

WARRANTY CONDITIONS

Warranty Coverage :

DAEDONG, Industrial Co., Ltd DAEDONG Tractor Division, herein referred to as **DAEDONG**, undertakes to replace or repair any part of a **DAEDONG** 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 **DAEDONG** loader to the Dealer's place of business for repair.

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

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

WARRANTY CONDITIONS

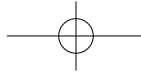
Warranty Provisions :

DAEDONG'S liability under this warranty is subject to the observance by the Purchaser of the following provisions:

1. The purchaser shall at all times in the operation of any **DAEDONG** Product, use those brands and grades of lubricating oils, lubricants or fuel and spare parts officially approved by **DAEDONG**.
2. The **DAEDONG** 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 perform 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 **DAEDONG** for the time that the parts have been used if they have been exposed to extreme wear.
3. Compensation is not paid for physical harm, deadlock, resulting damages or other losses.
4. To obtain warranty service, the Purchaser must (1) report the product defect to an authorized **DAEDONG** dealer and request repair within the applicable warranty term and (2) present evidence of purchase.
5. The Warranty shall be void if the **DAEDONG** loader has been altered or repaired outside of a **DAEDONG** 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.
6. Temporary repairs or additional costs due to the work being performed after normal working hours will not be compensated.
7. The above warranty is in lieu of all other warranties on **DAEDONG'S** behalf and neither party assumes any other liability in connection with **DAEDONG'S** Products.
8. Any dispute arising between **DAEDONG** and the Purchaser concerning the liability of **DAEDONG** under this warranty shall be subject to the laws of the State of North Carolina.

Right To Make Design and Product Changes:

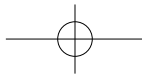
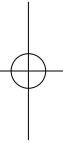
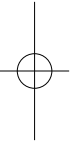
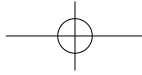
DAEDONG reserves the right to make changes in the design and other changes in its **DAEDONG** Products at any time without incurring any obligation with respect to any product previously ordered, sold or shipped.



PLEASE NOTE

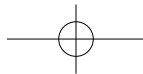
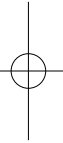
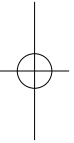
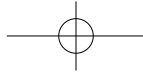
Make sure all potential operators of this equipment review this manual and all safety messages contained within.

SIGNS		DESCRIPTION
	CAUTION	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.
	WARNING	This mark indicates potentially hazardous situation which, if not observed, may result in death or moderate injury.
	IMPORTANT	This mark indicates emphasis on notable characteristics in working procedures or information on working procedures and technology for convenient use.
	NOTE	This mark indicates general comments or notes.



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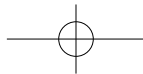
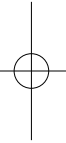
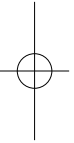
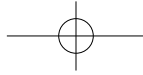
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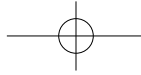
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1. SAFETY PRECAUTIONS



1-2 KL135

SAFETY

Understand that your safety and the safety of other persons is 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.

The safety information given in this manual does not replace any safety codes, insurance needs, federal, state and local laws. Make sure your machine has the correct equipment required by your local laws and regulations.

CAUTION

- **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

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

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

Equip your tractor with a ROPS cab or frame for your protection. See your tractor operator's manual for correct seat belt usage.

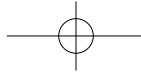
A frequent cause of personal injury or death is persons falling off and being run over. Do not permit others to ride on your tractor. Only one person, the operator, should be on the machine when it is in operation.

Before leaving the tractor, stop the engine, put all controls in neutral, engage the parking brake and remove the key from the ignition.

When using remote hydraulic tractor valves on some tractors, the loader lift and dump cylinders will continue moving unless the control levers 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 the control levers.

Stop the loader arms gradually when lowering or lifting loads.

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"



SAFETY PRECAUTIONS 1-3

Travel speed should be such that complete control and machine stability is maintained at all times. Where possible, avoid operation near ditches, embankments and holes. Reduce speed when turning, crossing slopes, and on rough, slick or muddy surfaces.

Never use your hand to check for suspected leaks under pressure. Use a piece of cardboard or wood for this purpose. Escaping hydraulic oil or diesel fuel leaking under pressure can have sufficient force to penetrate the skin and cause infection or serious injury, 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.

Contact with overhead power lines can cause severe electrical burn or death from electrocution.

Make sure there is enough clearance between raised equipment and overhead power lines.

Add recommended rear tire liquid weight or rear wheel weights for increased stability.

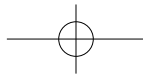
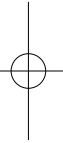
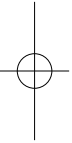
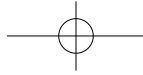
A loader attachment should be transported in a low position at slow ground speeds. Make turns slowly and use the tractor brakes cautiously. A loaded attachment in the raised position alters the center of gravity location of the machine and increases the possibility of mishaps.

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

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.

When using a loader, be alert of bucket position at all times. Loader in raised position with bucket rolled back can dump material on tractor causing damage or injury to tractor and / or operator.

Always park loader with bucket attached to loader.



2. SAFETY DECALS



2-2 KL135

SAFETY DECALS

Safety Decal Locations

⊕ IMPORTANT

- Warning decals 3102E-00001, located on the left hand Mid-Mount and Warning Decal 3102E-00002, 3102E-00003 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 **DAEDONG** 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.

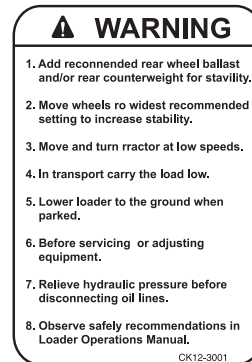
(1) Part No : 3101E-00001



(2) Part No : 3101E-00813



(3) Part No : 3102E-00001



SAFETY DECALS 2-3

(4) Part No : 3102E-00003

 WARNING
1. Add recommended rear wheel ballast and/or rear counterweight for stability.
2. Move wheels to widest recommended setting to increase stability.
3. Move and turn tractor at low speeds.
4. In transport carry the load low.
5. Lower loader to the ground when parked.
6. Before servicing or adjusting equipment.
7. Relieve hydraulic pressure before disconnecting oil lines.
8. Observe safety recommendations in Loader Operations Manual.
CK12-3003

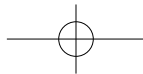
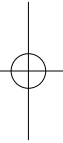
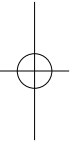
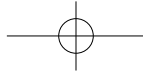
(5) Part No : 3102E-00002

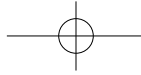
 WARNING

Crushing Hazard
Stay away from under lift arms and bucket!
1. Do not stand or work under a raised loader.
2. Support bucket and lift arms before working under loader.
3. Lower loader to the ground before leaving seat.
CK12-3002

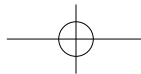
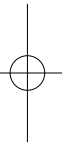
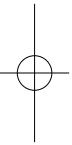
(6) Part No : 3104E-00030

KIOTI	
400-1, Jikgyo-ri, Changnyeong-eup Gyeongseong-gun, Gyeongnam, 653-806 Rep. of Korea Tel. : +82-55-530-7102 Fax. : +82-55-530-7113	
Tractor Model	_____
Loader Model	_____
Serial Number	_____
Rated Operating Load (WITH COUNTER WEIGHT)	_____ kg
Counter Weight	_____ kg
DO NOT EXCEED R.O.L.	





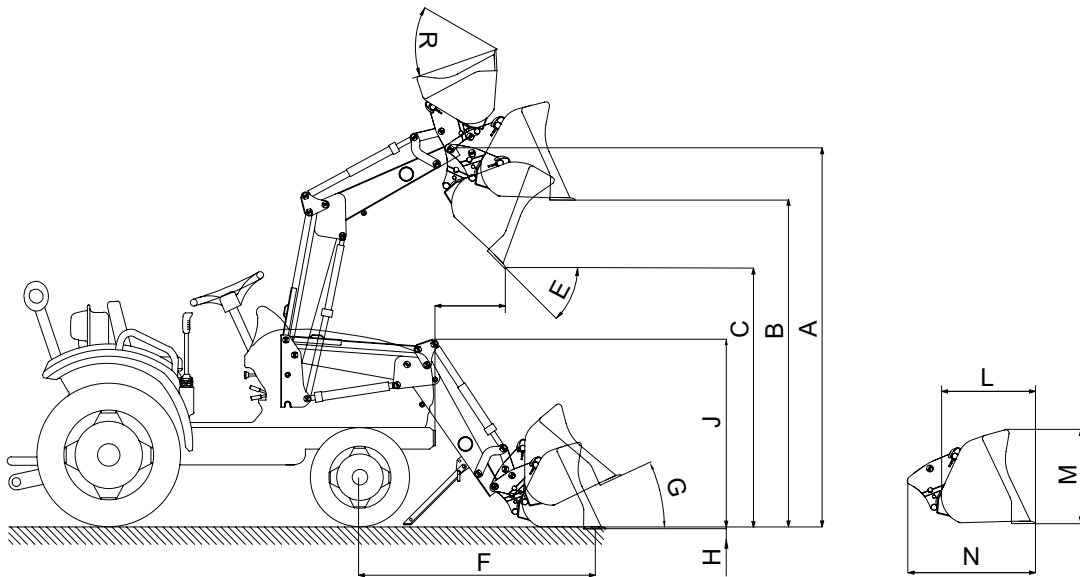
3. LOADER SPECIFICATIONS



3-2 KL135

LOADER SPECIFICATIONS

Specifications and design are subject to change without prior notice.

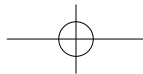
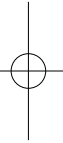
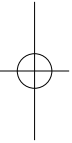
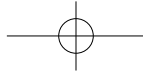


352O301A

Loader Model	KL135
Tractor Model	CK30

LOADER SPECIFICATIONS 3-3

A	Maximum Lift Height	2440 mm	96.1 in.
B	Clearance with Attachment Level	2150 mm	84.7 in.
C	Clearance with Attachment Dumped	1669 mm	65.7 in.
D	Reach at Maximum Height 45°	471 mm	18.5 in.
E	Maximum Dump Angle	61 degree	←
F	Reach with Attachment on Ground	1897 mm	74.7 in.
G	Attachment Rollback Angle	42 degree	←
H	Digging Depth Below Grade	211 mm	8.3 in.
J	Overall Height in Carry Position	1371 mm	54.0 in.
L	Depth of Attachment (to back of inner shell)	591 mm	23.3 in.
M	Height of Attachment	559 mm	22.0 in.
N	Depth of Attachment (to pivot pin)	768 mm	30.2 in.
S	Lift Capacity to Full Height at Pivot Pins	436 kgf	959.2 lbs
T	Breakout Force at Pivot Pins	857 kgf	1885.4 lbs
	Lift Cylinder	ø 50 mm X 612 mm	1.97 X 24.09 in.
	Bucket Cylinder	ø 50 mm X 780 mm	1.97 X 30.70 in.
	Bucket Width	1524 mm	60 in.
	Bucket Weight	112 kg	246.4 lbs
	Approx. Weight (without Bucket)	302.2 kg	664.84 lbs
	Bucket Capacity	0.27 m ³ (0.20 m ³)	9.53 cu.ft (7.06 cu.ft)



4. INTRODUCTION

4-2 KL135

INTRODUCTION

The purpose of this manual is to assist you in maintaining and operating your **DAEDONG** 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

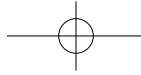
The serial number is important information about the machine and it may be necessary to know it before obtaining the correct replacement part. The serial number is located on the right side of loader sub_frame. The serial number should be recorded on the Delivery and Registration form and also below for your reference.

DAEDONG KL135 Loader Serial Number Information

Date Purchased _____

Loader Serial Number _____

Dealer Name and Telephone Number _____



5. TRACTOR PREPARATION



5-2 KL135

TRACTOR PREPARATION

Rear Counterweight

⚠ CAUTION

- Add recommended rear tire liquid weight, rear wheel or rear ballast for increased stability.
- 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 tractor.

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 **DAEDONG**.

Tire Inflation

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

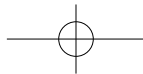
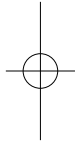
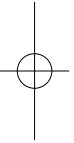
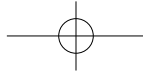
Rear tires must be maintained at equal pressure within the recommended tire inflation range. Unequal rear tire inflation can prevent loader attachment from contacting the ground across its full width.

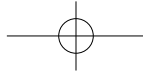
Wheel Tread Settings

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

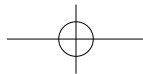
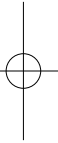
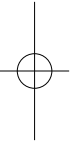
Front Counterweight

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.





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.

IMPORTANT

- Do not use the bucket for pushing down material with bucket cylinders partially extended. Damage to the cylinders may result.
- Do not tip bucket cutting edge down (fully extended bucket cylinders) during backfilling/backgrading operations.
- 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 required to dump.
- 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.
- Do not operate bucket cylinders without bucket, it may damage to the bucket cylinders.

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.
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 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.

⚠ 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.**
- **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 (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.

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.
- Stop the loader arms gradually when lowering or lifting.
- 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 the hydraulic system could cause the loader to drop, or attachment to dump, resulting in serious injury or death.

WARNING

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

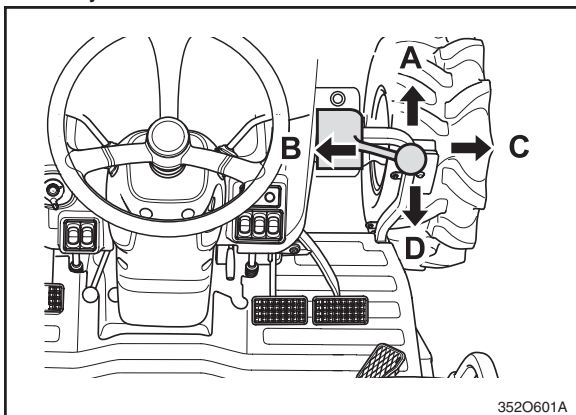
Backfilling/Backgrading

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 to utilize this operational practice when lowering loader boom when the bucket is loaded with material.

Loader Hydraulic Controls



(A) Forward-Float Low
(C) Right-Bucket Dump

(B) Left-Bucket Retract
(D) Rear-Raise

The Single lever joystick control lever is mounts on the CK25/30 From the factory.

The control lever has the safety lock function.

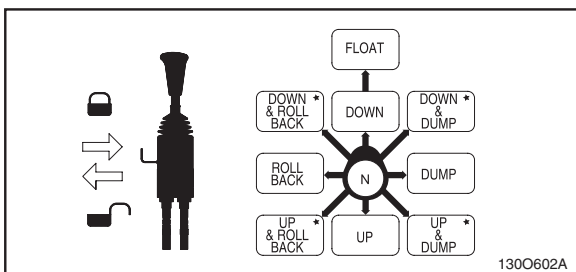
Lock the control lever when leaving the tractor while the Bucket is in the air.

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.

Refer to "Scraping" operation for recommended use of "float" position.

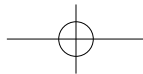
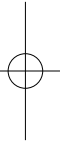
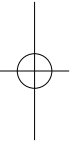
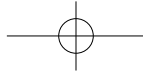
The control valve has a neutral position that prevents movement of loader or bucket.

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.



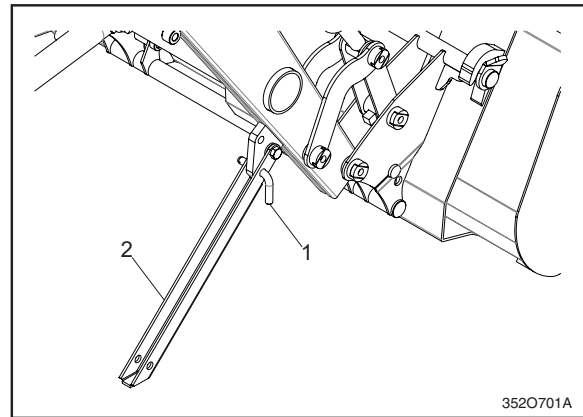
7. LOADER REMOVAL

7-2 KL135

LOADER REMOVAL

⚠ CAUTION

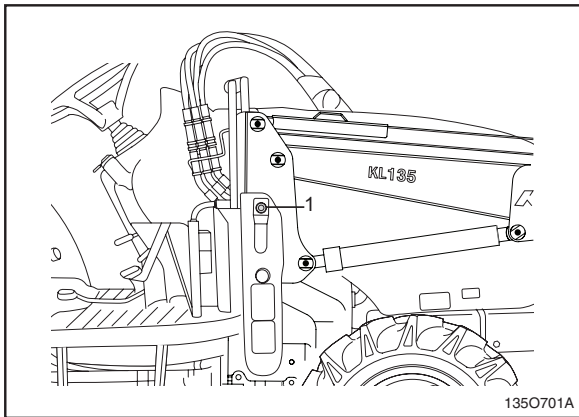
- Never park loader without bucket attached to the loader.
- Never allow weight of tractor to be put on parking leg when removing loader.



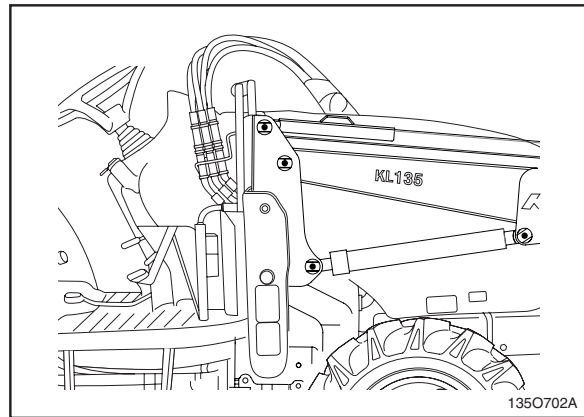
(1) Pin Hand

(2) Stand

- 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 pin-hand 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.



(1) Latch Pin



STEP 5. Remove the latch pin while move the control lever back and forth slightly to make the latch pin easy.

STEP 6. Pull the control lever to raise the loader until the inner bearing box.

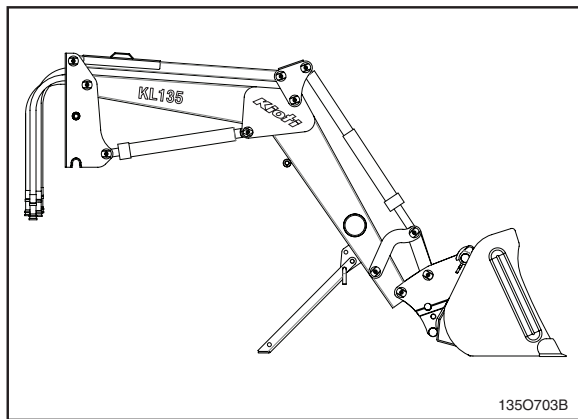
Adjust the bucket until the bottom surface of bucket touch the ground.

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.

7-4 KL135



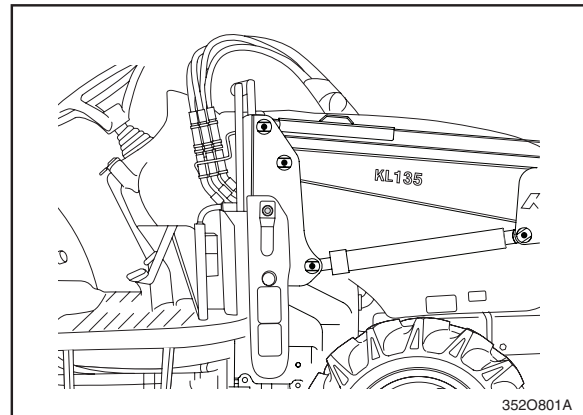
8. LOADER MOUNTING

8-2 KL135

LOADER MOUNTING

⚠ CAUTION

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

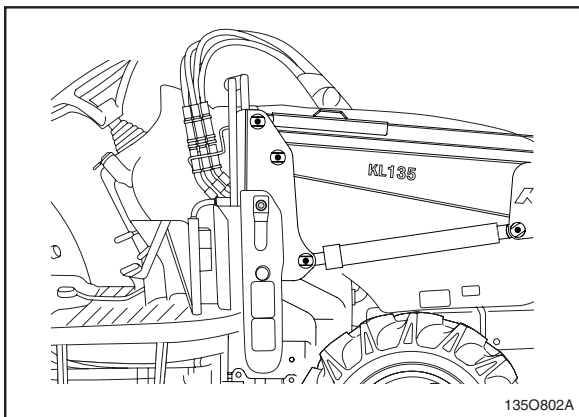
STEP 2. Stop the engine and move the control lever back and forth, Left and right several times to reduce the pressure in the hydraulic hoses.

Connect the hydraulic couplers match the color code rings.

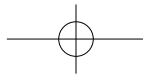
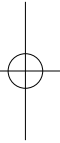
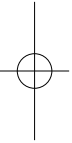
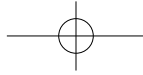
STEP 3. Start the engine and move the boom and bucket to adjust the height of inner bearing box.

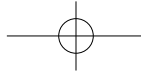
Be sure to check the hook of inner bearing box is slightly higher than the pin welded on outer bearing box .

LOADER MOUNTING 8-3



- STEP 4.** Move the tractor forward to put the inner bearing box into the outer bearing box. Stop the tractor when the hook is right over the pin.
Lower the inner bearing box with moving the boom and bucket until it hooked securely each other.
- STEP 5.** 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.
- 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

9-2 KL135

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 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.

⚠ WARNING

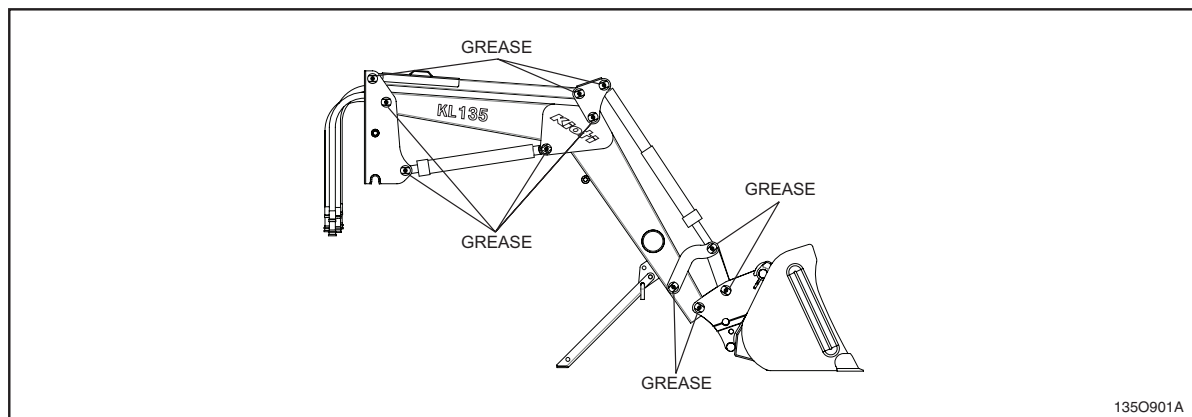
- *Do not operate the loader if the fittings are leaking or if the hoses are damaged. A sudden line burst could cause the mainframe to drop suddenly, causing damage to the tractor or loader or injury to personnel.*
- *Operate the loader from the tractor seat only.*
- *Do not stand or walk under a raised 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.

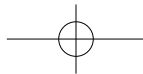
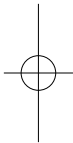
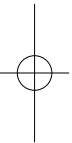
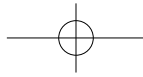
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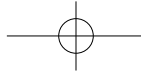
- When checking hydraulic system oil level, the loader should be on the ground and bucket fully retracted(all cylinders in retracted position).
- Grease all loader pivot points daily(or every day 10 hours). Refer to Tractor Operator's Manual for lubricant recommendations.
- Inspect hydraulic hoses, connections, 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 MAINTENANCE 9-3



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 lynch 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. TROUBLESHOOTING

10-2 KL135

TROUBLESHOOTING

This Troubleshooting 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 inoperative.	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.

Problem	Possible Cause	Correction
Lift and/or Bucket Cylinders operate in wrong direction relative to control lever position.	Hydraulic hoses connected incorrectly.	Correct hydraulic hose connections.
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/tubeline) kinked or pinched.	Check hoses and tubelines for evidence of restriction.
	Lift cylinder piston assembly leakage.	Check cylinders for leakage. Repair as needed.

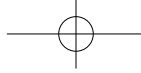
10-4 KL135

Problem	Possible Cause	Correction
Slow or erratic lift	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 leakage. Repair as needed.
	Control valve leaking internally	Replace control valve and recheck operation.
	Hydraulic pump defective.	Refer to "Hydraulic Pump Capacity Inadequate".
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.

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.) 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.
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.

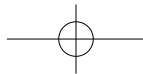
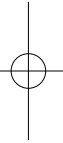
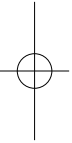
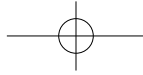
10-6 KL135

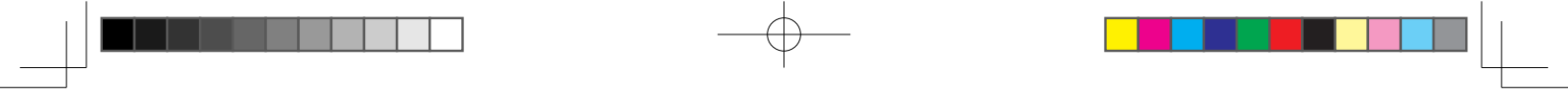
Problem	Possible Cause	Correction
External hydraulic fluid leakage.	Loose hydraulic connection.	Tighten loose connections.
	Defective hydraulic hose, tubeline, adapter fitting or adapter fitting o-ring.	Check for origin of oil leak and replace defective part.
	Control valve o-rings defective.	Replace 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.
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.



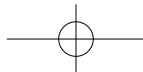
TROUBLESHOOTING 10-7

Problem	Possible Cause	Correction
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). 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.



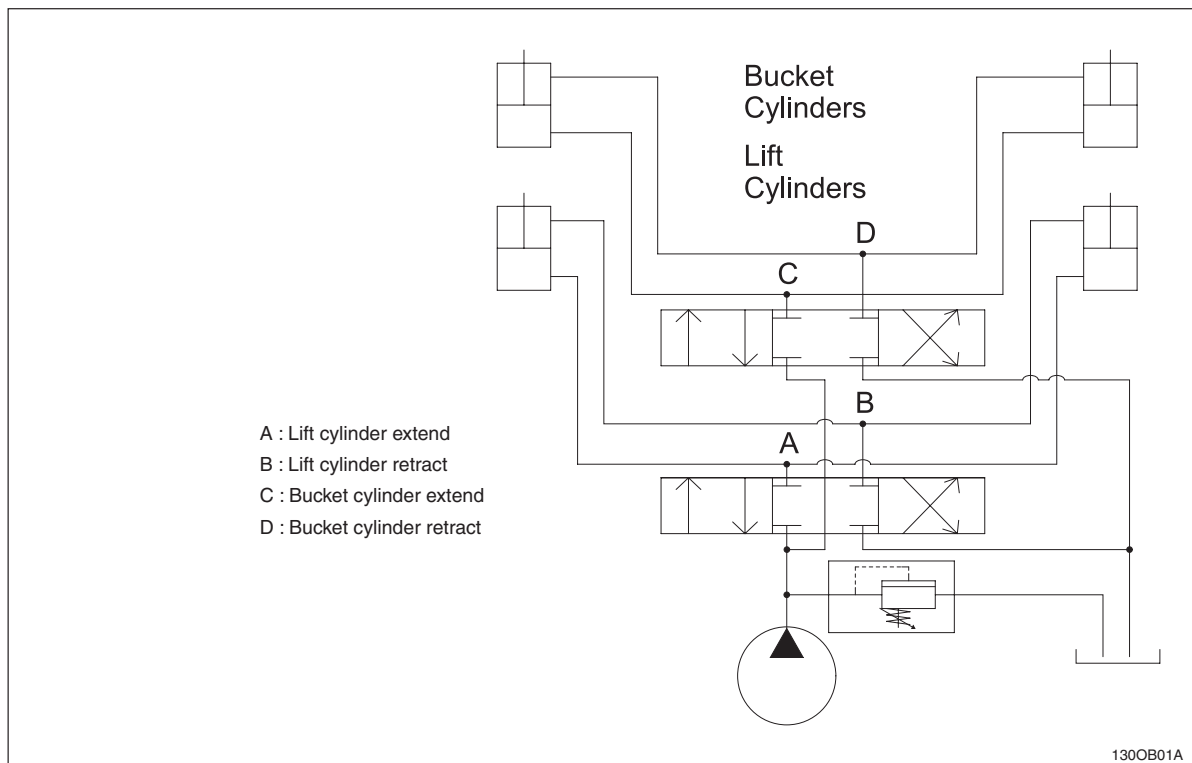


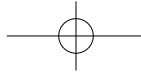
11. HYDRAULIC SYSTEM SCHEMATIC



11-2 KL135

HYDRAULIC SYSTEM SCHEMATIC AUXILIARY HYDRAULIC VALVE PACKAGECAUTION





12. TORQUE TIGHTENING CHARTS

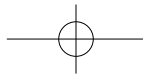
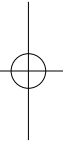
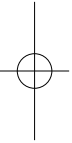
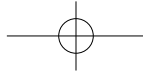
12-2 KL135

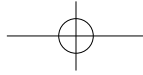
TORQUE TIGHTENING CHART 1

SAE FASTENER TORQUE CHART												
Note : Use these torques, unless special torques are specified. Values are for UNC and UNF thread fasteners, plated or unplated as received from supplier. Fasteners can be dry or lubricated with normal engine oil. Values do not apply if graphite, moly-disulphide or other extreme pressure lubricant is used.												
SAE Grade No.	2				5				8			
Bolt head identification (see note 1)					  				  			
Bolt Size	FT	LBS	Nm		FT	LBS	Nm		FT	LBS	Nm	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4	5	6	7	8	9	11	12	15	12	15	16	20
5/16	10	12	14	16	17	20.5	23	28	24	29	33	39
3/8	20	23	27	31	35	42	48	57	45	54	61	73
7/16	30	35	41	47	54	64	73	87	70	84	95	114
1/2	45	52	61	70	80	96	109	130	110	132	149	179
9/16	65	75	88	102	110	132	149	179	160	192	217	260
5/8	95	105	129	142	150	180	203	244	220	264	298	358
3/4	150	185	203	251	270	324	366	439	380	456	515	618
7/8	160	200	217	271	400	480	542	651	600	720	814	976
1	250	300	339	406	580	696	787	944	900	1080	1220	1464
1-1/8					800	880	1085	1193	1280	1440	1736	1953
1-1/4					1120	1240	1519	1681	1820	2000	2468	2712
1-3/8					1460	1680	1980	2278	2380	2720	3227	3688
1-1/2					1940	2200	2631	2983	3160	3560	4285	4827
Note 1: Bolt head identification marks as per grade. Manufacturing marks will vary. *Thick nuts must be used with Grade 8 bolts.												

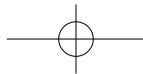
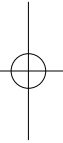
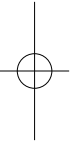
TORQUE TIGHTENING CHART 2

METRIC FASTENER (ISO) TORQUE CHART												
Note : Use these torques, unless special torques are specified. Values are for course thread fasteners, plated or unplated as received from supplier. Fasteners can be dry or lubricated with normal engine oil. Values do not apply if graphite, moly-disulphide or other extreme pressure lubricant is used.												
ISO Class No.	8.8				10.9				12.9			
Bolt head identification (see note 1)												
Bolt Size	Nm		FT LBS		Nm		FT LBS		Nm		FT LBS	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
M4	3	4	2	3	4	5	3	4	Because of the low ductility of these fasteners, the torque range is to be determined individually for each application. As a general rule, the torque ranges specified for grade 10.9 fasteners can be used satisfactorily on 12.9 fasteners. * M14 is not a preferred size.			
M5	6.5	8	5	6	9.5	11	7	8				
M6	10.5	12	8	9	15	17.5	11	13				
M8	26	31	19	23	37	43	27	32				
M10	52	61	38	45	73	87	54	64				
M12	90	107	66	79	125	150	93	112				
*M14	144	172	106	127	200	245	149	179				
M16	217	271	160	200	310	380	230	280				
M20	434	515	320	380	610	730	450	540				
M24	675	815	500	600	1050	1275	780	940				
M30	1250	1500	920	1100	2000	2400	1470	1770				
M36	2175	2600	1600	1950	3500	4200	2580	3090				
Note 1: Bolt head identification marks as per grade. Manufacturing marks will vary. *Thick nuts must be used with Grade 8 bolts.												





13. PART ILLUSTRATIONS



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GENERAL INFORMATION

Illustrations

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

Directional Reference

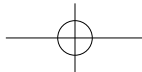
"Right hand" and "left hand" sides are determined by standing at the rear of the unit and facing in the direction of forward travel.

Parts 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.

Instructions

1. GROUP NAME
: Detail classification name for parts.
2. SECTION NAME
: Classification name for parts.
3. COMPONENTS
: The components of an assembly are identified by a bracket.
4. NO.
: Reference numbers are assigned to parts in the figure.



PART ILLUSTRATIONS 13-3

INTERCHANGEABILITY

: Indicates the interchangeability of parts due to design change.

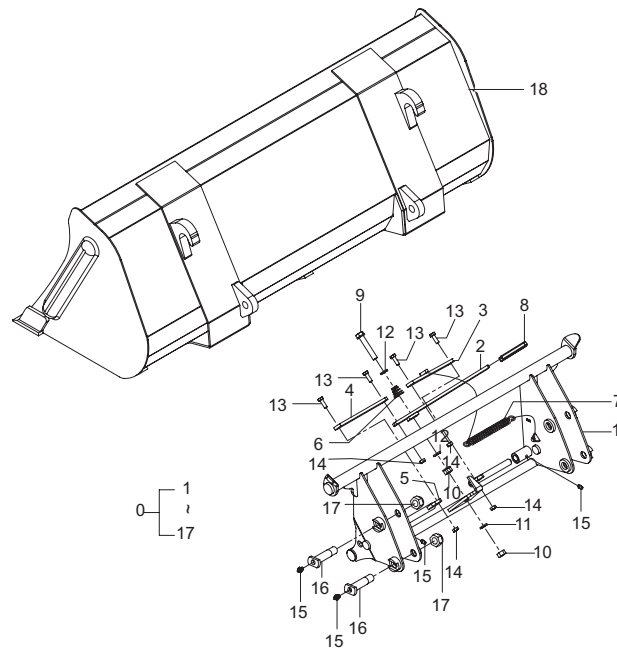
	Indicates that a new part can be used instead of an old part when you order this part, please order new part.
	Indicates that either parts can be used.
~4265-99999 5265-00001~	Indicates that a part has a serial number break. When you order this part, please order a part according to the serial number of the Loader.

★ Due to our policy of continuously improving products, The information contained herein is subject to change without notice.

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13.1 QUICK ATTACHMENT & BUCKET (EURO ISO)

UPDATE(10.07.2012)



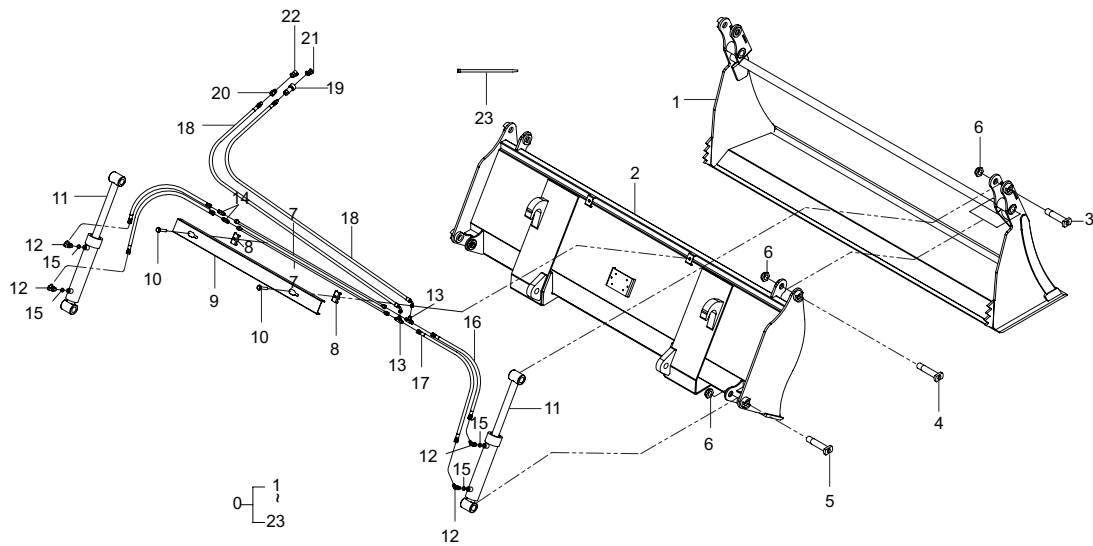
PART ILLUSTRATIONS 13-5

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
0	FTQU5-08000	Quick Attachment Assembly	-		
1	FTQU5-08100	Quick Attach Frame	1		
2	LTS19-47510	Lever W.A-Quick	1		
3	LTS19-43520	Link W.A-Quick	1		
4	LTS19-43521	Link-Quick	1		
5	LTS19-43540	Pin W.A-Quick	2		
6	LTL26-41551	Spring	1		
7	LTL26-41552-01	Spring	1		
8	BN01-0904	Grip-Rubber	1		
9	10191-M160F-90	Hex Bolt, M16-2.0P 90L	1		
10	10261-M1606	Hex Nut, M16-2.0P	2		
11	10316-M1600	Washer-Spring, M16	1		
12	10321-M1600	Washer-Plain, M16	2		
13	10191-M1004-35	Hex Bolt, M10-1.5P 35L	4		
14	1021N-M1004	Nut-Selflock, M10-1.5P	4		
15	802G0-T1900	Nipple, Grease, 1/8"	4		
16	14124-25122-N	Pin, Ø 25-122L	4		
17	1021M-M2404	Nut-Selflock, M24-1.5P	4		
18	FTBU2-60300-01	Bucket 60"	1		

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13.2 4IN1 BUCKET ASSEMBLY (EURO ISO)

UPDATE(10.07.2012)



3520D02B

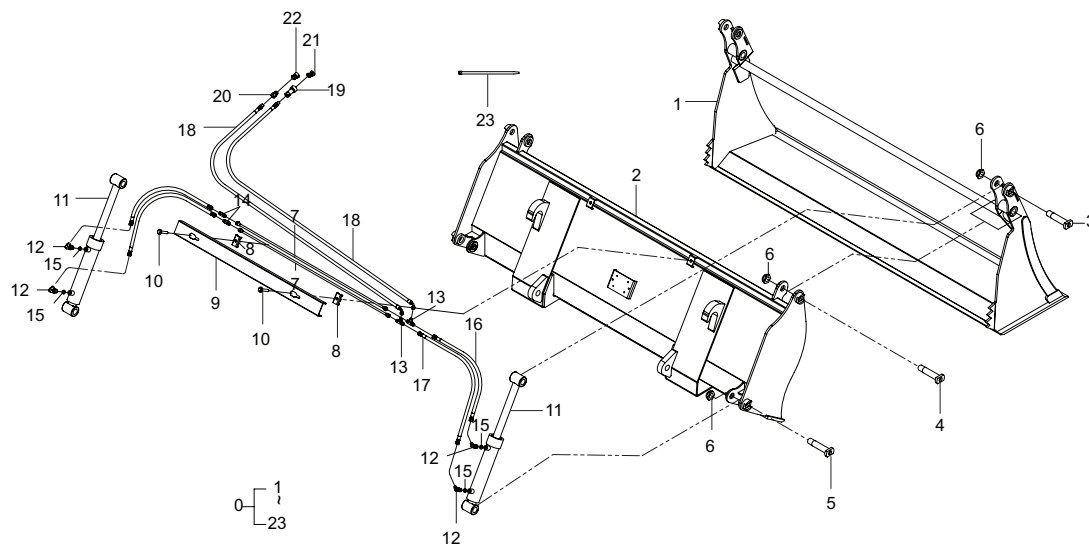
PART ILLUSTRATIONS 13-7

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
0	ZTBU5-5500S	4in1 Bucket Assembly, 55"	-		
1	ZTBU5-5510N	Front Bucket W.A, 55", V-hump type	1		
2	ZTBU5-55200	Rear Bucket W.A-ISO Euro, 55"	1		
3	14124-25110-N	Pin W.A, Ø25-110L	2		
4	14124-25138-N	Pin W.A, Ø25-138L	2		
5	14124-25122-N	Pin W.A, Ø25-122L	2		
6	1021M-M2404	Nut-Selflock, M24-1.5P	6		
7	ZTBU5-HP900	Pipe Assembly, Ø12	2		
8	LTL26-81802	Clamp	2		
9	ZTBU5-55301	Cover, Pipe	1		
10	1012S-M0803-35	Sem's Bolt, M8-1.25P 35L	2		
11	226509	Cylinder, 30x50x415L(ST180)	2		
12	802L2-P46F9-42	Nipple, 3/4-16UNF, Hose x PF3/8, O-Ring 90°	4		
13	802T2-F94F9-40	Nipple, 3/4-16UNF, T-Hose	2		
14	802N2-F94F9-40	Nipple, 3/4-16UNF, Hose x 3/4-16UNF, Hose	2		
15	81300-0P014	O-Ring, P14	4		
16	80620-01043	Hose, 4(3/4-16UNF)-4(3/4-16UNF) 400L(3/8)	2		
17	80620-01003	Hose, 4(3/4-16UNF)-4(3/4-16UNF) 550L(3/8)	2		
18	80620-07010	Hose, 1(PT1/2)-904(3/4-16UNF) 1500L(3/8)	2		
19	80420-T1130	Quifk Coupler, PT1/2" Female	1		
20	80410-T1130	Quifk Coupler, PT1/2" Male	1		
21	8043K-01100	Dust Plug, 1/2" Black Male	1		

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13.2 4IN1 BUCKET ASSEMBLY (EURO ISO)

UPDATE(10.07.2012)

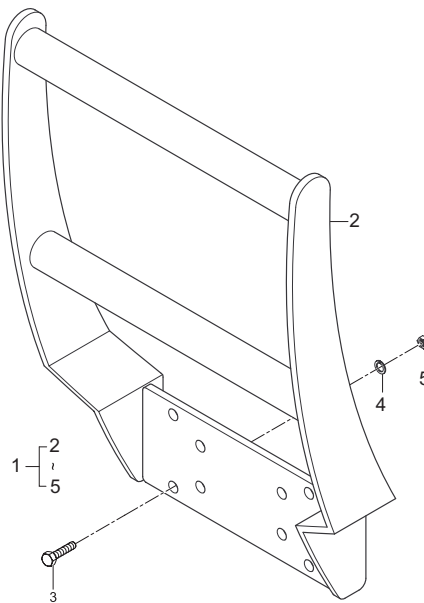


352OD02B

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13.3 FRONT GRILL ASSEMBLY (Optional)

UPDATE(10.07.2012)

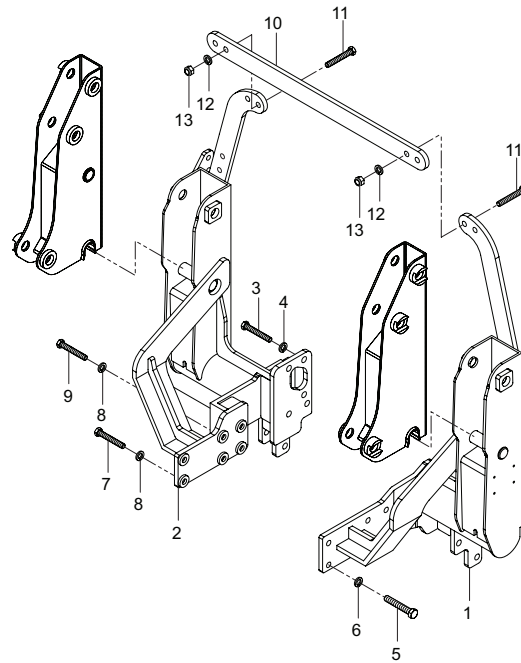


130OD02B

13-12 KL135

13.4 BEARING BOX ASSEMBLY

UPDATE(10.07.2012)



352OD05C

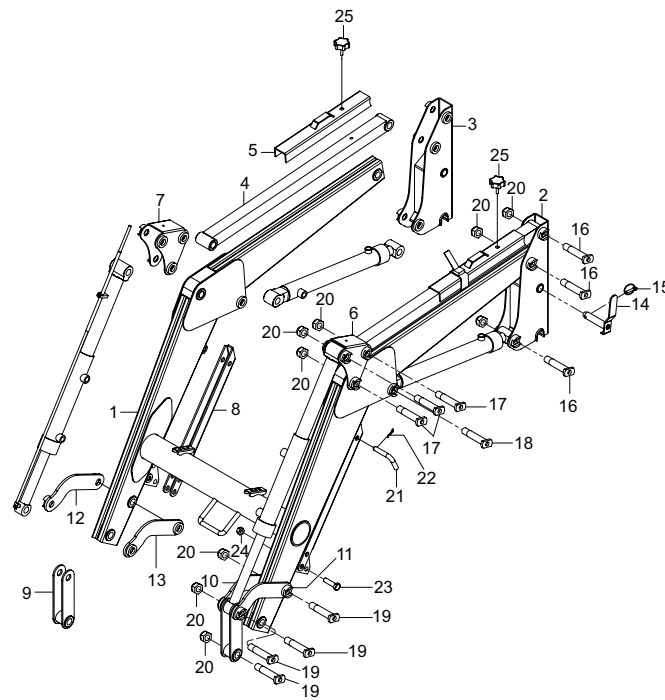
PART ILLUSTRATIONS 13-13

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
1	LP02-0100-A03	Bearing Box LH	1		10.08.13~
2	LP02-0100R-03	Bearing Box RH	1		11.05.01~
3	LP03-0100L	Inner Bearing Box LH	1		
4	LP03-0100R	Inner Bearing Box RH	1		
5	CK11-0100	Latch Pin(Hole), Ø25-140L	2		
6	CK11-0103	Pivot Pin(Bolt), Ø25-95L	4		
7	4001-0001	Grease Nipple, PT 1/8"	6		
8	1008-1001	Linch Pin, Ø10	2		
9	1010S-M1004-20	Sem's Bolt, M10-1.5P-20L	4		
10	1001-1456	Hex Head Bolt, M14-1.5P-30L	10		
11	1003-0014	Spring Washer, Ø14	10		
12	1001-1236	Hex Head Bolt, M12-1.25P-30L	6		
13	1003-0012	Spring Washer, Ø12	6		
14	1001-1257	Hex Head Bolt, M12-1.25P-35L	5		
15	1003-0012	Spring Washer, Ø12	6		
16	1001-125F	Hex Head Bolt, M12-1.25P-80L	1		

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13.5 BOOM ASSEMBLY

UPDATE(10.07.2012)



352OD06B

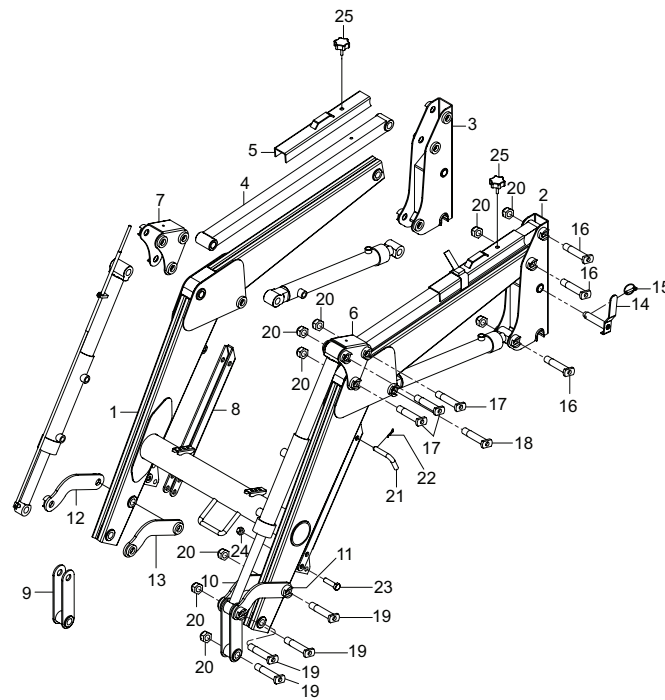
PART ILLUSTRATIONS 13-15

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
1	LTF42-11100-04	Boom W.A	1		
2	LTF42-11200-01	Post-L/H	1		
3	LTF42-11250-01	Post-R/H	1		
4	FTF31-54200-01	Link-Level	2		
5	LTM25-12100-01	Safety Bar	2		
6	LTF42-11400-02	Link-L/H	1		
7	LTF42-11410-02	Link-R/H	1		
8	LTF42-11701	Stand	2		
9	LTF42-11500-01	Link W.A	2		
10	LTS19-51330	Link-Bucket L/H	1		
11	LTS19-51310	Link-Bucket L/H	1		
12	LTS19-51320	Link-Bucket R/H	1		
13	LTS19-51340	Link-Bucket R/H	1		
14	14153-25132-01	Pin, Ø25-132L	2		
15	14021-10000	Ring Pin, Ø10	2		
16	14124-25110-N	Pin W.A, Ø110	6		
17	14124-25127-N	Pin W.A, Ø25-127L	6		
18	14124-25095-N1	Pin W.A, Ø25-95L	2		
19	14124-25122-N	Pin W.A, Ø25-122L	4		
20	1021M-M2404	Nut-Selflock, M24-1.5P	22		
21	LTS16-61201	Pin, Ø16	2		
22	14011-03000	R-Pin, Ø3	2		

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13.5 BOOM ASSEMBLY

UPDATE(10.07.2012)

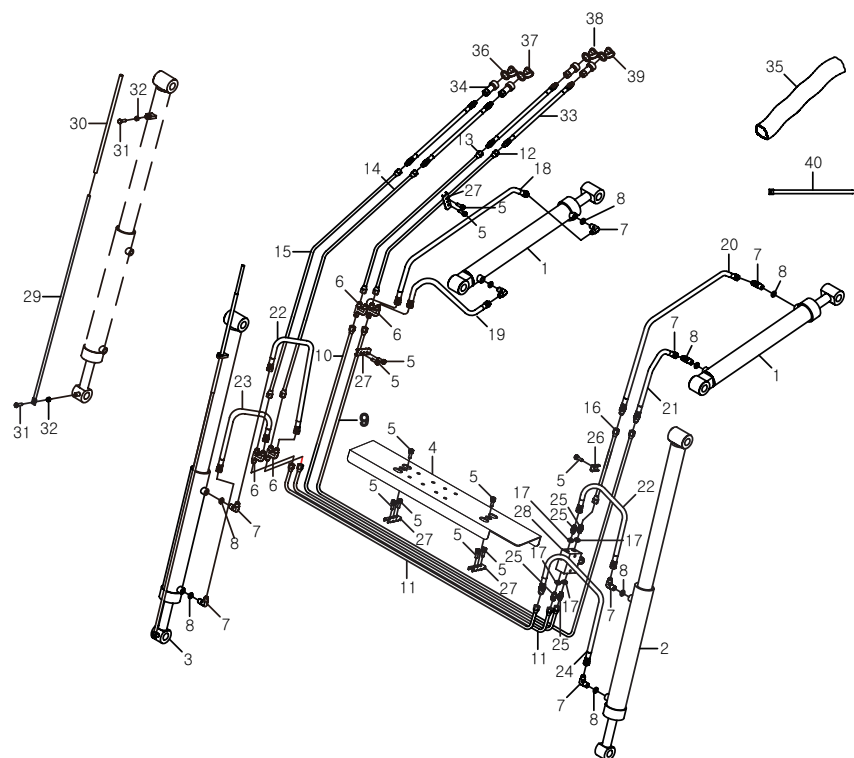


352OD06B

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13.6 BOOM HYDRAULIC ASSEMBLY

UPDATE(10.07.2012)



352OD07C

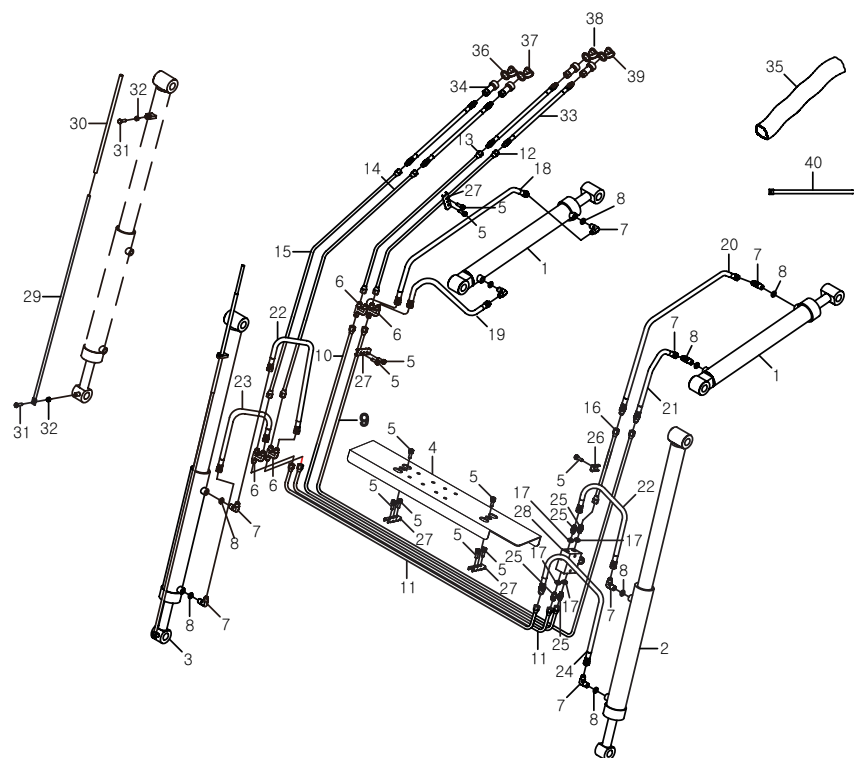
PART ILLUSTRATIONS 13-19

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
1	22D403	Boom Cylinder Ass'y, 30x50x612L (408ST)	2		
2	FT320-30000	Haness Ass'y	1		
3	22D401	Bucket Cylinder Ass'y-L/H, 30x50x780L(ST340)	1		
4	22D402	Bucket Cylinder Ass'y-R/H, 30x50x780L(ST340)	1		
5	FTE11-H5110-01	Cover, Pipe	1		
6	1012S-M0803-35	Bolt-Sem's, M8x1.25P-35L	11		
7	802H1-F94F9-40	Nipple, H-TYPE 3/4-16UNF, Hose	4		
8	802L2-P46F9-42	Nipple, PF3/8, O-Ring x 3/4-16UNF, Hose 90°	8		
9	81301-BP014	O-Ring, 1BP14	8		
10	FTF31-1182A	Pipe Ass'y	1		
11	FTF31-1182B	Pipe Ass'y	1		
12	FTF42-HP300	Pipe Ass'y	1		
13	FTE41-1181C	Pipe Ass'y	1		
14	FTE41-1181D	Pipe Ass'y	1		
15	FTF42-1181J	Pipe Ass'y	1		
16	81301-BP014	O-Ring, 1BP14	4		
17	80620-01028	Hyd Hose, 904(3/4-16UNF)x4(3/4-16UNF) 750L(3/8)	1		
18	80620-01004	Hyd Hose, 4(3/4-16UNF)x4(3/4-16UNF) 360L(3/8)	1		
19	80620-03023	Hyd Hose, 4(3/4-16UNF)x2(3/4-16UNF) 800L(3/8)	1		
20	80620-03024	Hyd Hose, 4(3/4-16UNF)x2(3/4-16UNF) 360L(3/8)	1		
21	80620-01003	Hyd Hose, 4(3/4-16UNF)x4(3/4-16UNF) 550L(3/8)	2		
22	80620-01028	Hyd Hose, 904(3/4-16UNF)x4(3/4-16UNF) 750L(3/8)	1		

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13.6 BOOM HYDRAULIC ASSEMBLY

UPDATE(10.07.2012)



352OD07C

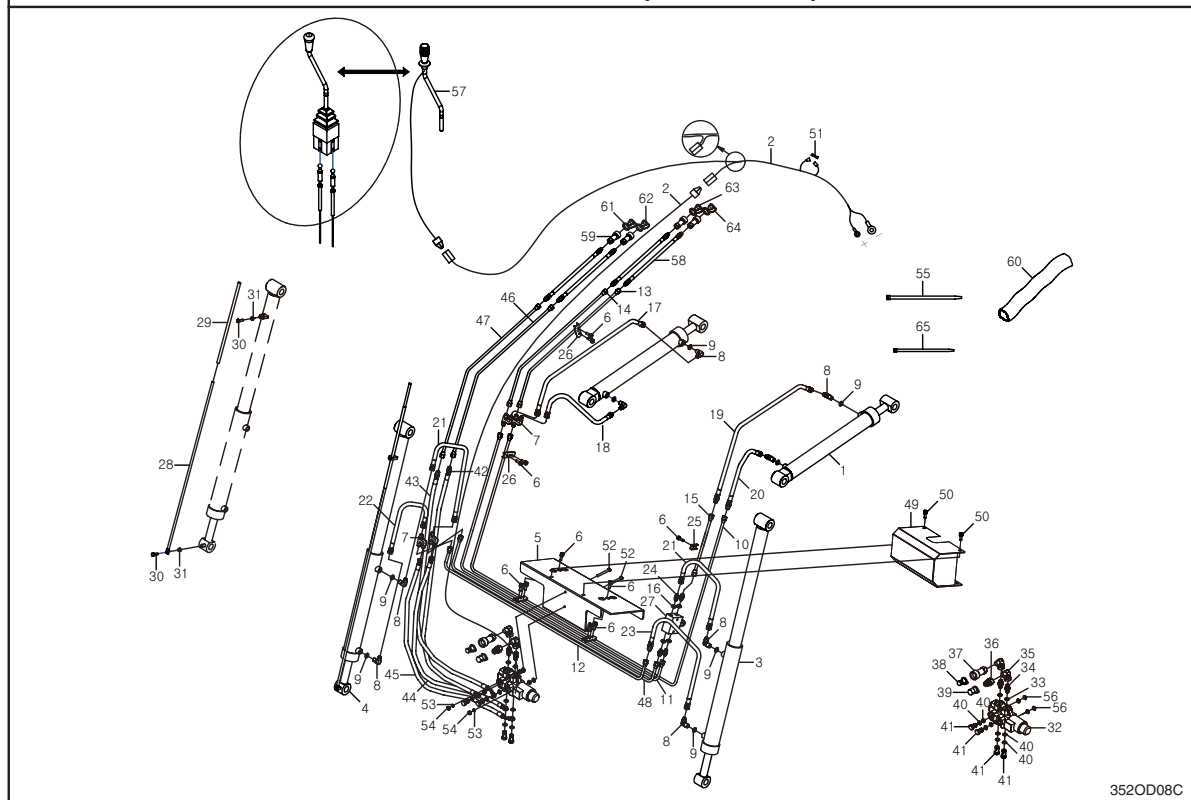
PART ILLUSTRATIONS 13-21

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
23	80620-01028	Hyd Hose, 904(3/4-16UNF)x4(3/4-16UNF) 750L(3/8)	1		
24	80620-03008	Hyd Hose, 4(3/4-16UNF)x2(3/4-16UNF) 700L(3/8)	1		
25	802N2-P46F9-42	Nipple, PF3/8,O-Ring x 3/4-16UNF	4		
26	LTL26-81802	Clamp	4		
27	LTL26-81801	Clamp	1		
28	801T1-50000	Valve, Relife	1		
29	14711-A0011	Bar, Guage-Long, Ø12x1000L	1		
30	14712-50012	Bar, Guage-Short, Ø17.3x500L	1		
31	10121-M1004-30	Hex-Bolt, M10x1.5P-30L	2		
32	10211-M1004	Hex-Nut, M10x1.5P	1		
33	80620-04014	Hyd Hose, 1(PT3/8)x2(3/4-16UNF) 900L(3/8)	4		
34	80420-T3360	Quick Coupler, PT3/8" Female	4		
35	50135-0700K	Webbing, 700L	1		
36	8043R-03300	Dust-Plug, 3/8" Red Male	1		
37	8043B-03300	Dust-Plug, 3/8" Blue Male	1		
38	8043Y-03300	Dust-Plug, 3/8" Yellow Male	1		
39	8043K-03300	Dust-Plug, 3/8" Black Male	1		
40	50120-M160K	Cable Tie, Black 160mm	2		

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13.7 BOOM HYDRAULIC ASSEMBLY (4IN1 STD.)

UPDATE(10.07.2012)



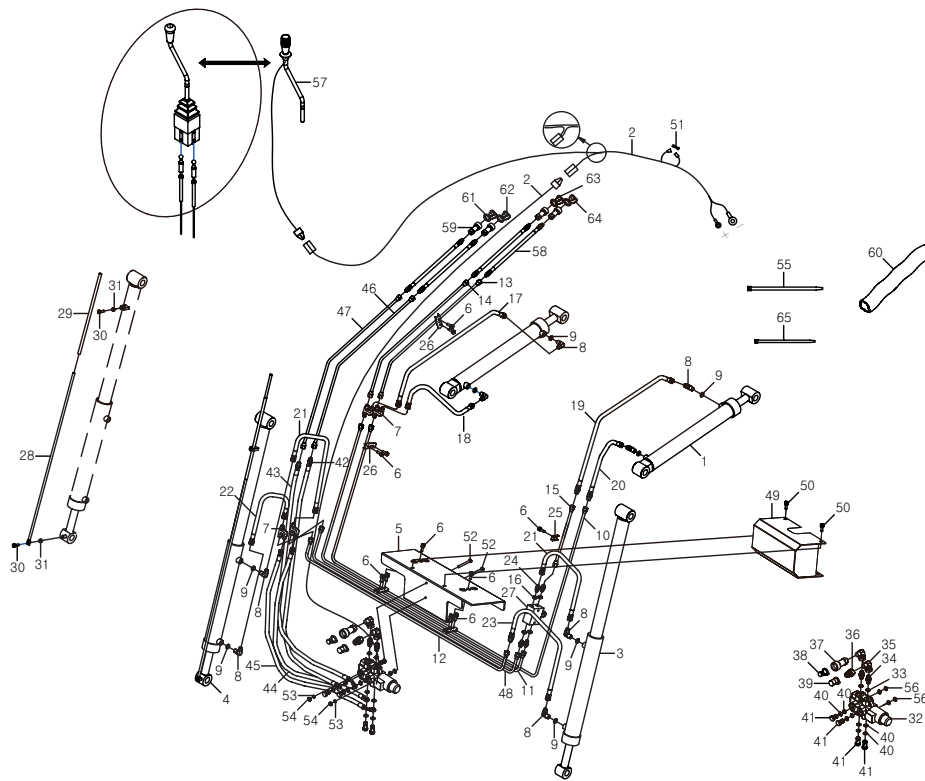
PART ILLUSTRATIONS 13-23

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
1	22D403	Boom Cylinder Ass'y, 30x50x612L (408ST)	2		
2	FT320-30000	Haness Ass'y	1		
3	22D401	Bucket Cylinder Ass'y-L/H, 30x50x780L(ST340)	1		
4	22D402	Bucket Cylinder Ass'y-R/H, 30x50x780L(ST340)	1		
5	FTE11-H5110-01	Cover, Pipe	1		
6	1012S-M0803-35	Bolt-Sem's, M8x1.25P-35L	11		
7	802H1-F94F9-40	Nipple, H-TYPE 3/4-16UNF, Hose	4		
8	802L2-P46F9-42	Nipple, PF3/8, O-Ring x 3/4-16UNF, Hose 90°	8		
9	81301-BP014	O-Ring, 1BP14	8		
10	FTF31-1182A	Pipe Ass'y	1		
11	FTF31-1182B	Pipe Ass'y	1		
12	FTF42-HP300	Pipe Ass'y	1		
13	FTE41-1181C	Pipe Ass'y	1		
14	FTE41-1181D	Pipe Ass'y	1		
15	FTF42-1181J	Pipe Ass'y	1		
16	81301-BP014	O-Ring, 1BP14	4		
17	80620-01028	Hyd Hose, 904(3/4-16UNF)x4(3/4-16UNF) 750L(3/8)	1		
18	80620-01004	Hyd Hose, 4(3/4-16UNF)x4(3/4-16UNF) 360L(3/8)	1		
19	80620-03023	Hyd Hose, 4(3/4-16UNF)x2(3/4-16UNF) 800L(3/8)	1		
20	80620-03024	Hyd Hose, 4(3/4-16UNF)x2(3/4-16UNF) 360L(3/8)	1		
21	80620-01003	Hyd Hose, 4(3/4-16UNF)x4(3/4-16UNF) 550L(3/8)	2		
22	80620-01028	Hyd Hose, 904(3/4-16UNF)x4(3/4-16UNF) 750L(3/8)	1		

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13.7 BOOM HYDRAULIC ASSEMBLY (4IN1 STD.)

UPDATE(10.07.2012)



352OD08C

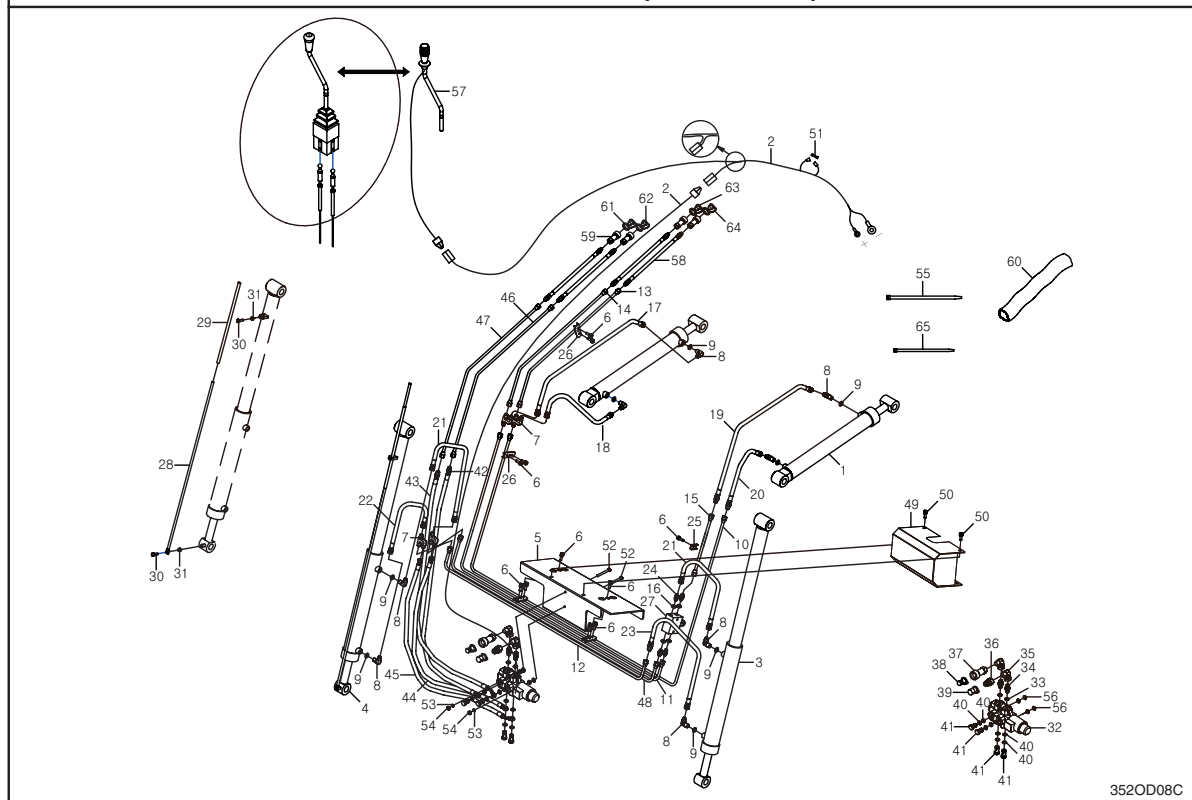
PART ILLUSTRATIONS 13-25

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
23	80620-03008	Hyd Hose, 4(3/4-16UNF)x2(3/4-16UNF) 700L(3/8)	1		
24	802N2-P46F9-42	Nipple, PF3/8, O-Ring x 3/4-16UNF	4		
25	LTL26-81802	Clamp	1		
26	LTL26-81801	Clamp	4		
27	801T1-50000	Valve, Relife	1		
28	14711-A0011	Bar, Guage-Long, Ø12x1000L	1		
29	14712-50012	Bar, Guage-Short, Ø17.3x500L	1		
30	10121-M1004-30	Hex-Bolt, M10x1.5P-30L	2		
31	10211-M1004	Hex-Nut, M10x1.5P	1		
32	801W1-02000	Valve, WALVOIL, PF3/8	1		
33	103C0-C0330	Washer-Copper, 3/8"	2		
34	802N2-P46F9-41	Nipple, PF3/8, Copper x 3/4-16UNF, Hose	2		
35	802N2-F94T6-3S	Nipple, PF1/4(O-Ring)x1/2-20UNF(90° Elbow)	2		
36	80410-T1130	Quick Coupler , PT1/2 Male	1		
37	80420-T1130	Quick Coupler , PT1/2 Female	1		
38	8043K-01100	Dust Plug , 1/2" Male Black	1		
39	8044K-01100	Dust Cap , 1/2, Black	1		
40	103E1-C0380	Seal BOND, 3/8"	8		
41	805BB-1P460	Nipple, PF3/8	4		
42	80620-25007	Hyd Hose, 2(3/4-16UNF)xBenzo(PF3/8) 620L(3/8)	1		
43	80620-26005	Hyd Hose, 2(3/4-16UNF)x45 Benzo(PF3/8) 600L(3/8)	1		
44	80620-06037	Hyd Hose, 4(3/4-16UNF)xBenzo(PF3/8) 670L(3/8)	1		

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13.7 BOOM HYDRAULIC ASSEMBLY (4IN1 STD.)

UPDATE(10.07.2012)



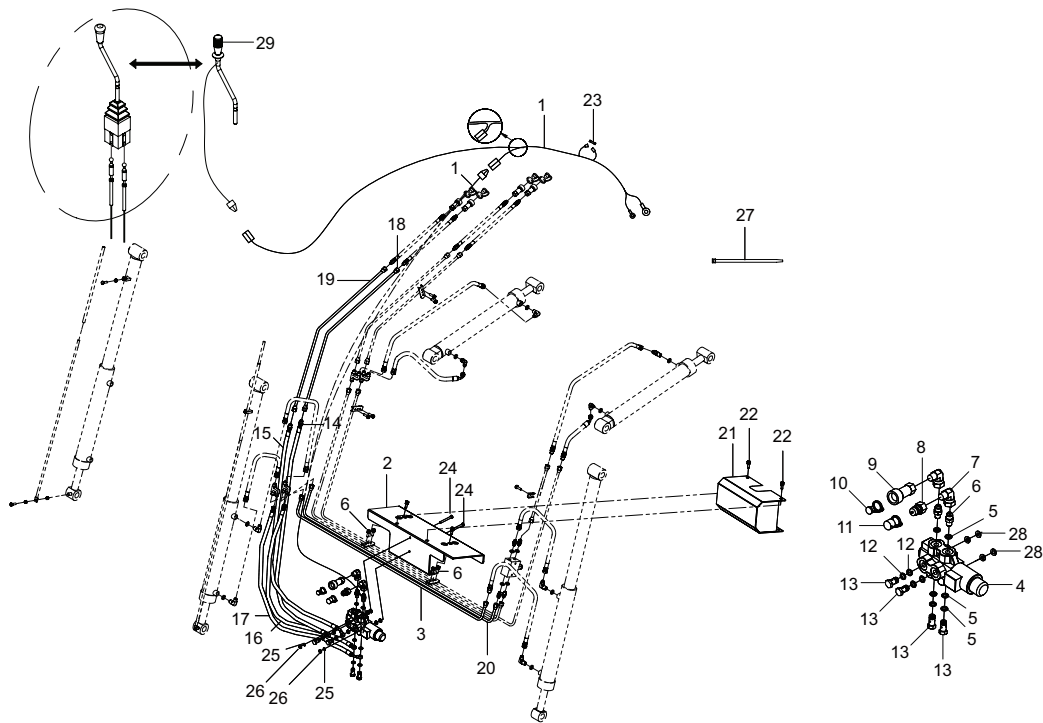
PART ILLUSTRATIONS 13-27

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
45	80620-24003	Hyd Hose, 4(3/4-16UNF)-45 Benzo(PF3/8) 550L(3/8)	1		
46	FTE42-1181C	Pipe Ass'y	1		
47	FTE42-1181D	Pipe Ass'y	1		
48	FTF42-HP400	Pipe Ass'y	1		
49	FTE11-H0120-01	Cover Ass'y-Valve	1		
50	1012S-M0803-20	Bolt-Sem's, M8x1.25P-20L	4		
51	FT303-71111	Fuse	1		
52	10121-M0602-50	Hex-Bolt, M6x1.0P-50L	2		
53	10316-M0600	Washer-Spring, M10	2		
54	10211-M0602	Hex-Nut, M6x1.0P	2		
55	50120-M160K	Cable Tie, Black 160mm	10		
56	10321-M0600	Washer Plain, M6	4		
57	801W1-80J10	Lever-Electric	1		
58	80620-04014	Hyd Hose, 1(PT3/8)x2(3/4-16UNF) 900L(3/8)	4		
59	80420-T3360	Quick Coupler, PT3/8" Female	4		
60	50135-0700K	Webbing, 700L	1		
61	8043R-03300	Dust-Plug, 3/8" Red Male	1		
62	8043B-03300	Dust-Plug, 3/8" Blue Male	1		
63	8043Y-03300	Dust-Plug, 3/8" Yellow Male	1		
64	8043K-03300	Dust-Plug, 3/8" Black Male	1		
65	50120-M160K	Cable Tie, Black 160mm	2		

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13.8 AUXILIARY HYDRAULIC DEVICE (OPTION)

UPDATE(10.07.2012)



352OD09C

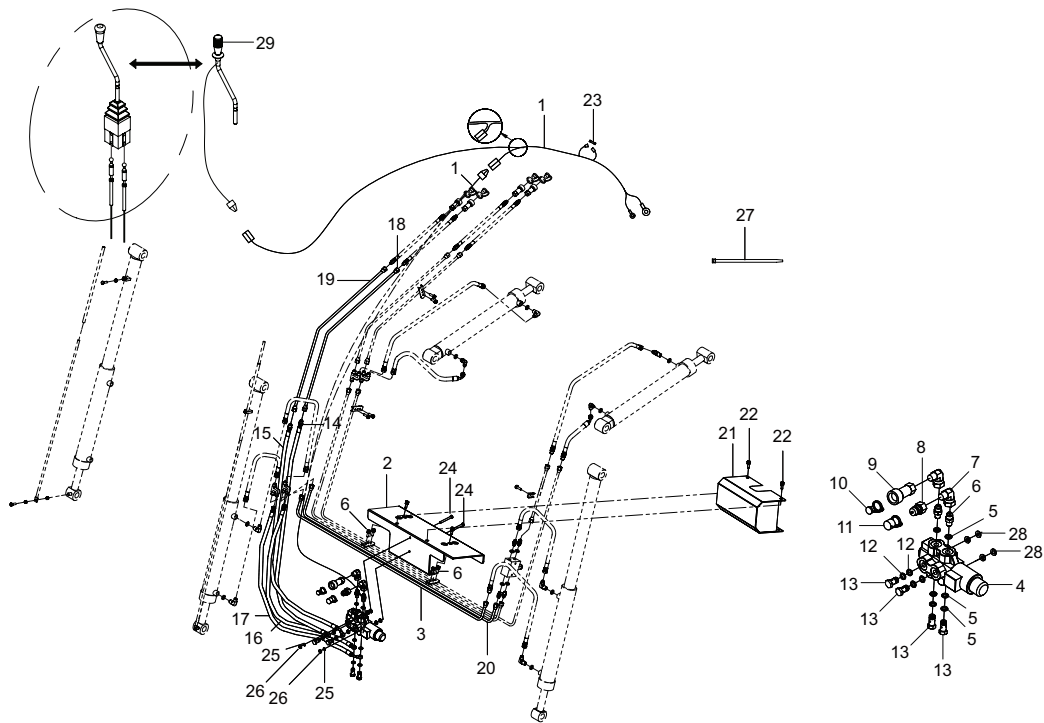
PART ILLUSTRATIONS 13-29

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
1	FT303-72000-01	Harness Assembly	1		
2	FTE11-H5110	Cover, Pipe Assembly	1		
3	FTF42-HP300	Pipe Assembly, 3/4-16UNF	1		
4	801W1-02000	Valve, WALVOIL	1		
5	103C0-C0330	Washer, Copper, 3/8"	2		
6	802N2-P46F9-41	Nipple, PF3/8, Copper x 3/4-16UNF, Hose	2		
7	802L2-T46F9-4S	Nipple, PT3/8x3/4-16UNF, Swivel 90°	2		
8	80410-T1130	Quick Coupler, PT1/2, Male	1		
9	80420-T1130	Quick Coupler, PT1/2, Female	1		
10	8043K-01100	Dust Plug, 1/2, Male	1		
11	8044K-01100	Dust Cap, 1/2, Female	1		
12	103E1-C0380	Seal Bond, 3/8"	8		
13	805BB-1P460	Benzo Nipple, PF3/8	4		
14	80620-25007	Hose, 2(3/4-16UNF)-Benzo 620L(3/8)	1		
15	80620-26005	Hose, 2(3/4-16UNF) -45 Benzo 600L(3/8)	1		
16	80620-06037	Hose, 4(3/4-16UNF)-Benzo 670L(3/8)	1		
17	80620-24003	Hose, 4(3/4-16UNF)-45 Benzo 550L(3/8)	1		
18	FTE42-1181C	Pipe Assembly, 3/4-16UNF	1		
19	FTE42-1181D	Pipe Assembly, 3/4-16UNF	1		
20	FTF42-HP400	Pipe Assembly, 3/4-16UNF	1		
21	FTE11-H0120-01	Cover, Valve	1		
22	1012S-M0803-20	Sem's Bolt, M8-1.25P 20L	4		

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13.8 AUXILIARY HYDRAULIC DEVICE (OPTION)

UPDATE(10.07.2012)

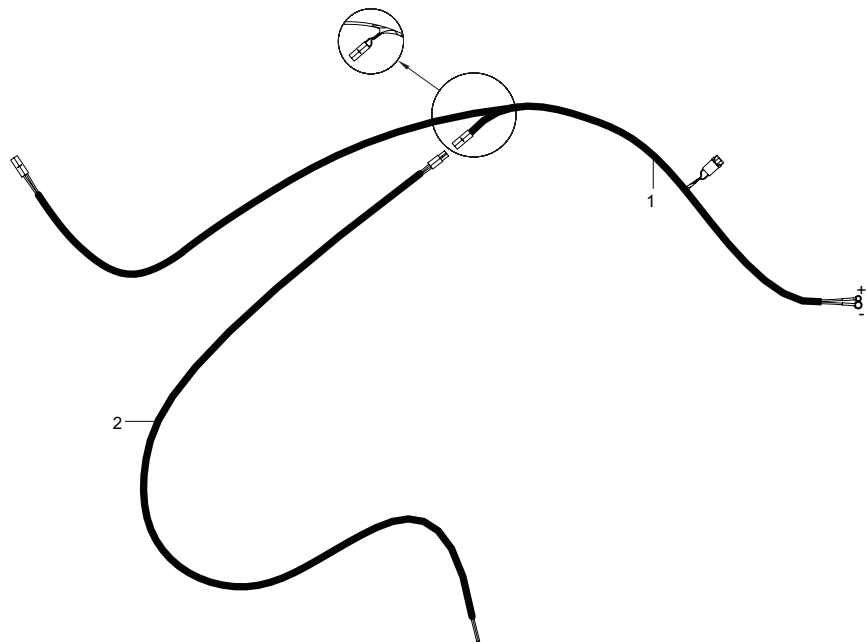


352OD09C

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13.9 HANESS ASSEMBLY

UPDATE(10.07.2012)

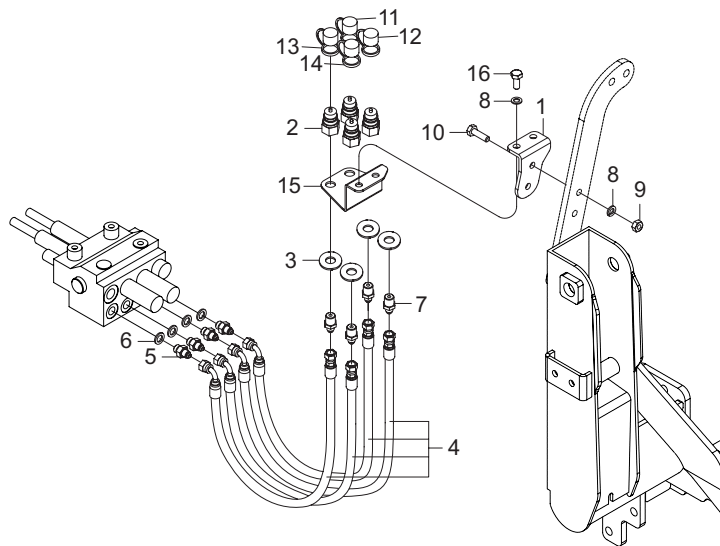


352OD10B

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13.10 IN-OUT HOSE FITTING ASSEMBLY (ROPS TYPE)

UPDATE(10.07.2012)



130OD06D

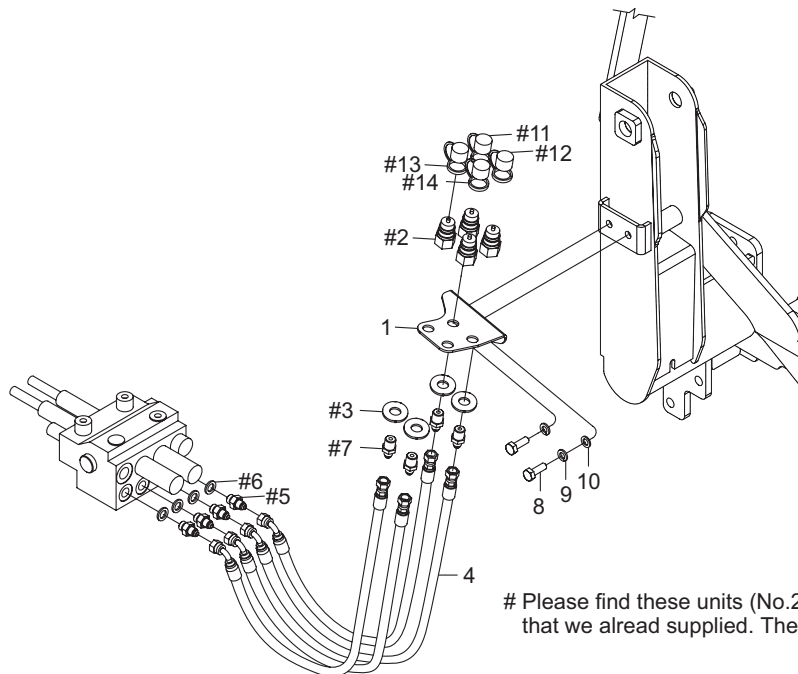
PART ILLUSTRATIONS 13-35

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
1	FT102-42101	Coupler Bracket Plate	1		
2	80410-T3360	Quick Coupler, PT3/8, Male	4		
3	10321-M1600	Flat Washer, M16	4		
4	80611-12004	Hyd. Hose (Control), 904(1/2-20UNF)-4(1/2-20UNF) 770(1/4)	4		
5	802N1-F67F7-52	Adapter, 1/2-20UNFx9/16UNF, O-RING	4		
6	81300-S0906	O-Ring, AS568 #906	4		
7	802N1-F67T4-60	Adapter, PT3/8x1/2-20UNF	4		
8	10316-M1000	Spring Washer, Ø10	4		
9	10191-M1004-35	Hex. Bolt-HT, M10-1.5P 35L	2		
10	10261-M1004	Hex. Nut-HT, M10-1.5P	2		
11	8044R-03300	Dust Cap, 3/8, Red, Female	1		
12	8044W-03300	Dust Cap, 3/8, White, Female	1		
13	8044Y-03300	Dust Cap, 3/8, Yellow, Female	1		
14	8044B-03300	Dust Cap, 3/8, Blue, Female	1		
15	CK02-0117	Attach Fitting Flange	1		
16	10191-M1004-25	Hex. Bolt-HT, M10-1.5P 25L	2		
17	50120-M270K	Cable Tie, Black, 270mm	2		

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13.11 IN-OUT HOSE FITTING ASSEMBLY (CABIN KIT TYPE II)

UPDATE(10.07.2012)



130OD13A

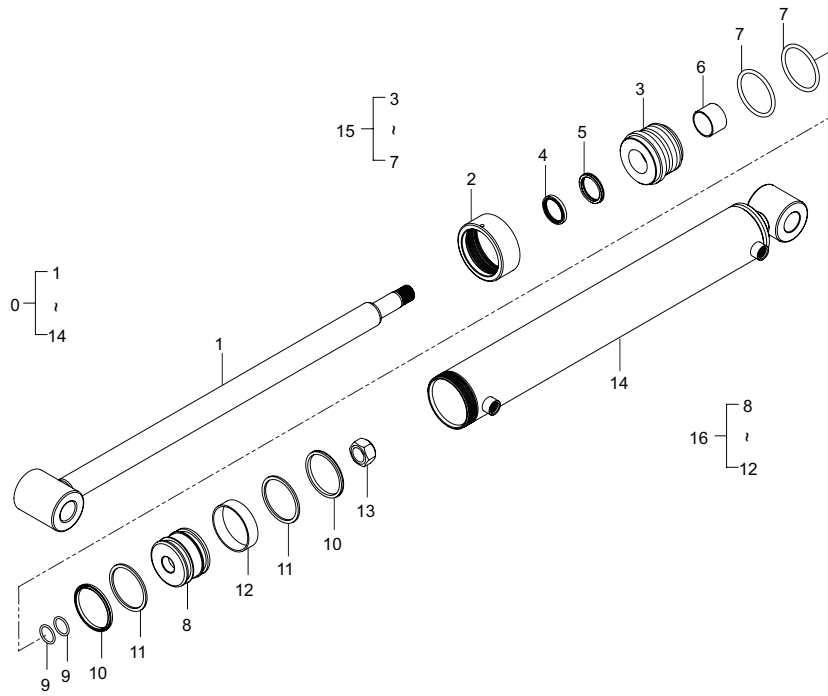
PART ILLUSTRATIONS 13-37

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
1	FT102-V1101	Attach Fitting Flange	1		
2	80410-T3360	Quick Coupler, PT3/8, Male	-		
3	10321-M1600	Plain Washer, M16	-		
4	80611-12004	Hyd. Hose (Control), 904(1/2-20UNF)-4(1/2-20UNF) 770(1/4)	-		
5	802N1-F67F7-52	Adapter, 1/2-20UNFx9/16UNF, O-RING	-		
6	81300-S0906	O-Ring, AS568 #906	-		
7	802N1-F67T4-60	Adapter, PT3/8x1/2-20UNF	-		
8	10191-M1004-30	Hex. Bolt-HT, M10-1.5P 30L	2		
9	10316-M1000	Spring Washer, Ø10	2		
10	10321-M1000	Flat Washer, Ø10	1		
11	8044R-03300	Dust Cap, 3/8, Red, Female	-		
12	8044W-03300	Dust Cap, 3/8, White, Female	-		
13	8044Y-03300	Dust Cap, 3/8, Yellow, Female	-		
14	8044B-03300	Dust Cap, 3/8, Blue, Female	-		
15	50120-M270K	Cable Tie, Black, 270mm	-		

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13.12 BOOM CYLINDER ASSEMBLY

UPDATE(10.07.2012)



3520D12B

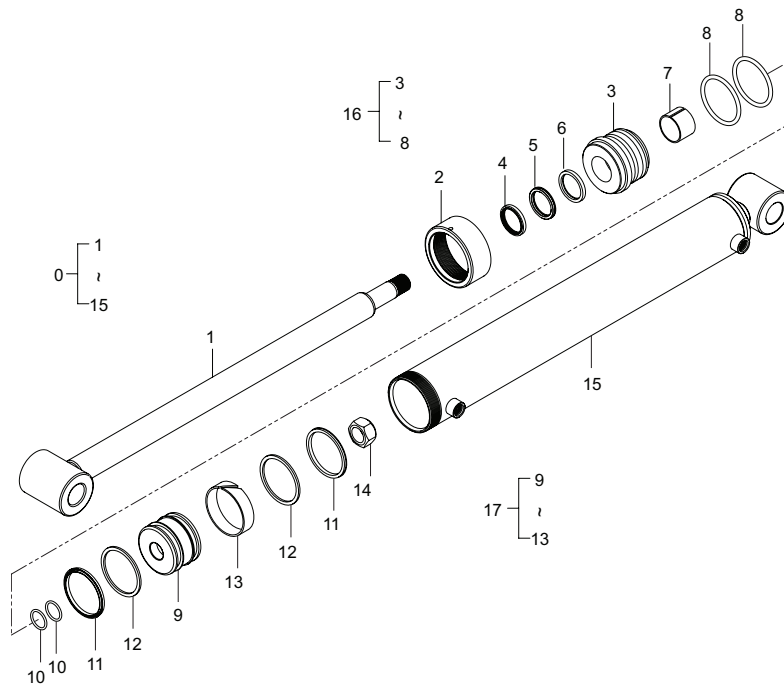
PART ILLUSTRATIONS 13-39

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
0	22D403	Boom Cylinder Ass'y Ø30x50x612L (408ST)	2		
1	22D403-R	Rod Assembly	1		
2	OC50-6037	Cap Outer, Ø50x60x37L	1		
3	IC50-3055	Cover Inner, Ø50x30x55L	1		
4	DSSD-R030	Dust, SDR 30x38x5/6.5	1		
5	UPIS-I030	Packing U, ISI 30x40x6	1		
6	DU03-0025	Bushing DU, 30x34x25	1		
7	OR1B-G045	O-Ring, 1BG45	2		
8	PI50-2350	Piston. Ø50x23x50L	1		
9	OR1B-G023	O-Ring, 1BG23	2		
10	UPOS-I050	Packing U, OSI 50x40x6	2		
11	TRBR-0050	Backup Ring, 50x40x3	2		
12	WEWR-0050	Wearing, WR 50x45x15	1		
13	NTP0-F032-D	Nut, 3/4-16UNF	1		
14	22D403-T	Tube Ass'y	1		
15	IA50-3055	Cover Inner Assembly NO.3~7	1		
16	PA50-2350	Piston Assembly NO.8~12	1		

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13.13 BUCKET CYLINDER ASSEMBLY – LH

UPDATE(10.07.2012)



3520D13B

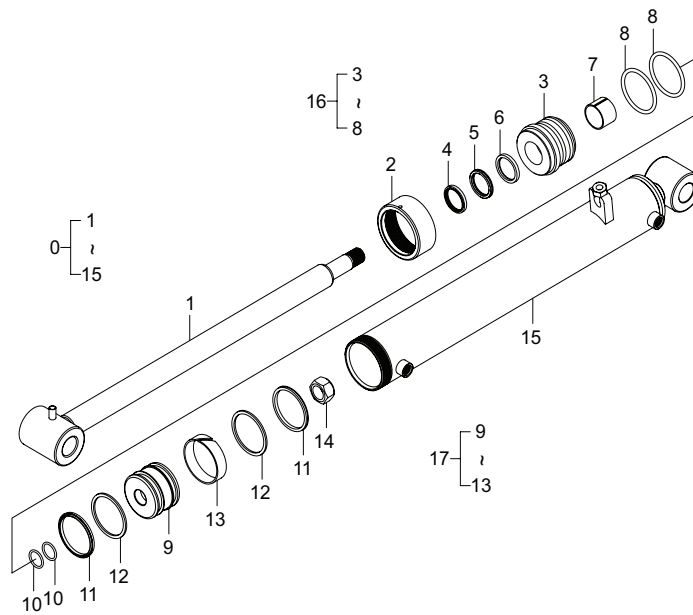
PART ILLUSTRATIONS 13-41

REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
0	22D401	Bucket Cylinder Ass'y-LH Ø30x50x780L (340ST)	1		
1	22D401-R	Rod Assembly	1		
2	OC50-6040	Cap Outer, Ø50x60x40l	1		
3	IC50-3065	Cover Inner, Ø50x30x65l	1		
4	DSSD-R030	Dust, SDR 30x38x5/6.5	1		
5	UPSK-Y030	Packing U, SKY 30x40x6	1		
6	UPIS-I030	Packing U, ISI 30x40x6	1		
7	DU03-0025	Bushing DU, 30x34x25	1		
8	OR1B-G045	O-Ring, 1BG45	2		
9	PI50-2350	Piston, Ø50x23x50l	1		
10	OR1B-G023	O-Ring, 1BG23	2		
11	UPOS-I050	Packing U, OSI 50x40x6	2		
12	TRBR-0050	Backup Ring, 50x40x3	2		
13	WEWR-0050	Wearing, WR 50x45x15	1		
14	NTP0-F032-D	Nut, 3/4-16UNF	1		
15	22D401-T	Tube Ass'y-LH	1		
16	IA50-3065	Seal Kit Head, NO.3~8	1		
17	PA50-2350	Seal Kit Piston, NO.9~13	1		

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13.14 BUCKET CYLINDER ASSEMBLY – RH

UPDATE(10.07.2012)



352OD14B

PART ILLUSTRATIONS 13-43

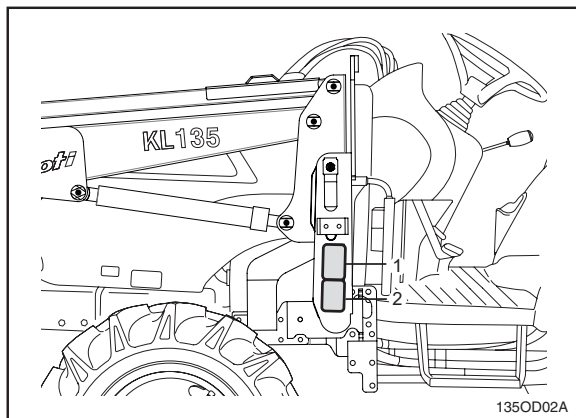
REF. NO	PART. NO	DESCRIPTION	QTY	I.C	REMARK
0	22D402	Bucket Cylinder Ass'y-RH Ø30x50x780L (340ST)	1		
1	22D402-R	Rod Assembly	1		
2	OC50-6040	Cap Outer, Ø50x60x40L	1		
3	IC50-3065	Cover Inner, Ø50x30x65L	1		
4	DSSD-R030	Dust, SDR 30x38x5/6.5	1		
5	UPSK-Y030	Packing U, SKY 30x40x6	1		
6	UPIS-I030	Packing U, ISI 30x40x6	1		
7	DU03-0025	Bushing DU, 30x34x25	1		
8	OR1B-G045	O-Ring, 1BG45	2		
9	PI50-2350	Piston, Ø50x23x50L	1		
10	OR1B-G023	O-Ring, 1BG23	2		
11	UPOS-I050	Packing U, OSI 50x40x6	2		
12	TRBR-0050	Backup Ring, 50x40x3	2		
13	WEWR-0050	Wearing, WR 50x45x15	1		
14	NTP0-F032-D	Nut, 3/4-16UNF	1		
15	22D402-T	Tube Ass'y-LH	1		
16	IA50-3065	Seal Kit Head, NO.3~8	1		
17	PA50-2350	Seal Kit Piston, NO.9~13	1		

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13.15 DECALS

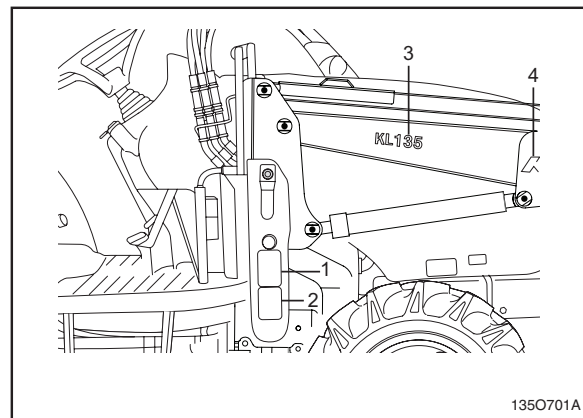
CAUTION

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



(1) CK12-5001

(2) CK12-3001



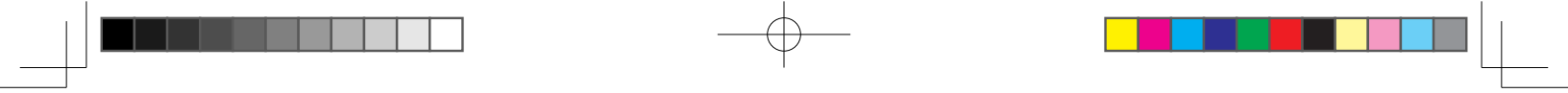
(1) CK12-3002

(2) CK12-3003

(3) LP30-5002

(4) CK12-3004

Refer to category "Safety decals"



14. LOADER INSTALLATION

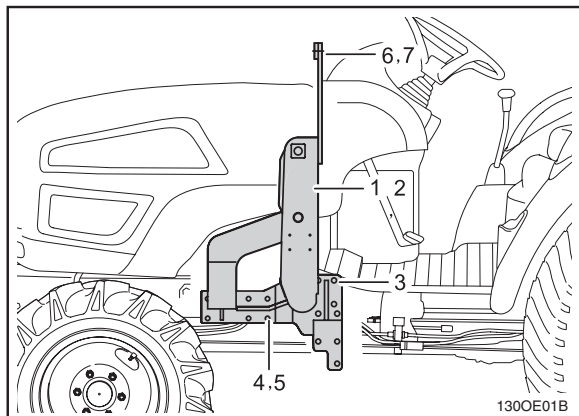


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LOADER INSTALLATION

CAUTION

- See your Loader Operator's manual for Safety Precautions and Tractor Preparations.



STEP 1.

Position tractor on hard level surface.

STEP 2.

Release loader, bucket and mount kit box from pallet.

STEP 3.

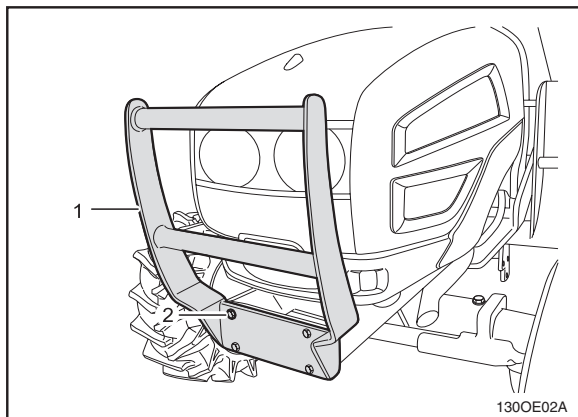
Install Bearing Box LH and Bearing Box RH.

1. Bearing Box LH - 1EA
2. Bearing Box RH - 1EA
3. Hex Head Bolt M14X1.5PX30L - 10EA
Spring Washer Ø 14 - 10EA
4. Hex Head Bolt M12X1.25PX30L - 6EA(LH)
Spring Washer Ø 12 - 6EA
5. Hex Head Bolt M12X1.25PX35L - 5EA(RH)
Hex Head Bolt M12X1.25PX80L - 1EA
Spring Washer Ø 12 - 6EA

STEP 4.

Install Over Cross Bar.

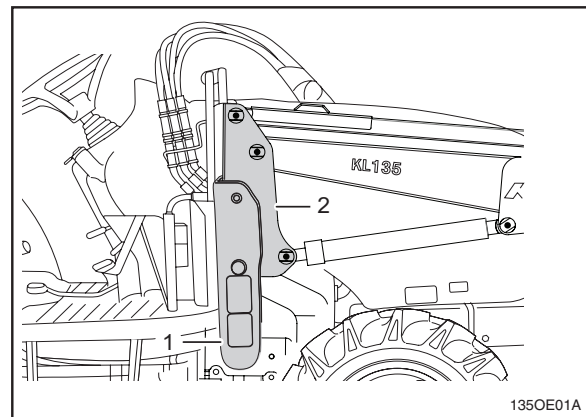
6. Overcross Bar - 1EA
7. Hex Head Bolt M12X1.75PX45L - 4EA
Hex Head Nut M12X1.75P - 4EA
Spring Washer Ø 12 - 4EA



STEP 5.

Install Front Grill (Optional)

1. Front Grill - 1EA
2. Hex Head Bolt M12X1.75Px40L - 4EA
Spring Washer Ø 12 - 4EA
Hex Head Nut M12X1.75P - 4EA



(1) Bearing Inner Box

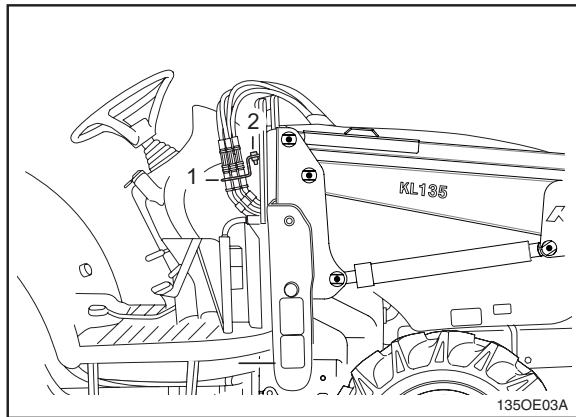
(2) Bearing Box

STEP 6.

Install Boom Ass'y

Hang the groove on the pin located on outer bearing box.

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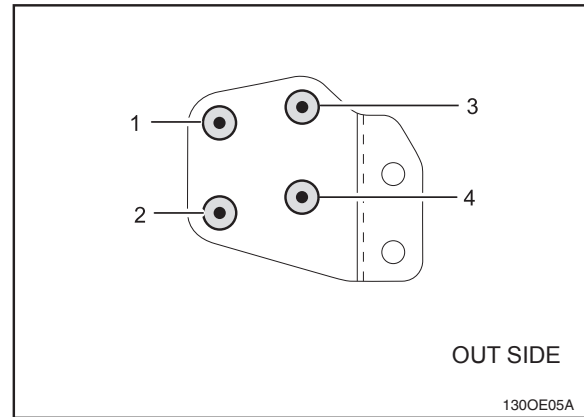
STEP 7.

Install Attach Fitting Flange.

W/Quick Coupler (Male)

1 Attach Fitting Flange
W/Quick Coupler(Male) -1SET

2 Hex Head Bolt
M10X1.5PX25L -2EA
Spring washer ϕ 10 - 2EA
Flat washer ϕ 10 - 1EA

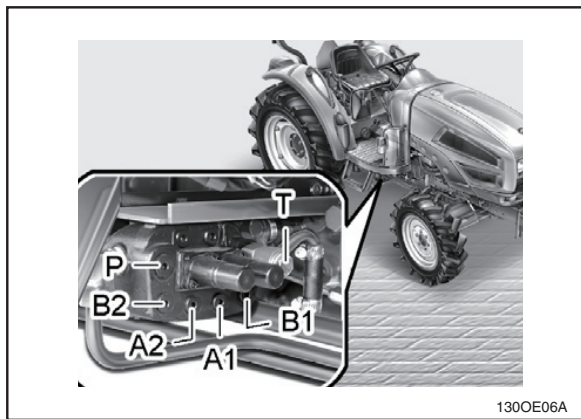


(1) Red
(3) White

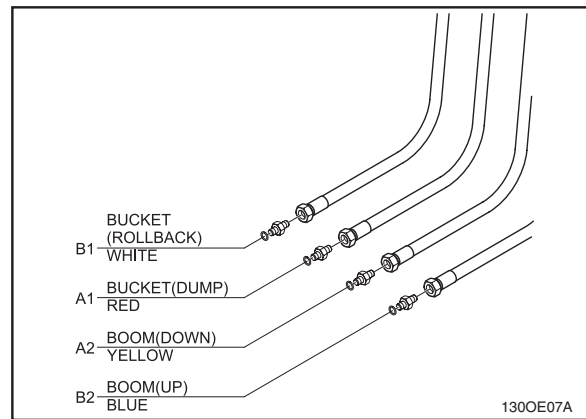
(2) Blue
(4) Yellow

STEP 8.

Install the hydraulic hose matching color code rings as shown on the diagram below.



(1) Valve Block



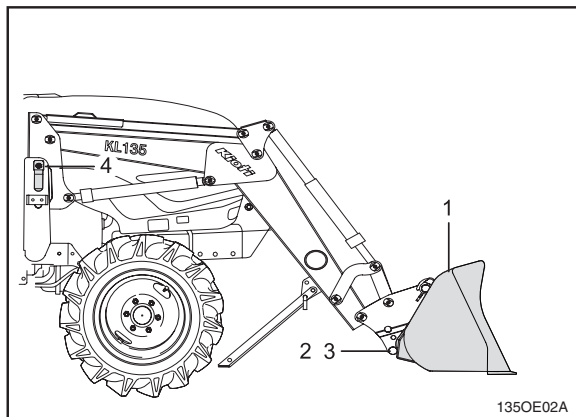
(2) Hydraulic Hose

STEP 9.

Fit the hydraulic hoses as shown in the diagram below.

3 Adapter w/o - Ring - 4Sets

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STEP 10.

Install Latch pin

4 Latch pin W/Linch Pin - 2Sets

STEP 11.

Install the Bucket Ass'y

1 Bucket Ass'y - 1Sets

2 Pivot Pin (Hole) - 4EA

3 Linch Pin - 4EA

STEP 12.

Grease every fitting.

See page 9-3 for the grease chart.

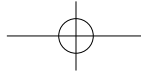
STEP 13.

Hydr. oil level check.

- Lower the boom on the ground and retract the bucket cylinder.
- Add the hydraulic oil up to the "Full" mark on the oil gauge.
- Specification of oil: Refer to the tractor manual.

STEP 14.

In order to check the leakage of hydraulic oil, please operate the Loader 5 times or more with carefully.



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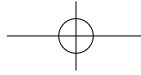
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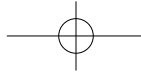
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