LS Tractor

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P/NO FT641-MEN00
REVISION 12

LS LOADER

OPERATOR MANUAL

LL6100

www.lstractor.com

LS TRACTOR

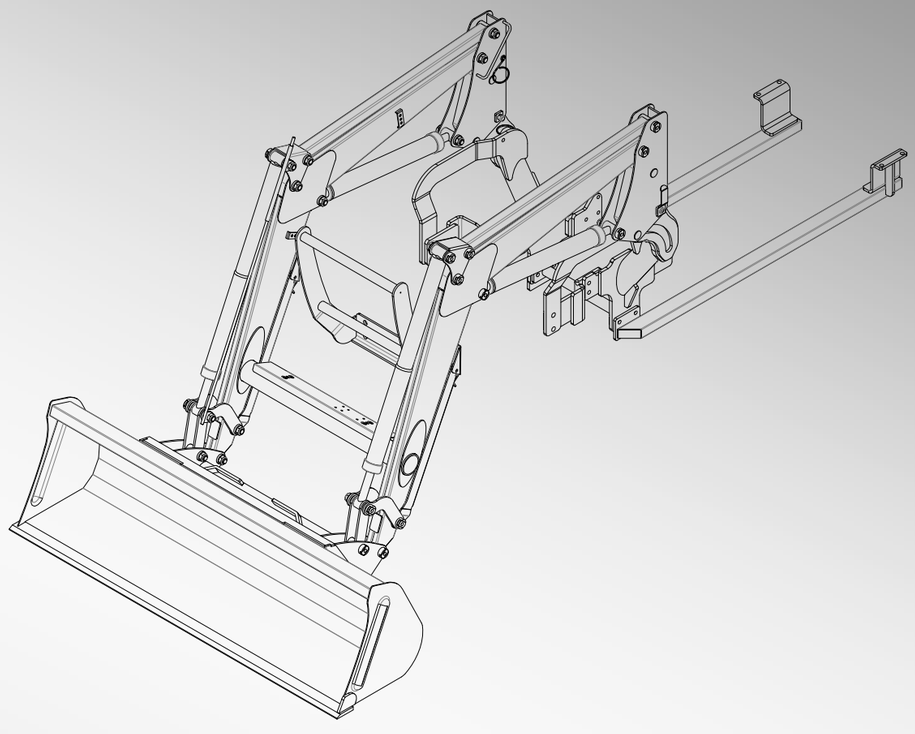
INNOVATIVE TECHNOLOGY PARTNER

LS LOADER
OPERATOR MANUAL

LL6100

SELF LEVELING TYPE

TRACTOR Model
• MT573



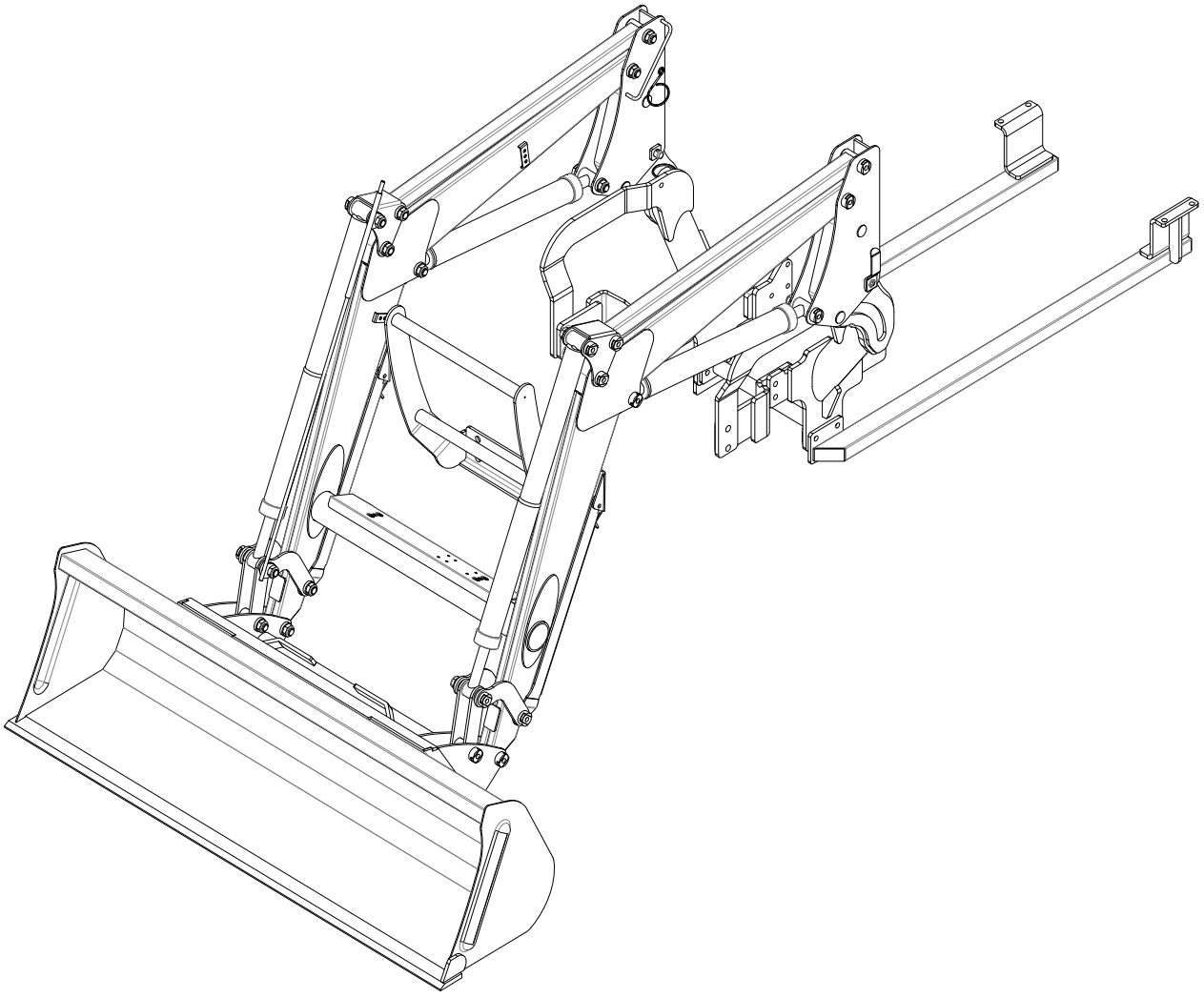
LS Tractor

LS LOADER

OPERATOR MANUAL

Model : LL6100

Applied Tractor	Loader Option
MT573	40381463 : 3rd function kit 40381453 : Bucket Cutting Edge



WARRANTY CONDITIONS

Warranty Coverage :

LS Mtron Tractor Division, herein referred to as LS Mtron, undertakes to replace or repair any part of a LS loader where damage has been proven to be caused by defects in material or workmanship.

This Warranty is valid for a period of 1 year from the date of the original retail sale. Parts replaced or repaired under the terms of this Warranty are guaranteed only until the original warranty expires. Warranty only applies to the original purchaser.

It is further understood and agreed that the defect should be immediately reported to the Selling Dealer. The Selling Dealer will generally perform Warranty repairs or replacements and the Purchaser shall deliver the LS Mtron Loader to the Dealer's place of business or repair.

The obligation of LS Mtron to the Purchaser under this Warranty is limited to the repair or replacement of defective parts by an authorized LS Mtron dealer. Repair or replacement in accordance with this Warranty shall constitute fulfillment of all liabilities of LS Mtron and the Selling Dealer in respect to LS Mtron Loaders.

There are no warranties beyond those which expressly appear herein. Any implied warranty of merchantability or fitness for a particular purpose is specifically exclude here from.

Warranty Provisions :

LS Mtron's liability under this warranty is subject to the observance by the Purchaser of the following provisions:

▶ The purchaser shall at all times in the operation of any LS Mtron Product, use those brands and grades of lubricating oils, lubricants or fuel and spare parts officially approved by LS Mtron.

▶ The LS Mtron Loaders shall have been used in accordance with the procedures specified in the Operator's Manual. This Warranty does not extend to damage resulting from misapplication, abuse, misuse, failure to preform maintenance, negligence, fire, accidents or changes or faulty mounting carried out by the Purchaser. When making a Warranty exchange of parts, the Purchaser shall compensate LS Mtron for the time that the parts have been used if they have been exposed to extreme wear.

▶ Compensation is not paid for physical harm, deadlock, resulting damages or other losses.

▶ To obtain warranty service, the Purchaser must (1) report the product defect to an authorized LS Mtron dealer and request repair within the applicable warranty term and (2) present evidence of purchase.

▶ The Warranty shall be void if the LS Mtron Loader has been altered or repaired outside of a LS Mtron dealership or travel of dealer personnel to customer location for Warranty repair. The customer shall also pay any premium for overtime labor requested by the customer.

▶ Temporary repairs or additional costs due to the work being performed after normal working hours will not be compensated.

▶ The above warranty is in lieu of all other warranties on LS Mtron's behalf and neither party assumes any other liability in connection with LS Mtron's Products.

Right To Make Design and Product Changes :

LS Mtron reserves the right to make changes in the design and other changes in its LS Mtron Products at any time without incurring any obligation with respect to any product previously ordered, sold or shipped.

PLEASE NOTE :

Make sure all potential operators of the this equipment review this manual and all safety messages contained within

This safety symbol indicates important safety messages in this manual. When you see this symbol, carefully read the message that follows and be alert to the possibility of personal injury or death.

Table of Contents

SAFETY PRECAUTIONS

Most tractor and/or loader equipment accidents can be avoided by following simple safety precautions. The safety information given in this manual does not replace safety codes, insurance requirements, federal, state, and local laws. Make sure your machine has the correct equipment required by your local laws and regulations. Understand that your safety and the safety of other persons are measured by how you service and operate this loader.
Know the position and operations of all controls before you try to operate. Make sure you check all controls in a safe area before starting.
Read this manual completely and thoroughly and make sure you understand all controls. All equipment has a limit. Make sure you are aware of the stability and load characteristics of this loader before you begin operation.

This safety alert symbol indicates important safety messages in this manual. When you see this symbol, carefully read the message that follows and be alert to the possibility of personal injury or death.

SAFETY PRECAUTIONS

READ MANUALS AND DECALS

- Read and understand both the tractor and the loader Operator Manuals and all decals before using the loader.
- Lack of knowledge can lead to accidents.
- It is the loader owner's responsibility to make sure anyone operating the loader reads and understands this manual first before operating the machine.
- Follow all safety, operating, and service instructions.
- Replace damaged or illegible safety labels. See following pages for required labels.

ROPS AND SEAT BELT

- Equip your tractor with an approved rollover-protective structure (ROPS) or ROPS Cab and seat belt for your protection.
- ROPS (Roll-Over Protective Structures) and seat belt equipped tractors are recommended for operator use in all loader operations.
- Operater should wear safety hard hat, safety glasses, safety shoes, and other PPE. Avoid wearing loose clothing or jewelry that may catch in moving parts.
- Use seat belt as specified by tractor/ROPS manufacturer.

YOURSELF

- Do not stand, walk, or work under a raised loader bucket or attachment unless it is securely blocked and held in position.
- Operate controls only when properly seated in the operator's seat.
- Only one person, the operator, should be on the machine when it is in operation.
- Accidental movement of valve handle/handles or leak in the hydraulic system could cause the loader to drop, or attachment to dump, causing severe injury.

OTHERS

- Do not allow anyone in loader work area, under raised loader, or to reach through the loader boom when the bucket or attachment is raised.
- A frequent cause of personal injury or death is persons falling off and being run over. Inadvertent movement of the loader or attachment could result in serious injury or death.
- Do not permit others to ride on your tractor. loader, bucket, or any attachment.
- Do not lift or carry anyone on buckets, forks, probes, or any other portion of the loader or loader attachments.
- Do not allow children or unqualified persons to operate equipment.

SAFETY PRECAUTIONS

⚠ SAFETY PRECAUTIONS ⚠

PREPERATION

- Move the wheels to the tractor manufacturer's widest recommended settings to increase stability.
- For better stability, always use a tractor equipped with a wide front axle, never use a tractor equipped with a tricycle type front axle.
- Add rear ballast or rear weight to the tractor to compensate for the load and increase stability.
- Add recommended rear trie liquid weight or rear wheel weights for increased stability.
- Do not modify, alter, or permit anyone else to modify or alter the loader, any of its components, or any loader function without first consulting a LS Mtron dealer.
- Assemble, remove, and reinstall the loader only as directed in this manual. Failure to do this could result in serious personal injury or death.
- The loader may shift during shipping and handling, making it unstable on the pallet. Support loader with an overhead hoist or other suitable means prior to removing bands or attaching straps securing loader to pallet. Failure do so could result in accidental tip-over of the loader that could cause serious injury to you and/or bystanders.

BEFORE OPERATION

- Before starting the engine of your tractor, make sure all operating controls are in park lock or neutral position.
- Be certain lights and safety markings, as provided by the tractor manufacturer, are clean and operating when transporting the tractor/loader on public roads. Be certain that the Slow Moving Vehicle (SMV) emblem is visible. Check with local law enforcement for specific requirements.

OPERATION

- Add wheel ballast and/or rear weight to counterbalance tractor/loader for stability at maximum loader capacity.
- Additional counterweight requirements will vary with loader attachments and equipment application.
- Move and turn the tractor at low speeds.
- Carry loader boom at a low position during normal operation.
- Never travel at high speeds with bucket loaded.
- Use caution when operating the loader with a raised bucket or attachment.
- Avoid driving over loose fill, rocks, holes, or anything that may be dangerous for loader operation or movement.
- Allow for the loader length when making turns.
- Use caution when handing loose or unstable loads.
- Gradually stop the loader boom when lowering or lifting loads.
- When using remote hydraulic tractor valves on some tractors, the loader lift and dump cylinders will continue moving unless the valve handle/handles are manually returned to neutral, or until relief pressure is reached at the ends of piston strokes. Observe the bucket movement and maintain control with valve handle/handles.
- Travel speed should be such that complete control and machine stability is maintained at all times. Where possible, avoid operating near ditches, embankments, and holes. Reduce speed when turning, crossing slopes, and on rough, slick or muddy surfaces.
- A loader attachment should be transported in a low position at slow ground speeds. Make turns slowly and use the tractor brakes cautiously. A loaded attachment in the raised position alters the center of gravity location of the machine and increases the possibility of mishaps.
- Be careful during loading, transporting, and stacking to minimize rolling bales and tractor tip over.
- Do not use buckets, forks, or other attachments without bale retaining devices.
- Operate the tractor and loader such that complete control and machine stability is maintained at all times.
- When using a loader, be alert of bucket or attachment position at all times. Loader in raised position with bucket or attachment rolled back can dump material onto tractor causing damage or injury to tractor and/or operator.

SAFETY PRECAUTIONS

⚠ SAFETY PRECAUTIONS ⚠

LARGE HEAVY OBJECTS

- Never use loader for handling large heavy objects, such as large round or rectangular bales, logs, and oil drums unless loader is equipped with attachment that is designed to handle such objects.
- Handling large heavy objects can be extremely dangerous due to danger of rolling the tractor over.
- Handling large heavy objects can be extremely dangerous due to danger of upending the tractor.
- Handling large heavy objects can be extremely dangerous due to danger of the object rolling or sliding down the loader boom onto the operator.
- If you must handle large heavy objects, protect yourself by using caution, moving slowly, and avoiding bumps and rough ground.
- If you must handle large heavy objects, protect yourself by never lifting load higher than necessary to clear the ground.
- If you must handle large heavy objects, protect yousrelf by adding rear ballast to the tractor to compensate for weight of load.
- If you must handle large heavy objects, protect yourself by never lifting large heavy objects that may roll or fall on the operator.
- Never lift any load from any point of the loader with a chain, rope or cable unless loader is equipped with a Factory approved attachment that was designed and built for this type of lifting. Always follow lifting instructions included with these attachments.
- Use only Factory bale probe or bale retaining devise handler attachment when handling round bales.
- Do not handle large square bales without a retaining device handler attachment.
- Do not use buckets, forks ,or other attachments without bale retaining devices.
- Do not use loader for handling large, heavy objects such as logs, tanks, etc.

SLOPES

- Stay off of slopes too steep for safe operation.
- Shift down before you start up or down a hill with a heavy load. Avoid "free wheeling".
- Use extreme caution when operating on a slope.
- Always operate up and down the slope, never across the slope.

ELECTRICAL

- Avoid contact with overhead wires, power lines,and obstacles when loader bucket or attachment is raised.
- Electrocution from power lines can occur with or without contact.
- Check for underground utilities before digging below grade level.
- Contact with overhead power lines can cause severe electrical burns or death from electrocution. Make sure there is enough clearance between raised equipment and overhead power lines.

HYDRAULIC

- Do not tamper with the relief valve setting. This will void warranty and could cause damage to loader and/or tractor.
- Pouring hydraulic fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Do not use HANDS to search for suspected leaks. If injured by escaping fluid, obtain medical treatment immediately.
- Visuslly check for hydraulic leaks and broken, missing or malfunctioning parts. Never use your hand to check for suspected leaks under pressure. Use a piece of cardboard or wood for this purpose. Escaping hydraulic fluid or diesel fuel leaking under pressure can have sufficient force to penetrate the skin and cause serious infection or other personal injury. If injured by leaking fluid, seek medical attention immediately.
- To prevent personal injury, relieve all pressure before disconnecting fluid lines.
- Before applying hydraulic pressure, make sure all hydraulic connections are tight and components are in good condition.
- Be sure to purge all the air from the hydraulic system before attempting to raise or lower this machine.

SAFETY PRECAUTIONS

SAFETY PRECAUTIONS

- When using remote hydraulic tractor valves on some tractors, the loader lift and dump cylinders will continue moving unless the valve handle/handles are manually returned to neutral, or until relief pressure is reached at the ends of piston strokes. Observe the bucket or attachment movement and maintain control with valve handle/handles.

- Raised loader or boom can fall due to hydraulic system failure.
- To avoid serious injury or death: Block up or securely support loader and boom before working underneath.
- To avoid serious injury or death: Purge all air from hydraulic system before attempting to raise or lower loader or boom.
- To avoid serious injury or death: Stand clear if lowering or raising loader or boom.
- Do not use hand or skin to check for hydraulic leaks. Use cardboard or wood. Wear eye protection.
- High pressure oil leaks can penetrate skin causing serious injury and gangrene. Consult a physician immediately.
- Lower the loader or boom and release hydraulic pressure before loosening fittings.

AFTER OPERATION

- Before leaving the tractor seat, lower attachment or loader boom to ground, stop engine, lock parking brakes, put all controls in neutral, relieve hydraulic pressure, and remove key before leaving operator's seat.
- Before disconnecting hydraulic lines, relieve all hydraulic pressure.
- Make sure all parked loaders on stands are on a hard level surface with all safety devices engaged to prevent loader from falling and being damaged or injuring someone.
- Always park loader with bucket attached to loader.
- When a front loader is mounted on the tractor, enter and exit the operator's seat only from left side of the tractor.
- Always park loader with a Factory attachment attached to the loader.
- Special care should be taken to park or store attachments with points or sharp edges in a safe manner.
- Make sure all parked loaders are on a hard level surface. Engage all safety devices to prevent loader from falling and being damaged or injuring someone. Do not repair loader if it is not mounted on the tractor. Loss of hydraulic fluid or removal of parts could cause loader to collapse resulting in injury.

REPAIR

- Visually check for hydraulic leaks and broken, missing, or malfunctioning parts. Make necessary repairs before operation.
- To keep mounting kit hardware from loosening during loader operation, hardware must be torqued to specifications notes in operator manual.
- Always wear safety goggles when servicing or repairing the machine.
- When servicing or replacing pins in cylinder ends, bucket, etc, always use a brass drift and hammer. Failure to do so could result in injury from flying metal fragments.
- Never tow from any point of the loader with a chain, rope, or cable. Doing so could cause a roll over or serious damage to the loader.

SAFETY DECALS

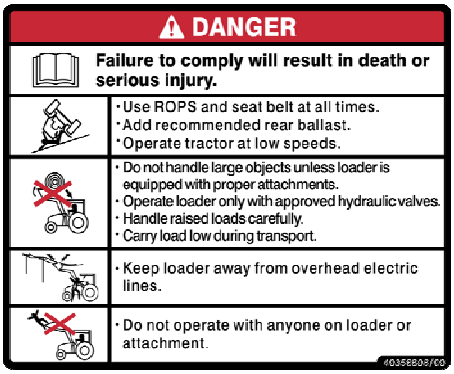
Care of Safety Decals.

▶ Keep safety decals clean and free of obstructing material.

▶ Clean safety decals with soap and water and dry with a soft cloth.

▶ If a component with a safety decal(s) affixed is replaced with a new part, make sure new safety decal(s) are attached in the same location(s) as the replaced components.

▶ Mount new safety decals by applying on a clean dry surface and pressing air bubbles to outside edges.



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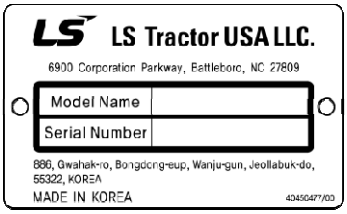

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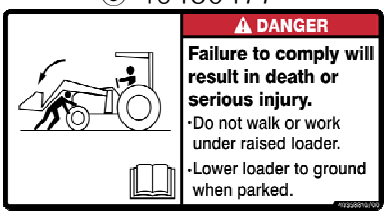

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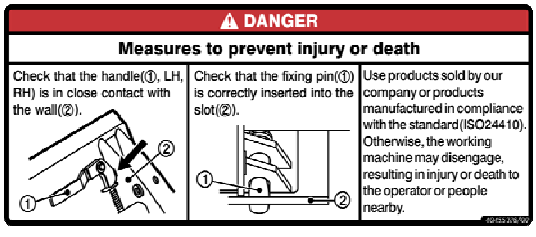

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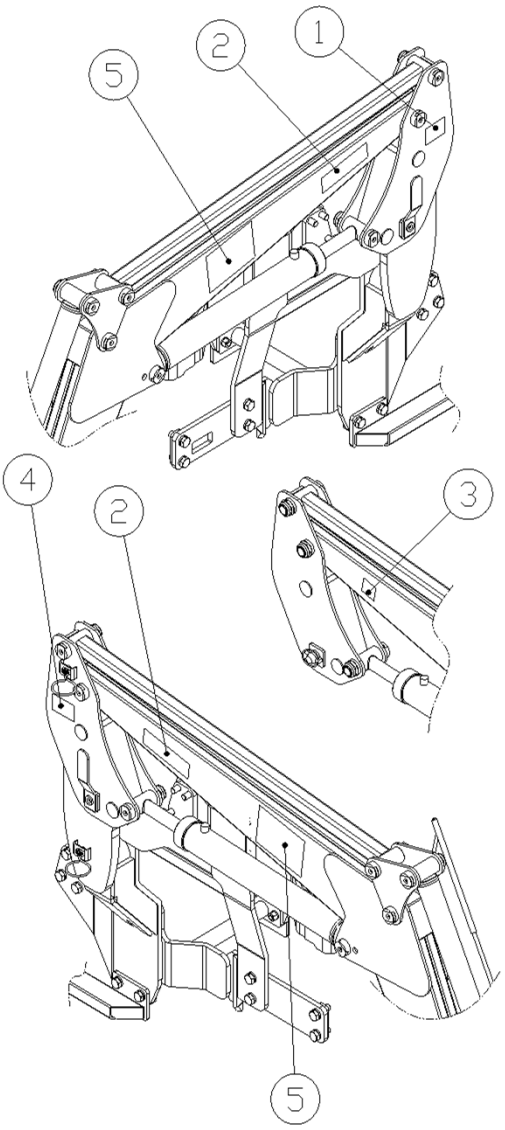
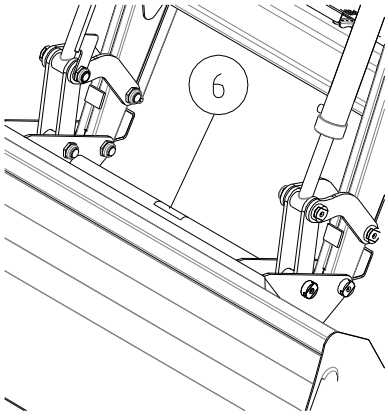
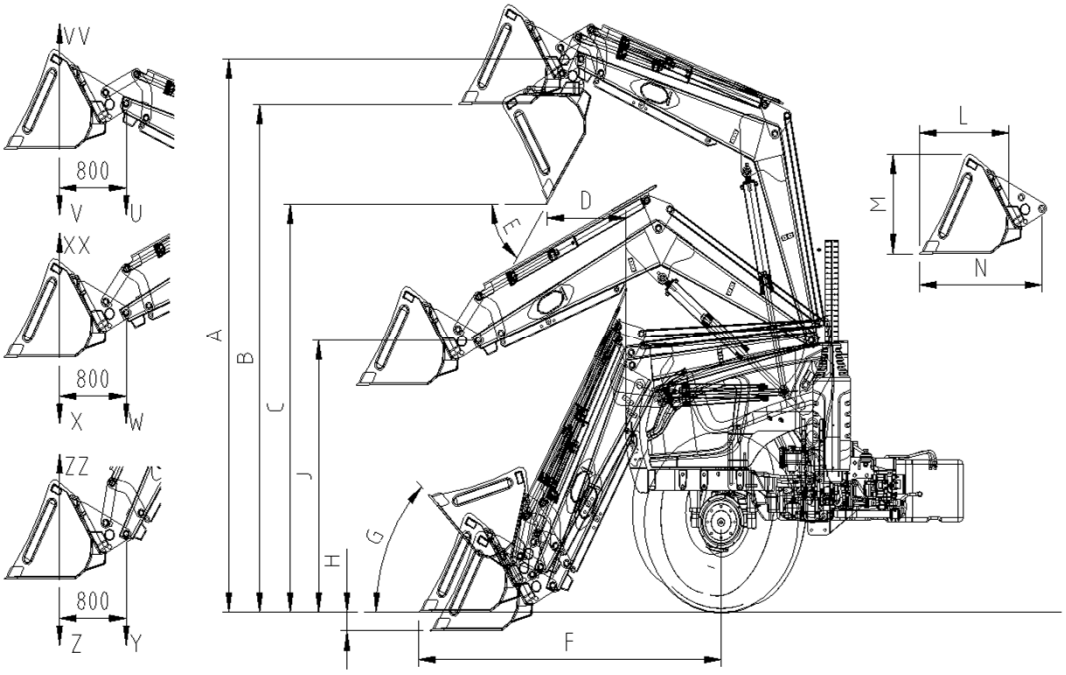




MEMO

LOADER SPECIFICATION



* Specifications shown are based on ASAE Standards.

* Specifications and design are subject to change without prior notice.

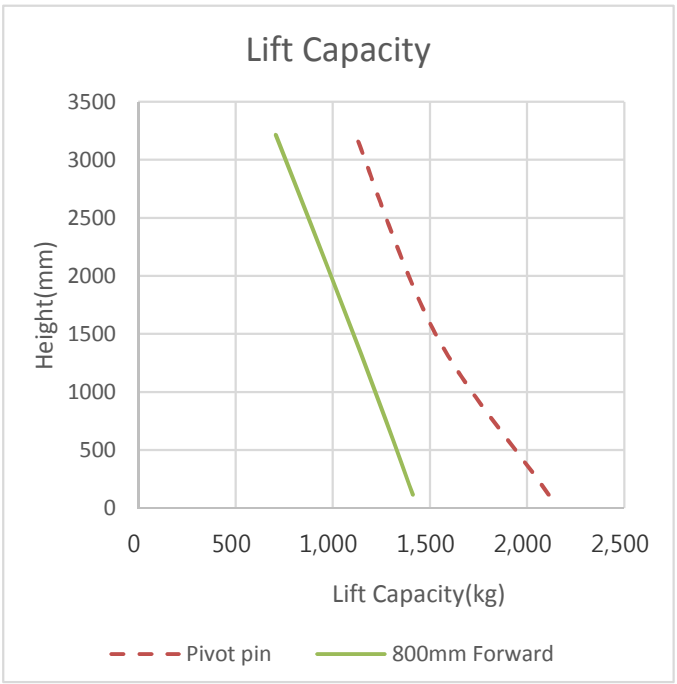
Loader Specifications					
	Loader Ratio	0.90 : 1			
A.	Maximum lift height to pivot pin	3,214	mm	126.5	"
B.	Maximum lift height under level bucket	2,925	mm	115.2	"
C.	Clearance with bucket dumped	2,420	mm	95.3	"
D.	Reach at maximum lift height	146	mm	5.7	"
E.	Maximum dump angle	64	°	64	°
F.	Reach with bucket on ground	1,919	mm	75.6	"
G.	Maximum rollback angle	38	°	38	°
H.	Digging depth	178	mm	7.0	"
J.	Overall height in carry position	1,630	mm	64.2	"
U	Lift capacity to maximum height-at pivot pin	1,118	kgf	2,460	lbs
V	Lift capacity to maximum height-800mm forward	707	kgf	1,555	lbs
W	Lift capacity to 1.5m(59in.) height-at pivot pin	1,529	kgf	3,364	lbs
X	Lift capacity to 1.5m(59in.) height-800mm forward	1,107	kgf	2,435	lbs
Y	Breakout force-at pivot pin	2,111	kgf	4,644	lbs
Z	Breakout force-800mm forward	1,412	kgf	3,106	lbs
VV	Bucket rollback force at maximum height-800mm forward	1,094	kgf	2,407	lbs
XX	Bucket rollback force at1.5m(59in.) lift height-800mm forward	1,642	kgf	3,612	lbs
ZZ	Bucket rollback force at ground line-800mm forward	1,602	kgf	3,524	lbs
	Loader Total Weight	704	kgf	1,549	lbs
	Weight of Boom Assembly	460	kgf	1,012	lbs
	Weight of Mounting Frame	244	kgf	537	lbs
	Approx. Weight(Loader w/o Bucket)	559	kgf	1,232	lbs

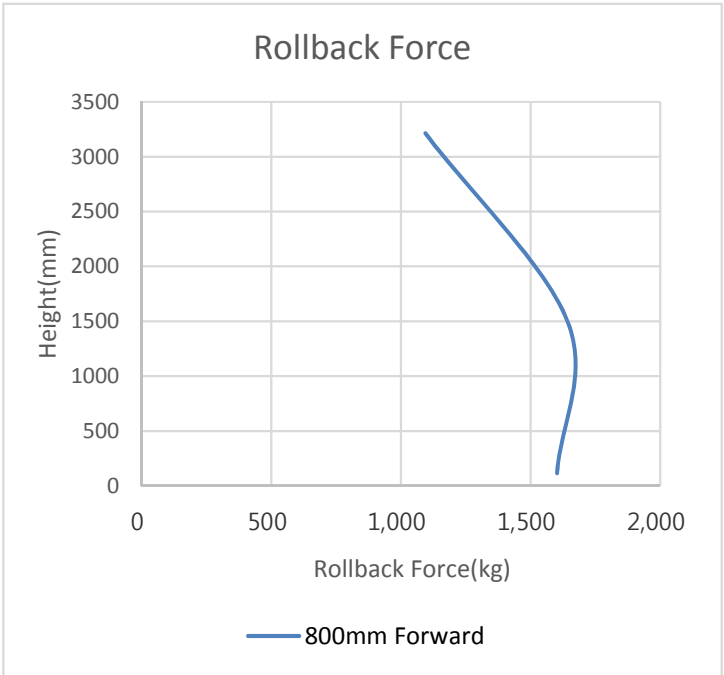
LOADER SPECIFICATION

Bucket Specifications					
L.	Bucket depth	536	mm	21.1	"
M.	Bucket height	577	mm	22.7	"
N.	Bucket length	743	mm	29.3	"
Capacity	Struck	0.31	㎥	10.9	cu.ft
	Heaped	0.45	㎥	15.9	cu.ft
Bucket width		1,980	mm	78.0	"
Weight		187	Kg	411.4	lbs

Cylinder Specifications					
1.	Boom cylinder	Ø35xØ70x555ST	mm	1.4x2.8x21.9ST	"
2.	Bucket cylinder	Ø35xØ65x360ST	mm	1.4x2.6x14.2ST	"
3.	Boom raising time	5.1	sec	5.1	sec
4.	Boom lowering time	3.8	sec	3.8	sec
5.	Bucket rollback time	2.0	sec	2.0	sec
6.	Bucket dumping time	2.9	sec	2.9	sec
7.	Maximum pressure (Governing loader operation)	190	bar	2756	psi
8.	Rated flow	50	ℓ/min.	13.2	gpm

Tractor Specifications		
LOADER MODEL	LL6100	
TARCTOR MODEL	MT573	Front Tire: 11.2-24 Rear Tire: 16.9-30 Wheelbase(mm): 2150 Engine Power(Kw): 54.4 Bucket Leveling Type: Auto Leveling Type





INTRODUCTION

The purpose of this manual is to assist you in maintaining and operating your loader. Read it carefully, it furnishes information and instructions that will help you achieve years of dependable performance. Some information may be general in nature due to unknown and varying conditions. However, through experience and these instructions, you should be able to develop operating procedures suitable to your particular situation.

"Right" and "Left" as used throughout this manual are determined by facing the direction the machine will travel when in use.

The photos, illustrations and data used in this manual are current at the time of printing, but due to possible in-line production changes, your machine may vary slightly in detail. The manufacturer reserves the right to redesign the machine as may be necessary without notification.

▶ Important:

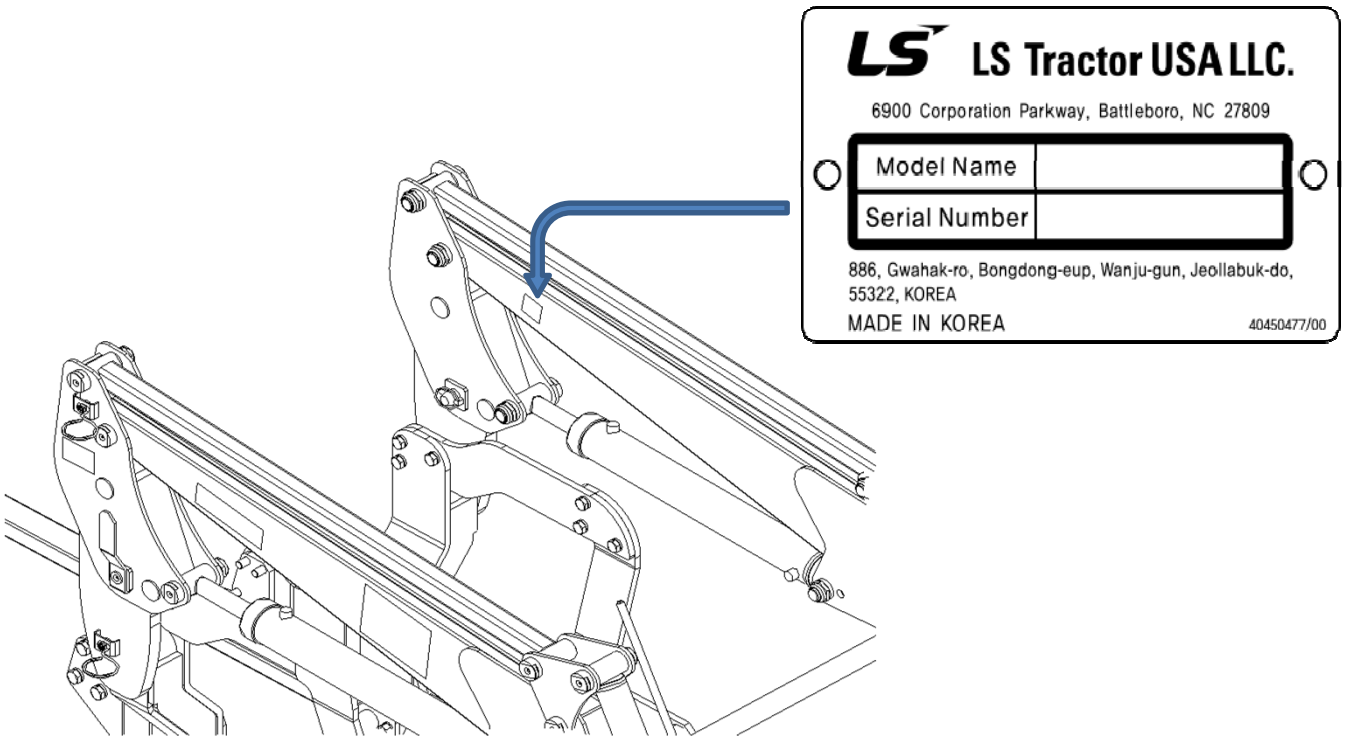
Illustrations used in this manual may not show all safety equipment that is recommended to ensure safe operation of tractor and loader. Refer to the Safety Precautions section of this manual for information concerning safety. consult your dealer for further information.

▶ Warranty Registration

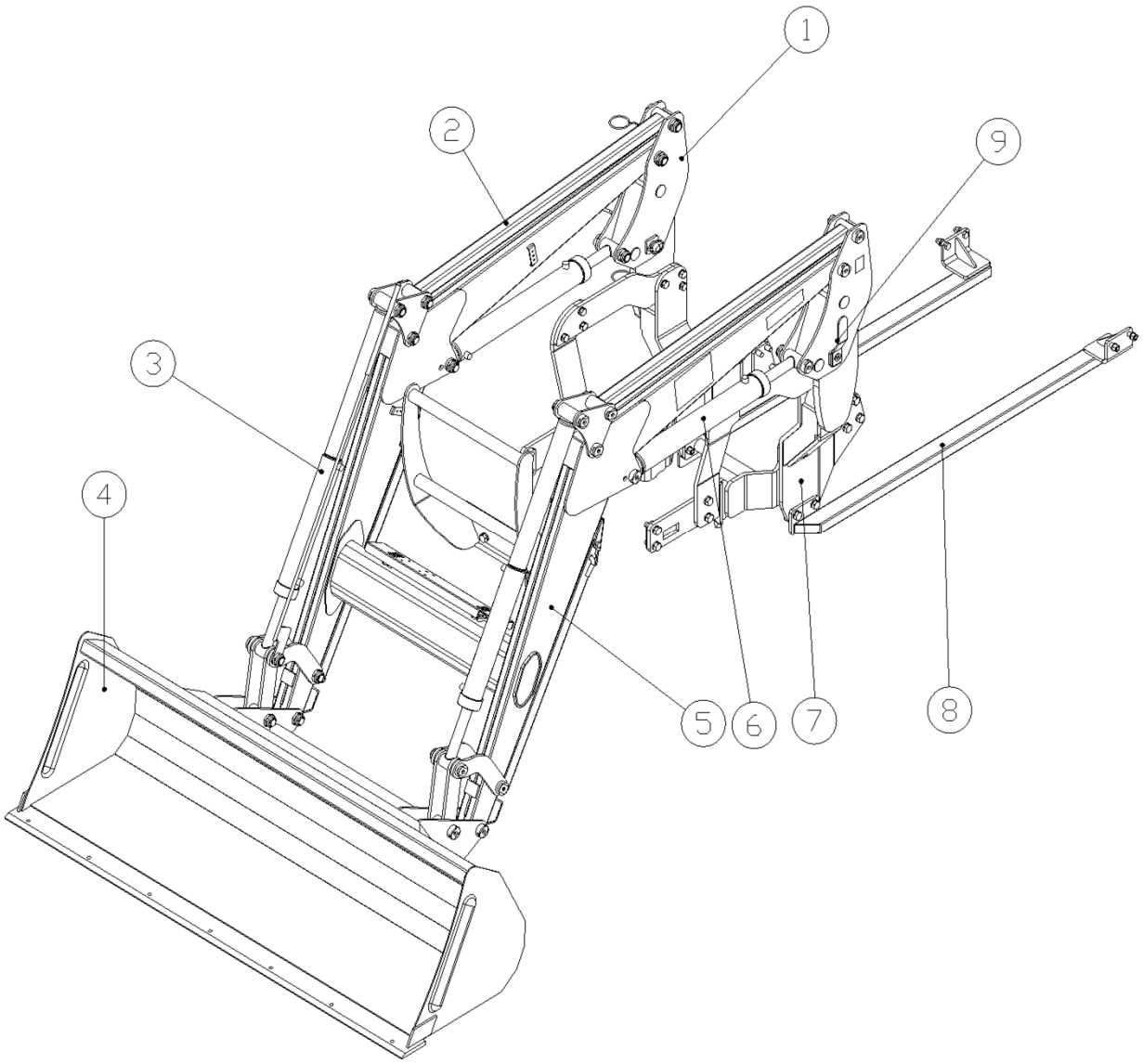
The Delivery and Warranty Registration forms must be filled out and signed to validate your warranty protection. The items on the form under "I hereby Acknowledge" should be read and understood. The terms and conditions of the warranty on this machine are specified in the front of this manual.

▶ Serial Number and Location

The serial number is important information about the machine and it may be necessary to know it before obtaining the correct replacement part. The serial number plate is located on the LH(left hand) inside of front area of boom. The serial number should be recorded on the Delivery and Registration form and also below for your reference.



LOADER TERMINOLOGY



NO.	NAME
1	Post
2	Self level bar
3	Bucket cylinder
4	Bucket
5	Boom
6	Boom cylinder
7	Mounting frame
8	Rear bar
9	Removal pin

PRE OPERATION

⚠WARINING

Precautions before working with the loader

Before operating the loader, make sure that the loader's bolts or nuts are loose and that the hydraulic connections are not loose.

Using the loader with loose bolts or nuts may cause damage to the loader or serious personal injury.

After starting the tractor, check for leaks or loosening of loader parts.

The engine speed of the tractor should be checked at idle RPM.

Check hydraulic cylinders or hydraulic connections for leaks.

If oil leakage occurs, stop the operation of the tractor, identify the cause of the leakage, remove the cause of the leakage, and start the tractor.

If there is a scratch or oil leakage in the hydraulic hose, replace the hydraulic hose.

If hydraulic oil gets on your skin or is injured by hydraulic oil, remove it immediately and treat it immediately.

Otherwise, an allergic reaction may occur or infection may lead to serious injury.

Check before operating the loader

Move the lever slowly and check that the loader boom and bucket move normally as indicated on the loader operating lever.

When the boom is floating, be careful not to shift the position of the loader operating lever to the float position when moving the bucket.

The boom may fall, causing injury to people around you or straining the loader.

When operating the loader's boom and bucket, check that the loader's boom and bucket operate as indicated on the lever, and if the loader or bucket does not work as indicated on the lever, close the loader's bucket to the ground and then the tractor turn off, shake the loader operating lever back and forth several times to release the hydraulic pressure from the hydraulic line.

Check the amount of hydraulic oil in the tractor, and if there is no problem, check if the hydraulic quick coupler is assembled in the position indicated on the manual

If it is as instructed in the manual, do not disassemble it at your discretion and take action from the place of purchase or LSTA.

If the loader is not disassembled after fixing it in a safe state, it may cause serious injury to the operator by lowering the loader boom.

How to bleed air from the loader hydraulic system during initial operation

Use the loader's boom and bucket cylinder operating lever to move the loader as large as possible until it operates normally.

TRACTOR PREPARATION

Rear Counterweight

CAUTION:
Add recommended rear tire liquid weight, rear wheel or rear ballast for increased stability.

CAUTION:
Do not exceed the manufacturer's rating for maximum gross vehicle weight. Refer to Operator's Manual or ROPS serial plate provided with tractor.

The use of adequate counterweight to counter balance for maximum loader capacity is required for safe loader operation.

Weight added to rear of the tractor provides better traction and easier, more efficient loader operation. The tractor can be counter weighted by filling rear tires with liquid calcium solution and/or by the installation of rear wheel weights.

Additional counterweight requirements will vary with loader attachments and equipment applications. Additional weight can be added by installation of Three Point Hitch mounted ballast.

CAUTION:
Certain specific conditions may not permit safe use of loader at loader rating or may require more careful restricted operation at the rated load.

Refer to Tractor Operator's Manual for specific recommendations on counterweight

▶ ROPS System
The tractor must be equipped with an approved ROPS System to ensure adequate operator's protection.

▶ Tractor Hydraulic System
Tractor operation in a loader application significantly increase demands on the tractor Hydraulic System. Check the tractor Hydraulic system fluid level daily. Refer to your tractor Operator's Manual maintenance section for instructions regarding tractor hydraulic system maintenance.

Adhere to recommendation in your Tractor Operator's Manual concerning hydraulic fluid and filter specifications, and change intervals.

CAUTION:
The tractor/loader must only be operated with all safety equipment properly installed.

▶ TRACTOR TIRES
Selection of tires(size, profile, tread type) should be restricted to tire recommendations as specified by *LS Mtron*

▶ Tire Inflation
Front tires must be maintained at the maximum recommended inflation to maintain normal tire profile with the added weight of loader/material.

Rear tires must be maintained at equal pressure within the recommended tire inflation range. Unequal rear tire inflation can prevent loader attachment from contacting the ground across its full width.

▶ Wheel Tread Settings
Tractor front wheel tread setting must be restricted to wheel tread spacing recommended in the tractor Operator's Manual.

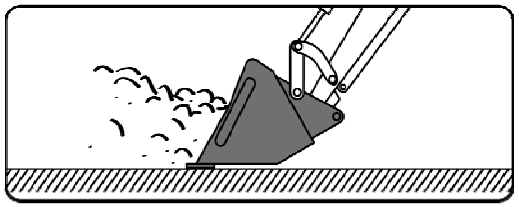
▶ Front Counterweight
Use of front counterweight is not recommended when tractor is being used in a loader application. Front counterweight adds unnecessary front axle load in loader applications.

LOADER OPERATION

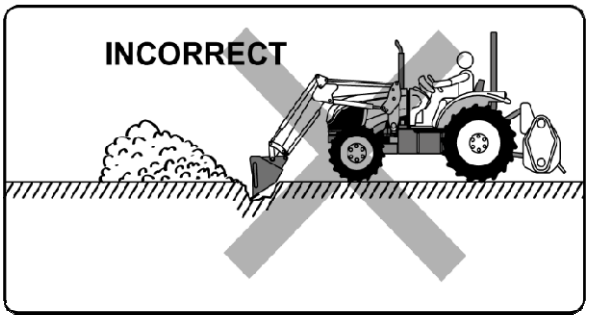
CAUTION:
The tractor/loader should only be operated with all safety equipment properly installed.

▶ Precautionary Notes

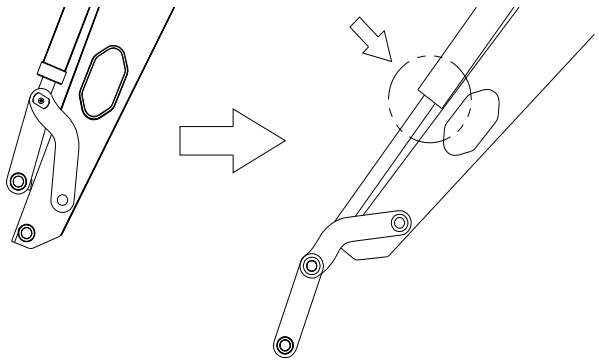
Do not lower the edge of the bucket too low for loading. Keep the bottom of the bucket level with the ground when loading.



▶ Important: Do not push the pile as shown in the picture with the bucket cylinder extended. Links connected to cylinders or buckets may be damaged.

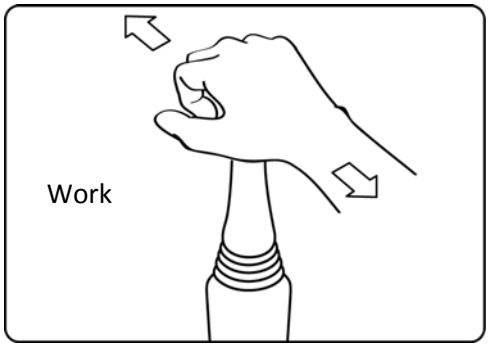


▶ Important: Do not operate bucket cylinders without bucket, it may damage to the bucket cylinders.



5. Don't hurry the learning process or take the unit for granted. Ease into it and become familiar with your new loader and tractor.

CAUTION: When unloading a heavy load, slowly push the control lever forward to lower the load. Never drop a loaded attachment and "catch it hydraulically". Stopping a load after it has gained downward momentum places undue strain on the unit and may cause unnecessary damage to the loader or tractor or even worse, personal injury.

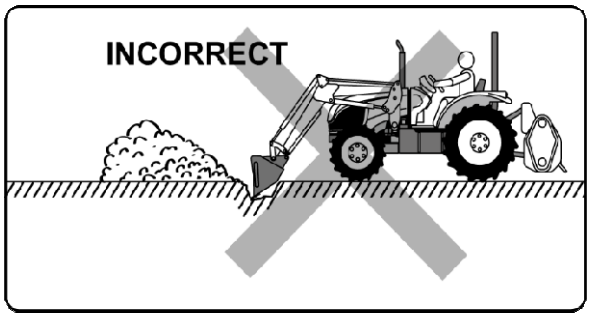


CAUTION: Before disconnecting hydraulic lines, relieve all hydraulic pressure. Escaping hydraulic oil under pressure can have sufficient force to penetrate the skin causing serious personal injury. If injured by escaping hydraulic oil seek medical attention immediately.

LOADER OPERATION

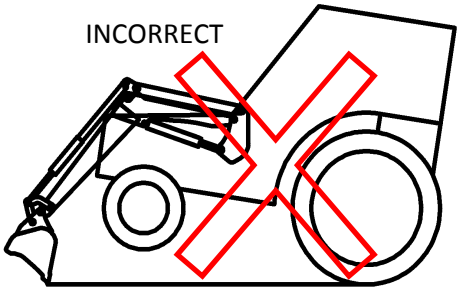
▶ Important:

Do not tip bucket cutting edge down(fully extended bucket cylinders) during backfilling/ backgrading operations.

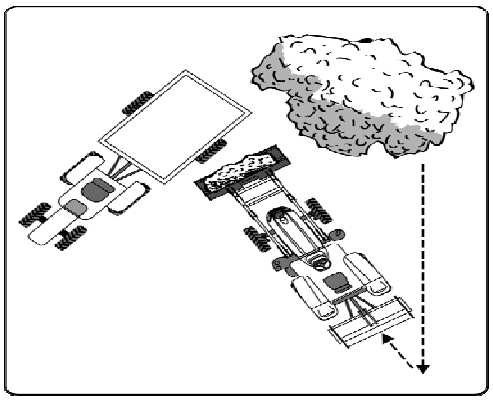


▶ Important:

Operation with front tractor wheels off the ground is not recommended.



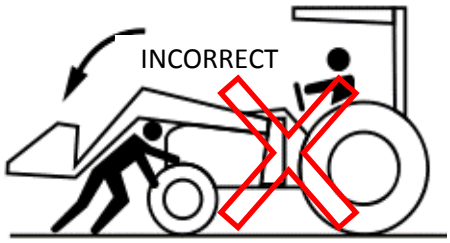
Position vehicle to be loaded as near the pile as possible and in such a direction as to minimize the amount of tractor turning



Do not lower the loader with the tractor engine shut off.

Keep the unit clean and perform regular service. Observe safety messages whenever cleaning, servicing, or lubricating.

CAUTION: Do not operate the loader if the fittings are leaking or if the hoses are damaged. A sudden line burst would cause the front loader to drop suddenly, causing damage to the tractor or loader or injury to per



▶ Initial Loader Operation

Before operating the loader, fully raise and lower the boom two or three times. Then raise the bucket approximately four(4) feet above the ground and cycle the bucket cylinders three times. Lower the bucket to the ground. Check the tractor hydraulic oil and the correct oil level.

CAUTION:

Before leaving the machine, stop the engine, remove the key, place all controls in neutral, and either set the parking brake or place tractor in Always keep cylinders in a retracted position when the loader is not in use to guard against rust and contamination which may cause damage to the cylinder rods or hydraulic system.

▶ Cold Weather Operation

For smooth operation in cold weather, let the tractor warm up. Slowly cycle the lift and bucket cylinders several times to warm the oil in the hydraulic system. The loader may operate erratically until the hydraulic oil has warmed to operating temperatures.

LOADER OPERATION

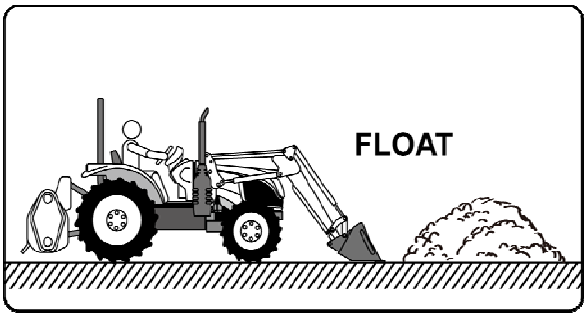
We urge you to follow this advice:

1. Read and understand this manual as well as the Tractor Operator's Manual.
2. Remember and observe the Safety Precautions brought to your attention in this manual, the tractor manual and on the machinery itself.
3. Use good common sense in the everyday operation of this unit.
   Safety recommendations can never be all-inclusive and you are responsible for watching out for and avoiding unsafe conditions.
4. Never exceed the limits of a piece of machinery. If its ability to do a job or to do so safely is in question, don't try it.

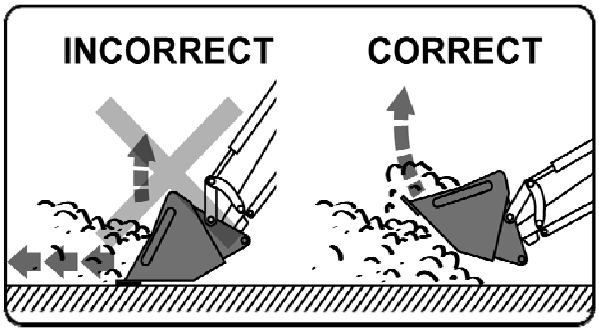
CAUTION:
Operate controls only when seated in the operator's seat.

▶ Loading Bucket

For the most efficient loading,
slowly drive the tractor straight into the material to be loaded and increase speed only after contact has been made.



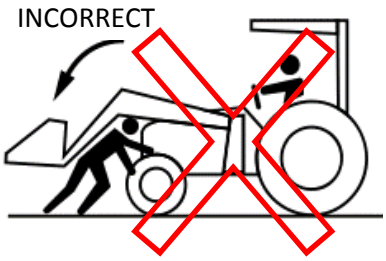
Roll the attachment back a small amount and slowly lift to break away the material.
As the load increase, continue rolling the attachment back so as to get the maximum load. Remove the top levels first when loading from large piles of material. When bucket is full, raise loader so the bucket is clear of material and slowly back out of the



CAUTION:
Stop the loader arms gradually when lowering or lifting.

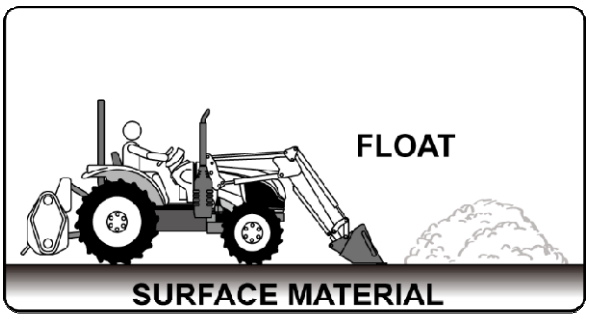
WARNING:
A loaded Bucket should be transported in a low position at low speeds. Make turns slowly and use the tractor brakes cautiously. A full bucket in the raised position alters the center of gravity location of the machine and increases

CAUTION:
Do not stand, walk or work under a raised loader unless it is securely blocked or held in position. Accidental movement of a control lever or leak in th hydraulic system could cause the loader to drop, or attachment to dump, resulting in serious injury or death.



▶ Scraping

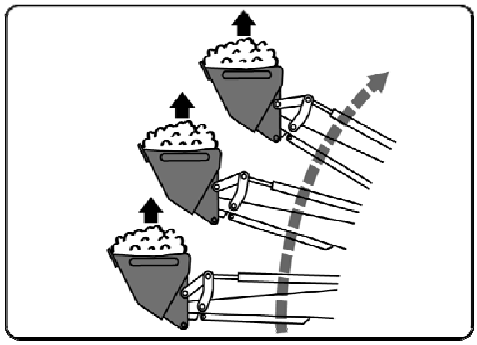
When scraping, the Boom lever must be used to keep the bucket on the ground horizontally. The bucket must be kept level to the ground during scraping operations.



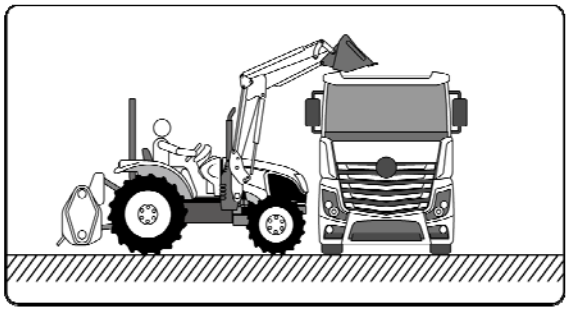
LOADER OPERATION

▶ Dumping Bucket

When in the dump area slowly drive the tractor
forward and raise the loader at the same time. Raise the loader to the height needed to dump the bucket. Make sure to keep a

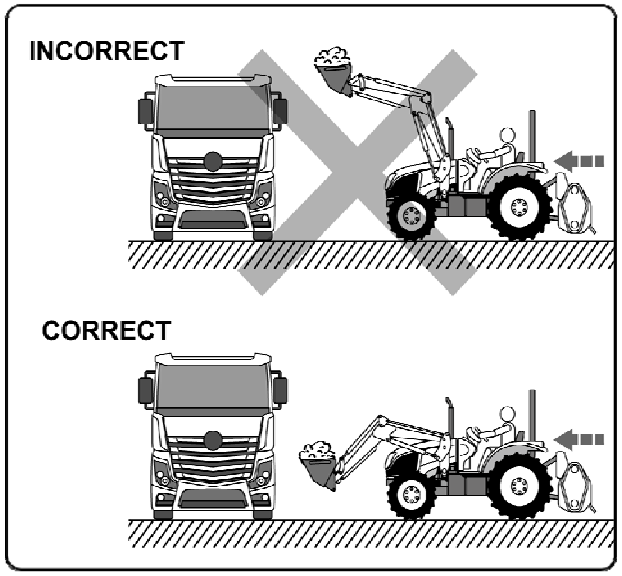


Dump the bucket, and keep all movements smooth.



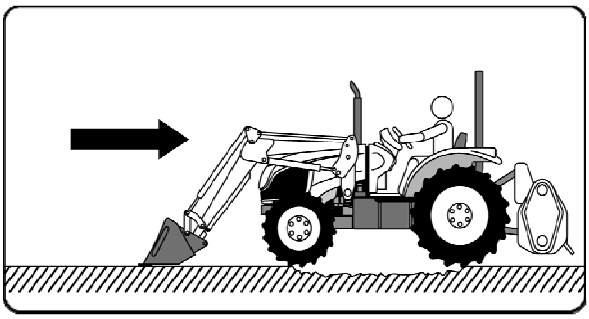
▶ Transporting a Loaded Bucket

Transport material with the bucket as low as possible to prevent spilling and keep maximum stability. The loader must be in a position that will not block the operators' vision. a loaded bucket must not be transported in the upright position or at Observe the following safety warning when transporting a loaded bucket.



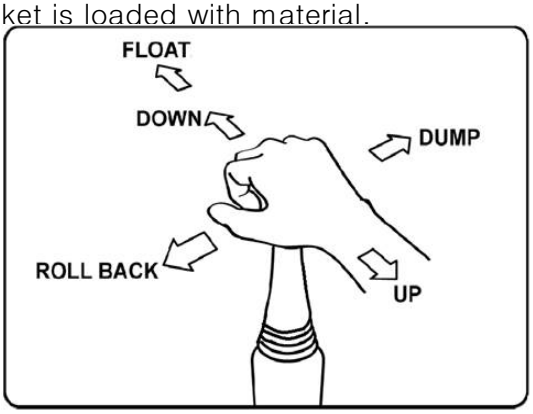
▶ Backfilling/Backgrading

When "Backfilling" or "Backgrading", position the bucket so it is level on the ground. Do not dump material from bucket following each pass, as additional weight of material in bucket will assist in "Backgrading" and increases loader efficiency during "Backfilling".

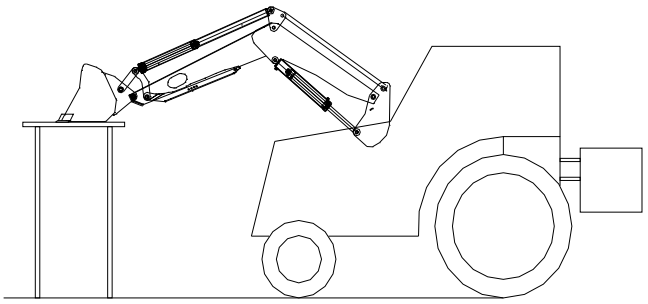


▶ Controlled Rate of Loader Functions

By "feathering" the control lever, reduced operational speeds can be controlled. This action controls the position of the valve spool in the valve body and regulates flow of oil to/from cylinders. It is important utilize this operational practice when lowering loader boom when the bucket is loaded with material.



If you need to lift the boom to repair a loader or tractor, always support the boom as shown before repairing.



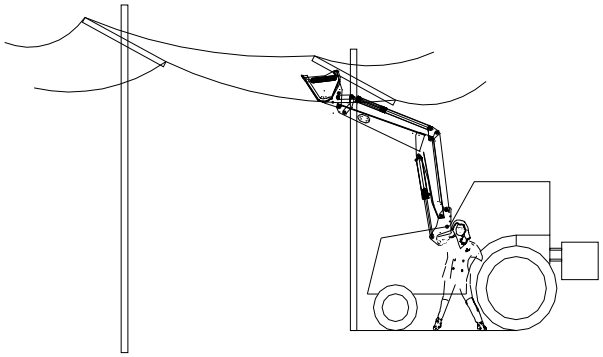
LOADER OPERATION

CAUTION:

When using a loader, be aware of bucket location at all times. When raising a loader with bucket rolled back, material can dump onto tractor causing damage to tractor or injury to operator.

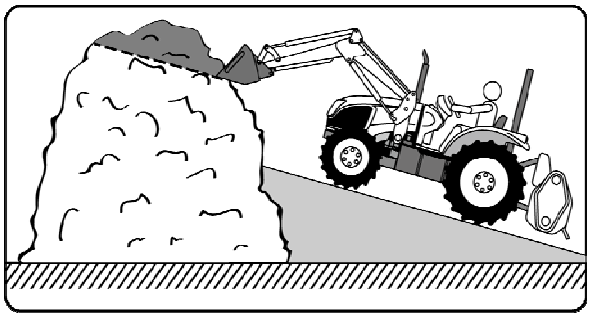
WARNING:

Contact with overhead power lines can cause severe electrical burns or death from electrocution. Make sure there is clearance between raised equipment and over head power lines.



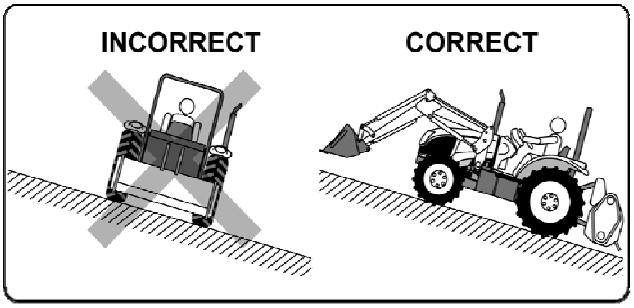
How to cut a big pile

When cutting a big pile, cut off the high part first so that the big pile does not collapse and hit the tractor.



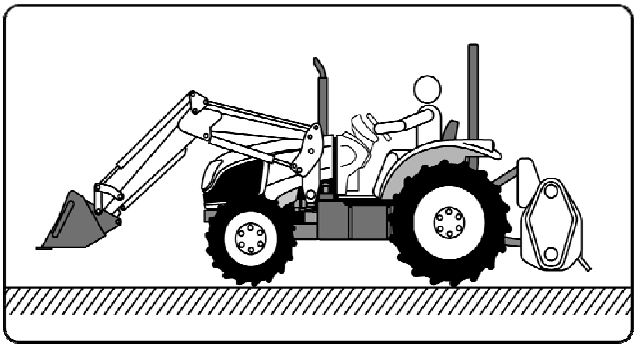
CAUTION:

When working on a ramp, work by moving up and down the ramp instead of moving left and right on the ramp.
The tractor may fall over and the driver may be seriously injured or killed.



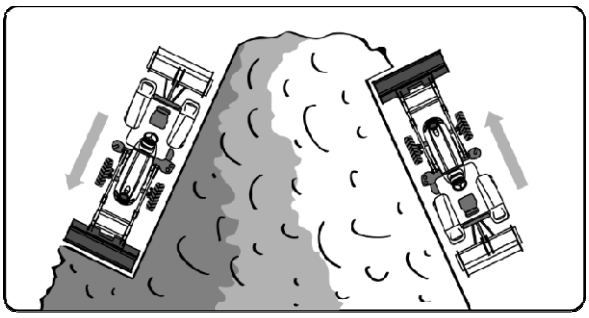
CAUTION:

To prevent the tractor from tipping while driving the tractor, keep the bucket position low, with or without load in the bucket.



CAUTION:

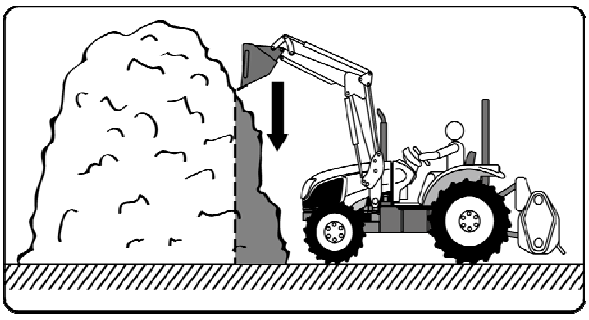
When cutting large piles, do not work beyond the width of the bucket or the width of the wheelbase.

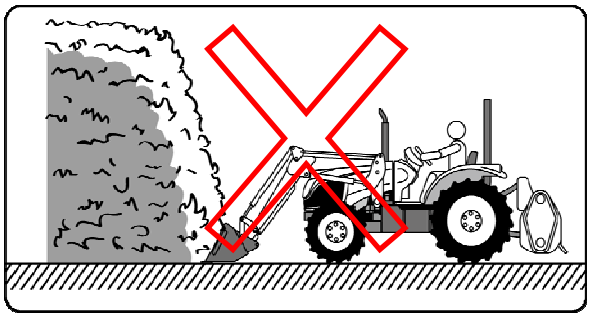


LOADER OPERATION

CAUTION:

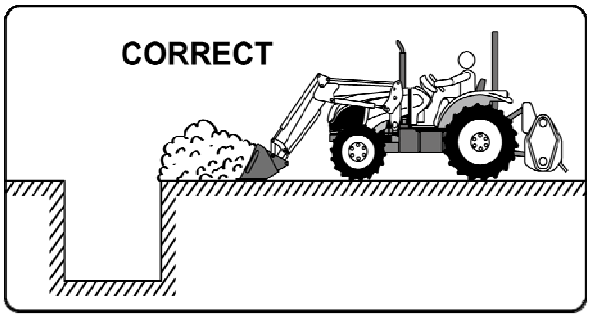
When working with a big pile, you need to cut it down from the top. If you cut it from the bottom, the big pile may collapse and hit the

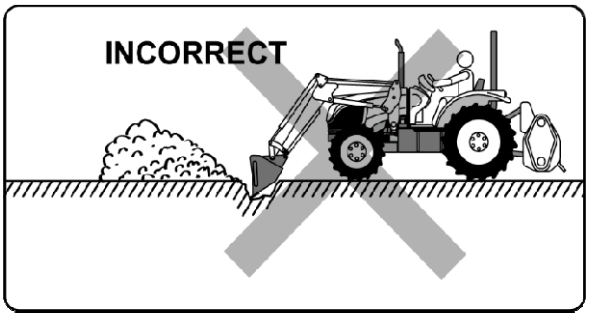




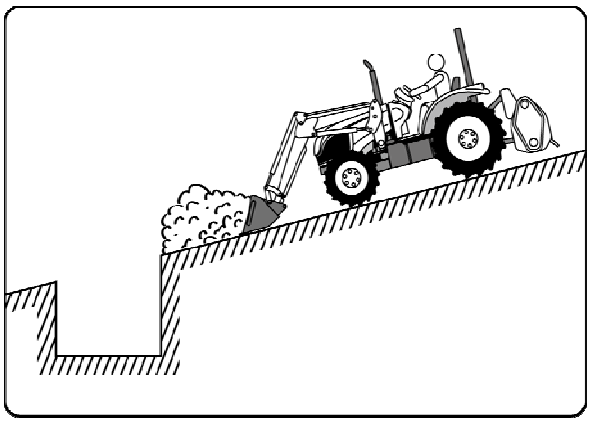
Ditch filling operation

Flatten the bucket and work in the amount that the tractor can work.





When filling a ditch on a ramp, it is easy to work by stacking a pile of soil on the top of the ditch.



ATTACHMENT and BUCKET INSTALLATION

Installing the Attachment

Only attachments manufactured in accordance with ISO 24410 may be fitted to this attachment. It can be easily detached and attached by the operator.

⚠ DANGER

To avoid serious injury or death to workers

Do not use non-standard attachments (attaches that do not fit ISO24410).

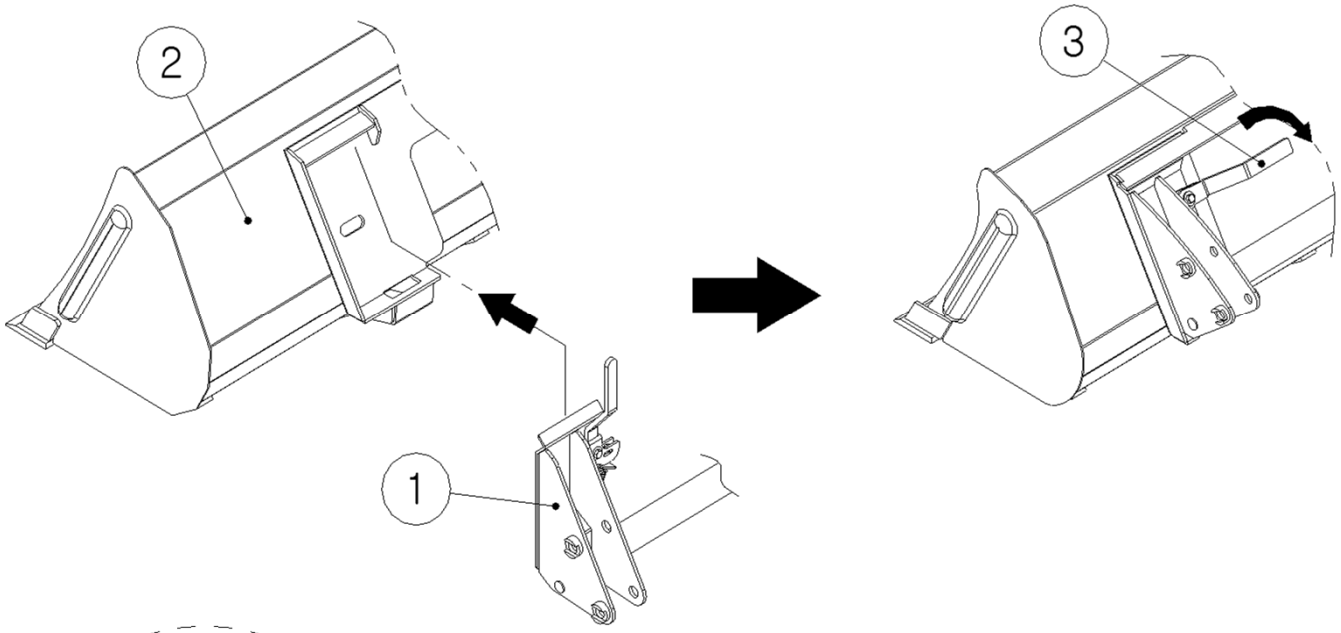
How to attach & detach

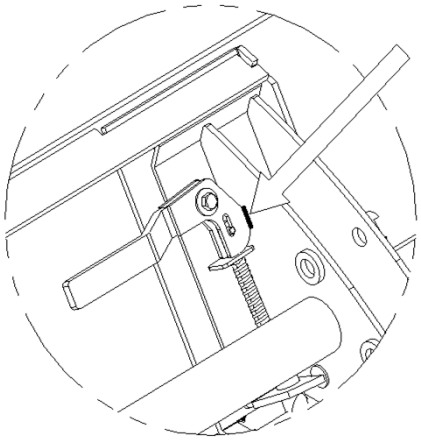
Turn the latch handle to lock and insert the latch pin accurately into the attachment latch groove. When the handle is turned to lock, the latch pin must protrude sufficiently below the latch groove.Otherwise, the attachment and attachment can be separated, causing the loader or attachment to be damaged or the person around to be injured or killed.

To assemble the quick attachment(①) on the bucket(②), tilt the quick attachment forward and then the bucket coupling has the quick attachment to hitch .

Use the bucket cylinder to allow the bucket and the quick attachment to each other when the bucket is caught in the quick attachment.

Turn down the lever(③) of the quick attachment as far as possible to lock it.





⚠ CAUTION

Visually check that the lever is in close contact with the hinge surface as shown in the illustration. Otherwise, the attachment may fall.

⚠ CAUTION

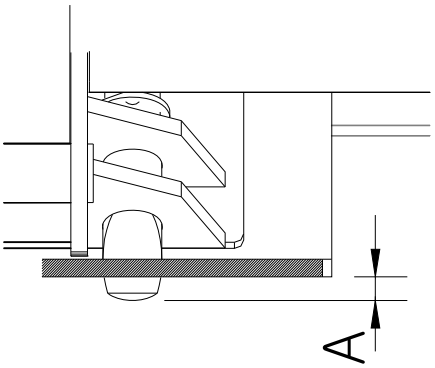
Before attaching the attachment to the quick attachment,

check that the parts of the quick attachment are

Replace the problematic part immediately. Otherwise, the attachment may fall, causing injury or death to people around you.

ATTACHMENT and BUCKET INSTALLATION

Check if the lock pin is inserted into the lock pin slot and protrudes more than 0.2" (A) below.



CAUTION

Do not operate in the state that the attachment is not correctly attached to the attachment.
Before attaching the attachment to the attachment, always inspect it and apply grease to the operati
Do not change or modify the product arbitrarily.
Keep attachments clean after work is done.
Do not attempt to attach/detach where the floor is uneven.

When removing the attachment from the quick attachment, work on a solid and level surface.
The removal method is the reverse of the assembly sequence.

BALLAST WEIGHT REQUIREMENTS

▶ Recommended ballasting/counterbalance weights

WARNING

Roll-over hazard!
Before operating a tractor with loader, ballast the tractor-loader combination so that a minimum of 25 percent of the total weight is on the rear wheels and/or hitch, with the rated load in the bucket.
Failure to comply could result in dead

The table below indicates the minimum ballast required to operate the loader at the maximum rated lifting capacity.

◈ Ballast Weight Requirements

Bucket Load	Hitch Ballast	Front Axle	Rear Axle
707kg(1,555lbs)	191kg(420lbs)	75%	25%

◈ Implement as Counter weight

Rotary Tiller	MRT5084A	Approx. 350 kg (661 lbs)

LOADER REMOVAL

CAUTION:
Never park loader without bucket attached to the loader.

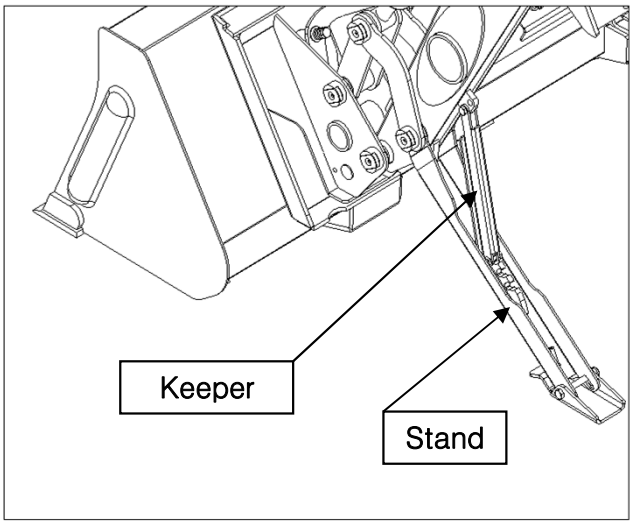
CAUTION:
Never allow weight of tractor to be put on parking leg when removing loader.

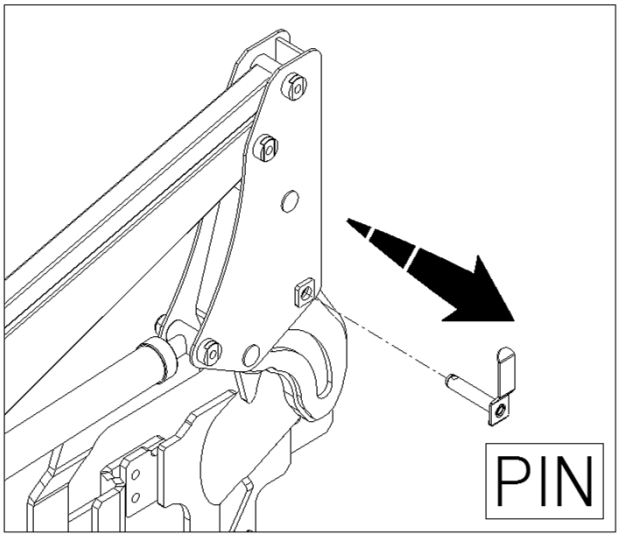
▶ Park the tractor and loader on hard level surface.

▶ Raise the boom until the bucket is about 2 feet off the ground.

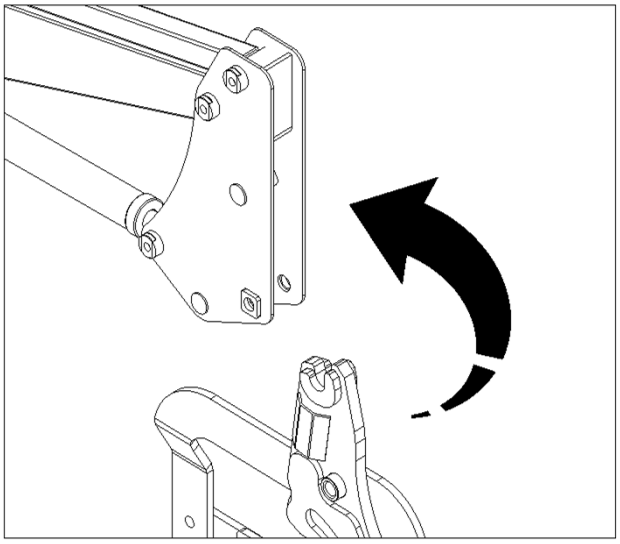
▶ Set the parking legs with pin-hand and Keeper.

▶ Lower the boom until the Parking legs make contact on the ground.
Tip the bucket until the bucket cutting edge touch the ground.





▶ Remove the latch pin while move the control lever back and forth slightly to make the latch pin easy.



▶ Pull the control lever to raise the loader until the post lift off mounting frame.
Adjust the bucket until the bottom surface of bucket touch the ground.

▶ Move the tractor backword slowly and stop to avoid the hydraulic hoses being tighten.

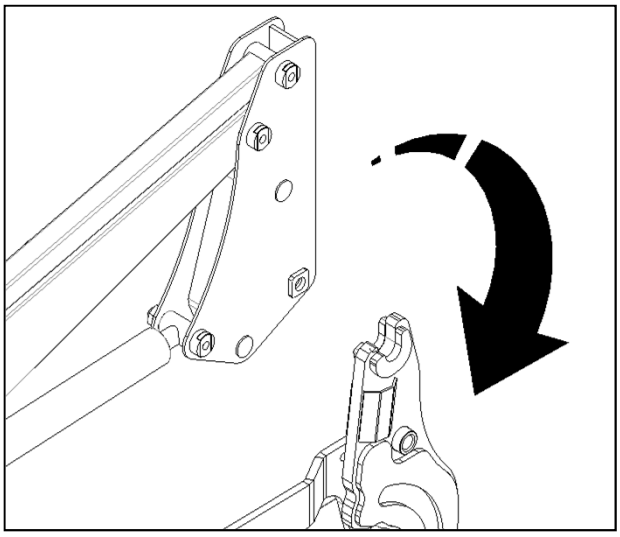
▶ Stop the engine and move the control lever back and forth, left and right several times to reduce the hydraulic pressure in the hoses.

▶ Disconnect the quick couplers on the hydraulic hoses.

LOADER MOUNTING

CAUTION:

Never allow weight of tractor to be put on parking leg when mounting loader.

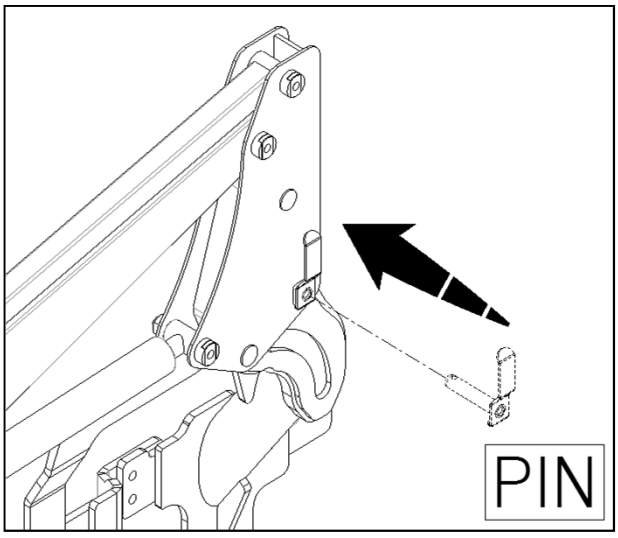


▶ Carefully drive the tractor into the loader to a position where the hydraulic hoses(Quick coupler) can be connected to the control valve block.

▶ Stop the engine and move the control lever back and forth, Left and right several times to reduce the pressure in the hydraulic hoses.
Connect the hydraulic couplers match the color code rings.

▶ Start the engine and move the boom and bucket to adjust the height of post.

Be sure to check the pin welded of post is slightly higher than the hook on mounting frame.



▶ Move the tractor forward to put the post into the mounting frame. Stop the tractor

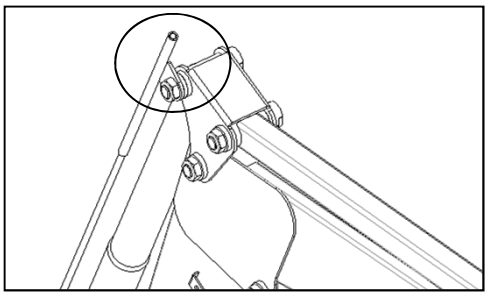
When the hook is right over the pin.

Lower the mounting frame with moving the boom and bucket until it hooked securely each other.

▶ Align the latch pin holes with moving the bucket and boom.
Insert the latch pins.
Rubber hammer can be used to put the pin in if needed.

▶ Remove pin and keeper holding the parking legs and return to storage position. Make secure by using pin and keeper.

▶ The bottom of bucket would be horizontal with ground level when the bucket touches the ground and the indicator arranged as below picture.



ADJUSTING STEERING ANGLE

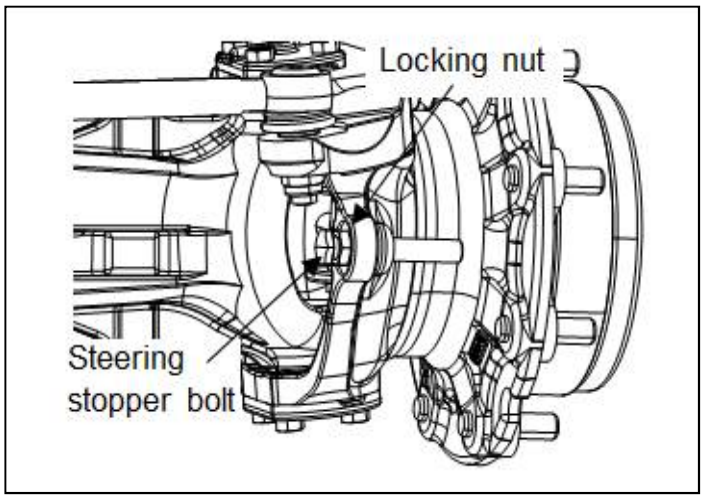
CAUTION:
If the front wheel track is adjusted or front tires are replaced with new tires having bigger diameter or width, or one of the front equipment is attached, the steering angle must be adjusted as below.

▶ Loosen the locking nut on both sides.

▶ Connect the front hook of the tractor to the crane by using specified wire. And, lift up the front axle off the ground sufficiently.

▶ Lift up one side of the front axle fully and turn the steering wheel to the left and right with checking that the clearances between tire and other parts are over 20mm(0.8 in.) at least.

▶ At this time, set each steering stopper of the both sides to be contacted with the cast. Check all the possible interferences by combinations of the steering and oscillation of the front axle.



▶ Tighten the locking nuts of the each side.

Notice:
DO NOT shorten the length of the steering stopper rather than factory condition. If the stopper does not contact at maximum steering condition, it can damage the steering cylinder or tie-rod.

LUBRICATION AND MAINTERNANCE

CAUTION:

Do not perform and service or maintenance Operations with loader raised off the ground. For additional access to tractor components remove loader.

▶ Important:

Lower the loader to the ground and relieve pressure in loader hydraulic lines prior to performing any service or maintenance operations on the tractor or loader.

CAUTION:

Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious injury. Before disconnecting lines, be sure to relieve all pressure. Before applying pressure to the system, be sure all connections are tight and that lines, pipes and hoses are not damaged. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood rather than your hands to search for suspected leaks. If injured by escaping fluid, seek medical attention immediately. Serious infection or reaction can develop if correct medical treatment is not administered immediately.

Refer to "Lubrication and Maintenance Chart" for quick reference to Maintenance Operations.

CAUTION:

Do not operate the loader if the fittings are leaking or if the hoses are damaged. A sudden line burst could cause the mainframe to drop suddenly, causing damage to the tractor or loader or injury to personnel.

CAUTION:

Operate the loader from the tractor seat only.

CAUTION:

Do not stand or walk under a raised loader. Accidental movement of control lever or leak in hydraulic system could cause mainframe to drop, causing severe injury.

Check the tractor hydraulic system as outlined in the Tractor Operator's Manual.

Note:

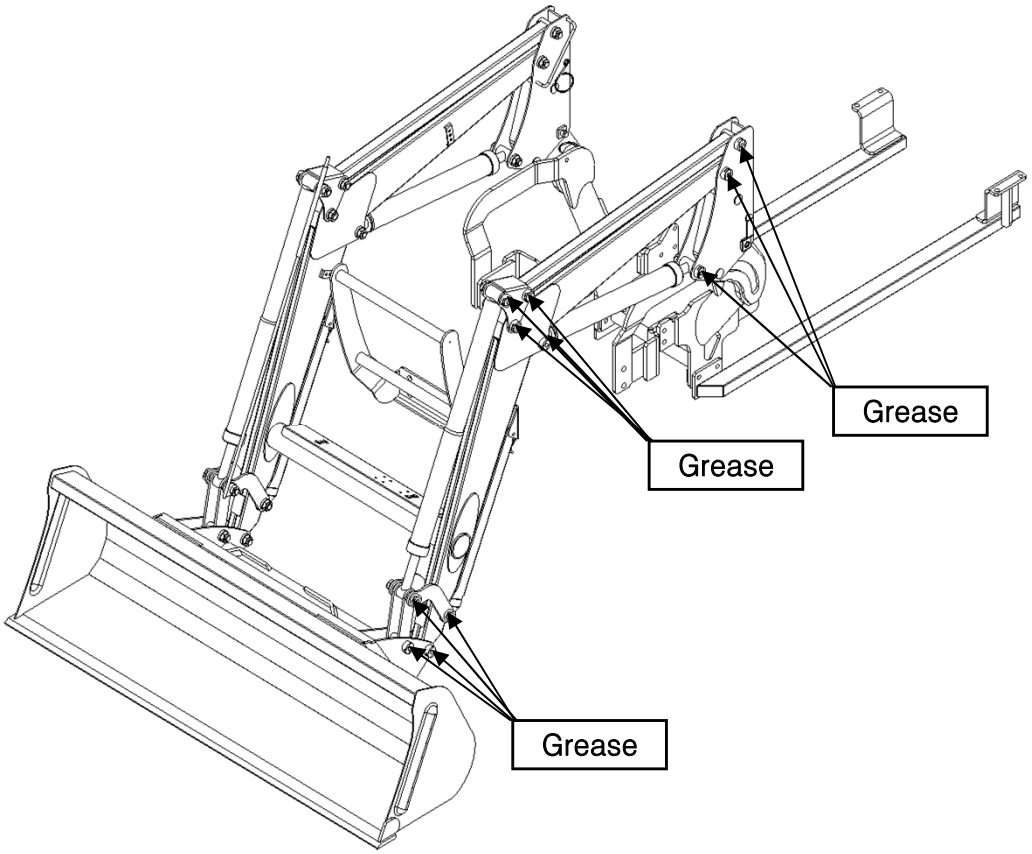
When checking hydraulic system oil level, the loader should be on the ground and bucket fully retracted(all cylinders in retracted position).

Grease all loader pivot points daily(10 hours). Refer to Tractor Operator's Manual for lubricant recommendations.

Inspect hydraulic hoses, connections, control valve and cylinders for evidence of leakage.

Tractor tires should be maintained at maximum recommended inflation to maintain normal tire profile with added weight of loader/material. Unequal rear tire inflation can result in bucket not being level to the ground.

LUBRICATION AND MAINTERNANCE



ITEM	SERVICE	SERVICE INTERVAL
Hydraulic System Oil Level	Check	Daily/10 hours
Hydraulic System Oil/Filter	Replace	As specified in Tractor Operator's Manual
Tire Inflation	Check	Weekly/50 hours
Loader Pivot Points	Lubricate	Daily/10 hours
Loader Hydraulic Lines, Hoses, Connections	Check for leaks, wear	Daily/10 hours
Lift and Bucket cylinder rod packings	Check for seepage, service as needed	Daily/10 hours
Pivot pin bolts and dust covers	Check, replace if missing	Daily/10 hours
Mid-Mount latch and linch pins	Check, replace if necessary	Daily/10 hours
Loader mount hardware	Check visually	Daily/10 hours
Loader mount hardware	Re-torque	Every 25 hours

TROUBLE SHOOTING

This Trouble Shooting Chart is provided for reference to possible loader operational problems.

Determine the problem that best describes the operational problem being experienced and eliminate the possible causes as listed by following the correction procedures.

PROBLEM	POSSIBLE CAUSE	CORRECTION
Lift and Bucket Cylinders	Low hydraulic fluid level.	Check and replenish hydraulic fluid.
	Hydraulic hoses connected improperly.	Check and correct hydraulic hose connections.
	Hydraulic hoses to/from control valve blocked	Check for damage(kinked) hoses, etc.
	Loader control valve or tractor main relief valve stuck open.	Check system pressure. Repair or replace relief valve.
	Low system pressure supplied from hydraulic pump.	Check system pressure.
		Repair or replace pump.
	Control valve linkage broken.	Inspect. Repair as required.
	Quick disconnect coupler(s) are not fully connected or "Flow Check"	Check coupler connections.
		Replace coupler(s) if necessary.
	Hydraulic hose or tubeline blockage.	Check for evidence of damage to hoses or tubelines that would block flow of oil between cylinders and control valve.
	Cylinder piston assembly defective(not sealing)	Check cylinders for internal leakage as described in service section under cylinder leakage tests.
	control valve blockage.	Inspect for blockage. Disassemble valve if necessary.
Lift and/or Bucket Cylinders operate in wrong direction relative to control valve lever position.	Hydraulic hoses connected incorrectly.	Correct hydraulic hose connections.
Aeration of Hydraulic Fluid(Generally indicated by foamy apperance of fluid).	Low hydraulic fluid level.	Check and refill hydraulic system to proper level.
	Air leaking into suction side of hydraulic pump.	Check for loose or defective connections between reservoir and hydraulic pump.
	Hydraulic fluid foaming due to improper hydraulic oil usage.	Refer to Tractor Operator's Manual and replace hydraulic oil using recommended hydraulic oil.

TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTION
Slow or erratic lift	Low hydraulic fluid level.	Check and replenish hydraulic fluid.
	Cold hydraulic fluid.	Allow hydraulic system to warm up to operating temperature.
	Engine R.P.M. too slow(hydraulic pump R.P.M. too slow).	Increase engine speed to obtain satisfactory loader operation.
	Excessive weight in bucket. Material weight exceeds maximum specified loader capacity.	Reduce material load.
	Control valve linkage binding/defective.	Check control valve linkage and repair if worn/defective.
	Aeration of hydraulic fluid	Refer to "Aeration of Hydraulic Fluid".
	Quick disconnect coupler restriction or coupler "Flow checks"	Check coupler connections. Repair or replace.
	Hydraulic hose or tubeline restriction(hoses/tubline) kinked or pinched.	Check hoses and tubelines for evidence of restriction.
	Lift cylinder piston assembly leakage.	Check cylinders for leakage. Repair as needed.
	Relief valve erratic or set below specifications.	Check and reset relief valve. Setting as needed.
	Control valve leaking internally.(hypassing fluid within valve).	Replace control valve and recheck operation.
	Inadequate hydraulic pump capacity.	Refer to "Hydraulic Pump Capacity Inadequate"
Inadequate lifting capacity	Engine R.P.M. too slow.	Increase engine R.P.M.
	Excessive load - material weight exceeds specified loader capacity.	Reduce Load.
	Relief valve setting below specifications.	Check and reset relief valve setting as needed.
	Lift cylinder piston assembly leakage.	Check cylinders for leakge. Repair as needed.
	Control valve leaking internally	Replace control valve and recheck operation.
	Hydraulic pump defective.	Refer to "Hydraulic Pump Capacity Inadequate".

TROUBLE SHOOTING

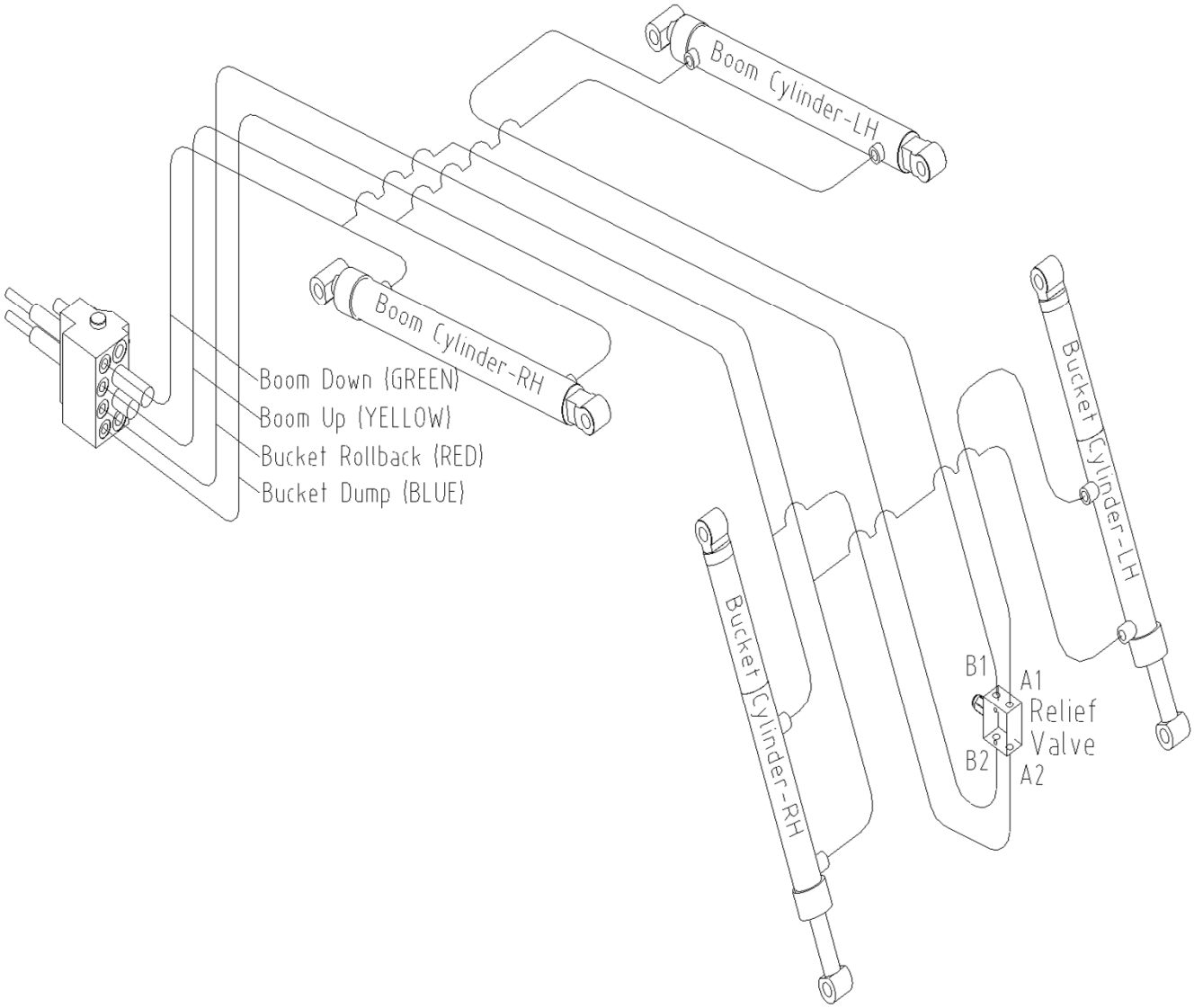
PROBLEM	POSSIBLE CAUSE	CORRECTION
System relief valve squeals.	Cold Hydraulic Fluid.	A low hydraulic fluid to warm up to operating temperature.
	Excessive load in bucket. Weight exceeds specified loader capacity.	Reduce load.
	Relief valve setting below specifications.	Check and reset valve setting as needed.
	Hydraulic hose, tubeline or quick disconnect coupler restriction.	Check for evidence of restriction in hydraulic oil flow. Repair or replace defective components.
Loader drops with control valve spool in "centered" position (no external oil leakage evident.)	Cylinder piston assembly leakage.	Check cylinders for leakage.
Note: A gradual drop over an extended period of time is a normal condition.	Control valve internal leakage.	Replace control valve and recheck.
Control valve spool(s) will not return to centered position.	Control lever linkage binding.	Determine origin of binding and repair.
	Control valve spool centering is broken.	Replace centering spring.
	Control valve spool binding in valve body spool bore.	Disassemble valve for inspection and repair.
External hydraulic fluid leakage.	Loose hydraulic connection.	Tighten loose connections.
	Defective hydraulic hose, tubeline, adapter fitting or adapter fitting o-ring.	Check for origin of oil leak and replace defective part.
	Control valve o-rings defective.	Replace defective o-rings.
	Control valve spool or body damaged or worn.	Replace control valve.
	Cylinder rod packing set leakage.	Check cylinders for leakage. Repair as needed.

TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTION
Hydraulic pump capacity inadequate.	Cold hydraulic fluid.	Allow hydraulic fluid to warm up to operating temperature.
	Engine R.P.M. too slow.	Increase engine R.P.M.
	Low hydraulic fluid supply.	Refer to Tractor Operator's Manual for service recommendations.
	Hydraulic hose restriction.	Check for evidence of restriction in hydraulic hoses.
	Hydraulic pump defective.	Refer to Tractor Operator's Manual for recommended service procedures. Replace hydraulic pump if determined to be defective.
Lift cylinder rod bend when lift cylinders extended.	Excessive shock load on lift cylinders during transport.	Replace defective parts. Review and observe proper and safe operational practices.
Bucket cutting edge wear is uneven side to side	Bucket is not level to ground.	Check rear tire inflation and adjust to level bucket to ground.
Bucket cutting edge wear rate is excessive. (Wear rate is even across full width of bucket).	Incorrect operational practices. Excessive down pressure placed on bucket when being used on hard abrasive surfaces.	Refer to operation-scraping section for correct operating procedures. Utilize float position.
Note: Extensive use of bucket on concrete or asphalt surfaces will accelerate wear rate of bucket cutting edge.	Bucket wear pads worn.	Replace wear pads.

HYDRAULIC SYSTEM SCHEMATIC

AUXILIARY HYDRAULIC VALVE PACKAGE

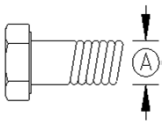


TORQUE TIGHTENING CHART

MINIMUM HARDWARE TIGHTENING TORQUES IN FOOT POUNDS (NEWTON-METERS) FOR NORMAL ASSEMBLY APPLICATIONS

Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.
Fasteners must always be replaced with the same grade as specified in the manual parts list.
Always use the proper tool for tightening hardware : SAE or SAE hardware and Metric for metric hardware.
Make sure fastener threads are clean and you start thread engagement properly.

INCH HARDWARE



SAE SERIES TORQUE CHART

SAE Bolt Head Identification

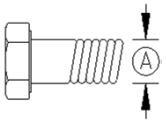
SAE Grade 2 (No Dashes)

SAE Grade 5 (3 Radial Dashes)

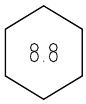
SAE Grade 8 (6 radial Dashes)

Ⓐ Diameter (Inches)	Wrench Size	MARKING ON HEAD					
		SAE 2		SAE 5		SAE 8	
		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m
1/4"	7/16"	6	8	10	13	14	18
5/16"	1/2"	12	17	19	26	27	37
3/8"	9/16"	23	31	35	47	49	67
7/16"	5/8"	36	48	55	75	78	106
1/2"	3/4"	55	75	85	115	120	163
9/16"	13/16"	78	106	121	164	171	232
5/8"	15/16"	110	149	170	230	240	325
3/4"	1-1/8"	192	261	297	403	420	569
7/8"	1-5/16"	306	416	474	642	669	907
1"	1-1/2"	467	634	722	979	1020	1383

METRIC HARDWARE



METRIC SERIES TORQUE CHART



Metric Grade 8.8

Metric Bolt Head Identification

Metric Grade 10.9

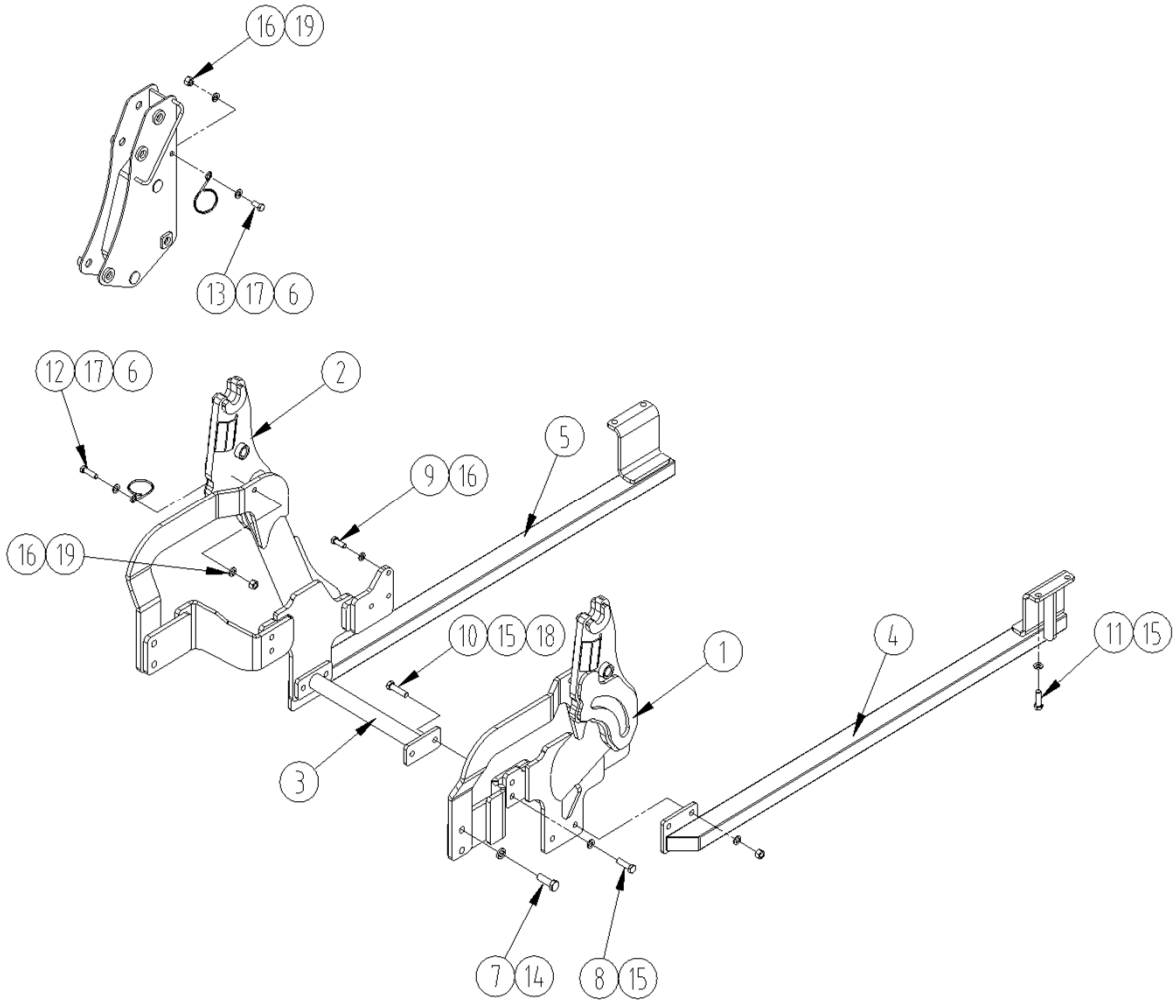
Ⓐ Diameter & Thread Pitch (Millimeters)	Wrench Size	COARSE THREAD				FINE THREAD				Ⓐ Diameter & Thread Pitch (Millimeters)
		MARKING ON HEAD				MARKING ON HEAD				
		Metric 8.8		Metric 10.9		Metric 8.8		Metric 10.9		
		N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	
6 x 1.0	10mm	8	6	11	8	8	6	11	8	6 x 1.0
8 x 1.25	13mm	20	15	27	20	21	16	29	22	8 x 1.0
10 x 1.5	16mm	39	29	54	40	41	30	57	42	10 x 1.25
12 x 1.75	18mm	68	50	94	70	75	55	103	76	12 x 1.25
14 x 2.0	21mm	109	80	151	111	116	87	163	120	14 x 1.5
16 x 2.0	24mm	169	125	234	173	181	133	250	184	16 x 1.5
18 x 2.5	27mm	234	172	323	239	263	194	363	268	18 x 1.5
20 x 2.5	30mm	330	244	457	337	367	270	507	374	20 x 1.5
22 x 2.5	34mm	451	332	623	460	495	365	684	505	22 x 1.5
24 x 3.0	36mm	571	421	790	583	623	459	861	635	24 x 2.0
30 x 3.0	46mm	1175	867	1626	1199	1258	928	1740	1283	30 x 2.0

LOADER INSTALLATION

◈ Position the loader on a hard level surface. The more level the surface the easier the loader is to install.

▶ IMPORTANT: Do not tighten any hardware until all components are attached onto the tractor.

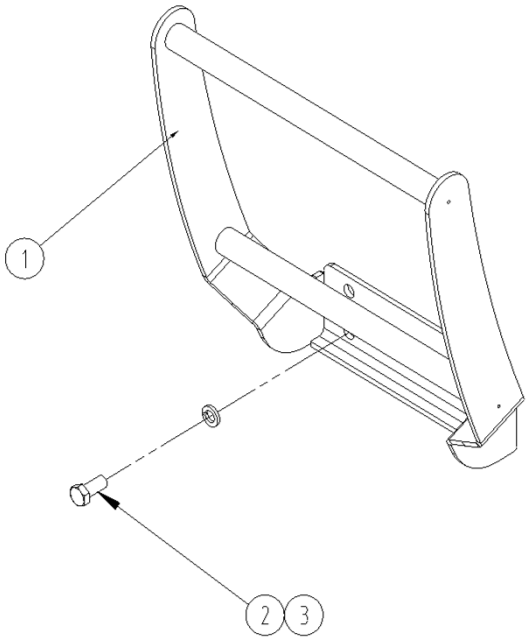
CAUTION: Lift and support all loader components safely.



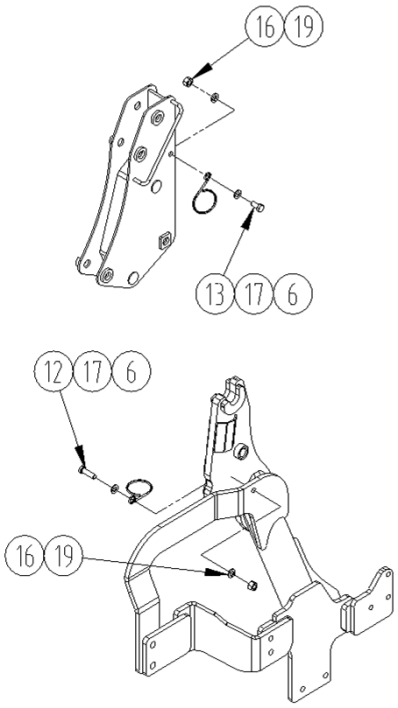
▶ Using a hoist, install Mounting Frame LH/RH.
(1) Mounting Frame LH – 1EA
(2) Mounting Frame RH – 1EA
(7) Hex. Bolt M20–2.5P 65L – 4EA
(14) Washer Spring M20 – 4EA
(8) Hex. Bolt M16–2.0P 50L – 4EA
(15) Washer Spring M16 – 4EA
(9) Hex. Bolt M14–2.0P 40L – 6EA
(16) Washer Spring M14 – 6EA

▶ Install Under Cross Bar And Rear Frame LH/RH.
(3) Cross Bar – 1EA
(4) Rear Frame–LH – 1EA
(5) Rear Frame–RH – 1EA
(10) Hex. Bolt M16–2.0P 65L – 4EA
(11) Hex. Bolt M16–1.5P 50L – 4EA
(15) Washer Spring M16 – 8EA
(18) Hex Nut M16–2.0P – 2EA

LOADER INSTALLATION



▶ Install grille guard
(1) Grill guard – 1EA
(2) Hex. Bolt M20-2.5P 45L – 4EA
(3) Washer Plain M20 – 4EA

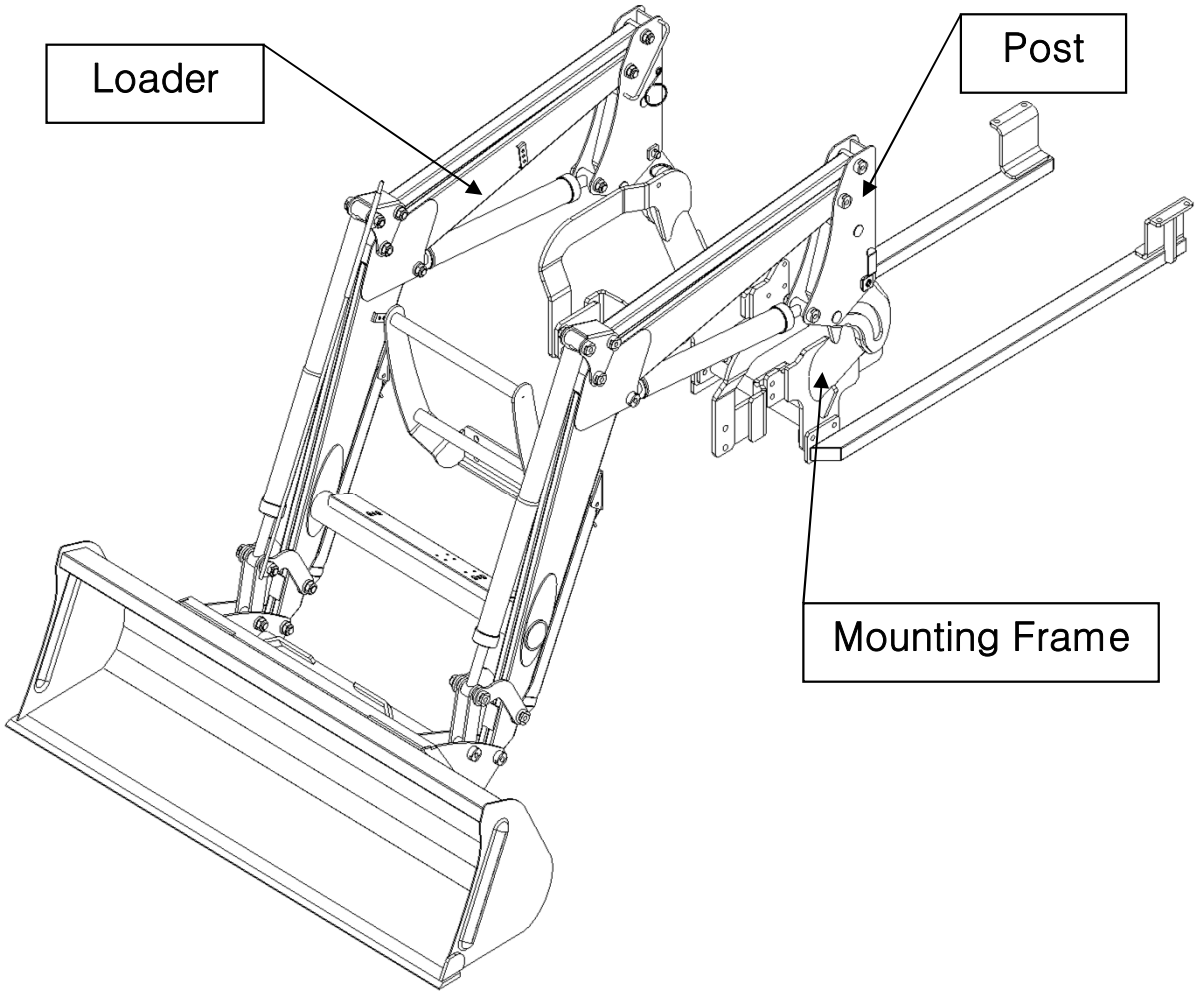


▶ Hose Guide
(6) Hose Guide – 2EA
(12) Hex. Bolt M14-2.0P 50L – 1EA
(13) Hex. Bolt M14-2.0P 35L – 1EA
(16) Washer Spring M14 – 2EA
(17) Washer Plain M14 – 2EA
(19) Hex Nut M14-2.0P – 2EA

Verify that all mounting kit hardware has been torqued as specified before installing loader.
▶ Identify hardware size and grade.
▶ Refer to Torque Chart, page 24 and find correct torque for your hardware size and grade.
▶ Torque hardware to this specification unless otherwise specfied.

▶ IMPORTANT NOTE: To keep mounting kit hardware from loosening during loader operation, hardware must be torque to specifications.

LOADER INSTALLATION

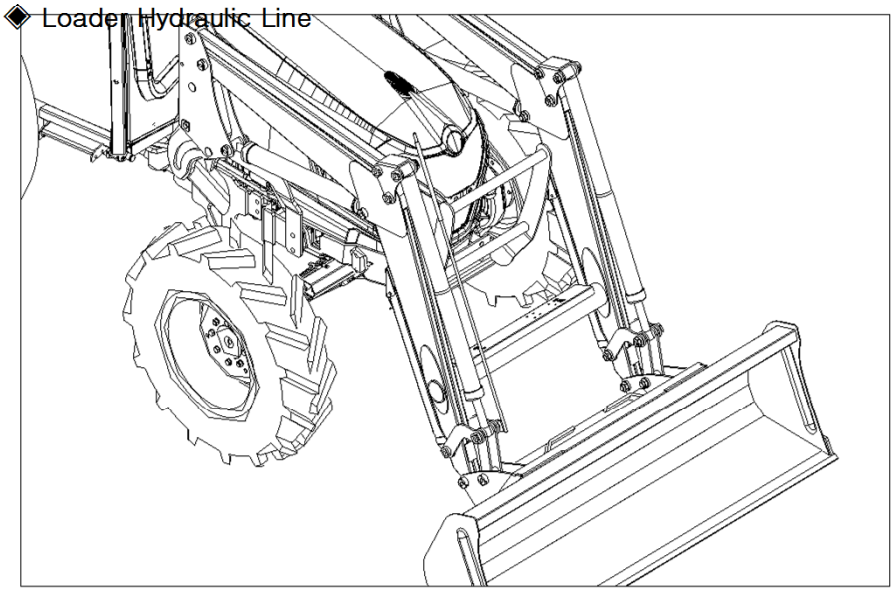


▶ Install Boom Ass'y.

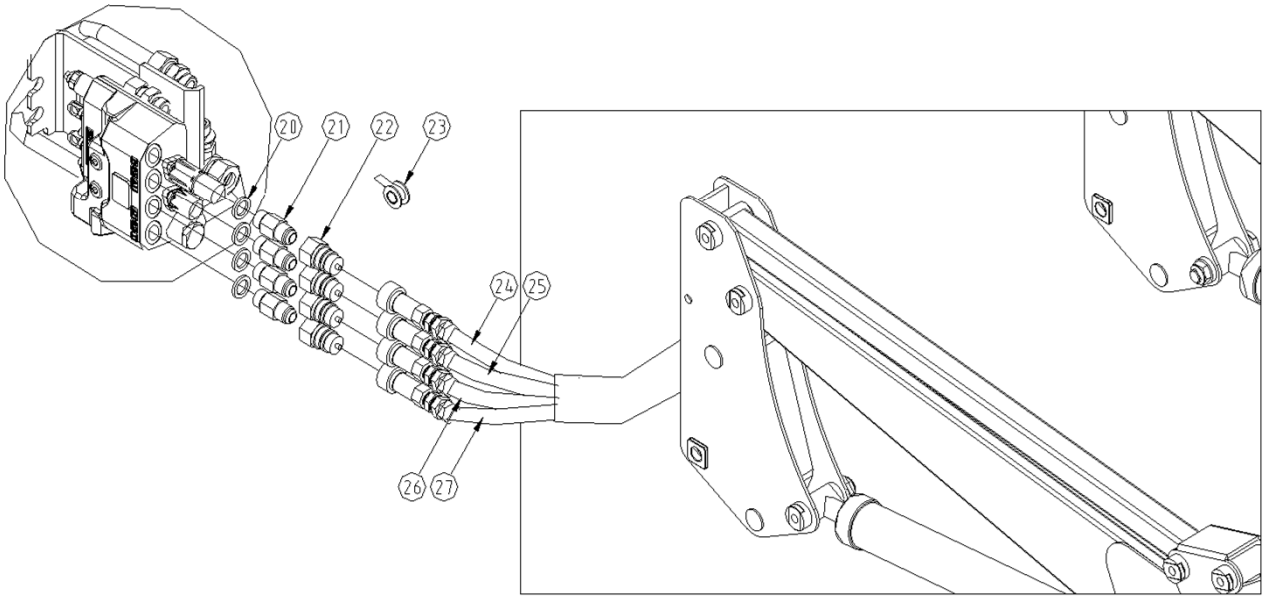
Hang the groove on the pin located on Mounting Frame.

LOADER INSTALLATION

◈ Loader Hydraulic Line



(20) Bonded seal – 4EA
(21) Nipple – 4EA
(22) Quick Coupler – 4EA
(23) Teflon tape – 4EA
(24) Hose (Green) – 1EA
(25) Hose (Yellow) – 1EA
(26) Hose (Red) – 1EA
(27) Hose (Blue) – 1EA



▶ wind up the teflon tape(22) on the nipples(20) and tighten the Quick Couplers(21) to the nipples(20).

▶ Install the nipples(20) assembly with bonded seals(19) to the loader valve.

▶ Connect a pair of each same colors as shown in figure.

How to store the loader

When storing the loader after removing it from the tractor, store it as follows:
1.Keep it in a place away from rain or snow
2. Separate it on a hard, level surface.
3. After removing the hydraulic coupler, put on the quick coupler cap to prevent contamination.

⚠ CAUCTION

After separating the loader, if the hydraulic pressure is removed or disassembled, the loader may fall and injure or die by the operator.

Replace the hose if the hydraulic hose is old, or if the hydraulic hose is damaged or leaks from the connection.

If parts are worn, damaged or lost, replace or replenish.
If the painting is damaged and the metal part is exposed, repaint it.
If you need to injection grease, check the maintenance part book to find out where to inject grease and then inject grease.
Apply grease to exposed areas like cylinder rods.

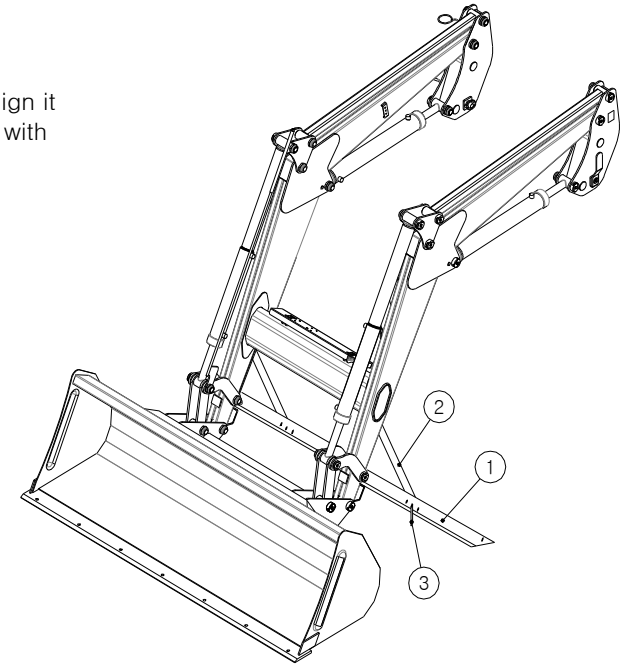
⚠ CAUCTION

Checklist before long-term storage

Replace the hose if the hydraulic hose is old, or if the hydraulic hose is damaged or leaks from the connection.
If parts are worn, damaged or lost, replace or replenish.
If the painting is damaged and the metal part is exposed, repaint it.
If you need to injection grease, check the maintenance part book to find out where to inject grease and then inject grease.
Apply grease to exposed areas like cylinder rods.

How to fix the stand

After removing the stand (1), lower the stand lock (2), align it with the appropriate hole, fix it with the pin (3), and fix it with the "R" pin so that the pin does not come off.



⚠ CAUCTION

Remove the loader from the tractor only if the bucket is attached to the loader.
Otherwise, the center of gravity will be shifted towards the tractor, causing the loader to fall on the tractor, damaging the tractor or loader and causing injury or death to the driver.

PART ILLUSTRATIONS

GENERAL INFORMATION

Illustrations

The individual parts in their normal relationship to each other. Reference numbers are used in the illustrations. These numbers correspond to those in the "Number" column and are followed by the quantity required and description.

Directional Reference

"Right hand" and "left hand" sides are determined by standing at the rear of the unit and facing in the direction of forward travel.

Part Order

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

Istructions

▶ GROUP NAME
: Detail classiflcation name for parts.

▶ SECTION NAME
:Classiflcation name for parts.

▶ COMPONENTS
: The components of an assembly are identifled by a bracket.

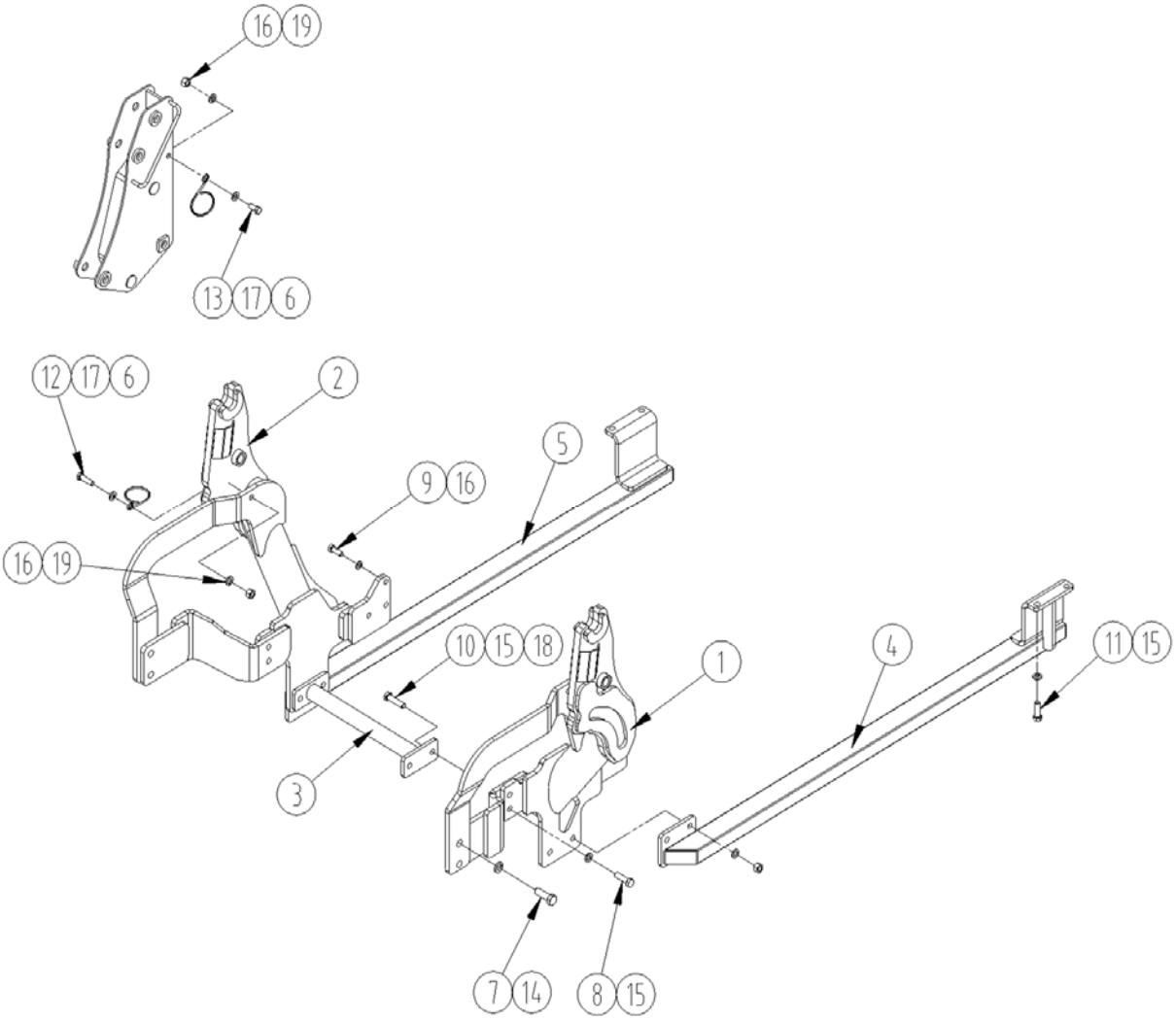
▶ NO.
: Reference numbers are assiqned to parts in the figure.

INTERCHANGEABILITY
: Indicates the interchangeabillty of parts due to design change

	Indicates that a new part can be used instead of an old part when you order this part, plese order new part.
	indicates that either parts can be used.
	indicates that either parts can not be used.
 ~4265-99999 5265-00001~	indicates that a part has a serial number break. When you order this part, please order a part according to the serial number of the Loader.

★ Due to our policy of continuously improving products, The information contained herein is subject to change withour notice

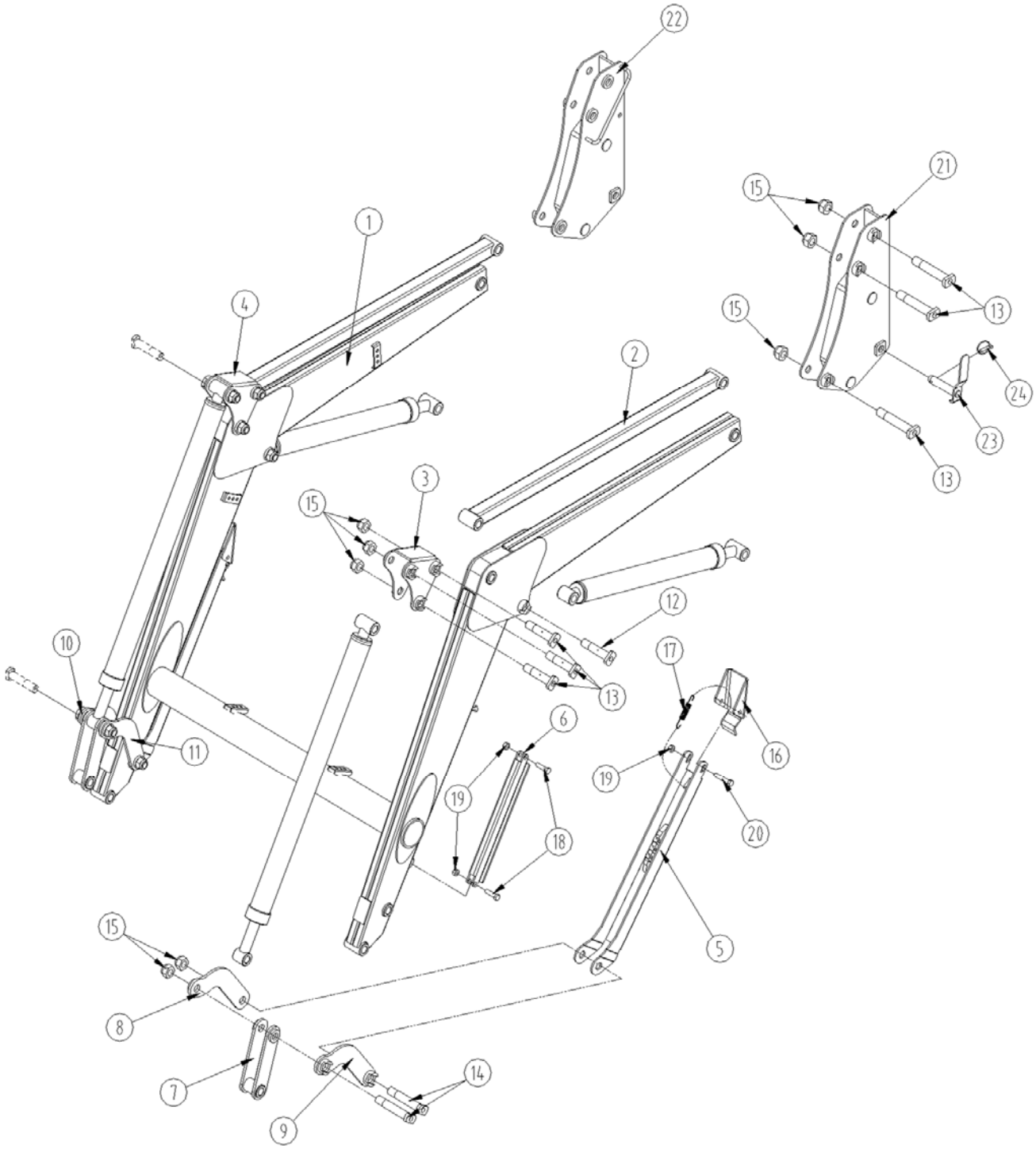
IMFL10. MOUNTING FRAME GROUP



IMFL10. MOUNTING FRAME GROUP

REF.NO	LS PART.NO	DESCRIPTION	QTY	I.C	SERIAL OR DATE
1	40350461	MOUNTING FRAME-LH	1	↵	
	40367276	MOUNTING FRAME-LH	1	←	2017.04.10~
2	40350462	MOUNTING FRAME-RH	1	↵	
	40367277	MOUNTING FRAME-RH	1	←	2017.04.10~
3	40350463	CROSS BAR	1		
4	40350464	REAR FRAME-LH	1		
5	40350465	REAR FRAME-RH	1		
6	40323525	HOSE GUIDE	2		
7	40350466	HEX.BOLT-HT, M20-2.5P 65L	4		
8	40228626	HEX.BOLT-HT, M16-2.0P 50L	4		
9	40230601	HEX.BOLT-HT, M14-2.0P 40L	6		
10	40305378	HEX.BOLT-HT, M16-2.0P 65L	4		
11	40287421	HEX.BOLT-HT, M16-1.5P 50L	4	↵	
	40230602	HEX.BOLT-HT, M16-1.5P 60L	4	←	2017.10.26~
12	40264168	HEX.BOLT-HT, M14-2.0P 50L	1		
13	40228621	HEX.BOLT-HT, M14-2.0P 35L	1		
14	40228645	WASHER-SPRING, M20	4		
15	40228644	WASHER-SPRING, M16	12		
16	40228643	WASHER-SPRING, M14	8		
17	40228649	WASHER-PLAIN, M14	2		
18	40228638	HEX.NUT-HT, M16-2.0P	4		
19	40228637	HEX.NUT-HT, M14-2.0P	2		

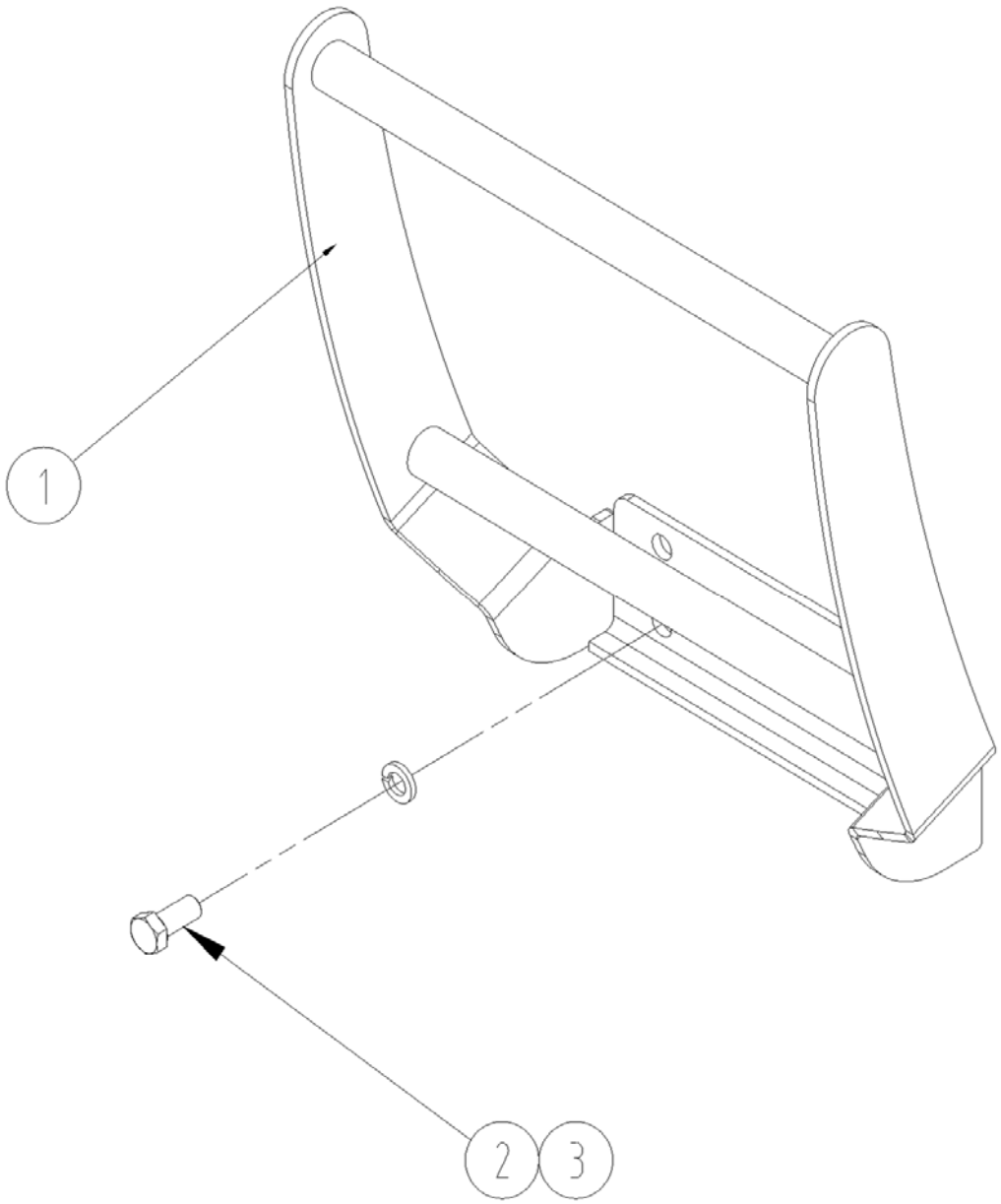
IMFL20. BOOM GROUP



IMFL20. BOOM GROUP

REF.NO	LS PART.NO	DESCRIPTION	QTY	I.C	SERIAL OR DATE
1	40368867	BOOM W.A.	1		
2	40368868	LINK-LEVEL	2		
3	40228801	LINK LH	1		
4	40228802	LINK RH	1		
5	40368869	STAND W.A.	2		
6	40368870	STAND LOCK	2		
7	40368871	LINK W.A.	2		
8	40228856	LINK W.A.-BUCKET	1		
9	40228854	LINK W.A.-BUCKET	1		
10	40228855	LINK W.A.-BUCKET	1		
11	40228857	LINK W.A.-BUCKET	1		
12	40228660	PIN ASS'Y, Ø24-110L	2		
13	40228661	PIN ASS'Y, Ø24-130L	11		
14	40368872	PIN ASS'Y, Ø24-145L	3		
15	40228633	NUT-SELFLOCK, M24-2.0P	16		
16	40368873	STAND FOOT	2		
17	40340465	STAND SPRING	2		
18	40228616	HEX.BOLT-HT, M12-1.75P 40L	4		
19	40228635	NUT-SELFLOCK, M12-1.75P	6		
20	40368874	HEX.BOLT-HT, M12-1.75P 110L	2		
21	40350469	POST LH	1		
22	40350470	POST RH	1		
23	40286963	PIN W.A., Ø25-106.3L	2		
24	40228656	PIN-RING, Ø10	2		

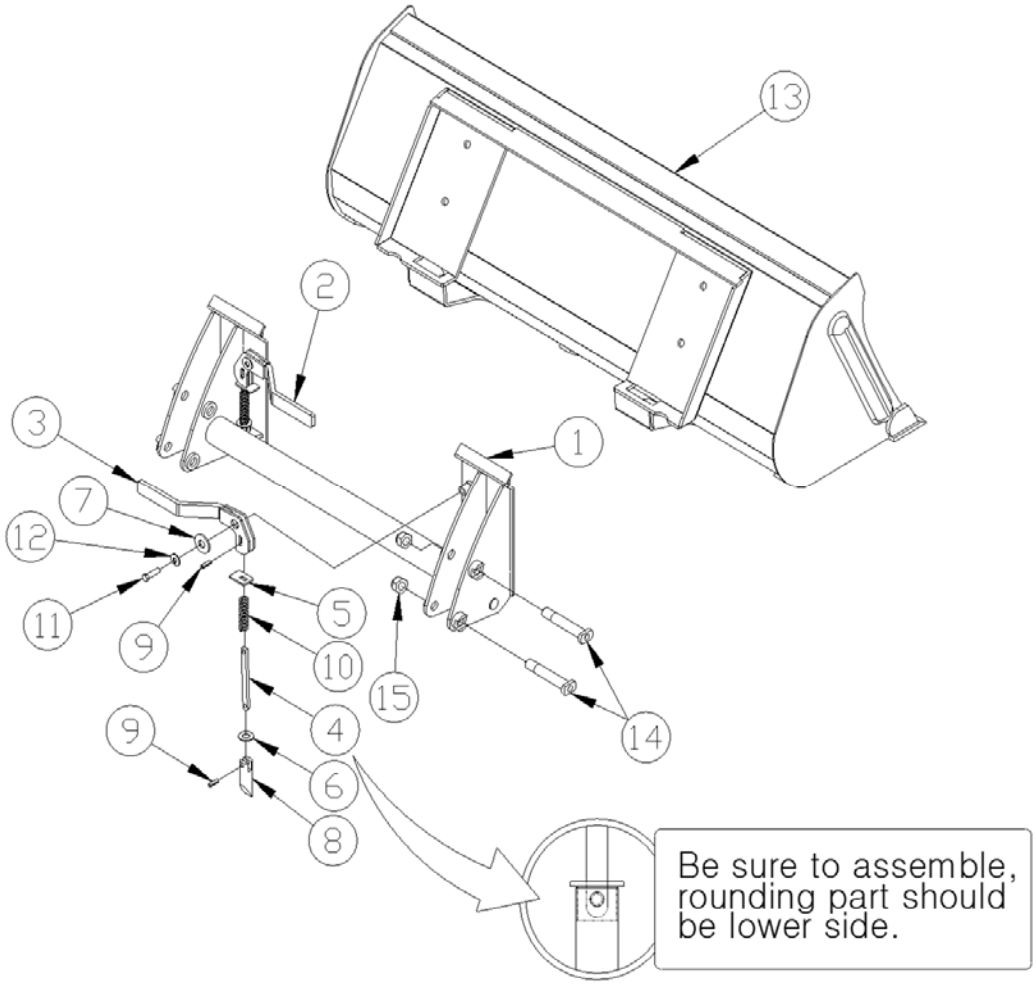
IMFL30. GRILL GUARD GROUP



IMFL30. GRILL GUARD GROUP

REF.NO	LS PART.NO	DESCRIPTION	QTY	I.C	SERIAL OR DATE
1	40350467	GRILL GUARD	1		
2	40230606	BOLT-HEX. M20-2.5P 45L	4		
3	40228645	WASHER-SPRING, M20	4		

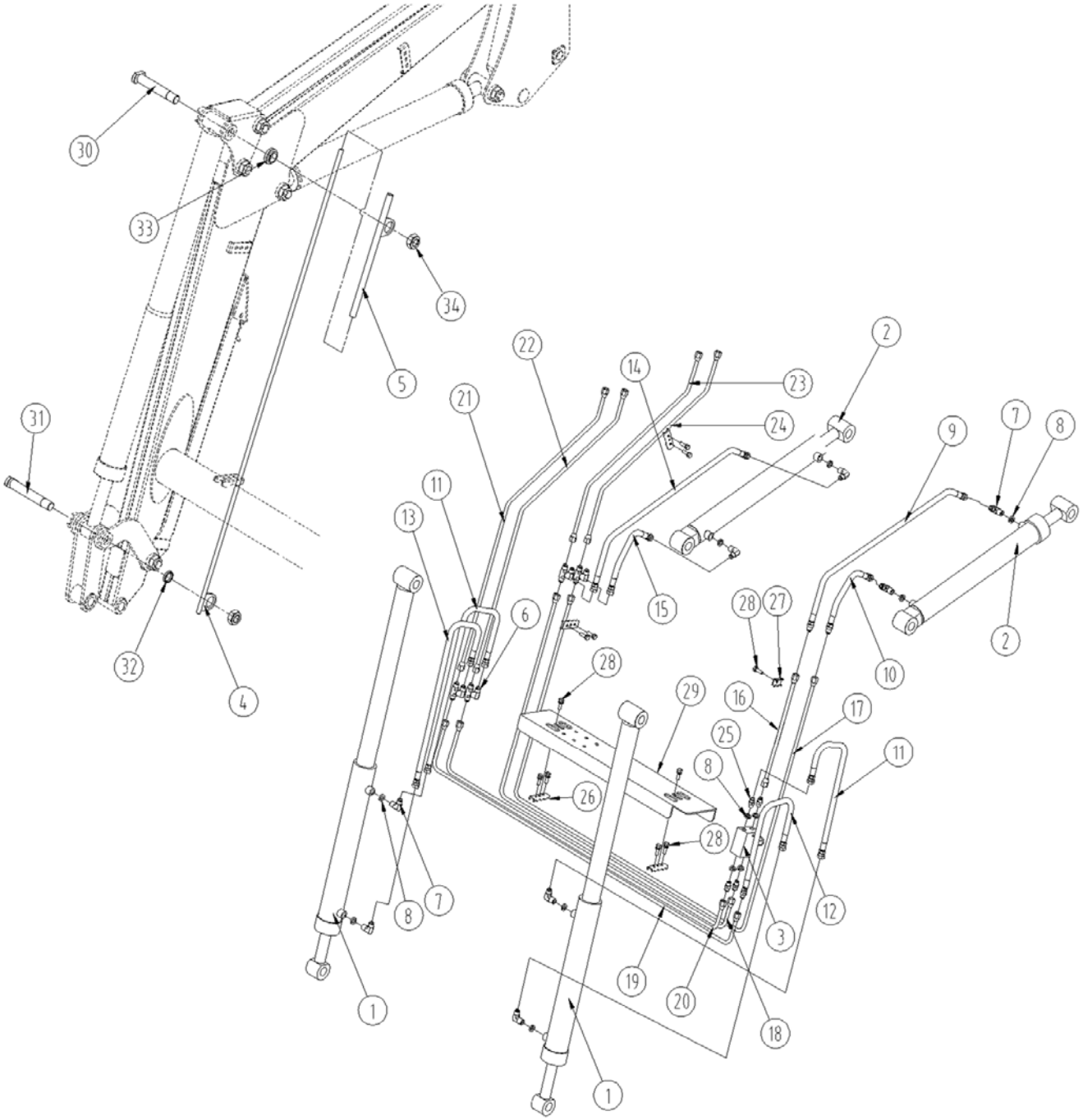
IMFL40. BUCKET and QUICK ATTACH GROUP



IMFL40. BUCKET and QUICK ATTACH GROUP

REF.NO	LS PART.NO	DESCRIPTION	QTY	I.C	SERIAL OR DATE
1~12	40286964	QUICK ATTA. ASS'Y	1		
1	40272719	QUICK ATTA. W.A.	1		Gloss paint applied: FL78AD0342 ~
	40517623	QUICK ATTA.W.A.	1		201020337~
2	40286958	HANDLE-LH	1		
3	40286959	HANDLE-RH	1		
4	40230849	PIN LINK	2		
5	40230850	PLATE GUIDE	2		
6	40230851	WASHER #1	2		
7	40230852	WASHER #2	2		
8	40230853	PIN, Ø31.5-112L	2		
9	40230615	SPRING PIN, Ø10-30L	4		
10	40230854	SPRING, I.D20x130L	2		
11	40294064	HEX. BOLT-HT, M14-2.0P 25L	2		
12	40228643	WASHER-SPRING, M14	2		
13	40350460	BUCKET W.A.-BOBCAT(78")	1		Gloss paint applied: FL78AD0342 ~
14	40230616	PIN, Ø25-138L	4		
15	40228633	NUT-SELFLOCK, M24-1.5P	4		

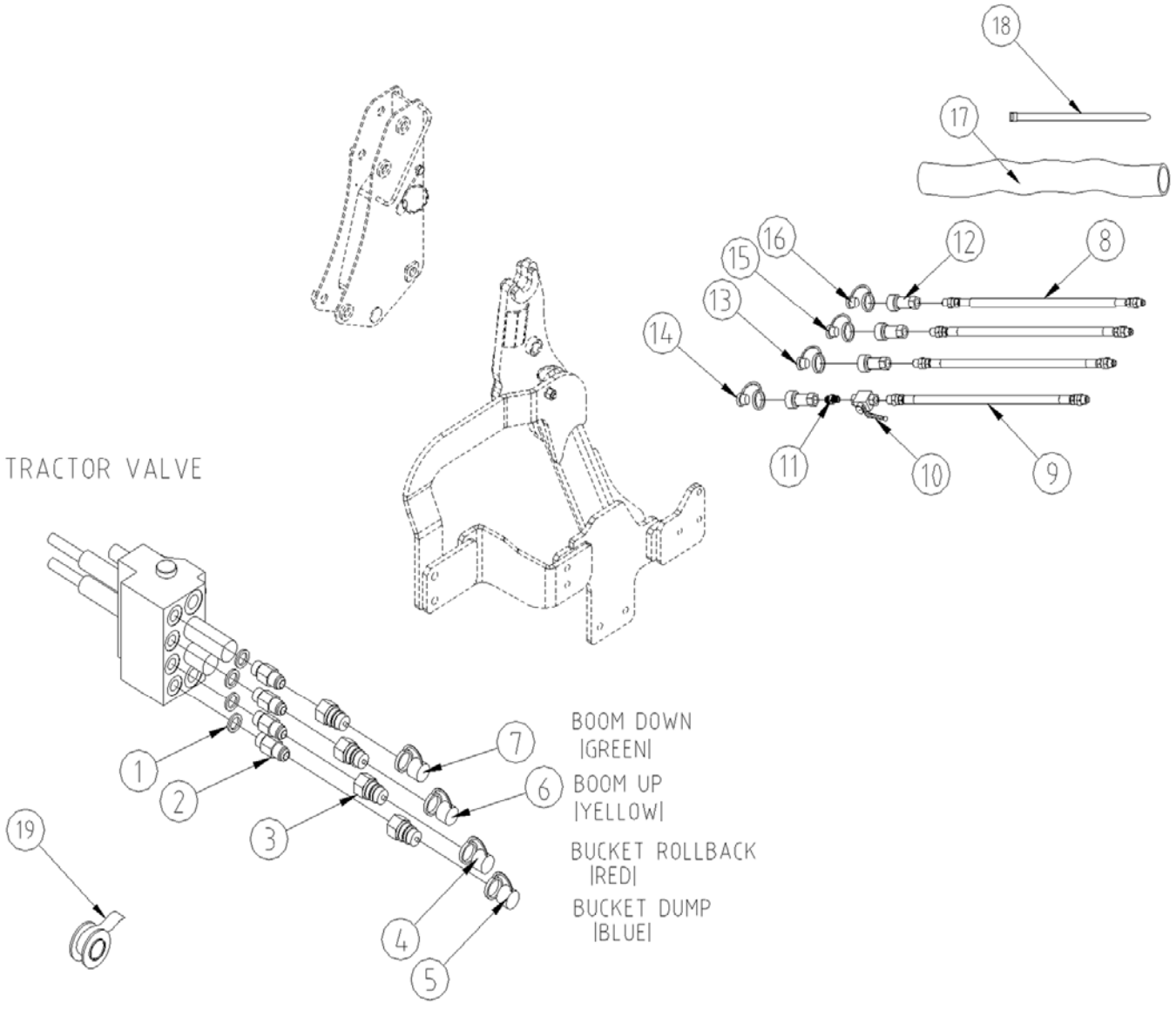
IMFL50. HYDRAULIC LINE GROUP(1/2)



IMFL50. HYDRAULIC LINE GROUP(1/2)

REF.NO	LS PART.NO	DESCRIPTION	QTY	I.C	SERIAL OR DATE
1	40350484	BUCKET CYLINDER ASSY, Ø35xØ65x1110L (ST360)	2		
2	40350475	BOOM CYLINDER ASS'Y Ø35 x Ø70 x 795L (555ST)	2		
3	40228705	VAVLE, RELIEF	1		
4	40371862	BAR, GUAGE-LONG, Ø12-1336L	1	◀┐	~FL78AD0140
	40459062	BAR, GUAGE-LONG, Ø11-1336L	1	◀	FL78AD0133~
5	40286945	BAR, GUAGE-SHORT, Ø17.3-2.3T-360L	1	◀┐	~FL78AD0140
	40459070	BAR, GUAGE-SHORT, Ø17.3-2.5T-360L	1	◀	FL78AD0133~
6	40230663	NIPPLE, H-TYPE 3/4-16UNF, HOSE	4		
7	40228714	NIPPLE, PF3/8, O-RINGx3/4-16UNF, HOSE 90°	8		
8	40228756	O-RING, 1BP14	12		
9	40228739	HOSE ASSY, 4(3/4-16UNF)-2(3/4-16UNF) 1000L (3/8)	1		
10	40228740	HOSE ASSY, 4(3/4-16UNF)-2(3/4-16UNF) 450L (3/8)	1		
11	40228735	HOSE ASSY, 4(3/4-16UNF)-4(3/4-16UNF) 700L (3/8)	2		
12	40228743	HOSE ASSY, 4(3/4-16UNF)-2(3/4-16UNF) 800L (3/8)	1		
13	40228734	HOSE ASSY, 4(3/4-16UNF)-4(3/4-16UNF) 800L (3/8)	1		
14	40228737	HOSE ASSY, 4(3/4-16UNF)-4(3/4-16UNF) 1000L (3/8)	1		
15	40228736	HOSE ASSY, 4(3/4-16UNF)-4(3/4-16UNF) 450L (3/8)	1		
16	40228803	PIPE ASS'Y	1		
17	40248399	PIPE ASS'Y	1		
18	40248400	PIPE ASS'Y	1		
19	40272713	PIPE ASS'Y	1		
20	40272714	PIPE ASS'Y	1		
21	40272715	PIPE ASS'Y	1		
22	40272716	PIPE ASS'Y	1		
23	40248803	PIPE ASS'Y	1		
24	40248804	PIPE ASS'Y	1		
25	40228717	NIPPLE, PF3/8, O-RING x 3/4-16UNF	4		
26	40228840	CLAMP	4		
27	40228841	CLAMP	1		
28	40228612	BOLT-SEM'S, M8-1.25P 35L	11		
29	40272717	COVER, PIPE	1		
30	40368872	PIN ASS'Y, Ø25-145L	1		
31	40368875	PIN ASS'Y, Ø25-153L	1		
32	40282263	BUSH	1		
33	40340725	BUSH	1		
34	40228633	NUT-SELFLOCK, M24-1.5P	2		

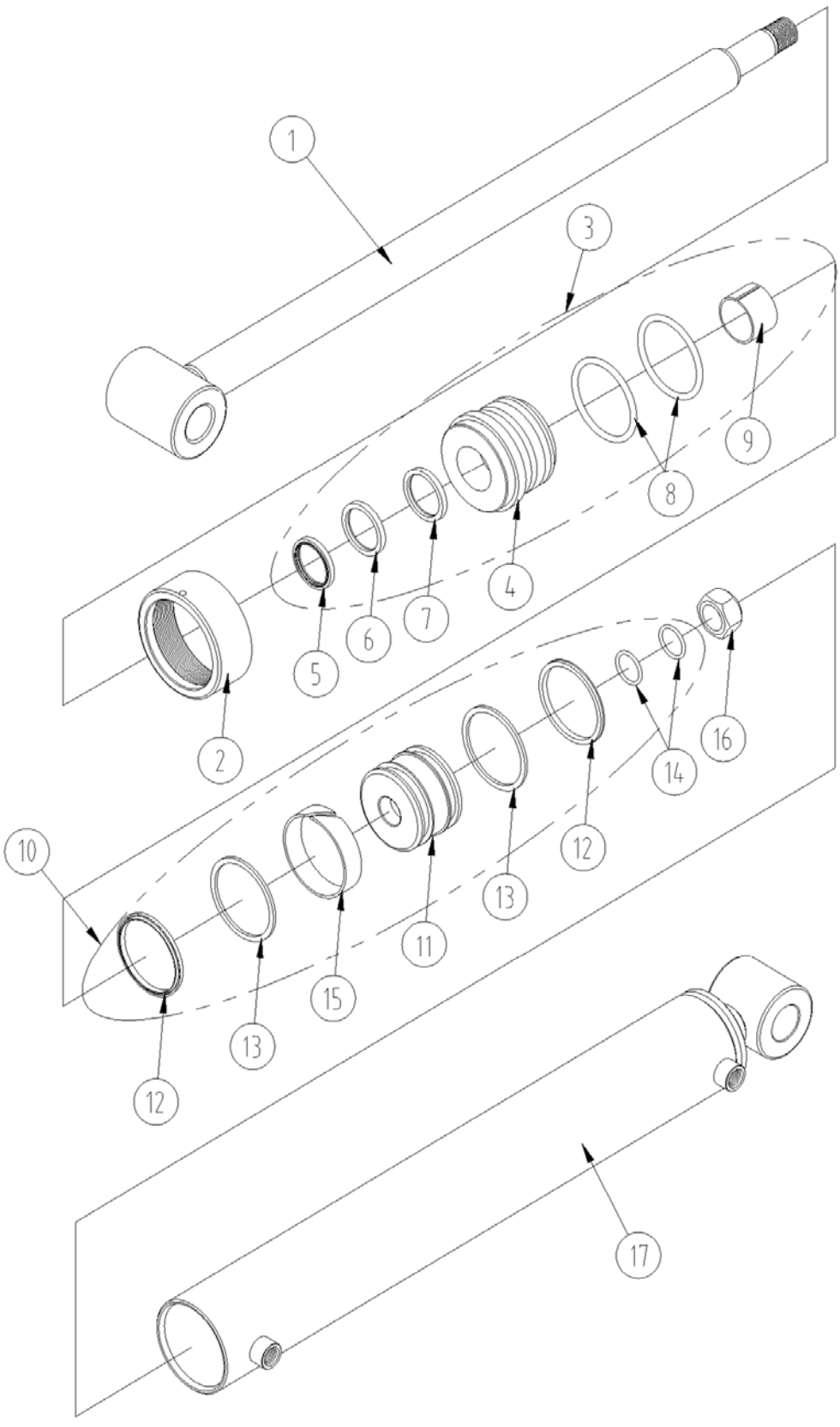
IMFL50. HYDRAULIC LINE GROUP(2/2)



IMFL50. HYDRAULIC LINE GROUP(2/2)

REF.NO	LS PART.NO	DESCRIPTION	QTY	I.C	SERIAL OR DATE
1	40228654	BONDED SEAL	4		
2	40230960	NIPPLE, PF3/8, COPPER x PT3/8	4		
3	40228720	QUICK COUPLER, PT3/8" MALE	4		
4	40228728	DUST PLUG, 3/8" RED FEMALE	1		
5	40228726	DUST PLUG, 3/8" BLUE FEMALE	1		
6	40228730	DUST PLUG, 3/8" YELLOW FEMALE	1		
7	40228729	DUST PLUG, 3/8" WHITE FEMALE	1		
	40287437	DUST PLUG, 3/8" GREEN FEMALE	1		FL78AE0286~
8	40350471	HOSE ASSY, 2(3/4-16UNF)-1(PT3/8") 1700L (3/8)	3		
9	40350472	HOSE ASSY, 2(3/4-16UNF)-1(PT3/8") 1600L (3/8)	1		
10	40350473	BALL VALVE	1		
11	40350474	NIPPLE, PT3/8 x PT3/8	1		
12	40228721	QUICK COUPLER, PT3/8" FEMALE	4		
13	40230676	DUST CAP, 3/8" WHITE FEMALE	1		
	40516718	DUST CAP, 3/8" GREEN FEMALE	1		FL78AE0286~
14	40228725	DUST CAP, 3/8" YELLOW FEMALE	1		
15	40244644	DUST CAP, 3/8" BLUE FEMALE	1		
16	40228724	DUST CAP, 3/8" RED FEMALE	1		
17	40230659	WEBBING, 100-1500L	1		
18	40228697	CABLE TIE, 270mm BLACK	2		
19	40228758	TEFLON TAPE	1		

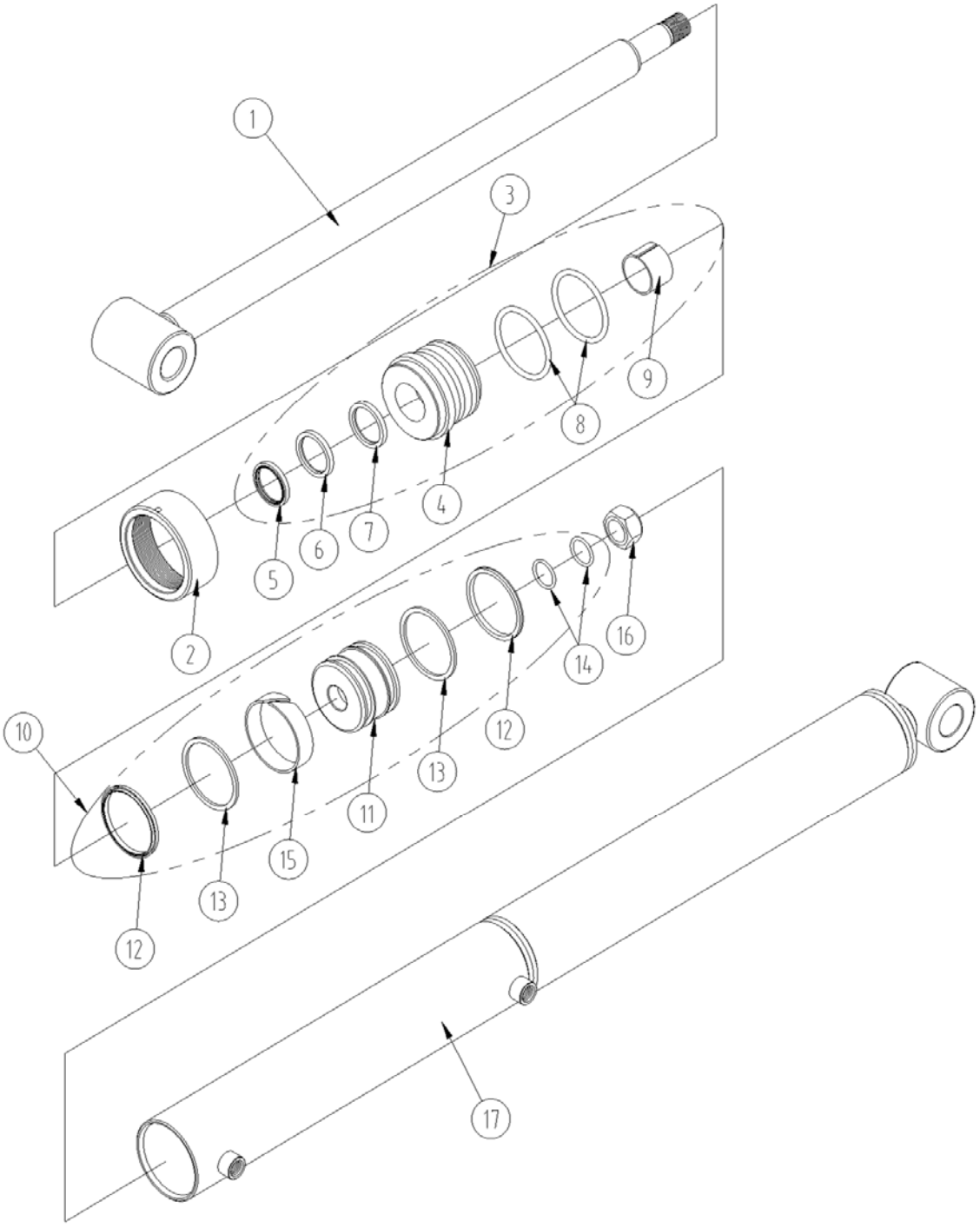
IMFL60. BOOM CYLINDER GROUP



IMFL60. BOOM CYLINDER GROUP

REF.NO	LS PART.NO	DESCRIPTION	QTY	I.C	SERIAL OR DATE
1~17	40350475	BOOM CYLINDER ASS'Y Ø35 x Ø70 x 795L (555ST)	1		
1	40350476	ROD ASS'Y	1		
2	40370826	CAP OUTER, Ø70 x Ø80 x 40L	1		
3	40370827	COVER INNER ASS'Y No.4~9	1		
4	40370828	COVER INNER Ø70 x Ø35 x 65L	1		
5	40228766	DUST SEAL, SDR 35 x 43 x 5/6.5	1		
6	40228884	PACKING U, SKY 35 x 45 x 6	1		
7	40228880	PACKING U, ISI 35 x 45 x 6	1		
8	40370829	O-RING, 1BP60	2		
9	40228769	DU-BUSH, 3530	1		
10	40230863	PISTON ASS'Y No.11~15	1		
11	40230865	PISTON. Ø70 x Ø27 x 46L	1		
12	40230871	PACKING U, OSI 70 x 60 x 6	2		
13	40230868	BACKUP RING, 70 x 60 x 3	2		
14	40228870	O-RING,1BG27	2		
15	40230874	WEARING, WR Ø70 x Ø65 x 15L	1		
16	40350482	NUT, 1-14UNF	1		
17	40350483	TUBE ASS'Y	1		

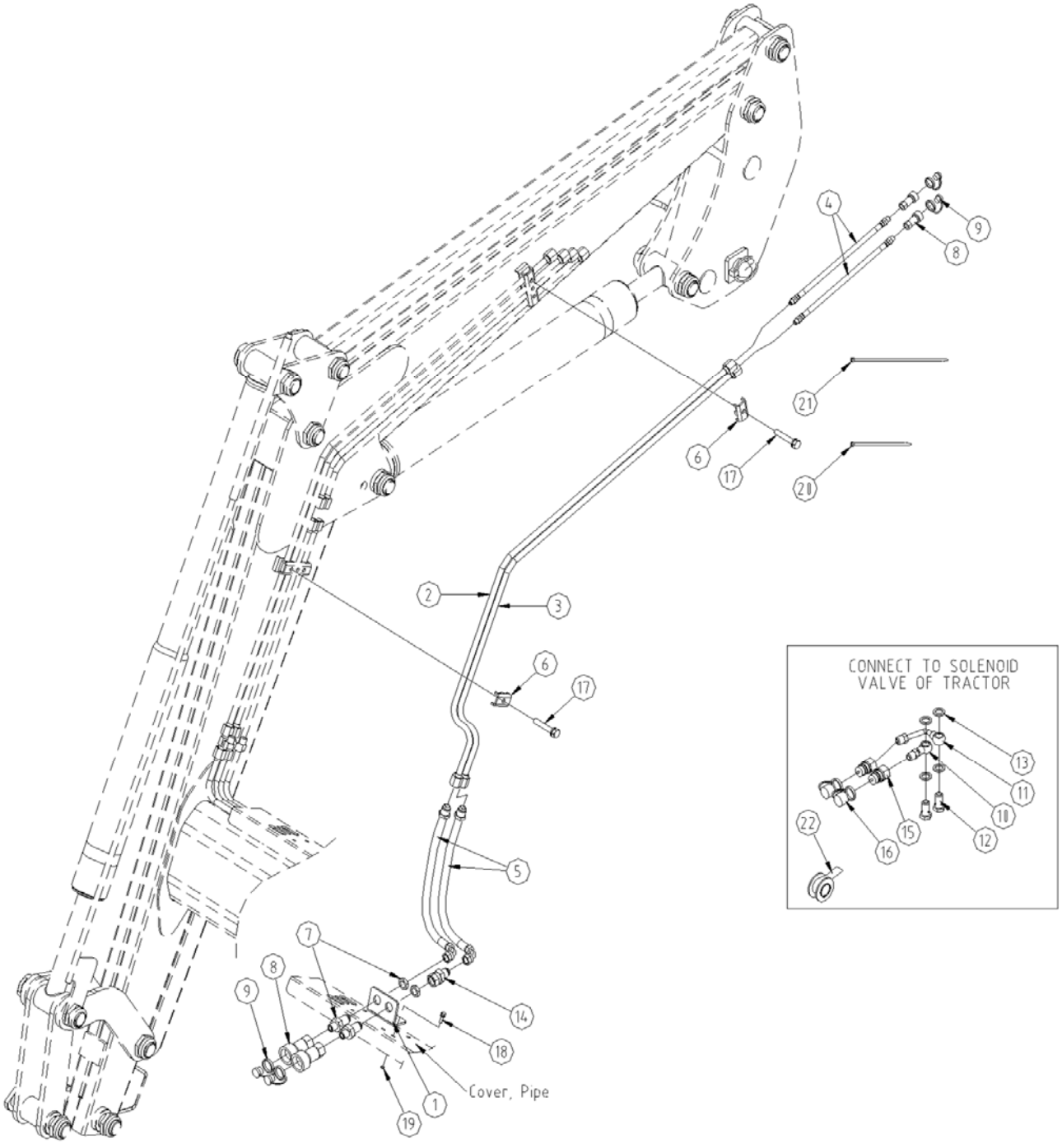
IMFL70. BUCKET CYLINDER GROUP



IMFL70. BUCKET CYLINDER GROUP

REF.NO	LS PART.NO	DESCRIPTION	QTY	I.C	SERIAL OR DATE
1~17	40350484	BUCKET CYLINDER ASS'Y, Ø35 x Ø65 x 1110L (360ST)	1		
1	40350485	ROD ASS'Y	1		
2	40248811	CAP OUTER, Ø65 x Ø75 x 40L	1		
3	40248809	COVER INNER ASS'Y No.4~9	1		
4	40248810	COVER INNER Ø65 x Ø35 x 65L	1		
5	40228766	DUST SEAL, SDR 35 x 43 x 5/6.5	1		
6	40228884	PACKING U, SKY 35 x 45 x 6	1		
7	40228880	PACKING U, ISI 35 x 45 x 6	1		
8	40248812	O-RING, 1BG60	2		
9	40228769	DU-BUSH, 3530	1		
10	40248813	PISTON ASS'Y No.11~15	1		
11	40248814	PISTON. Ø65 x Ø27 x 46L	1		
12	40248816	PACKING U, OSI 65 x 55 x 6	2		
13	40248815	BACKUP RING, 55 x 65 x 3	2		
14	40228870	O-RING,1BG27	2		
15	40248817	WEARING, WR Ø60 x Ø65 x 15L	1		
16	40350482	NUT, 1-14UNF	1		
17	40350486	TUBE ASS'Y	1		

IMFL90. OPTION1 (3rd FUNCTION KIT)

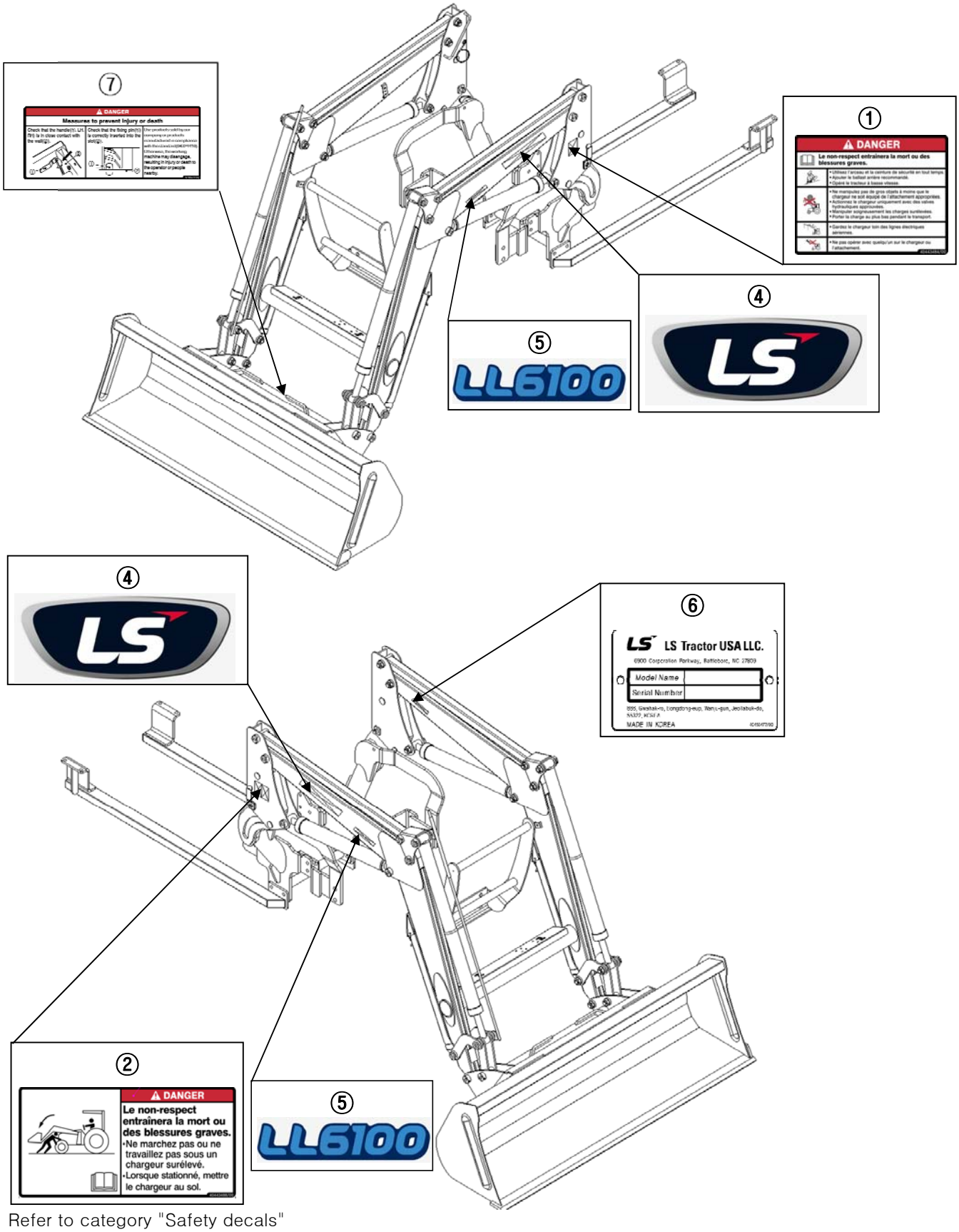


IMFL90. OPTION1 (3rd FUNCTION KIT)

REF.NO	LS PART.NO	DESCRIPTION	QTY	I.C	SERIAL OR DATE
1~22	40381457	LL6100 3rd FUNCTION KIT	1		
1	40381458	COUPLER BRACKET	1		
2	40381459	PIPE ASS'Y	1		
3	40381460	PIPE ASS'Y	1		
4	40382893	HOSE ASSY, 1(PT3/8")x2(3/4-16UNF) 1800L(3/8)	2		
5	40381462	HOSE ASSY, 904(3/4-16UNF)x2(3/4-16UNF) 670L(3/8)	2		
6	40340734	CLAMP	2		
7	40230673	NIPPLE, PT3/8*3/4-16UNF HOSE	2		
8	40228721	QUICK COUPLER, PT3/8" FEMALE	4		
9	40228723	DUST PLUG, 3/8" BLACK MALE	4		
10	40228732	ADAPTER PT3/8* PF3/8, BENZO	1		
11	40228733	ADAPTER PT3/8* PF3/8, BENZO 75°	1		
12	40228731	NIPPLE, PF3/8, BENZO	2		
13	40228654	BONDED SEAL, 3/8"	4		
14	40387920	NIPPLE, 3/4-16UNF HOSE*3/4-16UNF SWIVEL	1		
15	40228720	QUICK COUPLER, PT3/8" MALE	2		
16	40228727	DUST CAP, 3/8" BLACK FEMALE	2		
17	40230891	BOLT-SEM'S, M8-1.25P 50L	2		
18	40245474	BOLT-SEM'S, M8-1.25P 20L	2		
19	40228629	HEX.NUT, M8-1.25P	2		
20	40228697	CABLE TIE, 270mm BLACK	2		
21	40228698	CABLE TIE, 540mm BLACK	3		
22	40228758	TEFLON TAPE	1		

IMG980. DECAL GROUP

CAUTION :
Read and refer to the Tractor Operation Manual or Decals on the Tractor. and Loader Decals on as shown.



Refer to category "Safety decals"

IMG980. DECAL GROUP

REF.NO	LS PART.NO	DESCRIPTION	QTY	I.C	SERIAL OR DATE
1	40286952	DECAL-WARNING	1	┐	
	40358808	DECAL-DANGER-TSL	1	◀┘	2021.09.1~
2	40286953	DECAL-WARNING	1	┐	
	40450477	NAME PLATE-LSTA-IMG980	1	◀┘	2021.09.1~
~~3~~	~~40286954~~	~~DECAL-WARNING~~	~~1~~		DEL.
4	40368876	LS NAME	2		
5	40368877	DECAL,MODEL-LL6100	2		
6	40368878	NAME PLATE	1	┐	
	40450477	NAME PLATE-LSTA-IMG980	1	◀┘	2021.04.9~
7	40455376	DECAL-ATTACH LEVER DANGER-IMG980	1		After 210709602