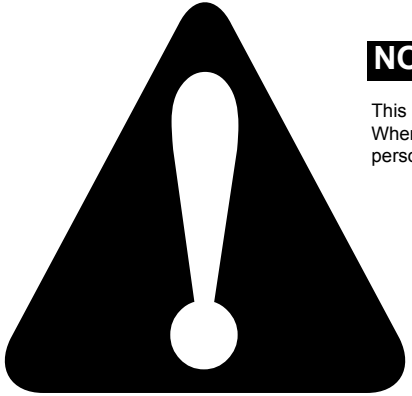
Most tractor and/or loader equipment accidents can be avoided by following simple safety precautions. The safety information given in this manual does not replace safety codes, insurance requirements, federal, state, and local laws. Make sure your machine has the correct equipment required by your local 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. All equipments has a limit. Make sure you are aware of stability and load characteristics of this loader before you begin operation.



NOTE

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.

WARRANTY CONDITIONS

Warranty coverage :

HANIL INDUSTRY, herein referred to as HANIL, undertakes to replace or repair any part of a HANIL 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 or 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 HANIL loader to the dealer''s place of business or repair.

The obligation of HANIL to the Purchaser under this Warranty is limited to the repair or replacement of defective parts by an authorized HANIL dealer.

Repair or replacement in accordance with this warranty shall constitute fulfillment of all liabilities of HANIL and the selling dealer in respect to HANIL 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 :

HANIL'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 HANIL Product, use those brands and grades of lubricating oils, lubricants or fuel and spare parts officially approved by HANIL.

WARRANTY CONDITIONS

- The HANIL loader 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 HANIL 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 Report the product defect to an authorized HANIL dealer and request repair within the applicable warranty term and Present evidence of purchase.

- The Warranty shall be void if the HANIL loader has been altered or repaired outside of a HANIL 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 dealership.

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

- The warranty period shall be 12 months after initial registration. It the purchaser concludes a separate contract of quality and service, the separate contract shall prevail.

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

- Service is available any HANIL dealer in the country

Right To Make Design and Product Changes :

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

CONTENT

1. SAFETY PRECAUTIONS

SAFETY PRECAUTIONS

READ MANUALS AND DECALS

Read and understand both the tractor and the loader Operator Manuals and all decals before using the loader.

1) Lack of Knowledge can lead to accidents.
2) It is the loader owner's responsibility to make sure anyone operating the loader reads and understands this manual first before operating the machine.
3) Follow all safety, operating, and serving instructions.
4) Replace damaged or illegible safety labels, See follwing pages for required labels.

ROPS AND SEAT BELT

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

YOURSELF

1) Do not stand, walk, or work under a raised loader bucket or attachment unless it is securely blocked and held in position.
2) Operate controls only when properly seated in the operator's seat.
3) Only one person, the operator, should be on the machine when it is in operation.
4) 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

1) 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.
2) A frequent cause of personal injury or death is person falling off and being run over. Inadvertent movement of the loader or attachment could result in serious injury or death.
3) Do not permit other to ride on your tractor. loader, bucket, or any attachment.
4) Do not lift or carry anyone on buckets, forks, probes, or any other portion of the loader or loader attachments.
5) Do not allow children or unqualified persons to operate equipment.

PREPERATION

1) Move the wheels to the tractor manufacturer's widest recommended settings to increase stability.
2) For better stability, always use a tractor equipped with a wide front axle. never use a tractor equipped with a tricycle type front axle.
3) Add rear ballast or rear weight to the tractor to compensate for the load and increase stability.
4) Add recommended rear tire liquid weight or rear wheel weights for increased stability.
5) 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 KUBOTA dealer.

6) Assemble, remove, and reinstall the loader only as directed in this manual. Failure to do this could result in serious personal injury or death.

7) The loader may shift during shipping and handling, making it unstable on the pallet. Support loader with an overhead hoist other suitable means prior to removing bands or attaching straps securing loader to pallet. Failure do so could result inaccidental tip-over of the loader that could cause serious injury to you and/or bystanders.

BEFORE OPERATION

1) Before starting the engine of your tractor, make sure all operating controls are in park lock or neutral position.

2) 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

1) Add wheel ballast and/or rear weight to counterbalance tractor loader for stability at maximum loader capacity.

2) Additional counterweight requirements will vary with loader attachments and equipment application.

3) Move and turn the tractor at low speeds.

4) Carry loader boom at a low position during normal operation.

5) Never travel at high speeds with bucket loaded.

6) Use caution when operating the loader with a raised bucket or attachment.

7) Avoid driving over loose fill, rocks, holes, or anything that may be dangerous for loader operation or movement.

8) Allow for the loader length when making turns.

9) Use caution when handing loose or unstable loads.

10) Gradually stop the loader boom when lowering or lifting loads.

11) 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.

12) 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.

13) 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.

14) Be careful during loading, transporting, and stacking to minimize rolling bales and tractor tip over.

15) Do not use buckets, forks, or other attachments without bale retaining devices.

16) Operate the tractor and loader such that complete control and machine stability is maintained at all times.

17) 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

LARGE HEAVY OBJECTS

1) 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.

2) Handling large heavy objects can be extremely dangerous due to danger of rolling the tractor over.

3) Handling large heavy objects can be extremely dangerous due to danger of upending the tractor.

4) Handling large heavy objects can be extremely dangerous due to danger of the object rolling or sliding down the loader boom onto the operator.

5) If you must handle large heavy objects, protect yourself by using caution, moving slowly, and avoiding bumps and rough ground.

6) If you must handle large heavy objects, protect yourself by never lifting load higher than necessary to clear the ground.

7) If you must handle large heavy objects, protect yourself by adding rear ballast to the tractor to compensate for weight of load.

8) If you must handle large heavy objects, protect yourself by never lifting large heavy objects that may roll or fall on the operator.

9) 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.

10) Use only Factory bale probe or bale retaining devise handler attachment when handling round bales.

11) Do not handle large square bales without a retaining device handler attachment.

12) Do not use buckets, forks ,or other attachments without bale retaining devices

13) Do not use loader for handling large, heavy objects such as logs, tanks, etc.

SLOPES

1) Stay off of slopes too steep for safe operation.

2) Shift down before you start up or down a hill with a heavy load. Avoid “free wheeling“

3) Use extreme caution when operating on a slope.

4) Always operate up and down the slope, never across the slope.

ELECTRICAL

1) Avoid contact with overhead wires, power lines, and obstacles when loader bucket or attachment is raised.

2) Electrocution from power lines can occur with or without contact.

3) Check for underground utilities before digging below grade level.

4) 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

1) Do not tamper with the relief valve setting. This will void warranty and could cause damage to loader and/or tractor.
2) 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.
3) Visually 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.
4) To prevent personal injury, relieve all pressure before disconnecting fluid lines.
5) Before applying hydraulic pressure, make sure all hydraulic connections are tight and components are in good condition.
6) Be sure to purge all the air from the hydraulic system before attempting to raise or lower this machine.

SAFETY PRECAUTIONS

1. 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.
2. Raised loader or boom can fall due to hydraulic system failure.
3. To avoid serious injury or death: Block up or securely support loader and boom before working underneath.
4. To avoid serious injury or death: Purge all air from hydraulic system before attempting to raise or lower loader or boom.
5. To avoid serious injury or death: Stand clear if lowering or raising loader or boom
6. Do not use hand or skin to check for hydraulic leaks. Use cardboard or wood. Wear eye protection.
7. High pressure oil leaks can penetrate skin causing serious injury and gangrene. Consult a physician immediately.
8. Lower the loader or boom and release hydraulic pressure before loosening fittings.

AFTER OPERATION

1) 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.
2) Before disconnecting hydraulic lines, relieve all hydraulic pressure.
3) 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.
4) Always park loader with bucket attached to loader.
5) When a front loader is mounted on the tractor, enter and exit the operator's seat only from left side of the tractor.
6) Always park loader with a Factory attachment attached to the loader.
7) Special care should be taken to park or store attachments with points or sharp edges in a safe manner.
8) 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

1) Visually check for hydraulic leaks and broken, missing, or malfunctioning parts. Make necessary repairs before operation.
2) To keep mounting kit hardware from loosening during loader operation, hardware must be torqued to specifications notes in operator manual.
3) Always wear safety goggles when servicing or repairing the machine

4) 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.

5) 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 loader.

2. SAFETY DECALS

SAFETY DECAL LOCATIONS

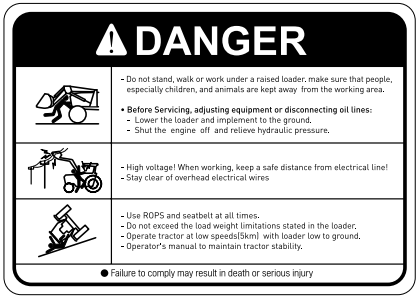
⊕ IMPORTANT

- Danger decals DEL00-00008, located on the left hand Mid-Mount and Warning Decal DEL00-00009, DEL00-00010 located on the loader right hand Mid-Mount are visible when getting on tractor

Care of Safety Decals.

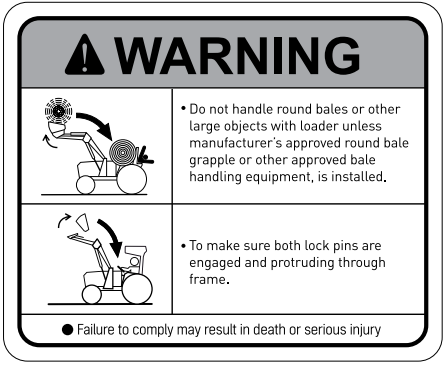
1. Keep safety decals clean and free of obstructing material.
2. Clean safety decals with soap and water and dry with a soft cloth.
3. Replace damaged or missing safety decals with new decals from your KUBOTA Dealer.
4. If a component with a safety decal(s) affixed is replaced with a new part, make sure new safety decal(s) are attached in the same location(s) as the replaced components.
5. Mount new safety decals by applying on a clean dry surface and pressing air bubbles to outside edges.

(1) Part No : DEL00-00008



(2) Part No : DEL00-00009

(3) Part No : DEL00-00010

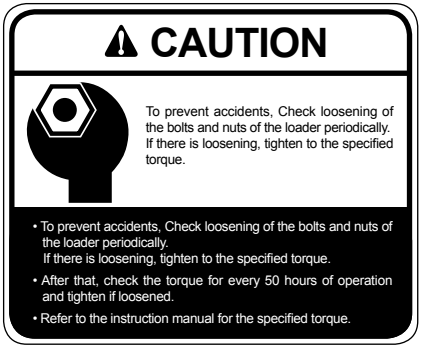


(4) Part No : DEL00-00006

(5) Part No : DEL00-00011

CAUTION

DEL 00-00007



SAFETY DECAL LOCATIONS

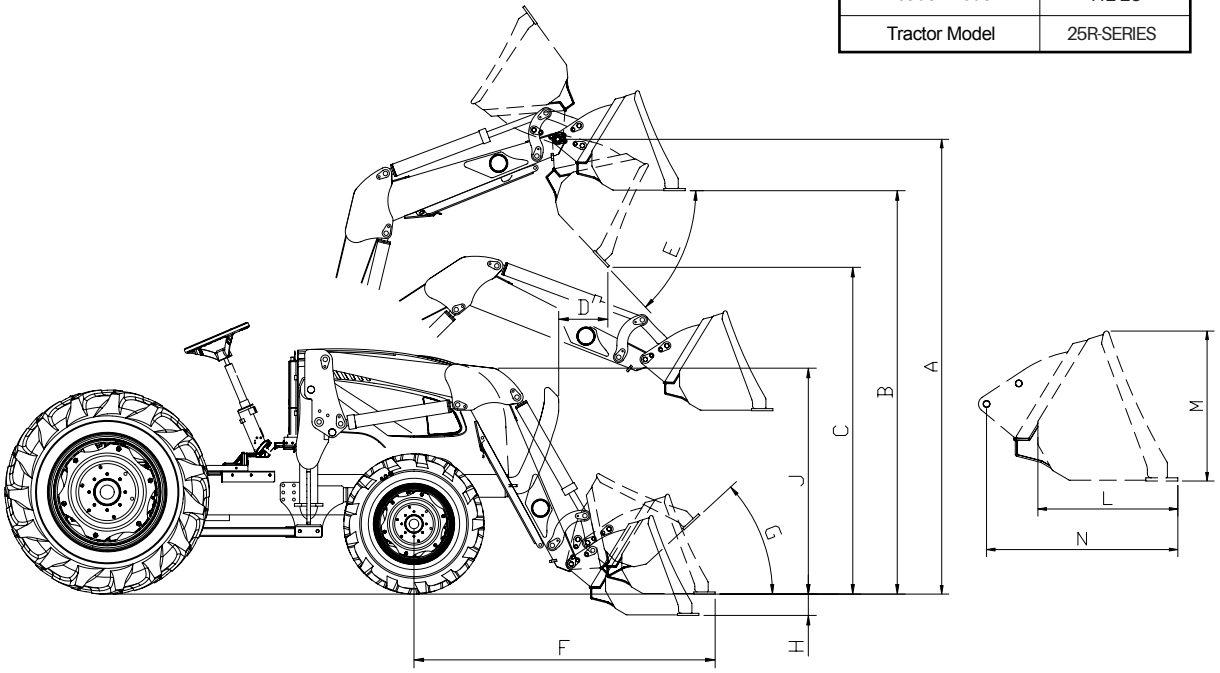
NAME PLATE

MAP 00-00001

3. LOADER SPECIFICATIONS

LOADER SPECIFICATIONS

Loader Model	HL 25
Tractor Model	25R-SERIES



REF.	Description	Specifications(mm)	Specifications(inch)
A	Maximum Lift Height	2715 mm	106.9 ”
B	Clearance with Attachment Level	2426 mm	95.5 ”
C	Clearance with Attachment Dumped	1956 mm	77.0 ”
D	Reach at Maximum Height(45°)	433 mm	17.0 ”
E	Maximum Dump Angle	57°	57°
F	Reach with Attachment on Ground	1805 mm	71.1 ”
G	Attachment Rollback Angle	42°	42°
H	Digging Depth Below Grade	109 mm	4.3 ”
L	Depth of Attachment (to back of inner shell)	512 mm	20.1”
M	Height of Attachment	496 mm	19.5”
N	Depth of Attachment (to pivot pin)	717 mm	28.2”
	Lift capacity to maximum height-at pivot pin	1198 kg	2636 lb
	Breakout force-at pivot pin	2458 kgf	5408 lb
	Bucket rollback force at ground line	1355 kgf	2981 lb
	Lift Cylinder	35x60x718x450ST	1.4 ”x2.4 ”x28.2 ”x17.7 ”ST
	Bucket Cylinder	35x60x988x330ST	1.4 ”x2.4 ”x38.9 ”x13.0 ”ST
	Bucket Width	1730 mm	68.1 ”
	Bucket Weight	104 kg	229 lb
	Approx. Weight (without Bucket)	325 kg	715 lb
	Bucket Capacity	0.32 m^3	11.3 cu.ft

4. INTRODUCTION

INTRODUCTION

INTRODUCTION

The purpose of this manual is to assist you in maintaining and operating your KUBOTA 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 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 infomation 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 is located on the right side of loader subframe. The serial number should be recorded on the Delivery and Registration form and also Below for your reference.

L5018 Loader Serial Number Information

Date Purchased _____

Loader Serial Number _____

Dealer Name and Telephone Number_____

5. TRACTOR PREPARATION

REAR COUNTERWEIGHT

> **⚠ CAUTION**
>
> **1) Add recommended rear tire liquid weight, rear wheel or rear ballast for increased stability.**
> **2) Do not exceed the manufacturer's rating for maximum gross vehicle weight. Refer to Operator's Manual or ROPS serial plate provided with tractor.**

1) The use of adequate counterweight to counter balance for maximum loader capacity is required for safe loader operation.
2) 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.
3) 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**
>
> **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 KUBOTA

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.

> **⚠ 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 tractor.

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

WHEEL TREAD SETTINGS

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

FRONT COUNTER WEIGHT

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.

6. LOADER OPERATION

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.

⚠ CAUTION

1) Do not operate bucket cylinders without bucket, it may damage to the bucket cylinders.

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

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

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

5) minimize the amount of tractor turning required to dump.

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

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

8) When driving with loads the max, speed of should be kept in than 10km/h.

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 it self.

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.

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

1) When lowering a heavy load, ease it downward slowly. 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.

2) 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.

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

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 park as equipped.**
> **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.

> ⚠ **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 pile.

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 level bucket position to prevent spilling from the bucket. 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 excessive speed.
Observe the following safety warning when transporting a loaded bucket.

TANSPORTING A LOADED BUCKET

⚠ CAUTION

1) 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 injury to operator.

2) Stop the loader arms gradually when lowering or lifting.

3) 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.

⚠ WARNING

A loaded Bucket should be transported in a low position at low ground 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 the possibility of accidents.

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.

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.

⚠ 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.

LOADER HYDRAULIC CONTROLS

1) Lock the control lever when leaving the tractor the Bucket is in the air.

2) The loader hydraulic valve lift Cylinder circuit incorporates a “float” position which allows the loader bucket to follow ground contours. The “float” position is engaged by shifting the control lever forward into “detent” until the operator pulls the control lever out of the “Detent” position.

3) Refer to “Scraping” operation for recommended use of “float” position.

4) The control valve has a neutral position that prevents movement of loader or bucket.

5) When the control valve is released from the work position, the spool will return to neutral.

⚠ IMPORTANT

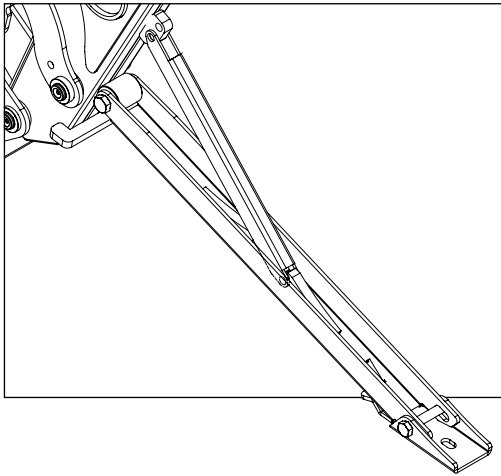
Contaminates in hydraulic oil can cause valve spools to stick.
Be alert when operating loader and follow your Tractor Operator’s Manual maintenance schedule.

7. LOADER REMOVAL

LOADER REMOVAL

⚠ CAUTION

- **Never park loader without bucket attached to the loader.**
- **Never allow weight of tractor to be put on parking leg when removing loader.**



STEP 1.

Park the tractor and loader on hard level surface

STEP 2.

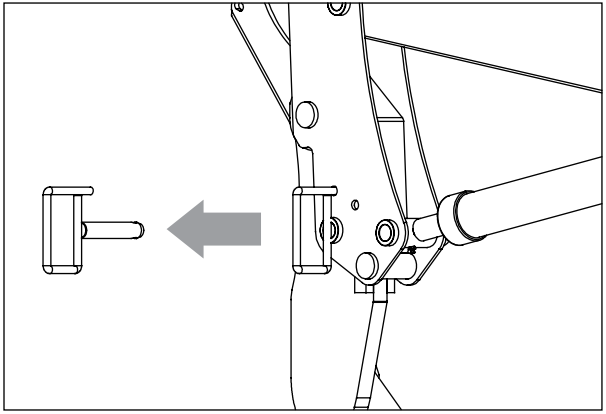
Raise the boom until the bucket is about 2 feet off the ground.

STEP 3.

Set the parking legs with pivot pin and keeper.

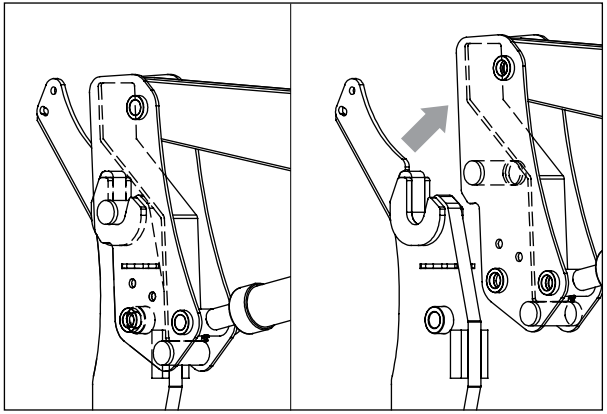
STEP 4.

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



STEP 5.

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



STEP 6.

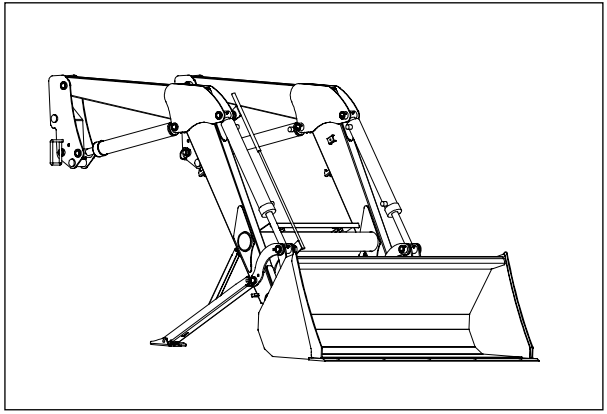
Pull the control lever to raise the loader until the loader break way from the mounting frame. bearing box. Adjust the bucket until the bottom surface of bucket tough the ground.

STEP 7.

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

STEP 8.

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



STEP 9.

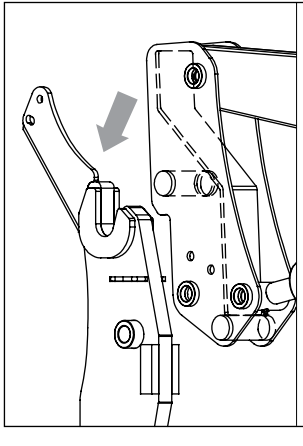
Disconnect the quick couplers on the hydraulic hoses.

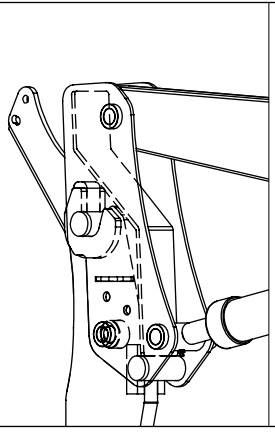
8. INSTALLATION WITH MOUNT AND BOOM

INSTALLATION WITH MOUNT AND BOOM

⚠ CAUTION

Never allow weight of tractor to be put on parking let when installation loader.





STEP 1.

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

STEP 2.

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.

STEP 3.

Start the engine and move the boom and bucket to adjust the height of loader.
Be sure to check the hook of mounting frame is slightly higher than the pin welded on loader post.

STEP 4.

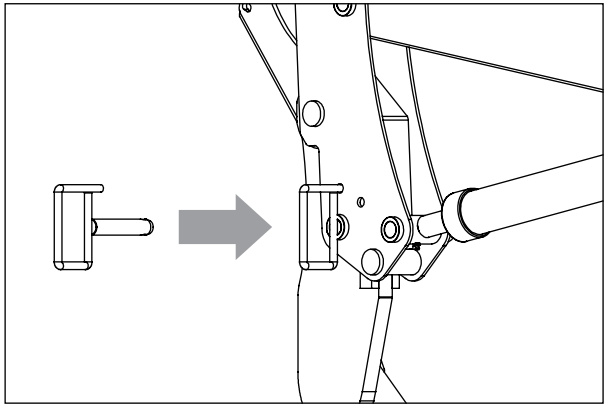
Move the tractor forward to put the mounting frame into the loader post. Stop the tractor when the hook is right over the pin.
Lower the loader post with moving the boom and bucket until it hooked securely each other.

STEP 5.

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

STEP 6.

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



9. LUBRICATION AND MAINTENANCE

⚠ 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 perfoming any service or maintenance operations on the tractor or loader.

⚠ CAUTION

1) Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serous 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.

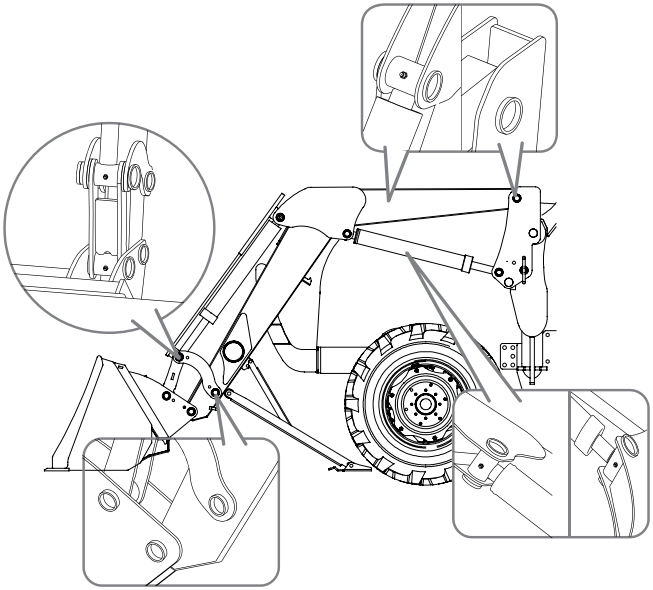
2) Do not operate the loader if the fittings are leaking or if the hoses are damaged. A sudden line burst could cause the mainframe to drop suddenly, causing damage to the tractor or loader or injury to personnel.

3) Operate the loader from the tractor seat only.

4) 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 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.



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 Lock pins	Check, replace if necessary	Daily/10 hours
Loader mount hardware	Check visually	Daily/10 hours
Loader mount hardware	Re-torque	Every 25 hours

10. TROUBLE SHOOTING

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 flowing 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.	Check coupler connections. Replace coupler(s) if necessary.
	Quick disconnect coupler(s) are not fully connected or “Flow Check”	Quick disconnect coupler(s) are not fully connected or “Flow Check”
	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 test.
	control valve blockage.	Inspect for blockage. Disassemble valve if necessary.

PROBLEM	POSSIBLE CAUSE	CORRECTION
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 appearance 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.
	Engine R.P.M. too slow.	Increase engine R.P.M
Inadequate lifting capacity	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 leakage. Repair as needed.
	Control valve leaking internally	Replace control valve and recheck operation.
	Hydraulic pump defective.	Refer to "Hydraulic Pump Capacity Inadequate".

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, tube line 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.
Loader drops with control valve spool in “centered” position (no external oil leakage evident.) Note: A gradual drop over an extended period of time is a normal condition.	Cylinder piston assembly leakage.	Check cylinders for leakage.
	Control valve internal leakage.	Replace control valve and recheck.
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.

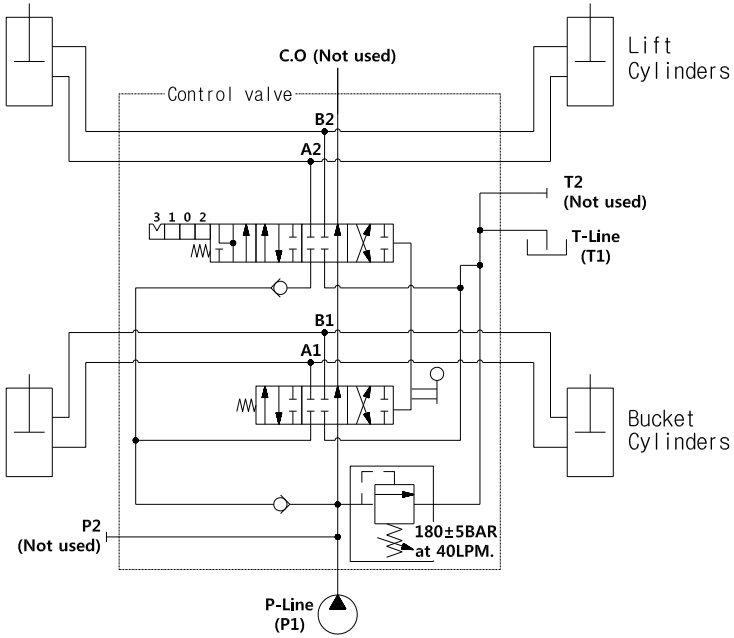
PROBLEM	POSSIBLE CAUSE	CORRECTION
Slow or erratic lift	Low hydraulic fluid level.	Check and replenish hydraulic fluid.
	Cold hydraulic fluid.	Allow hydraulic system to warm up to operating temperature.
	Engine R.P.M. too slow (hydraulic pump R.P.M. too slow).	Increase engine speed to obtain satisfactory loader operation.
	Excessive weight in bucket Material weight excessive 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”

PROBLEM	POSSIBLE CAUSE	CORRECTION
Control valve spool(s) will not return to centered positon.	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.	Disassemble valve for inspection and repair.
	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.
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.

PROBLEM	POSSIBLE CAUSE	CORRECTION
Hydraulic pump capacity inadequate.	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.
Bucket cutting edge wear rate is excessive. (Wear rate is even across full width of bucket) Note: Extensive use of bucket on concrete or asphalt surfaces will accelerate wear rate of bucket cutting edge.	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.
	Bucket wear pads worn.	Replace wear pads.

11. HYDRAULIC SYSTEM SCHEMATIC

HYDRAULIC SYSTEM SCHEMATIC



A1 : Bucket cylinder extend
B1 : Bucket cylinder retract
B2 : Lift cylinder extend
A2 : Lift cylinder retract

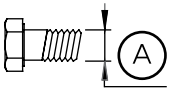
12. TORQUE TIGHTENING CHART

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 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

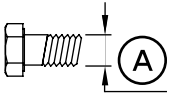
SAE Grade2 (No Dashes)

SAE Grade 5 (3 Radial Dashes)

SAE Grade 8 (6 radial Dashes)

A 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	4116	474	642	669	907
1“	1-1/2“	467	634	722	979	1020	1383

MERTIC HARDWARE



METRIC SERIES TORQUE CHART

Metric Grade 8.8

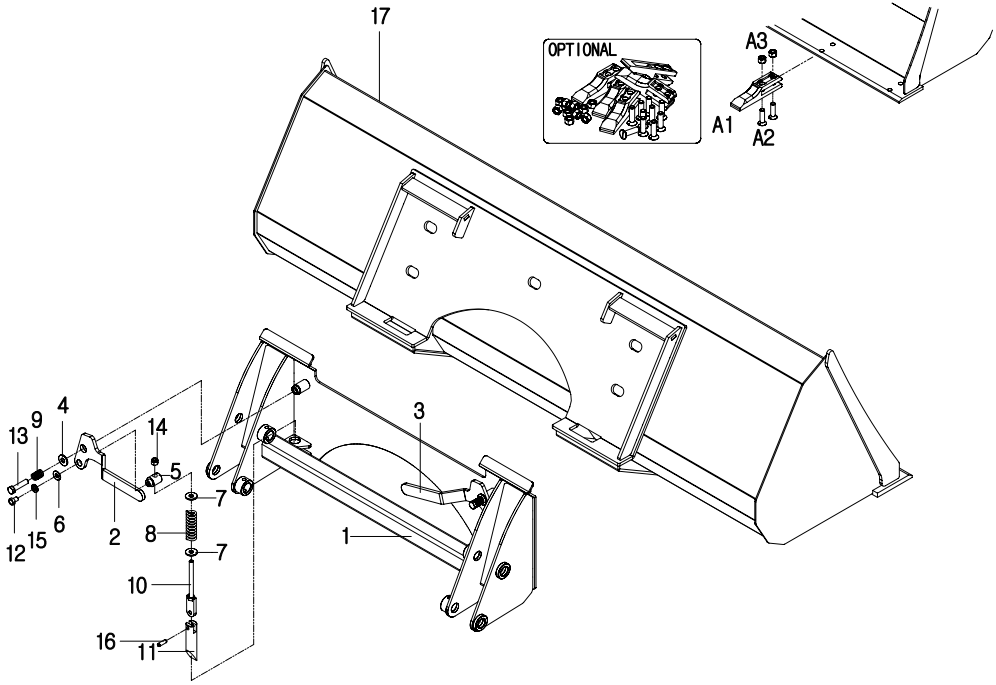
Metric Bolt Head Identification

Metric Grade 10.9

A Diameter & Thread Pitch (Milimeters)	Wrench Size	COARSE THREAD				FINE THREAD				A Diameter & Thread Pitch (Milimeters)
		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	
M6 X P1.0	10mm	8	6	11	8	8	66	11	8	M6 X P1.0
M8 X P1.25	13mm	20	15	27	20	21	16	29	22	M8 X P1.0
M10 X P1.5	16mm	39	29	54	40	41	30	57	42	M10 X P1.25
M12 X P1.75	18mm	68	50	94	70	75	55	103	76	M12 X P1.25
M14 X P2.0	21mm	109	80	151	111	116	87	163	120	M14 X P1.5
M16 X P2.0	24mm	169	125	234	173	181	133	250	184	M16 X P1.5
M18 X P2.5	27mm	234	172	323	239	263	194	363	268	M18 X P1.5
M20 X P2.5	30mm	330	244	457	337	367	270	507	374	M20 X P1.5
M22 X P2.5	34mm	451	332	623	460	495	365	684	505	M22 X P1.5
M24 X P3.0	36mm	571	421	790	583	623	459	861	635	M24 X P2.0
M30 X P3.0	46mm	1175	867	1626	1199	1258	928	1740	1283	M30 X P2.0

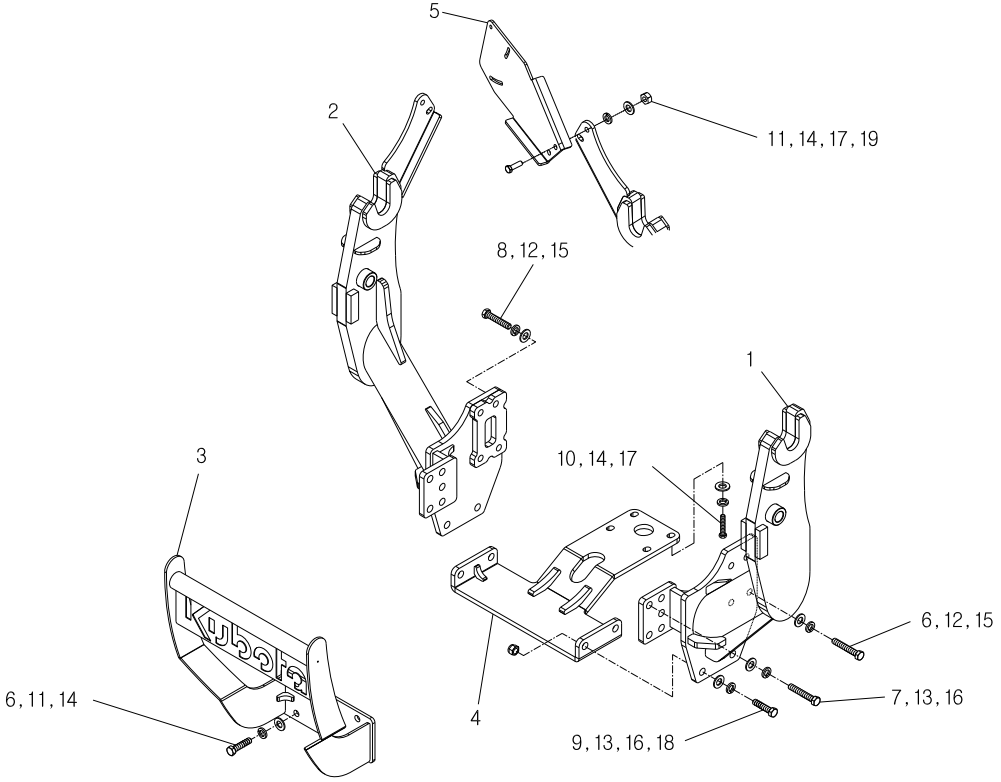
13. PART ILLUSTRATIONS

BUCKET, QUICK ATTACHMENT



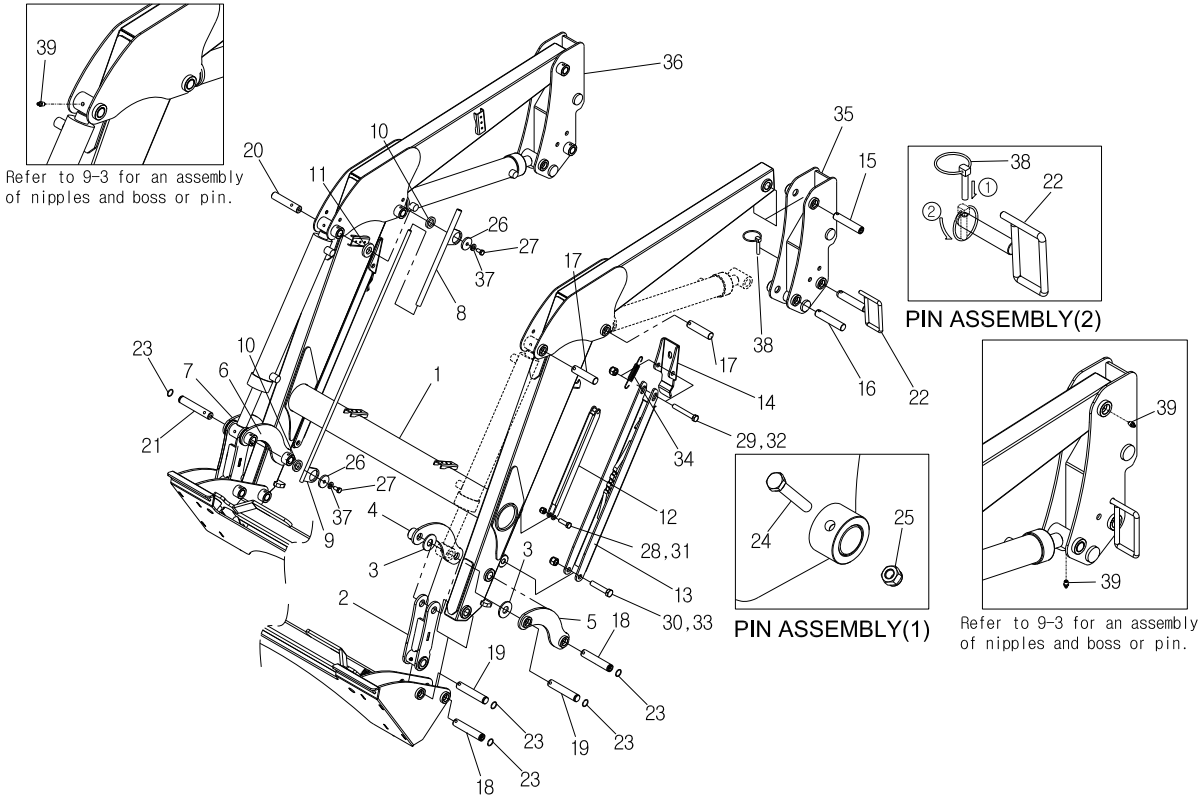
REF No.	PART No.	DESCRIPTION	Q'TY	I.C	REV. DATA
1	Q2150-10100	Quick Attachment W.A.	1		
2	Q2360-10001	Handle-L/H	1		
3	Q2360-10002	Handle-R/H	1		
4	Q2360-10005	Washer-Handle guide	2		
5	Q2360-10004	Link, Ø30-44L	2		
6	Q2360-10003	Washer-Link	2		
7	Q2360-10006	Washer-Pin guide	4		
8	Q2360-10007	Spring-Handle, Ø20xØ3.3-100L	2		
9	Q2360-10008	Spring-Handle(2), Ø6xØ3.2-30L	2		
10	Q2360-10200	Pin Link W.A., M12x1.75x130L	2		
11	Q2360-10009	Pin-Lock, Ø32-132L	2		
12	1AM12-02067-51	Hex-Bolt-HT, M12x1.25P-20L	2		
13	1AM14-0606P-81	Hex-Bolt-HT, M14x2.0P-60L	2		
14	1BM12-7N600	Nut, Nylock, M12x1.75P	2		
15	1CM14-414Q0	Washer-Spring, M14x3.5T	2		
16	2L100-00028	Pin-Spring, Ø10-28L	2		
17	B22BA-15000	Bucket W.A, 1458mm	1		
A1	B2000-00001	Bucket Tooth(Optional)	5		
A2	1AM16-0604P-81	Flat head-bolt, M16x2.0P-40L(Optional)	10		
A3	1BM16-81100	Hex-Nut-HT, M16x2.0P(Optional)	10		

MOUNTING FRAME, FRONT GRILL ASSEMBLY



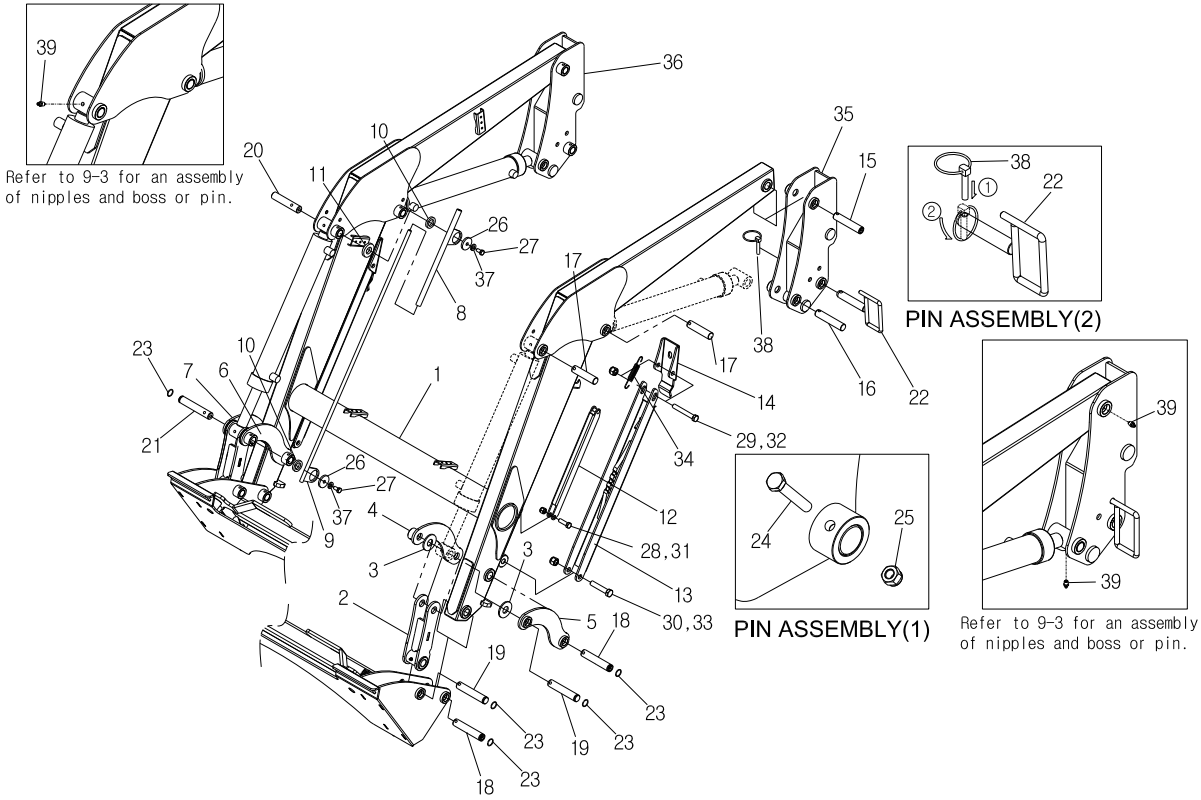
REF No.	PART No.	DESCRIPTION	Q'TY	I.C	REV. DATA
1	M2C02-10100	Mounting Frame-LH	1		
2	M2C02-10200	Mounting Frame-RH	1		
3	M2C01-10600	Grill Guide	1		
4	M2C02-10300	Cross bar	1		
5	M2C02-V0001	Valve Bracket	1		
6	1AM14-0401P-61	Hex-Bolt-HT, M14x1.5P-40L	8		
7	1AM16-0401P-61	Hex-Bolt-HT, M16x1.5P-40L	10		
8	1AM14-0501P-61	Hex-Bolt-HT, M14x1.5P-50L	4		
9	1AM16-0401P-81	Hex-Bolt-HT, M16x2.0P-50L	4		
10	1AM12-0351P-51	Hex-Bolt-HT, M12x1.25Px35L	4		
11	1AM12-03517-71	Hex-Bolt-HT, M12x1.75Px35L	2		
12	1CM14-41480	Washer-Spring, M14	12		
13	1CM16-41780	Washer-Spring, M16	14		
14	1CM12-41180	Washer-Spring, M12	6		
15	1CM14-11280	Washer-Plain, M14	12		
16	1CM16-11280	Washer-Plain, M16	14		
17	1CM12-10680	Washer-Plain, M12	6		
18	1BM11-M1606	Hex-Nut, M16x2.0P	4		
19	1BM12-72600	Hex-Nut, M12x1.75P	2		

BOOM ASSEMBLY



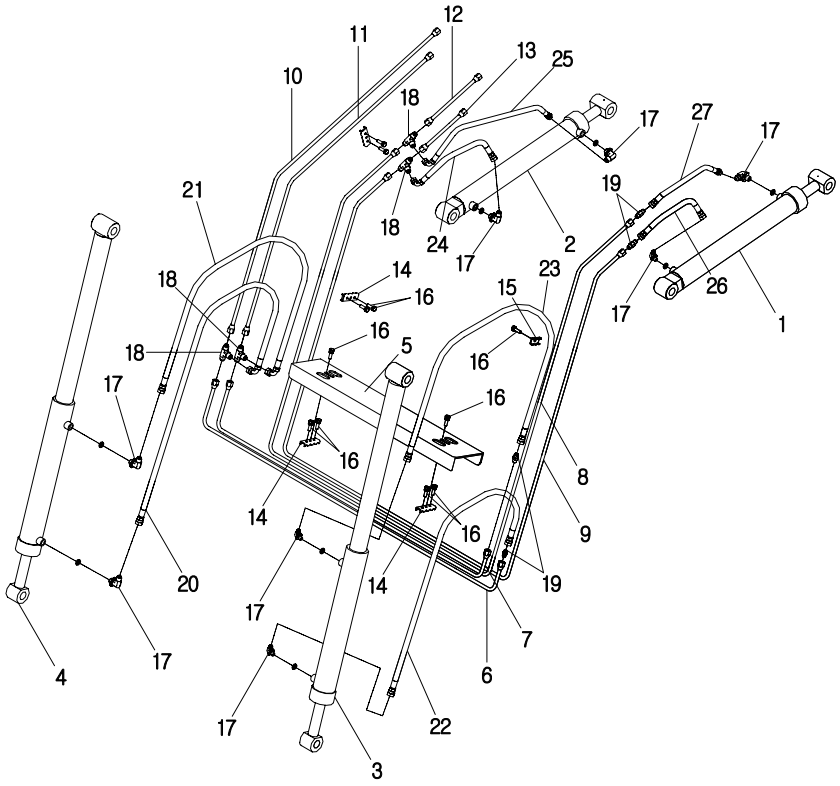
REF No.	PART No.	DESCRIPTION	Q'TY	I.C	REV. DATA
1	E232B-10100	Boom W.A., 1900L	1		
2	E232A-10600	Link W.A.	2		
3	E232A-10001	Washer-Link(2)	4		
4	E232A-10200	Link W.A.-Bucket Out-R/H	1		
5	E232A-10300	Link W.A.-Bucket IN-R/H	1		
6	E232A-10400	Link W.A.-Bucket Out-L/H	1		
7	E232A-10500	Link W.A.-Bucket IN-L/H	1		
8	E232B-10200	Indicator-Top	1		
9	E232C-10200	Indicator-Bottom, Ø12x950L	1		
10	E232A-10003	Bush-Indicator	2		
11	E232A-10002	Washer-Indicator	1		
12	E232D-11300	Stand Bar W.A	2		
13	E232D-11200	Stand	2		
14	E264A-10002	Foot-Stand	2		
15	1D2GB-10125	Pin Assembly, Ø25x125L(Nipple)	2		
16	1D11B-10125	Pin, Ø25x125L	2		
17	1D11B-10104	Pin, Ø25x104L	3		
18	1D2GC-10132	Pin Assembly, Ø25x132L(Nipple,Coil-ring)	4		
19	1D11C-10132	Pin, Ø25x132L(Coil-ring)	3		
20	1D11B-10119	Pin, Ø25x119L(indicator-Top, Coil-ring)	1		

BOOM ASSEMBLY



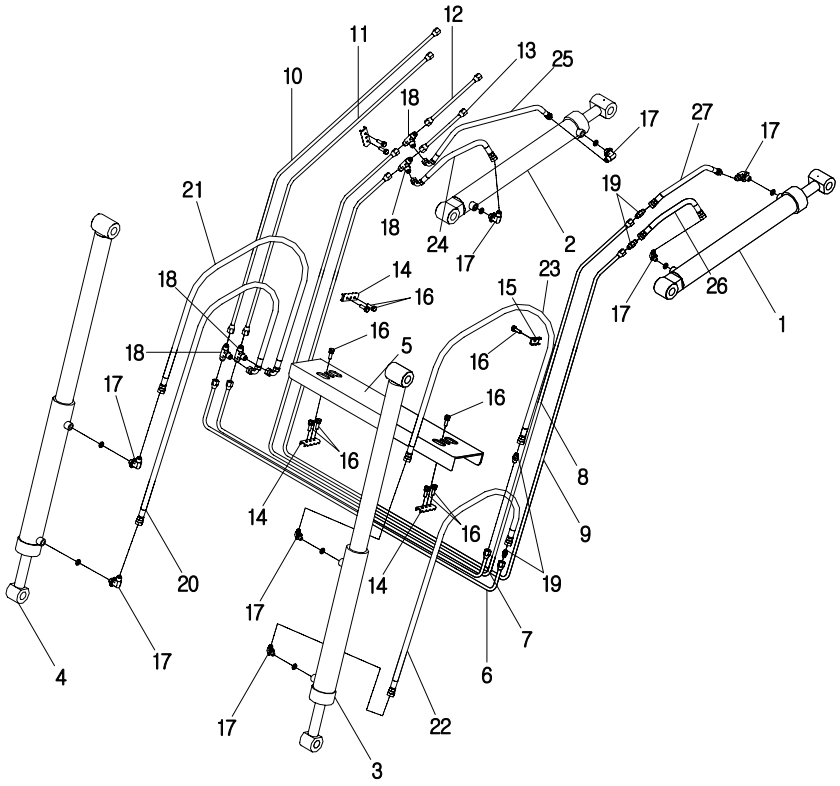
REF No.	PART No.	DESCRIPTION	Q'TY	I.C	REV. DATA
21	1D11C-10139	Pin, Ø25x139L(Indicator-Bottom, Coil-ring)	1		
22	1DW1R-251350	Lock pin, Ø25x128L	2		
23	F10G0-00001	Coil-ring, Ø25	8		
24	1AM08-05067-51	Hex-Bolt-HT, M8x1.25P-50L	16		
25	1BM08-5N700	Nut, Nylock, M8x1.25P	16		
26	E232A-10004	Plate-pin	2		
27	1AM10-02517-61	Hex-Bolt-HT, M10x1.5P-25L	2		
28	1AM12-03517-71	Hex-Bolt-HT, M12x1.75P-35L	2		
29	1AM14-10017-81	Hex-Bolt-HT, M14x2.0P-100L	2		
30	1AM16-08017-81	Hex-Bolt-HT, M16x2.0P-80L	2		
31	1BM12-7N700	Nut, Nylock, M12x1.75P	2		
32	1BM14-8N700	Nut, Nylock, M14x2.0P	2		
33	1BM16-8N700	Nut, Nylock, M16x2.0P	2		
34	2K1A0-18119	Tension spring, Ø18(Ø2.3)-119L	2		
35	P130A-10100	Post W.A LH	1		
36	P130A-10200	Post W.A RH	1		
37	1CM10-40880	Washer-Spring, M10	2		
38	2P010-25000	Link Pin, Ø10	2		
39	H2A1M-06100	Nipple, A-M6x1P (grease)	6		

BOOM HYDRAULIC ASSEMBLY



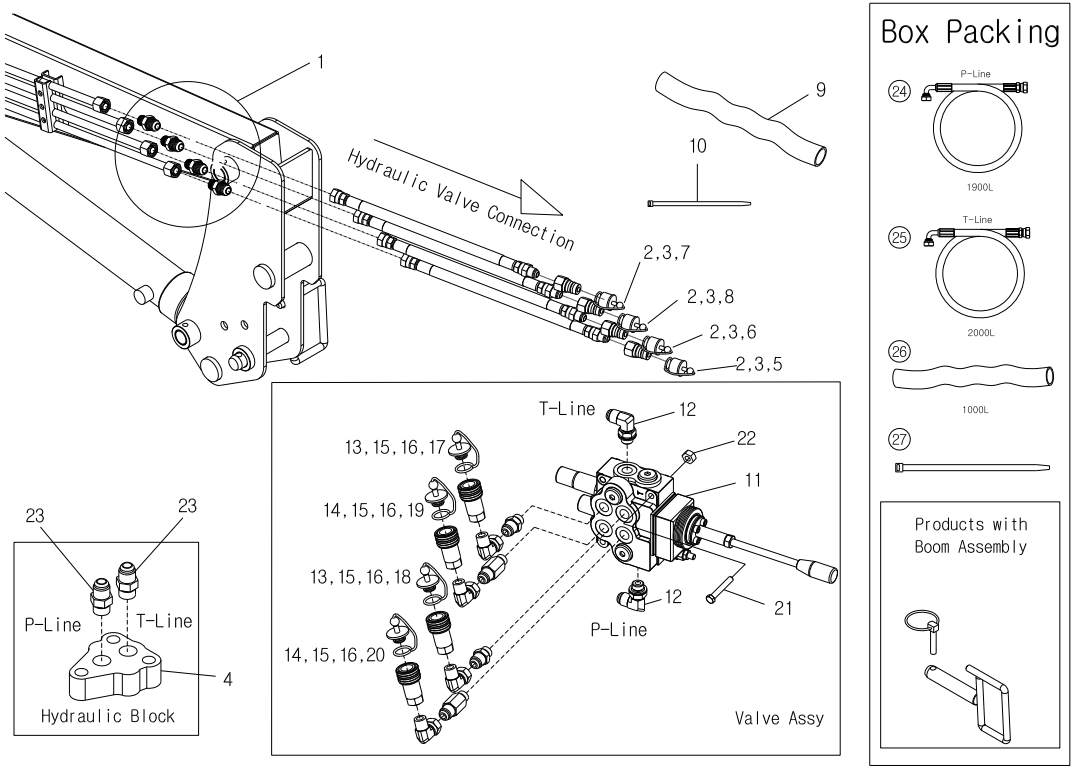
REF No.	PART No.	DESCRIPTION	Q'TY	I.C	REV. DATA
1	E232C-H0001	Boom Cylinder Ass'y-L/H, Ø60xØ35-666.5L(435ST)-LH	1		
2	E232C-H0002	Boom Cylinder Ass'y-R/H, Ø60xØ35-666.5L(435ST)-RH	1		
3	E232C-H0003	Bucket Cylinder Ass'y-L/H, Ø60xØ35-674L(363ST)-LH	1		
4	E232C-H0004	Bucket Cylinder Ass'y-R/H, Ø60xØ35-674L(363ST)-RH	1		
5	E232C-H0005	Cover, Pipe	1		
6	E232C-H0100	Pipe Ass'y, Bucket Rollback(1)	1		
7	E232C-H0200	Pipe Ass'y, Bucket Dump(1)	1		
8	E232C-H0300	Pipe Ass'y, Boom up(1)	1		
9	E232C-H0400	Pipe Ass'y, Boom down(1)	1		
10	E232C-H0500	Pipe Ass'y, Bucket Rollback(2)	1		
11	E232C-H0600	Pipe Ass'y, Bucket Dump(2)	1		
12	E232C-H0700	Pipe Ass'y, Boom up(2)	1		
13	E232C-H0800	Pipe Ass'y, Boom down(2)	1		
14	F1020-00000	Clamp-1	4		
15	F1010-00000	Clamp-2	1		
16	1AM08-03017-51	Hex-Bolt-HT, M8x1.25P-30L	11		
17	HELOAB08U-04G	Nipple, 1/2-20UNF, xPF1/4" (90°Elbow)	8		
18	BHBTM10-08U	Nipple, Ø10(M16x1.5P)x1/2-20UNF	4		
19	HBMC10-08U	Nipple, Ø10(M16x1.5P)x1/2-20UNF	8		
20	2JN94-20950	Hyd Hose, 904(1/2-20UNF)x4(1/2-20UNF)-950L(1/4)	1		

BOOM HYDRAULIC ASSEMBLY



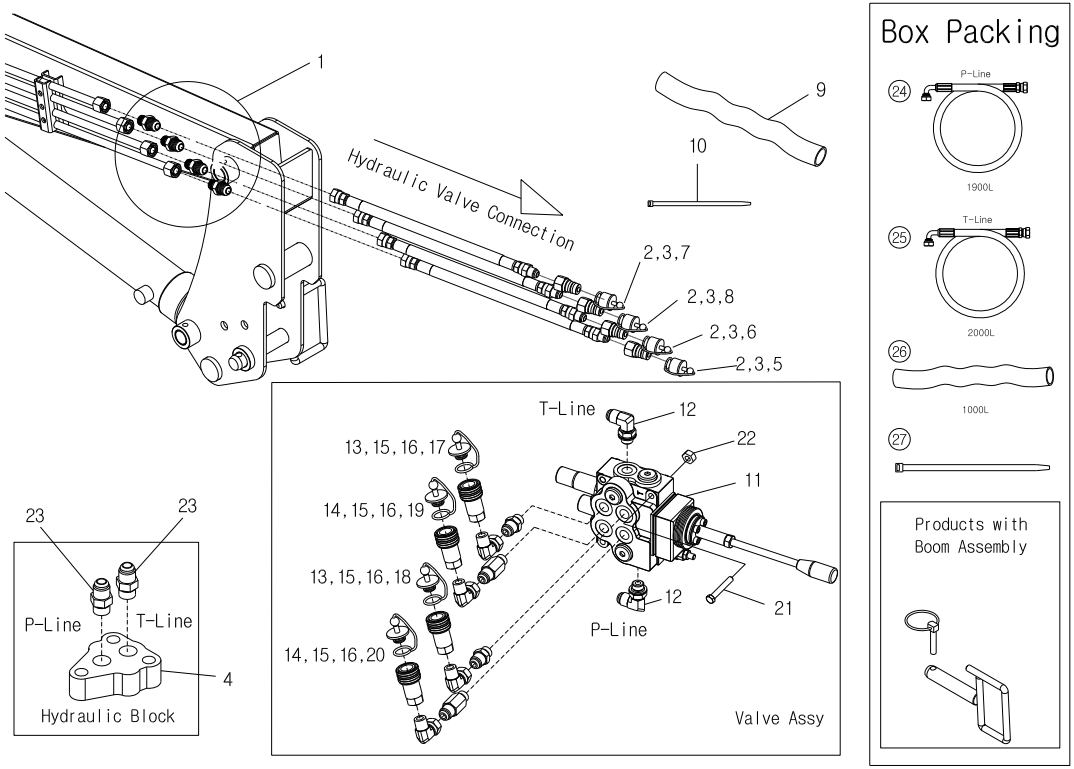
REF No.	PART No.	DESCRIPTION	Q'TY	I.C	REV. DATA
21	2JN94-20450	Hyd Hose, 904(1/2-20UNF)x4(1/2-20UNF)-450L(1/4)	1		
22	2JN74-20950	Hyd Hose, 4(1/2-20UNF)x4(1/2-20UNF)-950L(1/4)	1		
23	2JN74-20450	Hyd Hose, 4(1/2-20UNF)x4(1/2-20UNF)-450L(1/4)	1		
24	2JN94-20370	Hyd Hose, 904(1/2-20UNF)x4(1/2-20UNF)-370L(1/4)	1		
25	2JN94-20630	Hyd Hose, 904(1/2-20UNF)x4(1/2-20UNF)-630L(1/4)	1		
26	2JN74-20370	Hyd Hose, 4(1/2-20UNF)x4(1/2-20UNF)-370L(1/4)	1		
27	2JN74-20630	Hyd Hose, 4(1/2-20UNF)x4(1/2-20UNF)-630L(1/4)	1		

VALVE, HYD ASSEMBLY, BOX PACKING



REF No.	PART No.	DESCRIPTION	Q'TY	I.C	REV. DATA
1	BHUM10-08U	Nipple, Ø10(M16x1.5P)x1/2-20UNF	4		
2	2JN71-20850	Hyd Hose, 4(1/2-20UNF)x1(PT3/8)-850L(1/4)	4		
3	HQCP-06R	Quick Coupler, 3/8"(Male)	4		
4	M2C01-V0003	Hydraulic Block	1		
5	2R04R-03300	Dust Cap, Red, 3/8"(Male)	1		
6	2R04B-03300	Dust Cap, Blue3/8"(Male)	1		
7	2R04Y-03300	Dust Cap, Yellow, 3/8"(Male)	1		
8	2R04W-03300	Dust Cap, White, 3/8"(Male)	1		
9	2S090-00600	Webbing, 600L	1		
10	2T001-0540K	Cable Tie	1		
11	M2C01-V0002	Valve, LCB 3/8 ED TYPE - CC	1		
12	HELOAB12U-06G	Nipple, 3/4-16UNFxPF3/8 (O-ring,Gasket) 90°	2		
13	HOBAE12U-06GED	Nipple, PF3/8 ED x 3/4-16UNF	2		
14	HOBAE12U-L06GED-85L	Nipple, PF3/8 ED x 3/4-16UNF-85L	2		
15	HSME06R-12U	Nipple, 3/4-16UNFxPT3/8, 90° (Swivel)	4		
16	HQCP-06R	Quick Coupler, 3/8"(Female)	4		
17	2R04R-T3300	Dust Cap, Red, 3/8"(Female)	1		
18	2R04B-T3300	Dust Cap, Blue, 3/8"(Female)	1		
19	2R04Y-T3300	Dust Cap, Yellow, 3/8"(Female)	1		
20	2R04W-T3300	Dust Cap, White, 3/8"(Female)	1		

VALVE, HYD ASSEMBLY, BOX PACKING

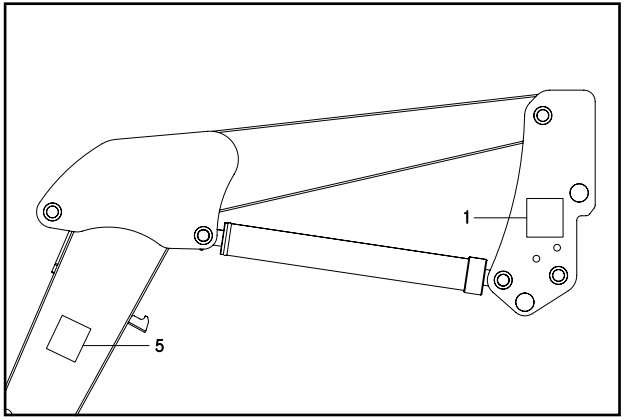


REF No.	PART No.	DESCRIPTION	Q'TY	I.C	REV. DATA
21	1AM08-06067-51	Wrench Bolt, M8×1.25P-60L	3		
22	1BM08-51700	Hex-Nut-HT, M8×1.25P	3		
23	HOBAB12U-06G	Nipple, PF3/8 Bonded x 3/4-16UNF	2		
24	2JN34-11900	Hyd Hose (P), 4(3/4-16UNF)x904(3/4-16UNF)-1900L(3/8)	1		
25	2JN34-12000	Hyd Hose (T), 4(3/4-16UNF)x904(3/4-16UNF)-2000L(3/8)	1		
26	2S090-01000	Webbing, 1000L	1		
27	2T001-0365K	Cable Tie	8		

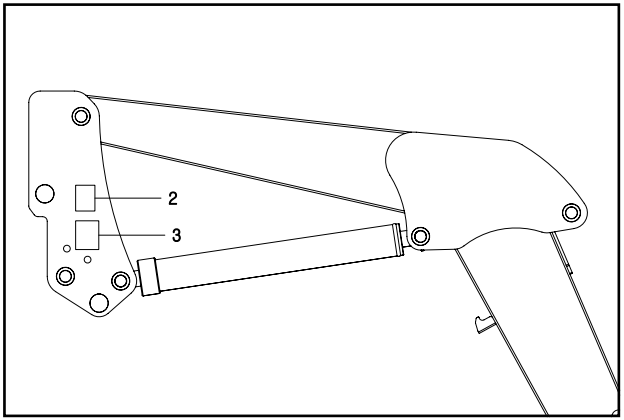
DECALS

⚠ CAUTION

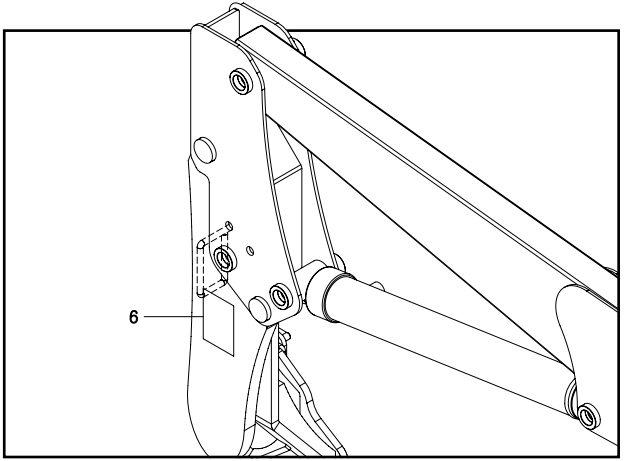
- Read and refer to the Tractor Operation Manual or Decals on the Tractor. and Loader Decals on as shown.



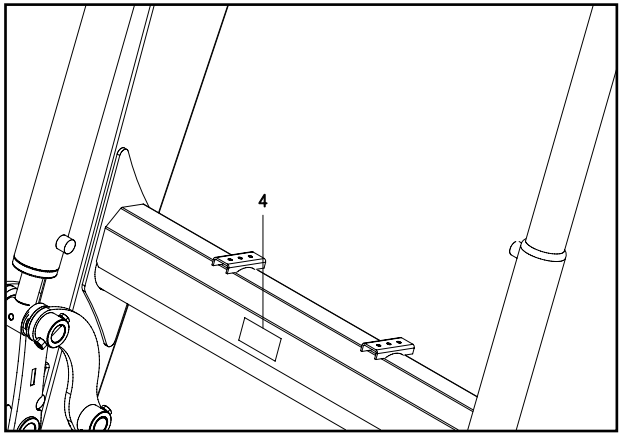
(5) DEL00-00011 (1) DEL00-00008



(3) DEL00-00010 (2) DEL00-00009



(6) 3102E-00007



(4) 3102E-00006

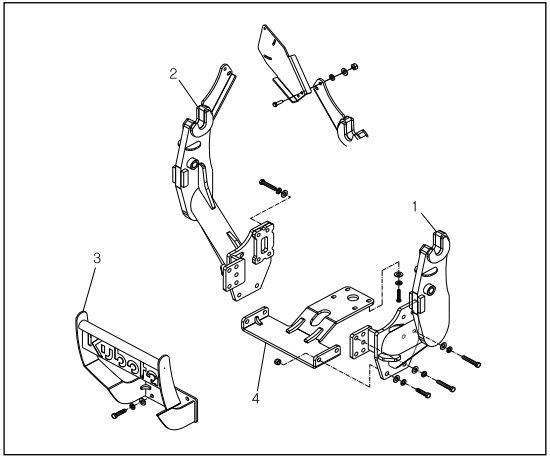
Refer to category “Safety decals”

14. LOADER INSTALLATION

INSTALLATION INSTRUCTIONS

⚠ CAUTION

· See your tractor Operator's manual for Safety precautions and Tractor preparations before installing the loader.



STEP 1.

Position tractor on hard level surface.

STEP 2:

Release loader, bucket and mount kit box from pallet.

STEP 3.

Install Mounting Frame-LH and
Mounting Frame-RH.

1. Mounting Frame-LH – 1EA
2. Mounting Frame-RH – 1EA
   - Hex-Bolt-HT, M14x1.5Px40L – 4EA
   - Hex-Bolt-HT, M14x1.5Px50L – 4EA
   - Washer-Spring, M14 – 8EA
   - Washer-Plain, M14 – 8EA
   - Hex-Bolt-HT, M16x1.5Px40L – 10EA
   - Washer-Spring, M16 – 10EA
   - Washer-Plain, M16 – 10EA

STEP 4.

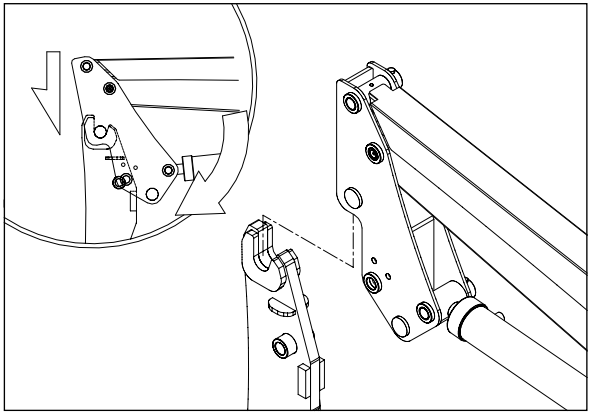
Install Cross Bar

4. Cross Bar – 1EA
   - Hex-Bolt-HT, M16x2.0P-50L – 4EA
   - Washer-Spring, M16 – 4EA
   - Washer-Plain, M16 – 4EA
   - Hex-Nut, M16x2.0P – 4EA
   - Hex-Bolt-HT, M12x1.25P-35L – 4EA
   - Washer-Spring, M12 – 4EA
   - Washer-Plain, M12 – 4EA

STEP 5.

Install Front Grill.

3. Grill - 1EA
   - Hex-Bolt-HT, M14x1.5Px40L – 4EA
   - Washer-Spring, M14 – 4EA
   - Washer-Plain, M14 – 4EA

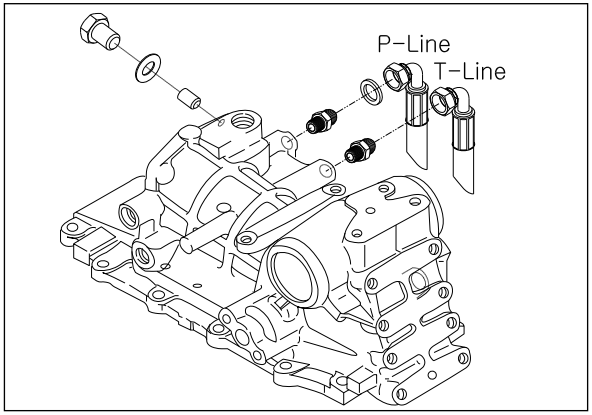


STEP 6.

Install Boom Ass'y
Hang the groove on the pin located on mounting frame

STEP 7.

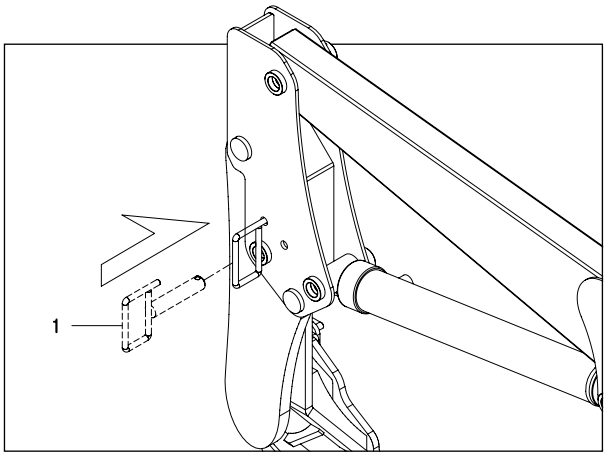
Hose "S"- shaped bend is fixed after the hose guide.



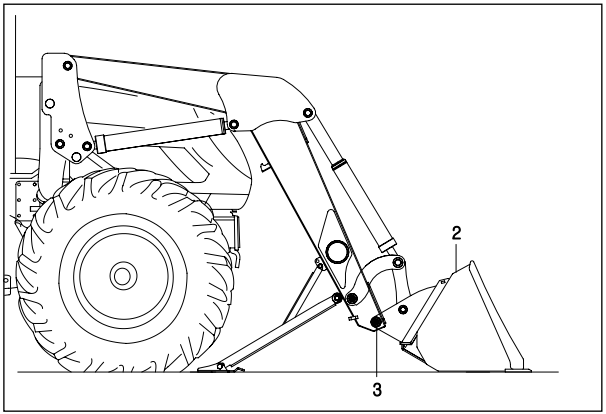
STEP 8.

L5018 Assembly manual for hydraulic valve
1. Remove the plug (A).
2. Insert and tighten the Screw plug (B) to switch inner hydraulic oil flow.
3. Remove plugs (D) on the right side of hydraulic housing.
4. Insert the nipple (C) connect hydraulic hose to port (P-line) to the VALVE (P-line) port.
5. Insert the nipple (C) connect hydraulic hose to port (T-line) to the VALVE (T-line) port.

(B) - screw plug : PTF 1/4-18 (1EA)
(C) - Nipples : OBAB 12U-06G (PF3/8 0 x U3/4) (2EA)



(1) Lock Pin



(2) Bucket Ass`y (3) Pivot Pin

STEP 9.

Install Lock Pin
1. Lock Pin - 2Sets

STEP 10.

Install the Bucket Ass'y

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