	Q'TY	REMARK
21	AL20-98-9990	LINK PIN		2	
22	PR30045	R-PIN	Ø3	2	
23	SN2OM	SNAP RING	Ø20	4	
24	BH0855125Z	BOLT	M8x25L	6	
25	WP08M	PLAIN WASHER	M8	6	
26	WSO8M	SPRING WASHER	M8	6	
27	BH1044150Z	BOLT(10.9T)	M10x20L	16	
28	WP10M	PLAIN WASHER	M10	16	
29	WS10M	SPRING WASHER	M10	16	
30	BH12I6175Z	BOLT(10.9T)	M12x90L	2	
31	NL12175Z	LOCK NUT	M12	2	
32	BH20H5250X	BOLT(10.9T)	M20x85L	2	
33	NL20250Z	LOCK NUT	M20	2	
34	PD03025	COTTER PIN	Ø3x25L	1	



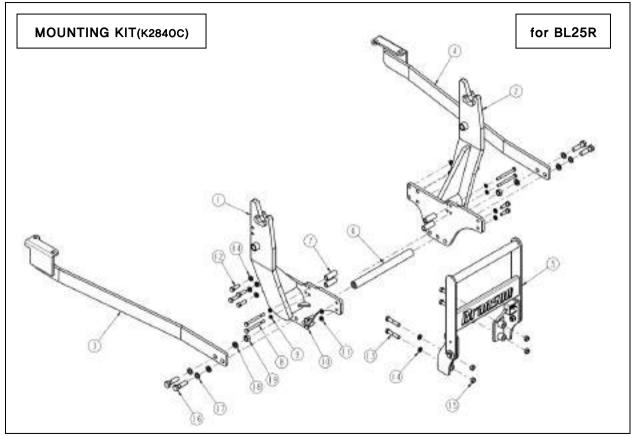
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10	PART NUMBER	PART NAME	DESCRIPTON	Q'TY	REMARK
1	B0945B-200B	COUPLER B/C		1	
2	B0945A-111B	LEVER RH.	8t	1	
3	B0945A-112B	LEVER LH.	8t	1	
4	B0945A-0090	HANDLE		2	
5	B0945A-1210	PIN	30x30	2	
6	B0945A-1220	PIN	Ø30	2	
7	B0945A-1230	PIN	Ø30	2	
8	B0945A-1310	SPRING	Ø5	2	
9	B0945A-132A	SPRING		2	
10	WP16M	PLAIN WASHER	M16	2	
11	NL16200Z	LOCK NUT	M16	6	
12	PS08040	SPRING PIN	Ø8x40L	2	

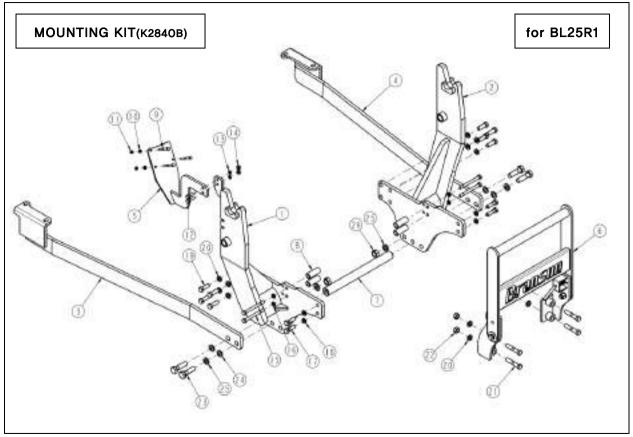
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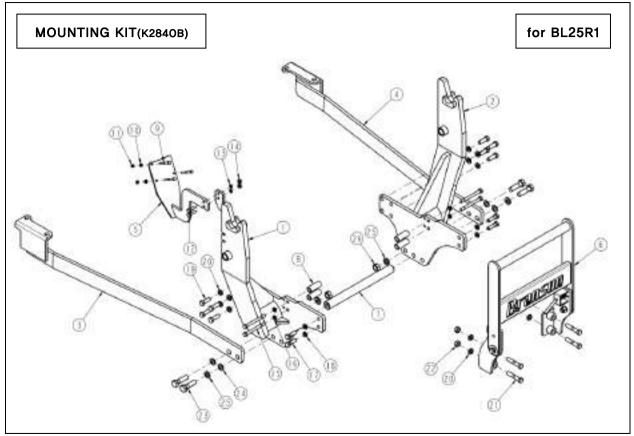
BUCKET (P/N:AKU30-A2-0000C) NO PART NUMBER PART NAME DESCRIPTON Q'TY REMARK AKU30-A2-000C BUCKET L = 1740 1 1



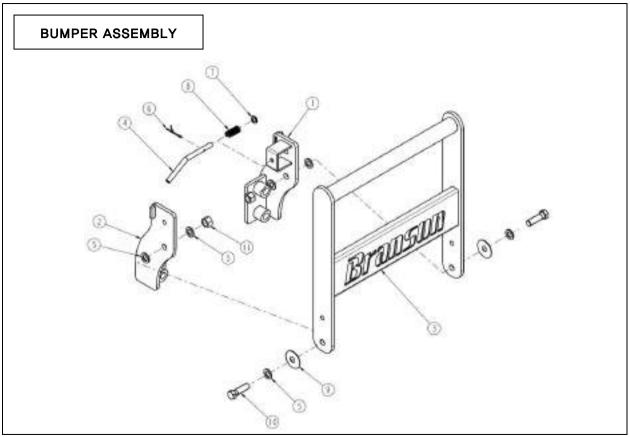
ראטכ	FING KIT(P/N:K2840C)				for BL25R
NO	PART NUMBER	PART NAME	DESCRIPTON	Q'TY	REMARK
1	K2840C-1100	SUB FRAME RH		1	
2	K2840B-1200	SUB FRAME, RH.		1	
3	K2840A-3100	BACK AXLE RH		1	
4	K2840A-3200	BACK AXLE LH		1	
5	K03B-4000	BUMPER		1	
6	C30-09-6100	CROSS BAR		1	
7	ALK28-09-416A	BUSHING		4	
8	BH12P7175Z	BOLT(10.9T)	M12x125L	4	
9	WS12M	SPRING WASHER	M12	4	
10	BH14A7200Z	BOLT(10.9T)	M14x50L	4	
11	WS14M	SPRING WASHER	M14	4	
12	BH1699200Z	BOLT(10.9T)	M16x45L	8	
13	BH16G8200Z	BOLT(10.9T)	M16x80L	4	
14	WS16M	SPRING WASHER	M16	12	
15	NH16200Z	NUT	M16	4	
16	BH20EA250Z	BOLT(10.9T)	M20x70L	4	
17	WP2OM	PLAIN WASHER	M20	4	
18	WS2OM	SPRING WASHER	M20	4	
19	NH20250Z	NUT	M20	2	



моилт	TING KIT(P/N:K2840B)				for BL25R1
NO	PART NUMBER	PART NAME	DESCRIPTON	Q'TY	REMARK
1	K2840B-1100	SUB FRAME, RH.		1	
2	K2840B-1200	SUB FRAME, RH.		1	
3	K2840A-3100	BACK AXLE RH		1	
4	K2840A-3200	BACK AXLE LH		1	
5	K2840B-1800	C/V BRACKET		1	
6	К03В-4000	BUMPER		1	
7	C30-09-6100	CROSS BAR		1	
8	ALK28-09-416A	BUSHING	M8x70L	4	
9	BH08E6125Z	BOLT(10.9T)	M8	3	
10	WSO8M	SPRING WASHER	M8	3	
11	NH08125Z	NUT	M10x40L	3	
12	BH1086150Z	BOLT(10.9T)	M10	2	
13	WS10M	SPRING WASHER	M10	2	
14	NH10150Z	NUT	M12x125L	2	
15	BH12P7175Z	BOLT(10.9T)	M12	4	
16	WS12M	SPRING WASHER	M14x50L	4	
17	BH14A7200Z	BOLT(10.9T)	M14	4	
18	WS14M	SPRING WASHER	M16x45L	4	
19	BH1699200Z	BOLT(10.9T)	M16	8	
20	WS16M	SPRING WASHER		12	



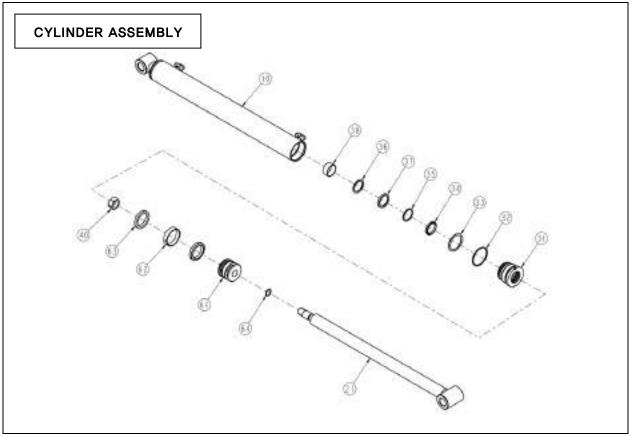
ראטכ	TING KIT(P/N:K2840B)				for BL25R
NO	PART NUMBER	PART NAME	DESCRIPTON	Q'TY	REMARK
21	BH16G8200Z	BOLT(10.9T)	M16x80L	4	
22	NH16200Z	NUT	M16	4	
23	BH20EA250Z	BOLT(10.9T)	M20x70L	4	
24	WP20M	PLAIN WASHER	M20	4	
25	WS20M	SPRING WASHER	M20	4	
26	NH20250Z	NUT	M20	2	



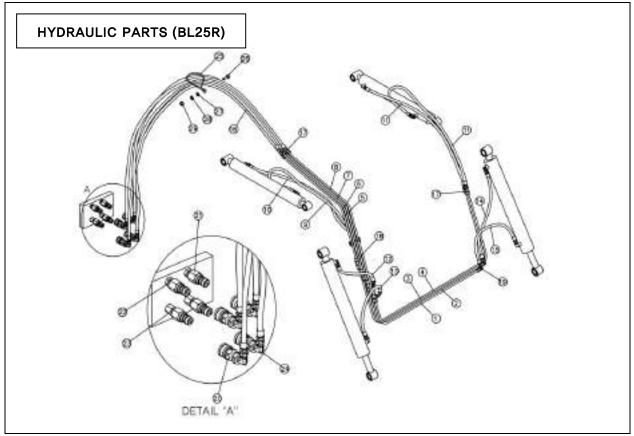
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0	PART NUMBER	PART NAME	DESCRIPTON	Q'TY	REMARK
1	K2840C-4100	BRACKET LH		1	
2	K2840C-4200	BRACKET RH		1	
3	козв-4200	FOLDER		1	
4	M7040A-4010	PIN		1	
5	WP16M	PLAIN WASHER	M16	6	
6	PD03025	SPLIT PIN	Ø3x25L	1	
7	WP12M	PLAIN WASHER	M12	1	
8	ALK28-04-0010	SPRING	SUP9, Ø1.5xØ18x66L	1	
9	WD16M	DISC SPRING WASHER	M16	2	
10	BH16B9200Z	BOLT(10.9T)	M16x55L	2	
11	NL16200Z	LOCK NUT	M16	2	

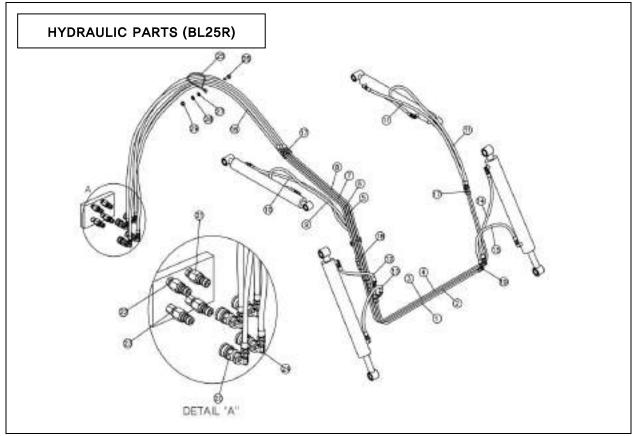
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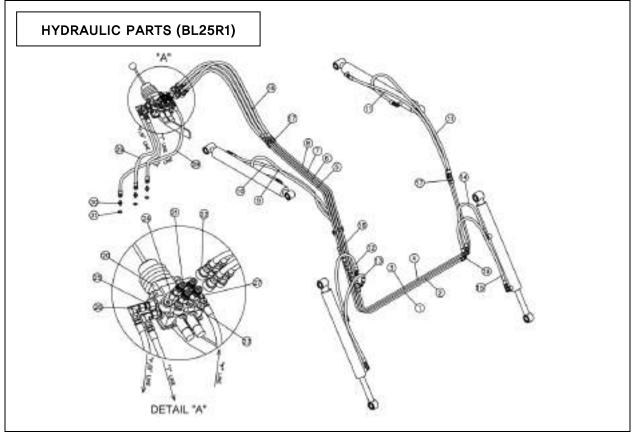
	PART N	IUMBER			REMARK
NO	BUCKET(C1850A-9000)	BOOM(C1850D-8000)	TUBE	Q'TY	
10	C1850A-05-1210	C1850D-05-2210	TUBE	1	
21	C1850A-05-1110	C1850D-05-2110	ROD	1	
31	CR5030	CR5530	COVER ROD	1	
32	1BG50	1BG55	O-RING	1	
33	1BG44	1BG49	O-RING	1	
34	LBW 30x38x5/6.5	LBW 30x38x5/6.5	DUST SEAL	1	
35	1BP30	1BP30	O-RING	1	
36	ISW 30x40x6	ISW 30x40x6	U-PACKING	1	
37	BRWW 30x40x2	BRWW 30x40x2	BACK UP RING	1	
38	DU3020	DU3020	DU BUSH	1	
40	CY-M20	СҮ-М20	NUT	1	
61	PI5030	PI5530	PISTON	1	
62	WRW 50x45x15	WRW 55x50x15	WEAR-RING	1	
63	ODW 50x35x9	ODW 55x40x10	U-PACKING	2	
64	1BP18	1BP18	O-RING	1	
	SEAL5030	SEAL5530	SEAL KIT	1	



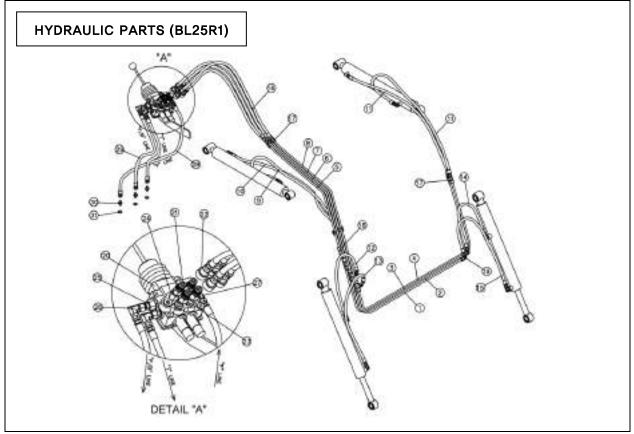
HYDRA	UIC PARTS (BL25R)				
NO	PART NUMBER	PART NAME	DESCRIPTON	Q'TY	REMARK
1	C1850A-07-1100	PIPE		1	
2	C1850A-07-1200	PIPE		1	
3	C1850A-07-1300	PIEP		1	
4	C1850A-07-1400	PIPE		1	
5	C1850A-07-1500	PIPE		1	
6	C1850A-07-1600	PIPE		1	
7	C1850A-07-1700	PIPE		1	
8	C1850A-07-1800	PIPE		1	
9	5PG1-0300	HOSE ASSY		1	
10	5PG1-0760	HOSE ASSY		1	
11	5PG1-0060	HOSE ASSY		2	
12	5PG1-0050	HOSE ASSY		1	
13	5PG1-0140	HOSE ASSY		1	
14	5PG1-0480	HOSE ASSY		1	
15	5PG1-0570	HOSE ASSY		1	
16	5PG1-1840	HOSE ASSY		4	
17	ALK28-07-9800	NIPPLE		6	
18	ALK28-07-9900	TEE NIPPLE		4	
19	ALK28-07-9600	ELBOW NIPPLE		2	
20	ALK28-07-7100	Q-COUPLER(F)		4	



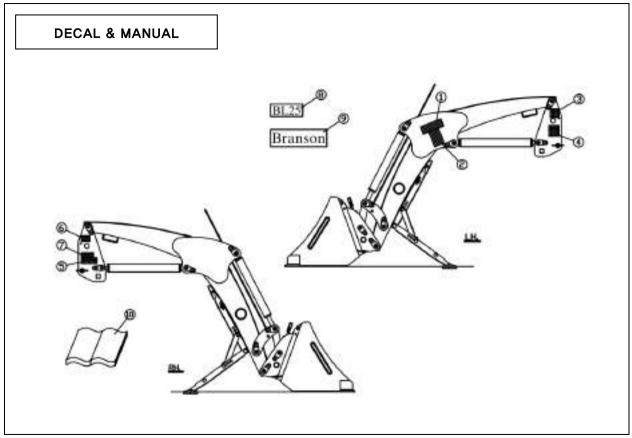
IYDRA	UIC PARTS (BL25R)				
NO	PART NUMBER	PART NAME	DESCRIPTON	Q'TY	REMARK
21	ALK28-07-7200	Q-COUPER(M)		4	
22	ALK28-07-7910	O-RING NIPPLE		2	
23	ALK28-07-7920	O-RING NIPPLE		2	
24	ALK28-07-9700	ELBOW NEPPLE		4	
25	C2050-9500	HOLDER		1	
26	BH1066150Z	BOLT		1	
27	WP10M	PLAIN WASHER		1	
28	WS10M	SPRING WASHER		1	
29	NH10150Z	NUT		1	



YDRA	UIC PARTS (BL25R1)				
NO	PART NUMBER	PART NAME	DESCRIPTON	Q'TY	REMARK
1	C1850A-07-1100	PIPE		1	
2	C1850A-07-1200	PIPE		1	
3	C1850A-07-1300	PIEP		1	
4	C1850A-07-1400	PIPE		1	
5	C1850A-07-1500	PIPE		1	
6	C1850A-07-1600	PIPE		1	
7	C1850A-07-1700	PIPE		1	
8	C1850A-07-1800	PIPE		1	
9	5PG1-0300	HOSE ASSY		1	
10	5PG1-0760	HOSE ASSY		1	
11	5PG1-0060	HOSE ASSY		2	
12	5PG1-0050	HOSE ASSY		1	
13	5PG1-0140	HOSE ASSY		1	
14	5PG1-0480	HOSE ASSY		1	
15	5PG1-0570	HOSE ASSY		1	
16	3P81-0900	HOSE ASSY		4	
17	ALK28-07-9800	NIPPLE		6	
18	ALK28-07-9900	TEE NIPPLE		4	
19	ALK28-07-9600	ELBOW NIPPLE		2	
20	HDMO3/2	CONTROL VALVE		1	BESKO VALVE



DRA	UIC PARTS (BL25R1)				
NO	PART NUMBER	PART NAME	DESCRIPTON	Q'TY	REMARK
21	ALK28-07-7200	Q-COUPLING(M)		4	
22	ALK28-07-7100	Q-COUPLING(F)		4	
23	AL25-07-9400	O-RING NIPPLE		2	
24	AL25-07-940A	O-RING NIPPLE		2	
25	7860-07-7080	O-RING NIPPLE		2	
26	\$1600G-07-0010	SWIVEL ELBOW NIPPLE		2	
27	M7040-07-7050	O-RING ELBOW		2	
28	3P81-1180	HOSE ASSY		1	
29	3P81-1200	HOSE ASSY		2	
30	BL30-07-7810	NIPPLE		3	
31	BL30-07-7820	WASHER(COPPER)		3	



ECAL	& MANUAL				
NO	PART NUMBER	PART NAME	DESCRIPTON	Q'TY	REMARK
1	03L01	DECAL		1	
2	03L02	DECAL		1	
3	03L03	DECAL		1	
4	03L04	DECAL		1	
5	03L05	DECAL		1	
6	03L06	DECAL		1	
7	03L00	DECAL		1	
8	11L20	DECAL		2	
9	11L02	DECAL		2	
10	M15013	Owner's MANUAL		1	

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Branson Front Loader (BL25R Series)

Owner's Manual

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