

11012300002

# 3 POINT HITCH BACKHOE

## BH6600/BH7600/BH8600 OPERATION MANUAL



*Enjoy your farming life.*

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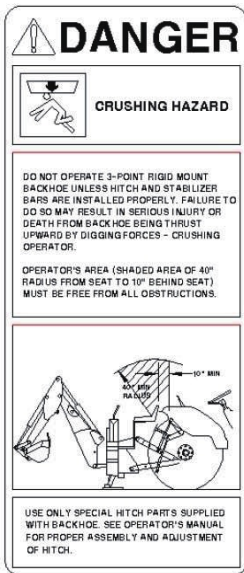
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# SAFETY

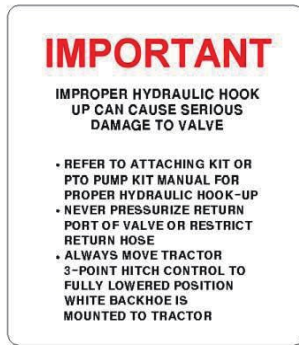
In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel in the operation, transport, maintenance and storage of equipment. Lack of attention to safety can result in accident,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

## SAFETY DECALS

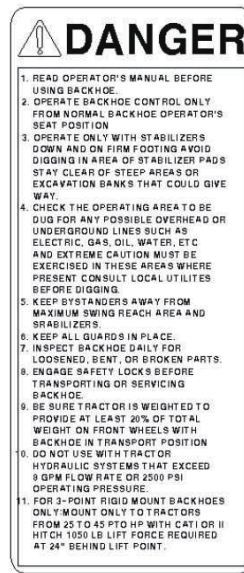
The safety of the operator was a prime consideration in the design of the backhoe. Proper shielding, convenient controls, simple adjustment and other safety features have been built into this implement. The following decals are located on the backhoe. Keep decals clean and replace them immediately if they are missing. Contact your dealer or Mateng for replacements.



Location: Left Side of Control Tower



Location: Left Side Toe Shield Area



Location: Right Side of Control Tower



Location: Right Side of Control Tower

## **SAFETY PRECAUTIONS CONTINUED THE TRACTOR AND/OR LOADER (IF EQUIPPED)**

1. Read the tractor and/or loader operator's manual to learn how to operate your tractor and/or loader safely. Failure to do so could result in serious injury or death and equipment damage.
2. It is recommended that tractor be equipped with Rollover Protective System (ROPS) and a seat belt be used for all loader operations
3. Add wheel ballast or front weight for stability.
4. Move wheels to the tractor manufacture's widest recommended settings to increase stability.
5. For better stability, use tractor with wide front axle rather than tricycle front wheels.
6. Move and turn the tractor at low speeds.
7. Stop tractor engine, place transmission in park (or neutral), engage parking break, lower loader arms to ground, cycle all hydraulic controls to relieve pressure, allow machine moving parts to stop, remove ignition key to prevent unauthorized person from starting engine before dismounting tractor or servicing, repairing, or making adjustments to the equipment.
8. Wear personal protective equipment (PPE), such as, but not limited to, protection for eyes, ears, lungs, head. hands and feet when operating, servicing, or repairing equipment. Avoid wearing loose clothing or jewelry that may catch and entangle on equipment moving parts.

## **THE BACKHOE**

1. **DO NOT** operate the backhoe unless it is rigidly attached to the tractor.
2. **KNOW** your controls. Read this operator's manual and the manual provided with your tractor. Learn how to stop the tractor, the engine and the backhoe quickly in an emergency.
3. **PROVIDE** adequate front end weight to counter-balance the backhoe at all times. 20% of the total tractor, loader and backhoe weight must be on the tractor front axle. If unsure of weight distribution, at a weight scale. Total vehicle weight, including backhoe and counter weights, must not exceed the ROPS certificate for gross vehicle weight.
4. **BE SURE** the area is clear of overhead or underground utilities or other hazards.
5. **POSITION** a barricade around the work area.
6. **KEEP** all bystanders a safe distance away.
7. **DO NOT** attempt to enter operator's platform backhoe by using the stabilizers as a step.
8. **OPERATE** from the backhoe operator's seat only.

9. **ALLOW** only one person to operate the backhoe at any time.
10. **DISENGAGE** safety locks as shown in Figure 1&3 before attempting to operate the backhoe.
11. **NEVER** dig with the backhoe unless the stabilizers are properly set.
12. **DO NOT** dig under stabilizers or tractor backhoe. Soft ground or sandy soil can cause cave-ins.
13. **KEEP BUCKET** away from the stabilizer area to avoid possible stabilizer damage.
14. **ALWAYS** swing bucket uphill to dump when on a hillside and keep loaded bucket low.
15. **SET BRAKES** and block wheels when operating on hills and banks to avoid dangerous runaway.
16. **WATCH** for overhead wires. **DO NOT** touch wires with any part of the backhoe.
17. **NEVER** allow a person to work under a raised bucket.
18. **NEVER** lift a person with the backhoe.
19. **DO NOT** use the backhoe as a battering ram. Use the backhoe only for digging.
20. **ALWAYS** lower the backhoe bucket and stabilizers to the ground, shut off engine, and apply the parking break before getting off unit, or when not digging.
21. **NEVER** leave the tractor unattended with the engine running.
22. **DO NOT** attempt to raise the tractor off the ground or move the tractor forward or backward using the backhoe Dipper stick or bucket.

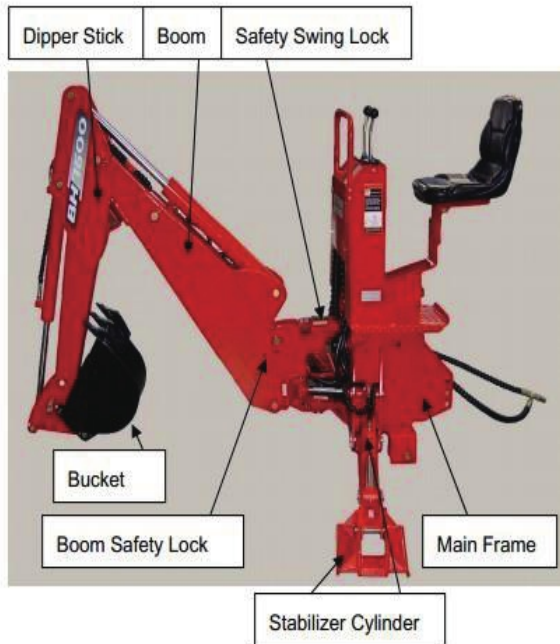
## **TRANSPORTATION**

1. **ALWAYS** engage safety locks before transporting backhoe.
2. **DO NOT** drive the tractor near the edge of a ditch or excavation.
3. **ALWAYS** use accessory lights and devices when transporting on a road or highway to warn operators of other vehicles. Check your local government regulations.

## **ADJUSTMENTS AND INSPECTION**

1. **CHECK** pins that attach backhoe to tractor and all pivot pins for tightness several times daily, replace any parts that are bent. Broken or missing.
2. **ALWAYS** engage safety locks before servicing backhoe.
3. **DO NOT** oil,grease, or adjust the backhoe while it is in motion.For greasing, see Service section for details.
4. **DO NOT** change any backhoe relief valve settings. They are factory set for best backhoe performance and safety.
5. **PROTECT YOUR EYES-WEAR SAFETY GLASSES**
6. **GUARD AGAINST INJURY** when driving connecting pins or performing any repair in which particles can chip from work piece or striking tool.

## GENERAL OPERATION



### CAUTION

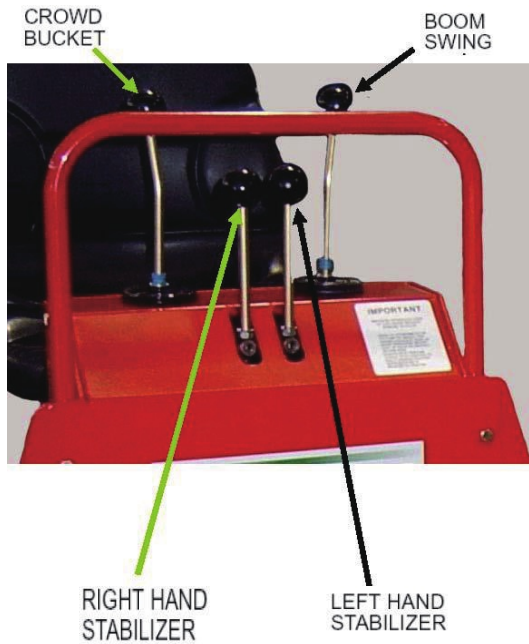
To avoid possible injury, observe the following safety Rules BEFORE OPERATING the backhoe:

1. BE SURE the area is clear of underground utilities or other hazards
2. POSITION a barricade around the work area.
3. PROVIDE adequate front end weight to counter-balance the tractor art all times. 20% of the total tractor.

**DIRECTIONS:** The terms right, left, front and back shall be determined from the position of the operator when seated in the operating position on the backhoe.

### ENGINE SPEED

The speed at which the backhoe operates is partially dependent on engine RPM. Use a moderate engine speed to start and increase it as your experience permits. Refer to "DIMENSIONS AND SPECIFICATONS" for hydraulic flow volume requirement. When powering from tractor systems with higher output, reduce engine RPM to obtain acceptable backhoe operating speed.



### CONTROLS

The backhoe has two major control levers plus the stabilizer control levers. These controls are located on the control panel directly ahead of the operator.

**1. Boom/Swing:** Push lever forward, the boom moves down, away from the operator. Pull lever back, the boom moves up, toward the operator.

The Boom/Swing Control lever has an added "float" function. A detent or stop should be felt when the lever is pushed forward to move the boom down. Pushing the lever forward more will overcome the detent and cause the boom to float, or move down or up freely, depending on the forces acting on it. when the lever is released it should return to the center, neutral position.

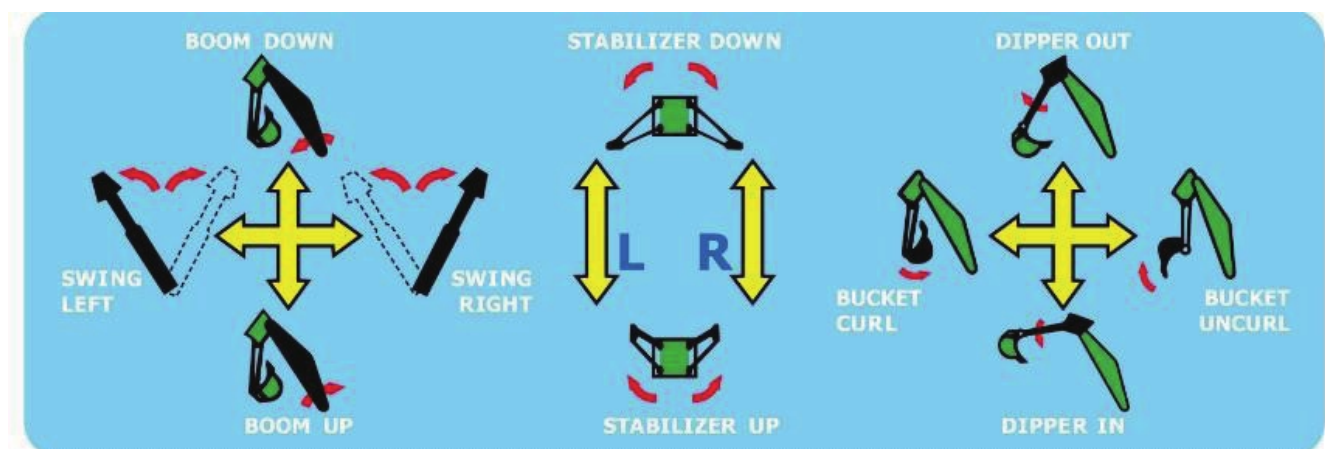
### Safety Swing Lock Pin



Move lever to the left, the backhoe swings to the left. Move lever to the right, the backhoe swings to the right. By moving the lever to one of the intermediate positions, the boom can be swung left or right at the same it is being raised or lowered, performing the two operations simultaneously.



1. SWING RIGHT AND LOWER  
The boom by moving the lever forward and to the right
2. SWING RIGHT AND RAISE  
The boom by moving the lever forward to the right.
3. Left Hand Stabilizer:  
Push lever downward, the LH Stabilizer lowers, Pull lever upward, the RH stabilizer raises.
4. Crowded/ Bucket:  
Push lever forward, the dipper stick moves out, away from the operator. Pull lever back, the dipper stick moves in, toward the operator.
5. Crowded/ Bucket: Push lever forward, the dipper stick moves out, away from the operator, Pull lever back, the dipper stick moves in, toward the operator.
6. Move lever to left, The bucket curls in. Move lever to right, the bucket extends out.  
By moving the lever to one of the intermediate positions, the dipper stick can be extended or retracted at the same time the bucket is being loaded or dumped.
7. EXTEND AND LOAD the bucket by moving the lever forward and to the left.
8. RETRACT AND LOAD the bucket by moving the lever back and to the left.
9. EXTEND AND DUMP the bucket by moving the lever forward and to the right.
10. RETRACT AND DUMP the bucket by moving the lever back and to the right
11. The two operations of the boom lever, combined with the two operations performed by the bucket and dipper stick control lever, provide four simultaneous operations from the two levers, keeping cycle time to a minimum.
12. In general, the direction of movement of a control lever corresponds to the movement of the operating member.



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## WHEN TRANSPORTING

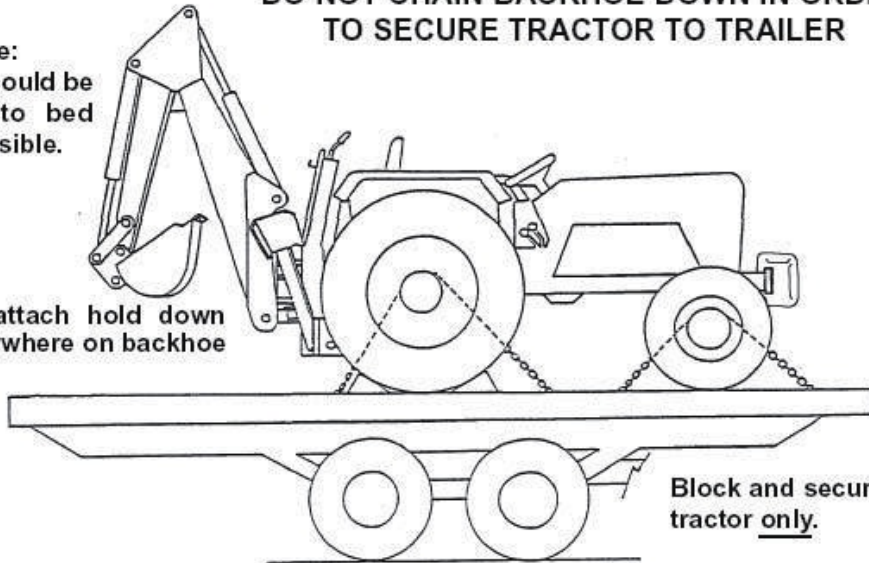
Figure 4



**DO NOT CHAIN BACKHOE DOWN IN ORDER TO SECURE TRACTOR TO TRAILER**

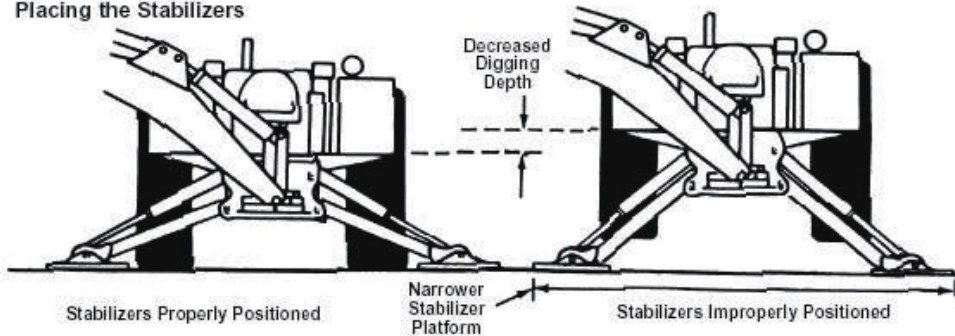
**Note:**  
Bucket should be lowered to bed when possible.

**DO NOT** attach hold down chains anywhere on backhoe assembly.



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### Placing the Stabilizers



Set the stabilizers to remove weight from the rear wheels. The wheels are to remain touching the ground as this provides for the widest stabilizer stance and the lowest center of gravity. Raising the wheels off the ground will not only reduce stability and digging depth, but will perform and impose unnecessary stress.

## General Operations

### FILLING THE BUCKET

Control the bucket attitude throughout the digging cycle to keep teeth at the proper angle for best penetration. This will minimize dragging and scraping through the ground.



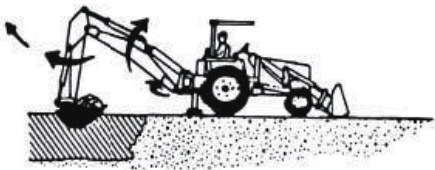
When digging in hard-packed soil, bucket penetration can be increased by applying down pressure with the boom while crowding in and curling the bucket. If the crowd action "stalls" it may be necessary to apply lift occasionally during the digging cycle to correct the bucket depth.



To obtain a cleaner trench and avoid the buildup of material directly in front of the backhoe, crowd out and completely curl the bucket while starting to lift it from the excavation. In this way, excess material will fall back into the excavation.



**DUMPING THE BUCKET** To dump the bucket at the end of the digging cycle, lift the bucket clear of the trench while crowding it out and swinging it to the spoil pile.

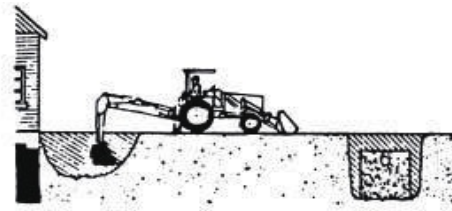


As the pile is approached, dump the bucket. When the bucket is empty, the dipper stick and bucket are in position to resume digging upon return to the trench.

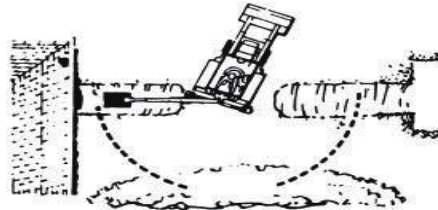
**IMPORTANT:** Avoid constant jarring or hammering type contact between the spoil pile and the loaded bucket, as this may cause premature wear to the backhoe pins and bushings.

### TRENCHING BETWEEN A BUILDING AND OPEN EXCAVATIONS

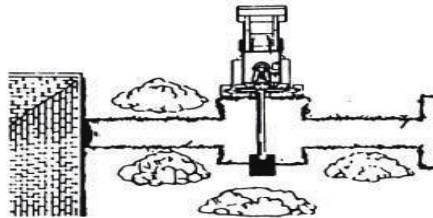
Start the trench at the building. Trench out halfway to the excavation. Then start trenching from the excavation to the first trench. Dig toward the first trench until there is just enough room to move the unit out between the two trenches.



Position the unit so the backhoe swing post is over the centerline of the trench connection. Dig with the backhoe at extreme swing positions, and in as close to the stabilizers as possible. Pile the spoil on the opposite side of the trenches.



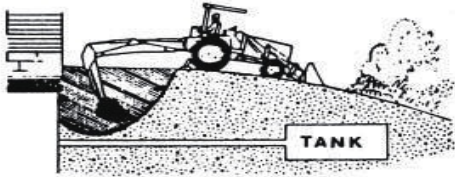
Position the unit forward with the lift and crowd levers so the two trenches can be connected. Pile the spoil on the opposite side of the trench.



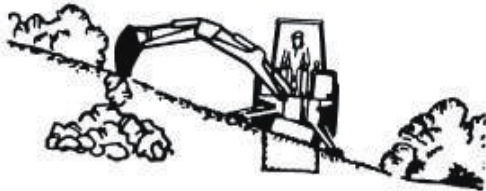
## General Operations

### SIDE SLOPE EXCAVATING OR TRENCHING

Dig with backhoe uphill whenever possible



Level the backhoe on slopes with the stabilizers to dig plumb trenches, or use the backhoe or loader to cut a level slot for the uphill wheel and stabilizer. Pile the spoil from the slot on the low side.



When on the side of a steep slope, cut a level surface along the uphill side of the trench with the loader.

Pile the spoil of the cut downhill. When digging, pile the spoil of the trench uphill.



Dig field trenched progressively. As soon as one trench is completed, have the workmen lay the tile. Start the next trench, using the spoil to fill the previous trench.

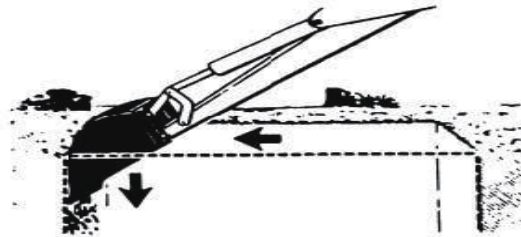


### MISCELLANEOUS

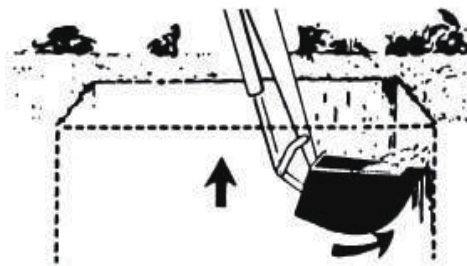
When finishing straight walls or bell holes in sandy soil, use a platform under the rear tires and stabilizers. The platform distributes the load over a larger area and lessens the possibility of a cave-in. The platform also tends to keep the unit from creeping rearward if hard digging is encountered.



**FINISHING STRAIGHT WALLS** Finish the far wall by crowding out while forcing the bucket down from the boom. Actuate the bucket (curl out) to keep the bottom of the bucket vertical.



To finish the near wall, lift up and crowd in. Keep the edges of the bucket horizontal.



**BACKFILLING** Backfill by lifting the bucket over the spoil pile and then crowding in. Pull both the crowd and lift levers for smooth, even backfilling. *IMPORTANT: Do not backfill by using the swing circuit and dragging the bucket sideways. Doing so can cause damage to the dipper stick boom swing cylinders or mainframe?*

## Hydraulic System Hoses

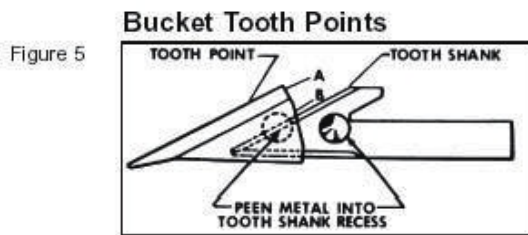
Oil leaks in the pressure side of the system can be located by carefully inspecting the external area of the hoses and fittings.

Check the return side of the system for leaks by examining the oil in the reservoir. If air is being drawn into the system, the oil will contain air bubbles and appear to foam.

When tightening connections, always use two correct size wrenches.

**IMPORTANT:** Do not over-tighten fittings. Make them just tight enough to eliminate leaks.

NEVER use teflon tape on pipe thread fittings. Always use a paste type sealer.



Hoses on any backhoe are very severely worked and will fail in time. Examine them regularly and replace any that show signs of failure. Pay careful attention to the routing of hoses so they can move fully and freely without kinking, and cannot be pinched or cut by any part of the backhoe.

The bucket tooth points are self-sharpening and will require little attention; however, these points on the bucket shanks can be replaced when they become badly worn or broken.

A tooth points can be removed from the welded tooth shank by hammering at "A" (Figure 5) on the tooth point or by driving a chisel at "B", just between the tooth point box section and the tooth shank. Install the new point and anchor it to the shank by peening at the location shown.

If a tooth shank breaks off, becomes damaged or lost so that it cannot hold a tooth point, a new shank should be welded to the bucket in its place. **The newer Style are now bolted on.**

## Tightening Nuts and Bolts

Periodically, check to be sure all bolts and nuts are tight. Check all pivot pins for cotter pins, washers and retainers; if missing, replace.

## Lubrication

Economical and efficient operation of the backhoe is dependent upon regular and proper lubrication of all moving parts with a quality lubricant. All parts fitted with grease fittings should be lubricated with a good quality chassis lube type grease. If any grease fittings are missing, replace them immediately. Clean all fittings thoroughly before using grease gun. Lubricate all grease fittings at least twice daily, once at the beginning of operation and again approximately halfway through the work day.

Lower stabilizers to the ground, extend dipper stick and bucket and lower boom so bucket rests on the ground . Refer to these illustrations for the location of all grease fittings.

**\*IMPORTANT:** Before greasing boom to swing frame pivot ( \* ) , raise boom and install boom safety lock pin .

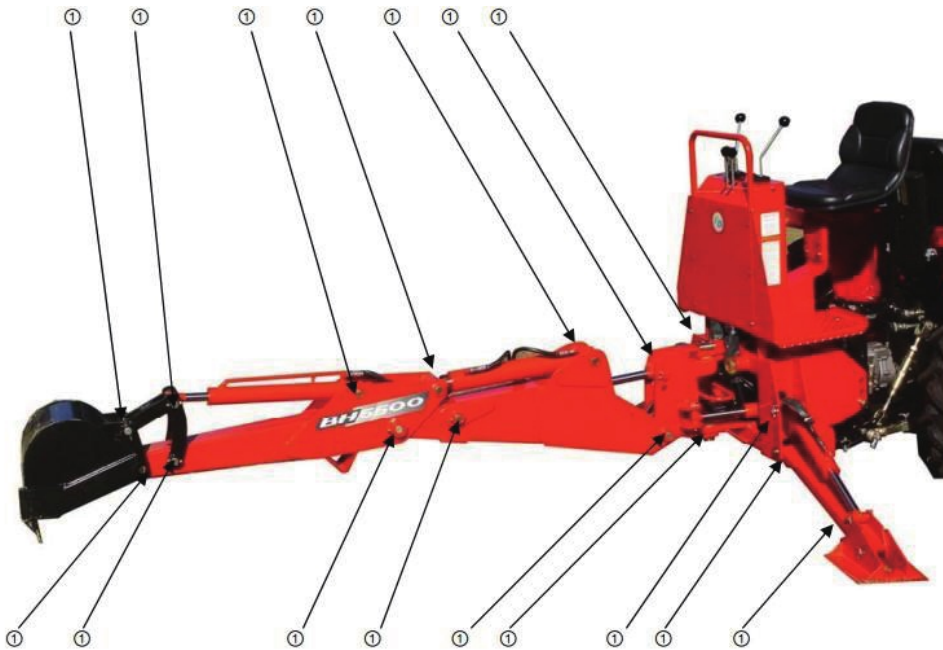
The following locations should be oiled with SAE 30 oil:

- A. Stabilizer Pivot Pins
- B. Control Handle Linkage
- C. Seat Bracket Pivot

Hydraulic Oil: Most any all purpose Tractor Hydraulic oil can be used, AW32 / AW42 is good.

*IMPORTANT: Avoid excessive greasing. Dirt collects on exposed grease and increases wear greatly.*

After greasing, wipe off excessive grease from fittings.



## INSTALLATION AND REMOVAL

Tractor Preparation

1. Remove rockshaft center link.
2. Remove the sway links, lift links, and draft links.
3. Remove drawbar.

The backhoe can be self-assisting during the installation and removal procedures.

### Testing Backhoe Hydraulic Hook-Up

1. Start the tractor.
2. Exit the tractor.
3. Sitting in the backhoe operator's seat raise and lower the stabilizer legs and extend and retract the dipper stick.
4. Exit backhoe, stop engine, and check hydraulic fluid level in tractor.

### Removing Assembled Backhoe from Tractor

1. Start tractor engine, engage park brake, place throttle in low idle position, and exit tractor.
2. Remove Swing Lock Pin from its storage location and install in backhoe.
3. Remove Lock Pins and Hair Pins Clips from front of sub frame. Pivot latches forward to disengage from loader mount.
4. Pivot sub frame down until the sub frame clears the Loader Mount Weldment. Again, this is Accomplished by using the boom and stabilizer circuit hydraulics.
5. Flip up pivoting latches and reinstall Lock Pins and Hair Pin Clips for storage Purposes.
6. Continuing to use the boom and stabilizer circuit hydraulics, raise sub frame slightly at the Tractor lower 3-point hitch connection points to take the sub frame weight off of the pins.

*IMPORTANT* - Watch that hydraulic hoses to backhoe are not kinked or pulled tight.

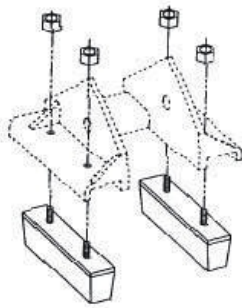
7. Drive tractor ahead just enough (5" to 6") to clear sub frame hooks from the Tractor lower 3-point hitch connection points.
8. Again, using boom and stabilizer circuit hydraulics lower backhoe and sub frame to the ground.
9. Shut off tractor, engage parking brake, then disconnect hydraulic hoses from backhoe.
10. Reconnect tractor pressure line hose to tractor power beyond hose, located just above PTO master shield.

**NOTE: For long term storage, coat exposed cylinder rods with grease.**

### Stabilizer Pads

The backhoe is supplied with flip-over stabilizer pads as standard equipment. They are suitable for most backhoe work and generally are all that is ever required. However, Street pad kits are available as an option. This kit bolts to the standard pads and increase the versatility of the backhoe. see figure 10.

Figure 10



## Hydraulic Trouble Shooting

The trouble shooting material presented in this section is offered as a guide to diagnosing probable causes and remedies for general operational problems. Match your problem with the typical problem examples given, and note the numbers given for the possible cause. These numbers correspond with the possible cause and correction paragraphs that follow.

*NOTE: When using the following chart, if it is decided that an overhaul of components or pressure adjustments are necessary to correct malfunctioning, it is recommended that your dealer make these repairs. He is equipped to do this work.*

**WARNING**



Escaping hydraulic / diesel fluid under pressure can penetrate the skin causing serious injury. Do not use your hand to check for leaks. Use a piece of cardboard or paper to check for leaks. Stop engine and relieve pressure before connecting or disconnecting lines. Tighten all connections before starting engine or pressurizing lines. If any liquid is injected into the skin, obtain medical attention immediately or gangrene may result.



## General Unpacking

The backhoe has been partially disassembled and strapped to a skid for shipping purposes. Initial installation on the tractor will require a hoist or other device capable of safely lifting the entire backhoe from the skid. After the initial installation is complete, the backhoe can serve as its own erecting hoist, by lowering stabilizers and bucket to the ground. Additional lifting devices will not be required for normal removal and reattaching.

## Assembly

*IMPORTANT: Tighten all hardware to torque requirements*

1. Remove the stabilizer assemblies and any miscellaneous items which have been fastened to the skid and arrange conveniently. Reposition stabilizer cylinders from their shipping configuration, assembling them into the Mainframe, using pins and hardware provided. Be sure cylinder ports are pointed upward and hoses are routed above the cylinder to main-frame pivot pin connection.

### CAUTION

*DO NOT cut any strapping that fastens the backhoe mainframe and swing frame to the skid base at this time.*

### CAUTION

*Be sure hoist being used is suitable, has sufficient capacity and is in the proper position. Do not allow anyone under a backhoe member supported by hoist.*

### CAUTION

*Be sure hoist being used is suitable, has sufficient capacity and is in proper position. Do not allow anyone under a backhoe member supported by hoist.*

2. Support boom(A) and dipper stick(B) with hoist remove plastic bag containing bucket pins from and remove boom transport lock pin. Lower boom and manually extend dipper stick until it rests on ground, Move control handle to "BOOM DOWN" position as required to aid movement.

3. Remove plastic bag containing bucket pins from backhoe, Attach bucket(D) to Dipper stick using one pin, two bolts, locknuts, pin retainers, and washers as needed to take up gap under pin retainers.

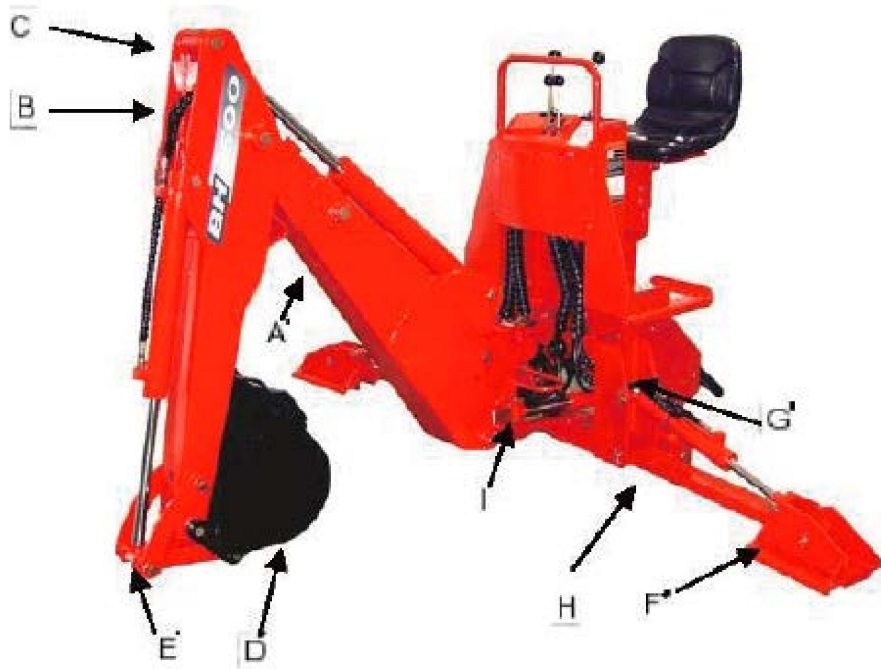
4. Attach Bucket link(E) to bucket, using same hardware as listed for step #3.

5. Reposition hoist on backhoe to prevent tipping and raise Mainframe slightly. Remove all remaining strapping and skid. Using caution to prevent tipping raise Mainframe (G) approximately 10" and block Mainframe and Swing Frame securely.

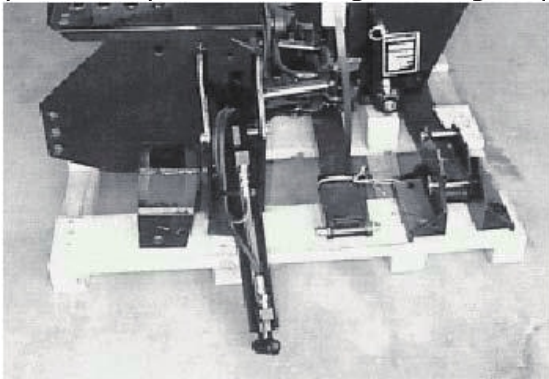
6. Attach Stabilizers (F) to Mainframe (G) using pins and hardware assembled to Stabilizers (F)

7. Attach Stabilizer cylinders(H) to stabilizers (F) using pins and hardware assembled to Stabilizers (F).

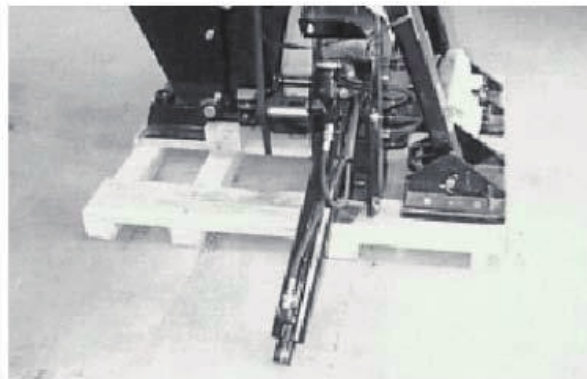
8. Follow the Mount Kit Instructions section of the Operator's Manual. Check the installation carefully and make sure that all members are correctly installed and securely fastened.



**Packing may be different than below**, as we are always trying to improve, to maximize space and prevent damage during shipping.



A

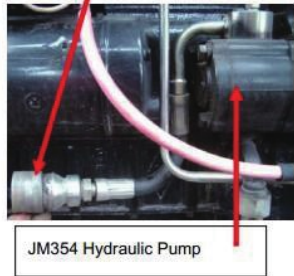
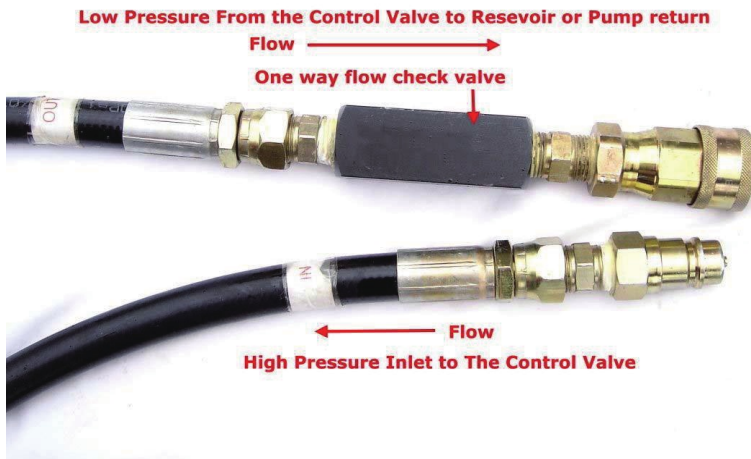


B

### **HYDRAULICS and MOUNTING KITS**

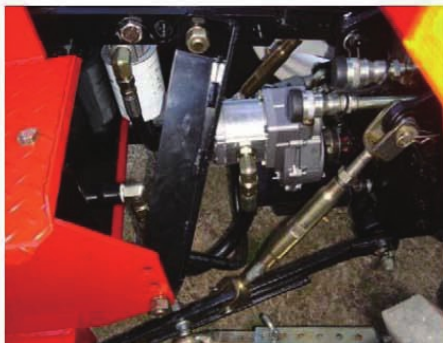
#### **SUB FRAME & 3 POINT HYDRAULIC HOOK-UP TO THE TRACTOR & HYDRAULIC SYSTEMS**

**Warning!** If the control valve is piped wrong you will damage the valve this will void the valve warranty. If using your Tractor Hydraulics it must have a filter installed on the return system, if not, it will void any warranty. Please contact your dealer for help. The factory installed PTO pump with reservoir does not come with a check valve, a check valve is only needed when the hydraulic lines are connected directly to the tractor hydraulic system.



### 3 Point components and hookups

These parts come with your 3 point backhoe, both models BH6600/7600, some parts may vary in size or length for each model.



Shown with optional PTO pump and reservoir



3 point attaching point on a JM254LE



3 Point Shown Mounted on a Mahindra Tractor



Hose Kit supplied without PTO pump all fittings are JIC

## ATTACHING KIT INSTRUCTIONS

### 3-POINT HITCH LINKAGE & MOUNT KIT & HYDRAULIC HOOK-UP General

#### Description

Mounting and hydraulics kits include two hoses which can be used to connect the backhoe to the tractor hydraulic system. Additional hydraulic components or kits will be required to complete the hook-up to the tractor hydraulic system. Refer to the Hydraulic Hook-up section for further information. Pumps and reservoir kits are available as options.

The backhoe is mounted on the tractor lower link arms and an adjustable upper link. A set of stabilizer arms is included. They bolt from the adjustable upper link to the backhoe mainframe, locking the hoe rigidly in one position.

***IMPORTANT: Tractor lower links must be kept free of lifting forces at all times after installation of the attaching kit, by keeping tractor quadrant lever in the lowered position.***

***IMPORTANT: If the 3-point kit is to be used with a PTO & Reservoir Kit, the Reservoir Tank and its fittings should be installed before proceeding with the 3-Point installation, this might be done at the factory depending on how purchased.***

#### 3-POINT HITCH LINKAGE ASSEMBLY

1. Use hoist to raise the backhoe mainframe so that the boom pivot pin is approximately 12" (BH6600), or 14" (BH7600), off the ground.
2. Back tractor close to the backhoe. Connect tractor lower link arms to lower link mounts at position " C" Figure 8, using two L-pins(4), two cotter pins, and two snap pins (7) as shown in Figure 8.
3. Secure upper bar(16) between upper braces(15) Using M20\*2.5p\*95 bolt(22), lock washer(20) And nut(21).Use hoist to raise or lower backhoe slightly until a hole in the upper bar aligns with a hole in the upper braces.
4. Attach RH lower link weldment(18) and LH lower link weldment(17) to backhoe mainframe using M20\*2.5p\*55 bolt(24), lockwasher(20), and nut(21).
5. Align RH and LH link weldment(17,18) with a hole in the upper bar/brace assembly, as close to the tractor as possible. Use M20\*2.5\*110 bolt(23), lockwashers(20) and nut(21). You may need to return to Step 4 and readjust upward or downward the bolt connection.
6. Remove backhoe from the tractor.
7. Tighten all hardware at this time. Check your installation very carefully to be sure all members are correctly installed and securely fastened. 7A. If using optional PTO pump and Reservoir Kit proceed to that section prior to remounting the backhoe onto the tractor.
8. Connect hoses from the backhoe control valve to the tractor hydraulic system as described in " Hydraulic hook-up." Section, prior to remounting the backhoe onto the tractor.

Figure 7

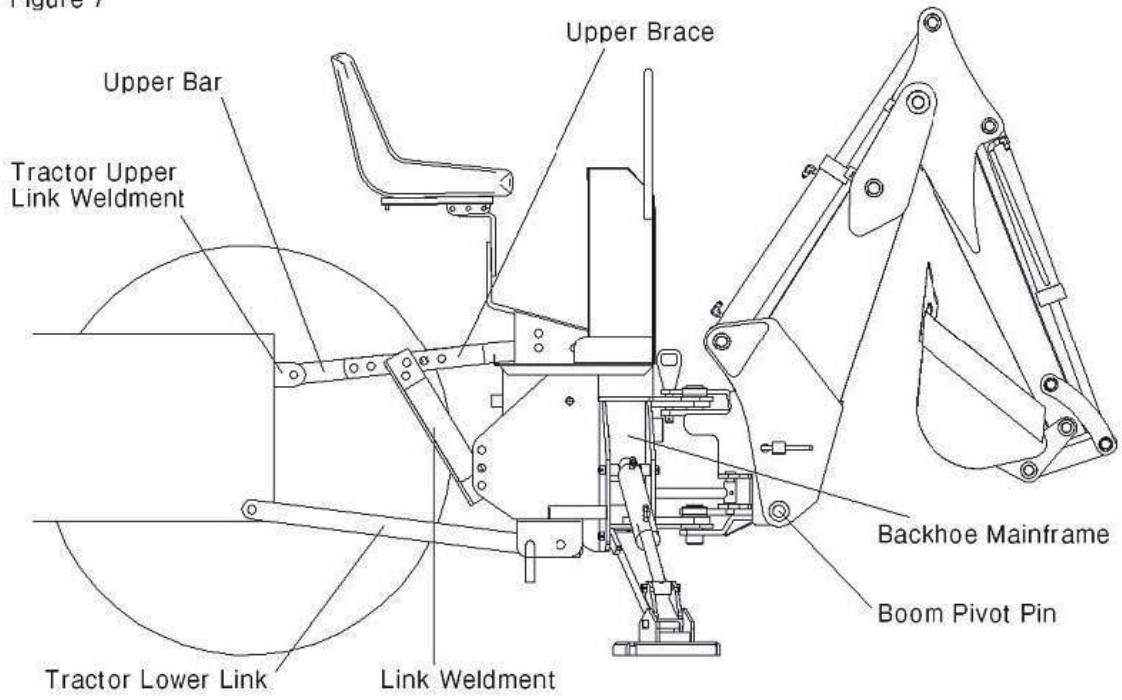
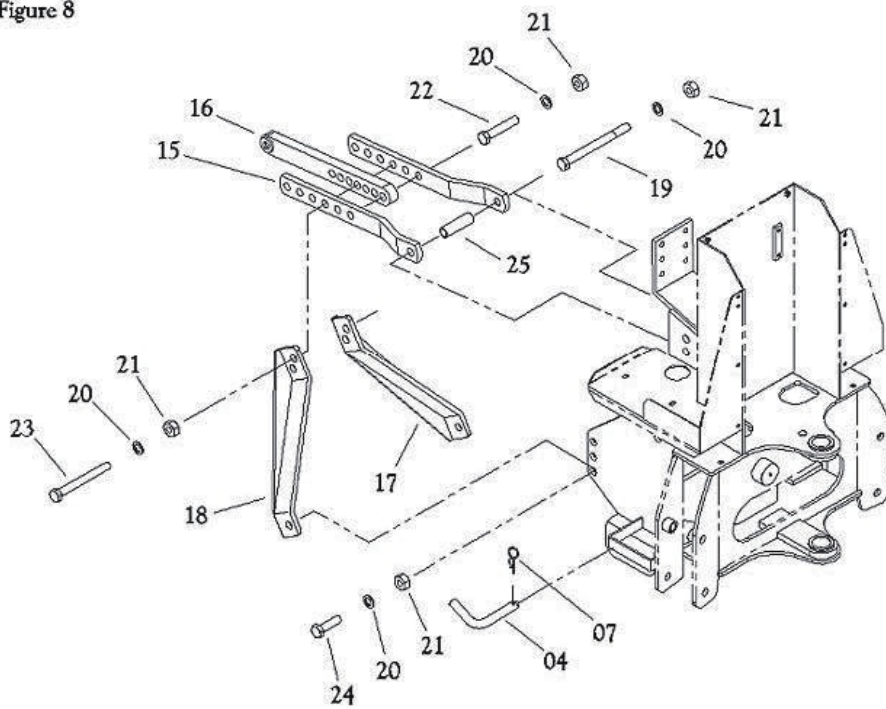
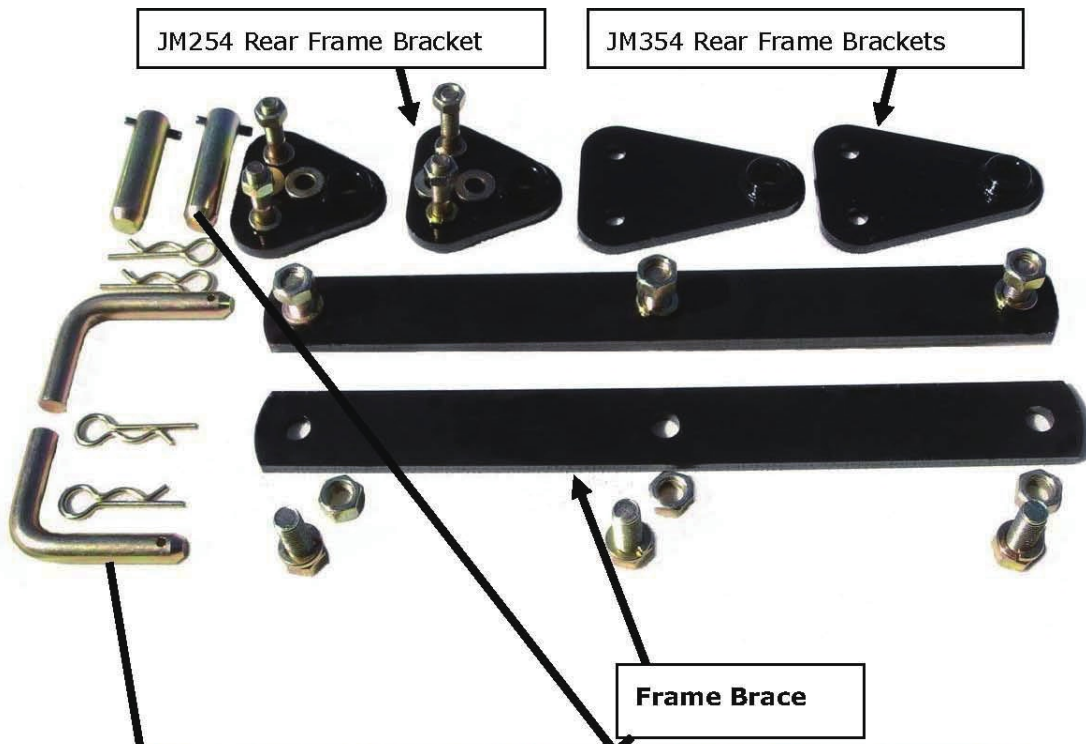


Figure 8





BH6600 / BH7600 JM254 JM354 Frame mount parts

## General Description

Tractor will require setup, please consult your backhoe safety section for proper ballasting and other important safety precautions.

*IMPORTANT:* Remove tractor Upper 3-point Arm and Lower Draft Arms from tractor before proceeding.

*IMPORTANT:* Tighten all hardware to the torque requirements

*IMPORTANT:* Some hardware on the sub frame has been factory preassembled for ease of shipment. This hardware must be loosened to ease initial assembly of kit to tractor and backhoe.

*IMPORTANT:* Some tractor or loader mounting hardware will be discarded and replaced by components in the backhoe mounting kit. Please read manual carefully, if loader and mount kit. Please read manual carefully, if loader and mount kit have already been installed, remove loader. Some of the loader mount kit hardware may need to be loosened, to ease backhoe mount kit installation

### Adjustment of Sub frame Weldment (less backhoe) when Installed on Tractor with Loader Mount

1. Lift and slide hooks located on Sub frame Assembly into Tractor lower 3-point hitch connection points.
2. Remove Lock Pins and Hair Pin Clips . Pivot assembly up and into Loader Mount Weldment. Secure to Loader Mount Weldment using Lock Pins and Hair Pin Clips . Tighten and torque all hardware that has been loosened, reinstalled, and installed up to this point. Remove sub frame assembly from tractor.

### Sub frame Assembly to Basic Backhoe

1. Install sub frame assembly to basic backhoe using two 7/8 NF 2" bolts , 7/8" lock washers , and nuts .
2. Assemble Braces to sub frame using two 7/8NF 2" bolts , 7/8" lock washers and nuts . Install Braces to backhoe mainframe using four 3/4 NF 2" bolts , 3/4" lock washers and nuts .
3. Tighten and torque all hardware.
4. Using a hoist on backhoe to prevent tipping. Raise backhoe slightly to remove blocking, then lower entire unit to the ground. Block as required.
5. Proceed to the "hydraulic Hook-Up" section of your backhoe Operator's Manual.



## **MOUNT KIT ASSEMBLY**

Tractor will require setup, please consult your backhoe safety section for proper ballasting and other important safety precautions.

*IMPORTANT:* Remove tractor Upper 3-point Arm and Lower Draft Arms from tractor before proceeding.

*IMPORTANT:* Some hardware on the sub frame has been factory preassembled for ease of shipment. This hardware must be loosened to ease initial assembly of kit to tractor and backhoe.

*IMPORTANT:* Tighten all hardware to the torque requirements specified in the torque chart.

**IMPORTANT:** Some tractor or loader mounting hardware will be discarded and replaced by components in the backhoe mounting kit. Please read manual carefully, if loader and mount kit. Please read manual carefully, if loader and mount kit have already been installed. Some of the loader mount kit hardware may need to be loosened, to ease backhoe mount kit installation.

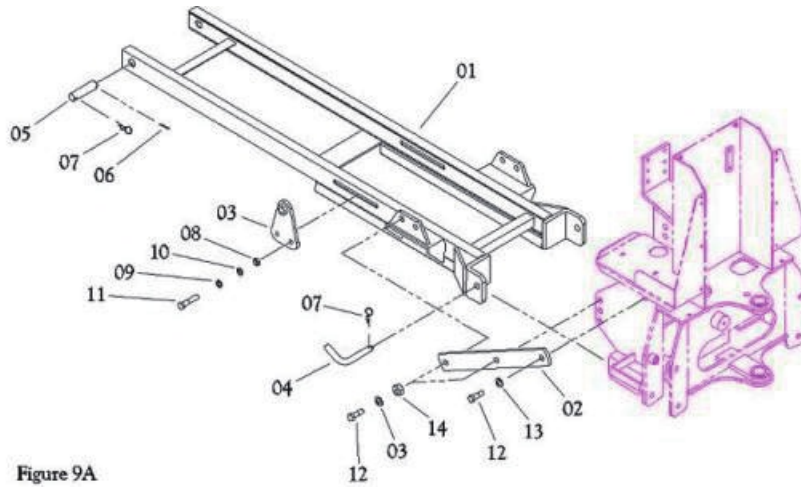


Figure 9A

Mount Kit(BH6600) + SubFrame(BH6600) - Hole A  
 Mount Kit(BH6600) + SubFrame(BH7600) - Hole B

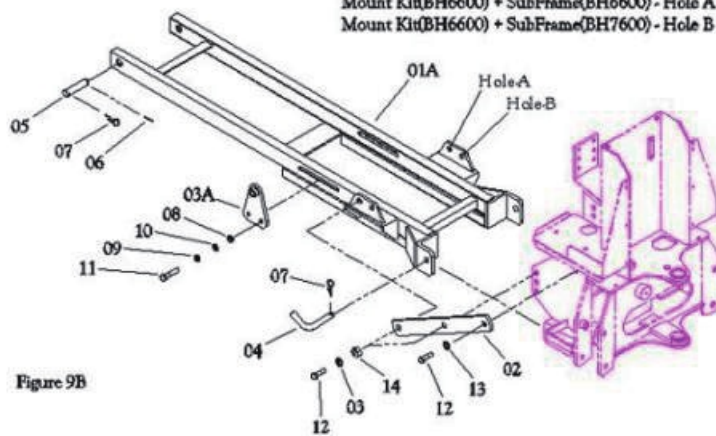


Figure 9B

Mount Kit(BH7600) + SubFrame(BH7600) - Hole B  
 Mount Kit(BH7600) + SubFrame(BH6600) - Hole A

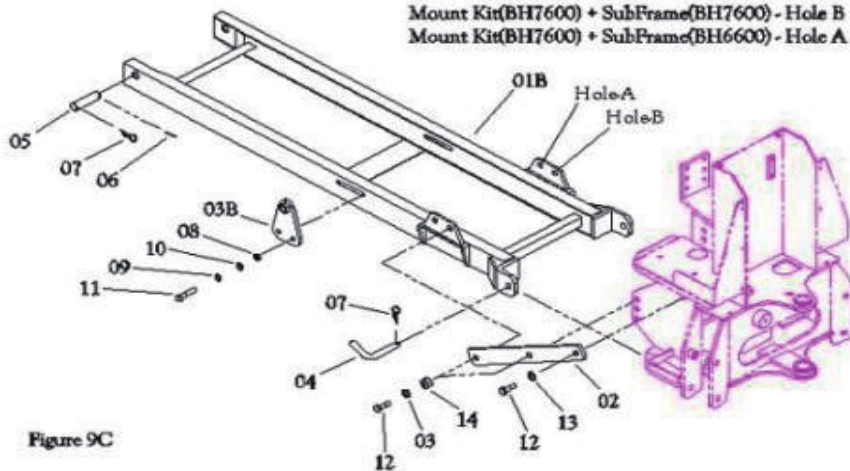


Figure 9C

## **Parts List:**

**BH-6600/BH7600/BH8600BACKH**

### **CONTENTS**

**1.Base assembly/Steering assembly/Console assembly**

**2. Base link assembly**

**3.Jib assembly/Bucket assembly**

**4.Left leg assembly/Right leg assembly/ Seat assembly**

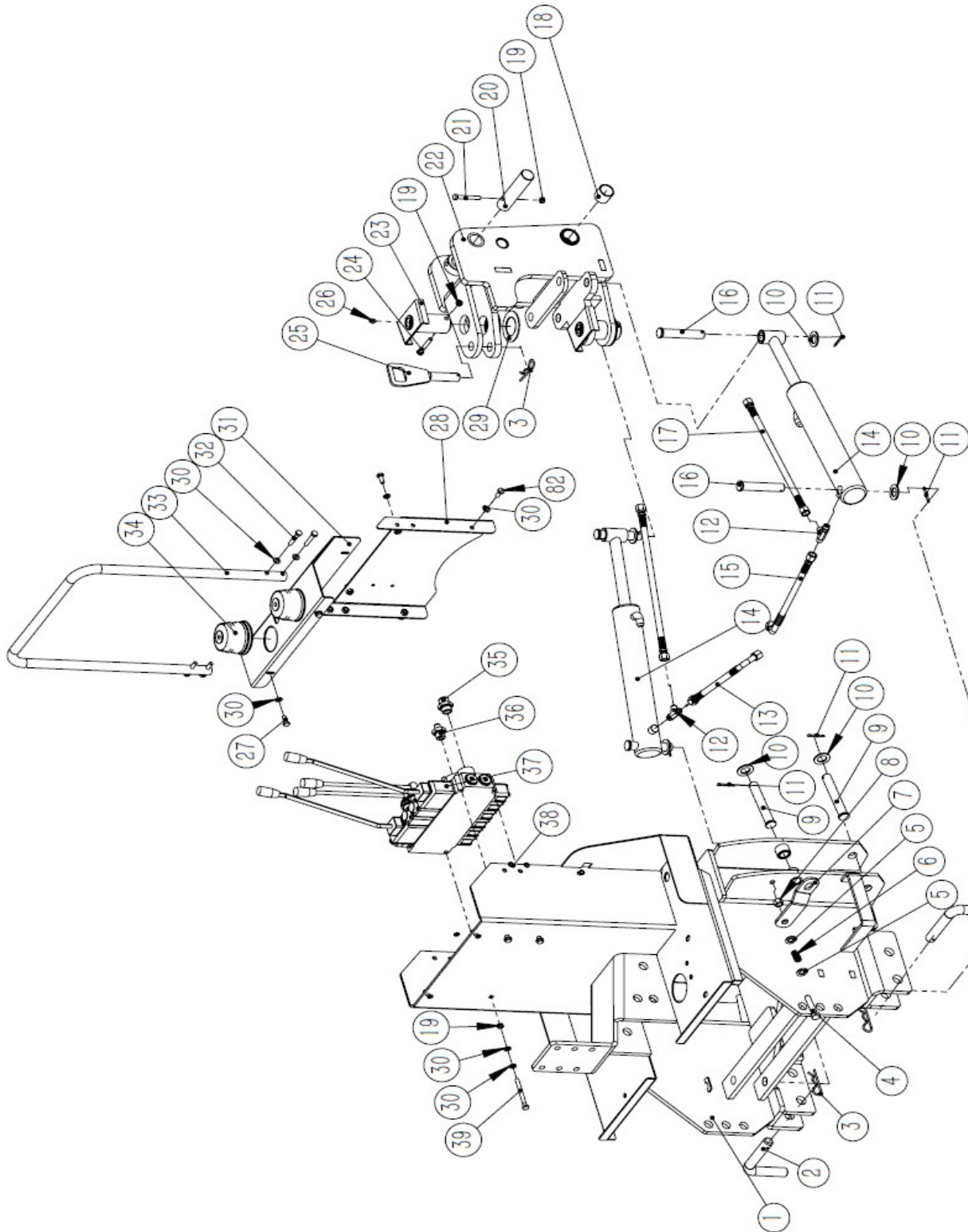
**5.Mechanical wooden fork assembly**

**6.Gear pump configuration**

**7.Gear case**

**8.Tank components**

# 1.Base assembly/Steering assembly/Console assembly



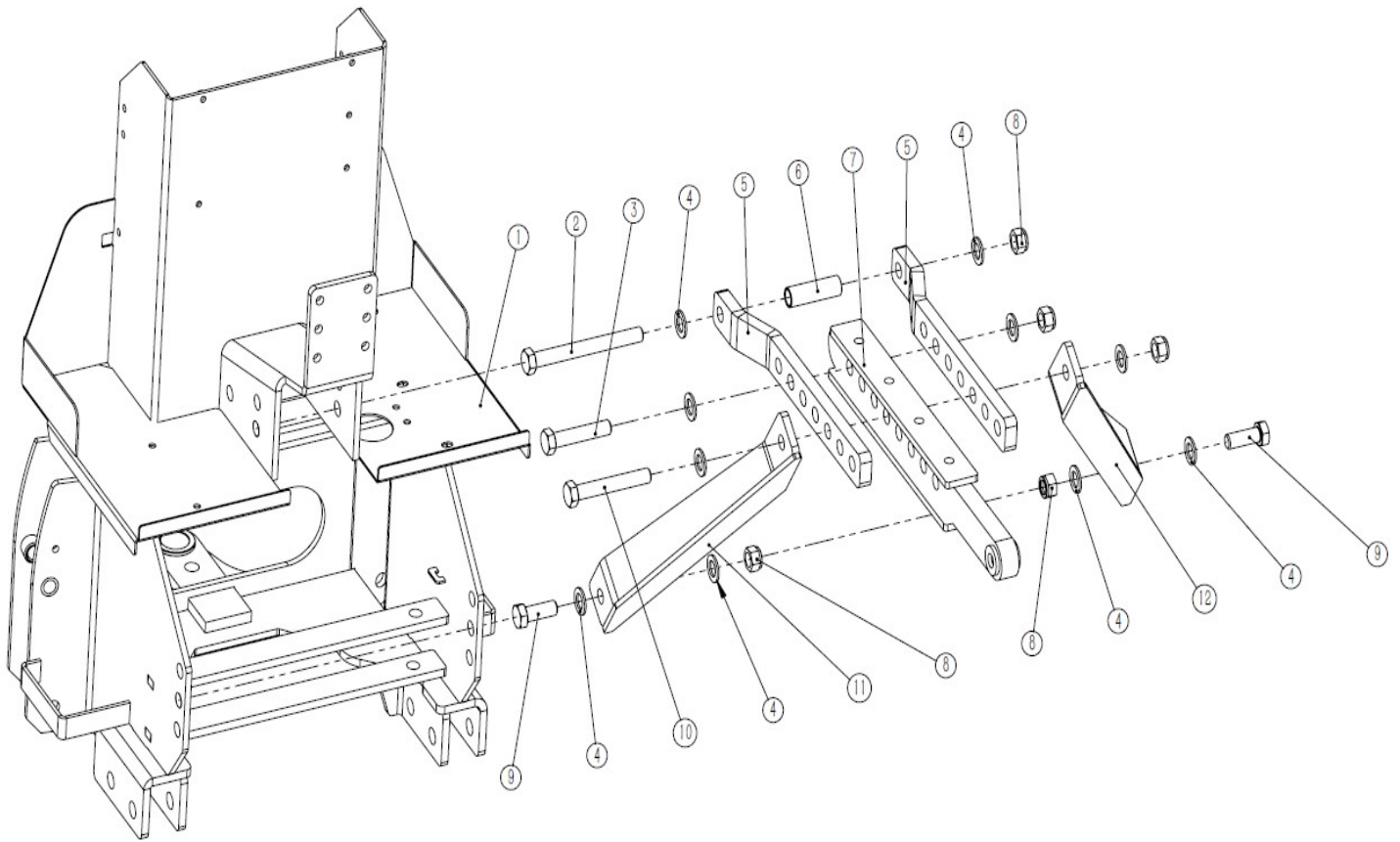
## 1.Base assembly/Steering assembly/Console assembly

POS.	COD.	Specification	Description	Qty	Remark
1	2020000440	F11001A01100-000	Base assembly welding	1	
2	2010000142	F11001A01000-003	Pin	2	
3	3120400008	Din11024-4-EP•Zn	R Pin	3	
4	3040100075	GB/T5783-M12×60-8.8-EP•Zn	Full-thread hexagon bolts	2	
5	3080100007	GB/T95-12-EP•Zn	Plain washer	4	
6	3110200005	Y I -1.5×14×25×4.5-R-65Mn-EP•Zn	Pressure spring	2	
7	2000004914	F11001A01000-004	plate	2	
8	3050100007	GB/T41-M12-5-EP•Zn	Hexagon Nuts	2	
9	2010000140	F11001A01000-001	Pin	4	
10	3080100011	GB/T95-20-EP•Zn	Plain washer	8	
11	3120100093	GB/T91-4×32	Split pin	8	
12	3180100092	TL-LEE08UNF1 / 2-200MDCF	Transition joints	2	
13	3180200004	2SN06BL×M22512-04-05 / M22592-04-05 (H55) ×1040-6G	Steering Cylinder Outlet Hose	2	
14	3181300021	BH7-145	Hydraulic cylinder	2	
15	3180200178	2SN06BL×M22512-04-05 / M22592-04-05 ×1040- 6P	Steering Cylinder Inlet Hose	1	
16	3120500006	F11001A01000-002	Pin	4	
17	3180200161	2SN06BL×M22512-04-05 / M2251-04-05×400	Hose	2	BH6600/7600
	3180200003	2SN06BL×M22512-04-05 / M22512-04-05×440	Hose	2	BH8600
18	3101000011	C30×34×30-GCr15	Bushing	2	
19	3051500601	GB/T6184-M8-8-EP•Zn	Metal locknut	6	
20	2010000168	F11001A02000-001	Pin	1	
21	3040300005	GB/T5782-M8×60-8.8-EP•Zn	Full-thread hexagon bolts	1	
22	2020000422	F11001A02100-000	The rotary joints are welding	1	
23	2020000429	F11001A02200-000	The suspension pin shaft is welding	2	
24	3040300004	GB/T5782-M8×55-8.8-EP•Zn	Full-thread hexagon bolts	2	
25	2020000427	F11001A02300-000	Pin	1	
26	3170400003	JB/T7940.1-M8×1	Grease nipple	3	
27	3040100022	GB/T5783-M8×20-8.8-EP•Zn	Full-thread hexagon bolts	6	
28	2020000424	F11001A08100-000	Front cover plate of control cabinet welding	1	

## 1.Base assembly/Steering assembly/Console assembly

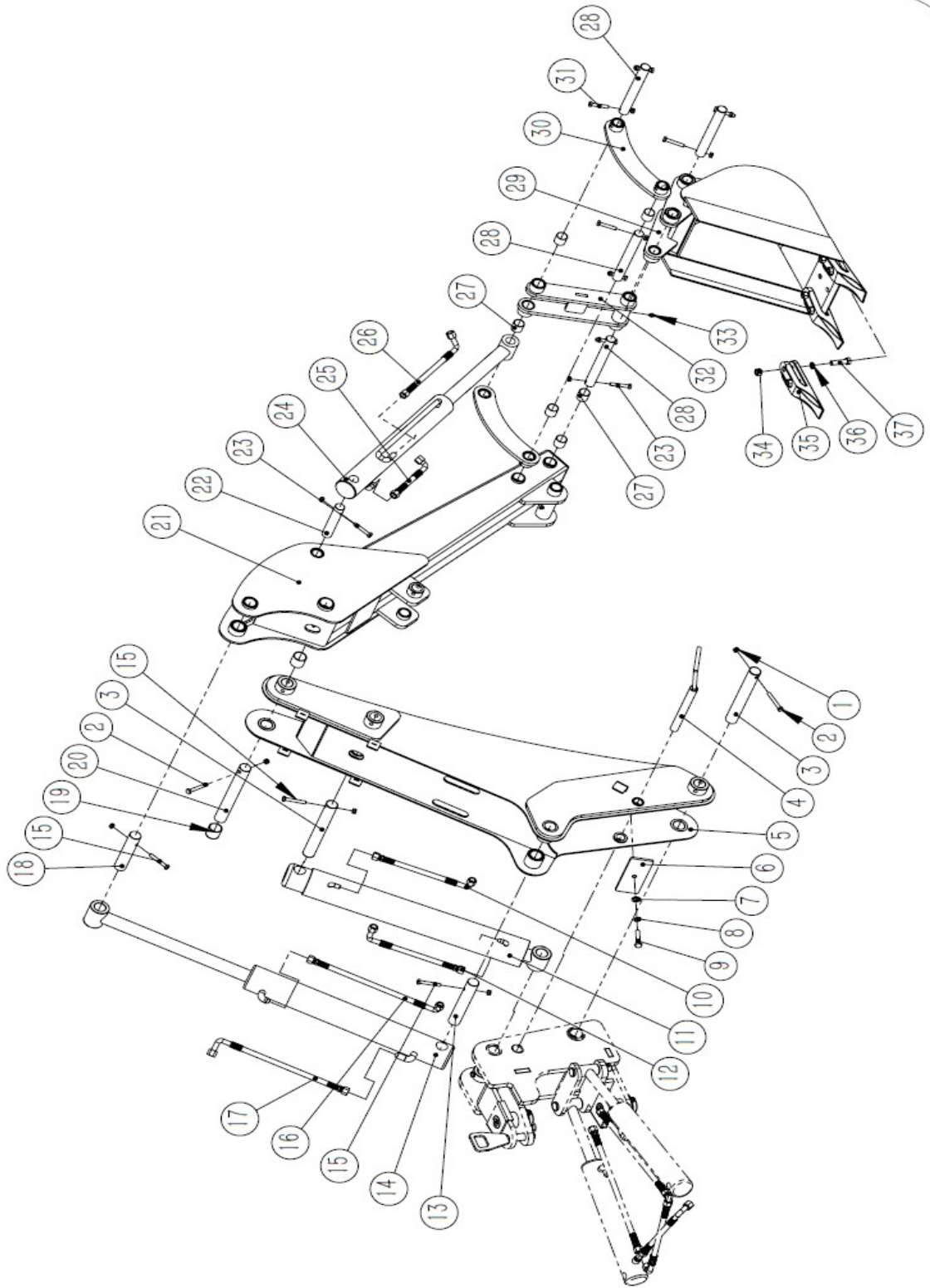
POS.	COD.	Specification	Description	Qty	Remark
29	2000000210	F11001A02000-002	Tube	6	
30	3080100004	GB/T95-8-EP•Zn	Plain washer	16	
31	2000000211	F11001A08000-001	plate	1	
32	3040100028	GB/T5783-M8×45-8.8-EP•Zn	Full-thread hexagon bolts	4	
33	2010000141	F11001A08000-002	Poles	1	
34	3210300001	60×120	Tarpaulin	2	
35	3180100118	TL-GE16M22×1.5EDOMDCF	Transition joints	2	
36	3180100119	TL-GE08M20×1.5EDOMDCF	Transition joints	12	
37	3180700002	ZT6-010000	Hydraulic Valve	1	
38	3080500007	GB/T93-8-EP•Zn	Metal locknut	10	
39	3040300008	GB/T5782-M8×80-8.8-EP•Zn	Full-thread hexagon bolts	3	

## 2.Base link assembly



POS.	COD.	Specification	Description	Qty	Remark
1	2020000440	F11001A01100-000	Base assembly welding	1	
2	3040300078	GB/T5782-M20×190-8.8-EP•Zn	Hexagon head bolts	1	
3	3040300073	GB/T5782-M20×100-8.8-EP•Zn	Hexagon head bolts	1	
4	3080100011	GB/T95-20-EP•Zn	Plain washer	10	
5	2000000229	F11001A07000-001	Poles	2	
6	2010000143	F11001A07000-002	Tube	1	
7	2020000456	F11001A07300-000	Poles are welding	1	
8	3050500011	GB/T889.1-M20-8-EP•Zn	Locknut	5	
9	3040100138	GB/T5783-M20×55-8.8-EP•Zn	Full-thread hexagon bolts	2	
10	3040300076	GB/T5782-M20×130-8.8-EP•Zn	Hexagon head bolts	1	
11	2020000425	F11001A07100-000	Base connecting rod welding	1	
12	2020000426	F11001A07200-000	Base connecting rod welding	1	

### 3.Jib assembly/Bucket assembly





### 3.Jib assembly/Bucket assembly

POS.	COD.	Specification	Description	Qty	Remark
1	3050500003	GB/T889.1-M8-8-EP•Zn	Locknut	14	
2	3040300006	GB/T5782-M8×65-8.8-EP•Zn	Full-thread hexagon bolts	2	
3	2010000169	F11001A03000-006	Pin	2	
4	2020000709	F11001A03500-000	Pin welding	1	
5	2020000761	F11001A03100-000	Large movable arm welding	1	BH6600
	2020000707	F11003A03100-000	Large movable arm welding	1	BH7600
	2020000771	F11005A03100-000	Large movable arm welding	1	BH8600
6	2000000249	F11001A03000-007	Plate	1	
7	3080100006	GB/T95-10-EP•Zn	Plain washer	1	
8	3080500008	GB/T93-10-EP•Zn	Spring washer	1	
9	3040100048	GB/T5783-M10×45-8.8-EP•Zn	Full-thread hexagon bolts	1	
10	3180200181	2SN06BL×M22512-04-05 / M22592 -04-05×1840-6Q (6)	Hose	1	BH6600
	3180200177	2SN06BL×M22512-04-05 / M22592 -04-05×2010-6Q (7)	Hose	1	BH7600
	3180200172	2SN06BL×M22512-04-05 / M22592 -04-05×2210-6Q (8)	Hose	1	BH8600
11	3181300017	CDL1MP5-70 / 34.9 / 405-D-1 / 2x20UNF-1CGUM	Hydraulic cylinder	1	BH6600
	3181300019	CDL1MP5-70 / 34.9 / 435-D-1 / 2x20UNF-1CGUM	Hydraulic cylinder	1	BH7600
	3181300062	CDL1MP5-70 / 44.45 / 425-D-1 / 2x20UNF-2CGUM	Hydraulic cylinder	1	BH8600
12	3180200006	2SN06BL×M22512-04-05 / M22592 -04-05 (H55) ×1840-6H(6)	Hose	1	BH6600
	3180200008	2SN06BL×M22512-04-05 / M22592 -04-05 (H55) ×2010-6H(7)	Hose	1	BH7600
	3180200010	2SN06BL×M22512-04-05 / M22592 -04-05 (H55) ×2210-6H(8)	Hose	1	BH8600
13	2010000160	F11001A03000-003	Pin	1	
14	3181300061	CDL1MP5-63.5 / 34.9 / 340-D-1 / 2x20UNF-1CGUM	Hydraulic cylinder	1	BH6600
	3181300020	CDL1MP5-63.5 / 34.9 / 460-D-1 / 2x20UNF-1CGUM	Hydraulic cylinder	1	BH7600
	3181300063	CDL1MP5-70 / 44.45 / 560-D-1 / 2x20UNF-1CGUM	Hydraulic cylinder	1	BH8600
15	3040100180	GB/T5783-M8×55-8.8-EP•Zn	Full-thread hexagon bolts	3	

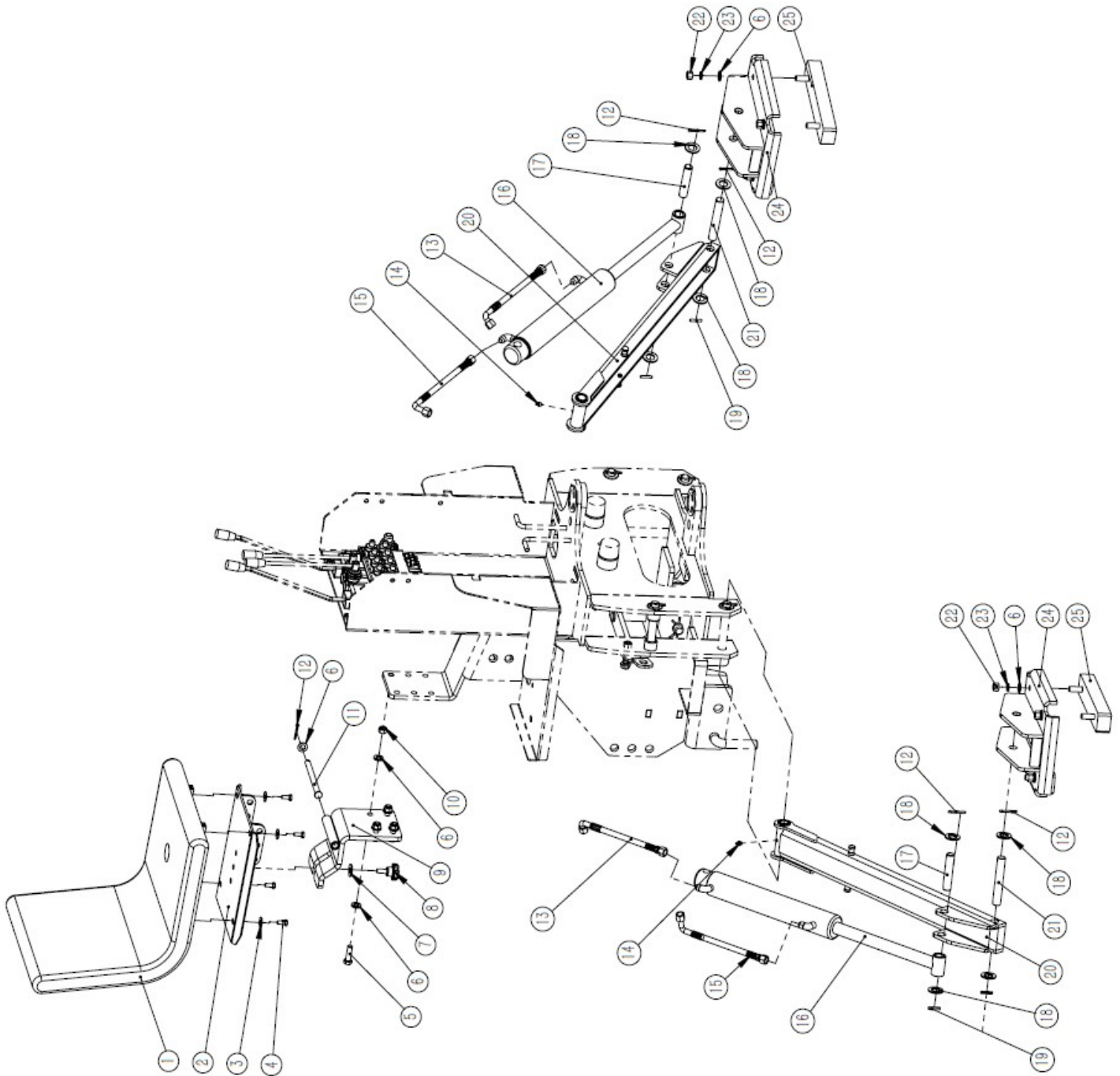
### 3.Jib assembly/Bucket assembly

POS.	COD.	Specification	Description	Qty	Remark
15	3040100180	GB/T5783-M8×55-8.8-EP•Zn	Full-thread hexagon bolts	7	
16	3180200180	2SN06BL×M22512-04-05 / M22592-04-05×1950- 6K (6)	Hose	1	BH6600
	3180200175	2SN06BL×M22512-04-05 / M22592-04-05×2150- 6K (7)	Hose	1	BH7600
	3180200171	2SN06BL×M22512-04-05 / M22592-04-05×2380- 6K (8)	Hose	1	BH8600
17	3180200007	2SN06BL×M22512-04-05 / M22592-04-05 (H55) ×1950-6D (6)	Hose	1	BH6600
	3180200009	2SN06BL×M22512-04-05 / M22592-04-05 (H55) ×2150-6D (7)	Hose	1	BH7600
	3180200011	2SN06BL×M22512-04-05 / M22592-04-05 (H55) ×2380-6D (8)	Hose	1	BH8600
18	2010000163	F11001A03000-005	Pin	1	
19	3101000011	C30×34×30-GCr15	Bushing	2	
20	2010000162	F11001A03000-004	Pin	1	
21	2020000760	F11001A03200-000	Small moving arm welding	1	BH6600
	2020000708	F11003A03200-000	Small moving arm welding	1	BH7600
	2020000770	F11005A03200-000	Small moving arm welding	1	BH8600
22	2010000167	F11001A03000-002	Pin	1	
23	3040100029	GB/T5783-M8×50-8.8-EP•Zn	Full-thread hexagon bolts	1	
24	3181300060	CDL1MP5-50.8 / 35 / 320-D-1 / 2x20UNF-1CGUM	Hydraulic cylinder	1	BH6600
	3181300001	CDL1MP5-50.8 / 35 / 390-D-1 / 2x20UNF-1CGUM	Hydraulic cylinder	1	BH7600
	3181300064	CDL1MP5-60 / 38.1 / 370-D-1 / 2x20UNF-1CGUM	Hydraulic cylinder	1	BH8600
25	3180200179	2SN06BL×M22512-04-05 / M22592-04-05×2700- 6J (6)	Hose	1	BH6600
	3180200174	2SN06BL×M22512-04-05 / M22592-04-05×2970- 6J (7)	Hose	1	BH7600
	3180200173	2SN06BL×M22512-04-05 / M22592-04-05×3270- 6J (8)	Hose	1	BH8600

### 3.Jib assembly/Bucket assembly

POS.	COD.	Specification	Description	Qty	Remark
26	3180200012	2SN06BL×M22512-04-05 / M22592 -04-05 (H55) ×2700- 6C (6)	Hose	1	BH6600
	3180200013	2SN06BL×M22512-04-05 / M22592 -04-05 (H55) ×2970- 6C (7)	Hose	1	BH7600
	3180200014	2SN06BL×M22512-04-05 / M22592 -04-05 (H55) ×3270- 6C (8)	Hose	1	BH8600
27	3101000012	C25×28×25-GCr15	Bushing	8	
28	2010000165	F11001A03000-001	Pin	4	
29	2020000369	F11001A10100-000	9 Bucket body welding	1	
	2020000370	F11001A11100-000	12 Bucket body welding	1	
	2020000371	F11001A13100-000	15 Bucket body welding	1	
	2020000372	F11001A14100-000	18 Bucket body welding	1	
	2020000373	F11001A15100-000	20 Bucket body welding	1	
	2020000374	F11001A16100-000	24 Bucket body welding	1	
	2020000375	F11001A17100-000	35 Bucket body welding	1	
30	2020000735	F11001A19100-000	Bucket body welding	1	
30	2020000463	F11001A03300-000	Connecting rod welding	2	
31	3040100028	GB/T5783-M8×45-8.8 -EP•Zn	Full-thread hexagon bolts	4	
32	2020000462	F11001A03400-000	Connecting rod base bracket welding	1	
33	3170400003	JB/T7940.1-M8×1	Grease nipple	5	
34	3040200014	GB/T5786-M12×1.25×45- 8.8-EP•Zn	Full-thread hexagonal bolts (fine pitch)	6	
35	3220100013	F11001A10000-001	Blade	3	
36	3080500009	GB/T93-12-EP•Zn	Spring washer	6	
37	3050200003	GB/T6171-M12×1.25-8 -EP•Zn	Hexagon Nuts (fine pitch)	6	

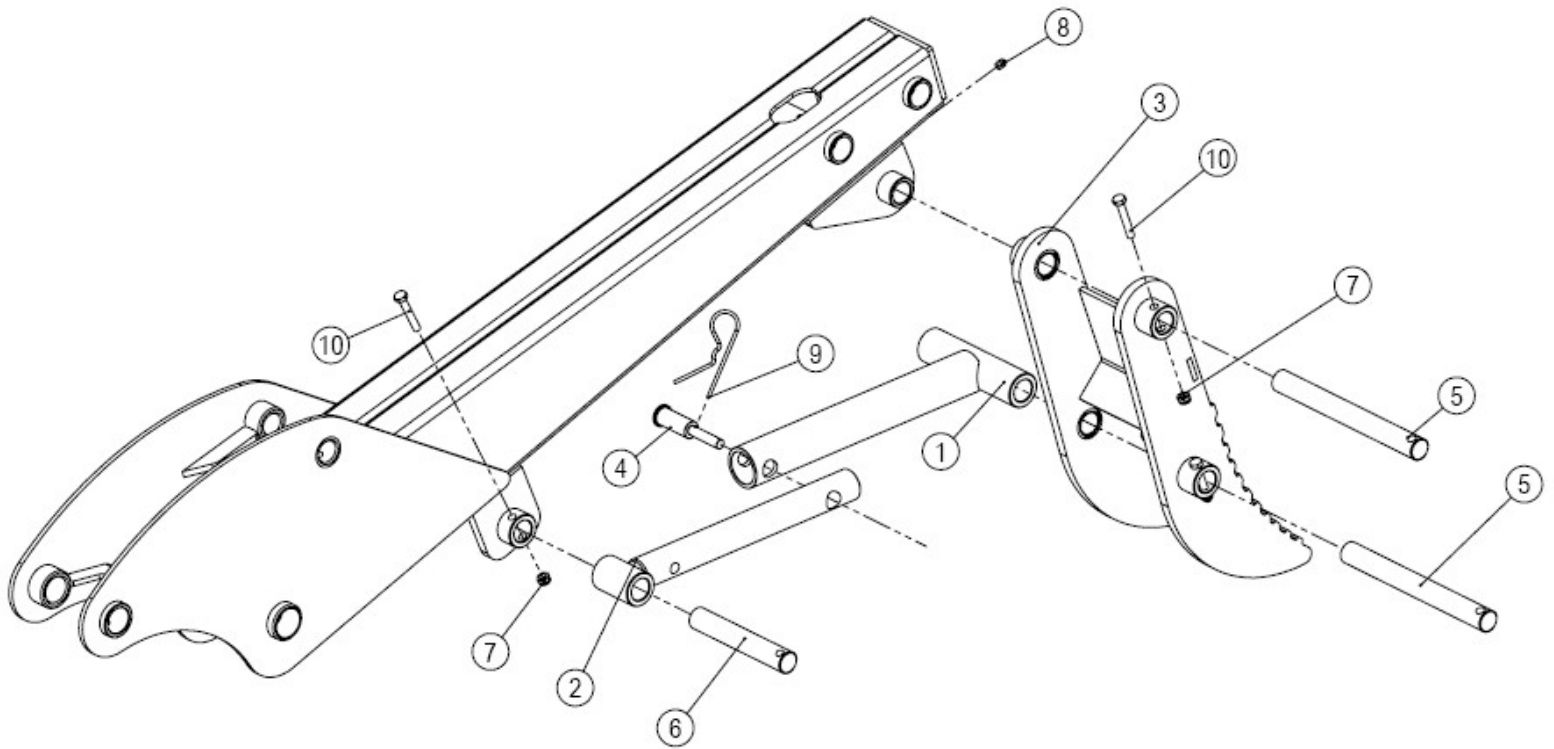
# 4. Left leg assembly/Right leg assembly/ Seat assembly



## 4.Left leg assembly/Right leg assembly/ Seat assembly

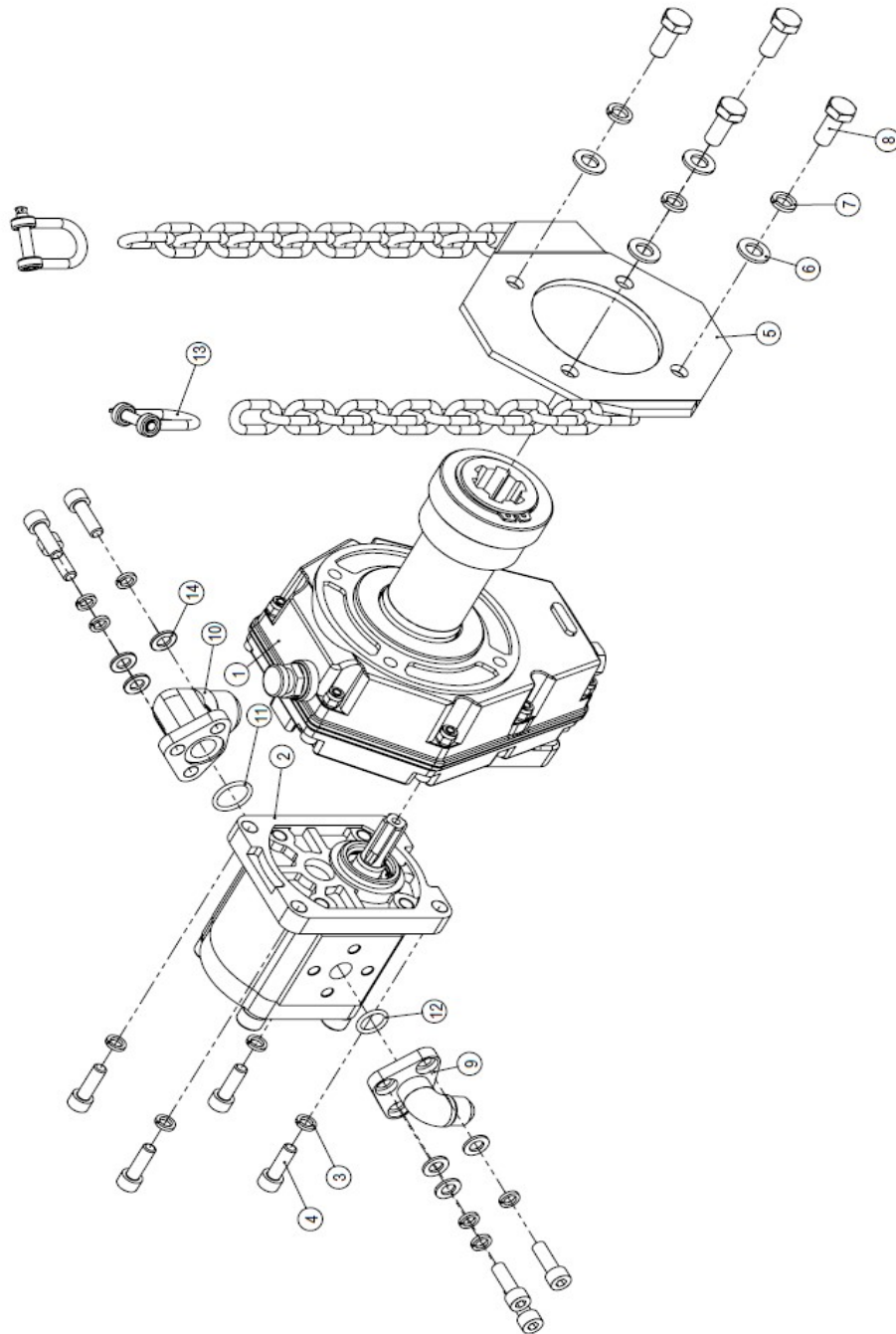
POS.	COD.	Specification	Description	Qty	Remark
1	3140800002	WYXW.1	Chair	1	
2	2020000416	F11001A06100-000	Bottom plate welding	1	
3	3080200008	GB/T96.2-8-EP•Zn	Large plain washer	4	
4	3040100022	GB/T5783-M8×20-8.8-EP•Zn	Full-thread hexagon bolts	4	
5	3040100071	GB/T5783-M12×40-8.8-EP•Zn	Full-thread hexagon bolts	4	
6	3080100007	GB/T95-12-EP•Zn	Plain washer	9	
7	3080100006	GB/T95-10-EP•Zn	Plain washer	1	
8	3210500020	Φ40*M10*25	Rubber	1	
9	2020000419	F11001A06200-000	Base support plate welding	1	
10	3050500007	GB/T889.1-M12-8-EP•Zn	Locknut	4	
11	2010000136	F11001A06000-001	Pin	1	
12	3120100093	GB/T91-4×32	Split pin	1	
13	3180200176	2SN06BL×M22512-04-05 / M22592-04-05×1190- MN	Hose	2	
14	3170400003	JB/T7940.1-M8×1	Grease nipple	2	
15	3180200005	2SN06BL×M22512-04-05 / M22592-04-05 (H55) ×1190-EF	Hose	2	
16	3181300022	CDL1MP5-50.8 / 28.6 / 285-D-1 / 2x20UNF-1CGUM	Hydraulic cylinder	2	
17	2010000138	F11001A04000-003	Pin	2	
18	3080100011	GB/T95-20-EP•Zn	Plain washer	8	
19	3120300050	GB/T879.1-5×25-St-N	Spring-type straight pin	4	
20	2020000421	F11001A04200-000	Poles are welding	2	
21	2010000137	F11001A04000-002	Pin	2	
22	3050100007	GB/T41-M12-5-EP•Zn	Hexagon Nuts	8	
23	3080500009	GB/T93-12-EP•Zn	Spring washer	8	
24	2020000420	F11001A04100-000	Bottom plate welding	2	
25	3210600001	F11001A04000-001	Rubber sheet	4	

## 5.Mechanical wooden fork assembly



POS.	COD.	Specification	Description	Qty	Remark
1	2020000737	F11001A09200-000	The wooden fork supports the forestand welding	1	
2	2020000736	F11001A09300-000	The wooden fork supports the forestand welding	1	
3	2020000395	F11001A09100-000	Hold fork	1	
4	2010000247	F11001A09000-002	Pin	1	
5	2010000126	F11001A09000-003	Pin	2	
6	2010000248	F11001A09000-001	Pin	1	
7	3050500003	GB/T889.1-M8-8-EP•Zn	Locknut	3	
8	3170400003	JB/T7940.1-M8×1	Grease nipple	1	
9	3120400008	Din11024-4-EP•Zn	R Pin	1	
10	3040100029	GB/T5783-M8×50-8.8-EP•Zn	Full-thread hexagon bolts	3	

## 6. Gear pump configuration

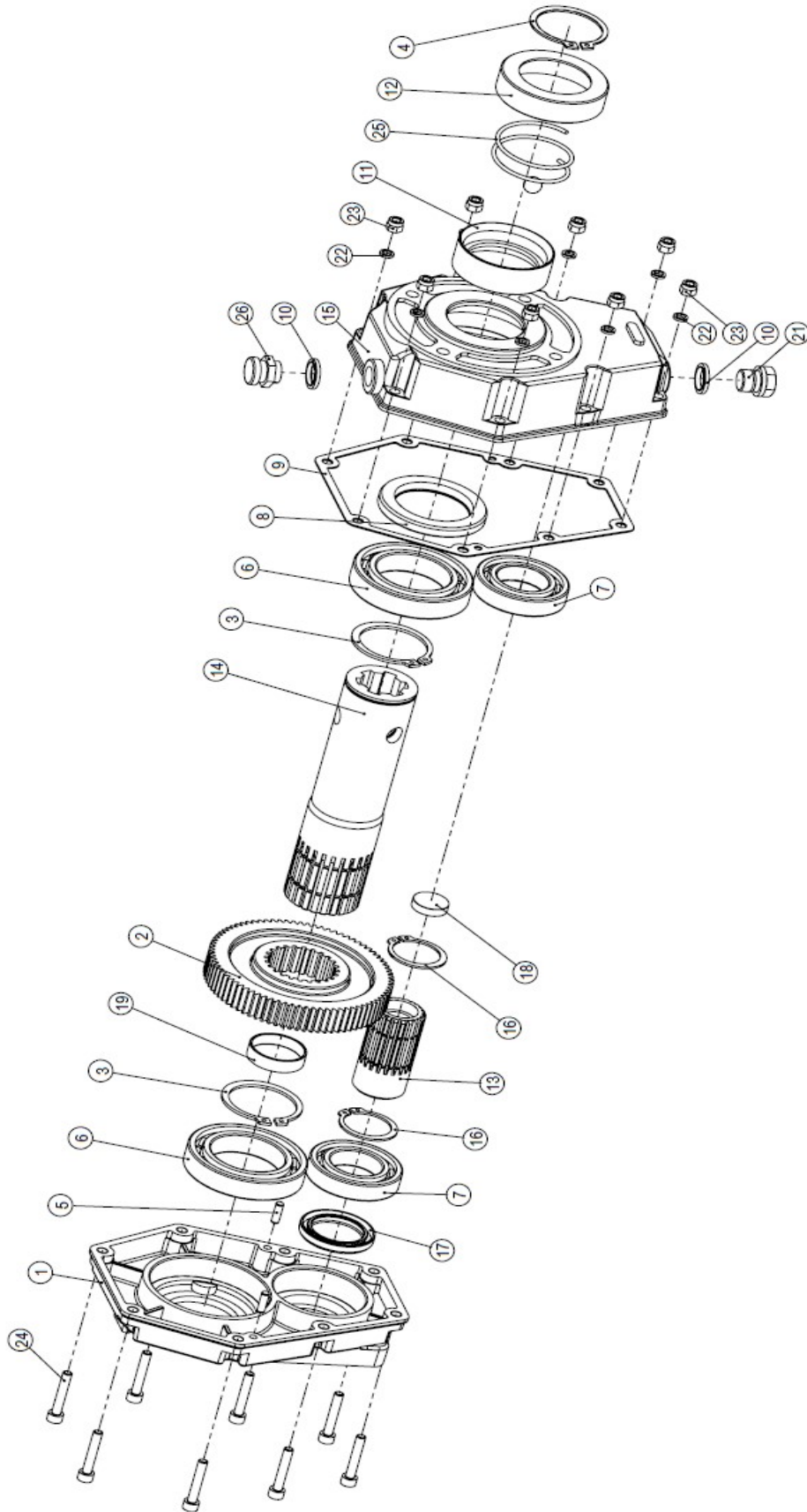


## 6.Gear pump configuration

POS.	COD.	Specification	Description	Qty
1	2090000228	F11001A57100-000	Gear box	1
2	3180600001	2ABPF10F70H30	Hydraulic pump	1
3	3080500007	GB/T93-8-EP•Zn	Spring washer	10
4	3060100027	GB/T70.1-M8×25-8.8-EP•Zn	Hexagon socket head cap screws	10
5	2020000396	F11001A57200-000	Plate welding	1
6	3080100006	GB/T95-10-EP•Zn	Plain washer	4
7	3080500008	GB/T93-10-EP•Zn	Spring washer	4
8	3040100043	GB/T5783-M10×25-8.8-EP•Zn	Full-thread hexagon bolts	4
9	3180100002	TL-GE12015×2.5XCF	Transition joints	1
10	3180100003	TL-GE20020×2.5XCF	Transition joints	1
11	3170200011	GB3452.1-20×2.5-NBR-70	O-Ring	1
12	3170200009	GB3452.1-15×2.5-NBR-70	O-Ring	1
13	3130600005	JB 8112-1999-8	D-ring	2
14	3080100004	GB/T95-8-EP•Zn	Plain washer	10



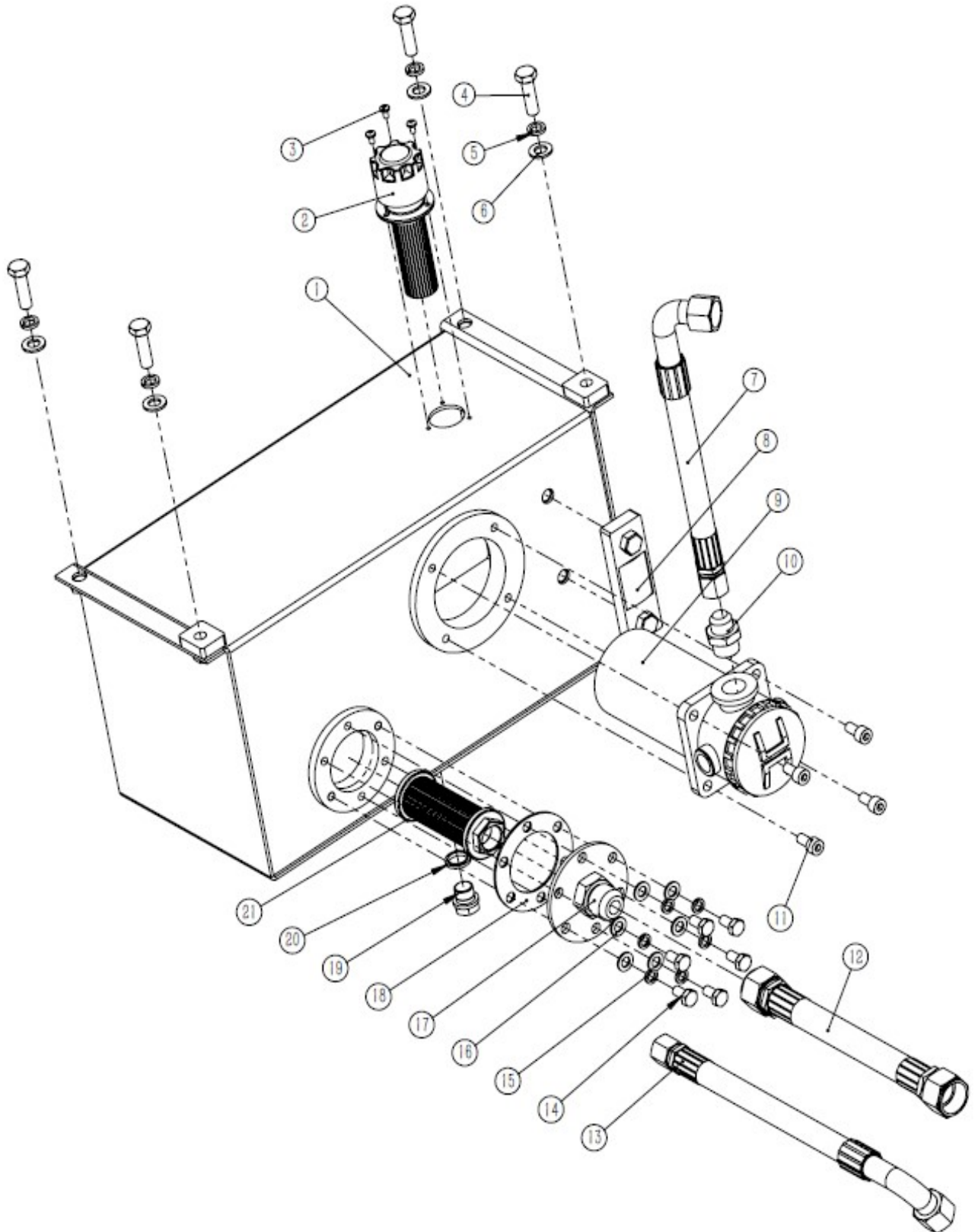
## 7. Gear case



## 7.Gear case

POS.	COD.	Specification	Description	Qty	Remark
1	3220300015	F11001A57100-002	The body	1	
2	3160600011	F11001A57100-004	Gear	1	
3	3080700030	GB/T894-50-A	Retaining rings for shaft	2	
4	3080700029	GB/T894-48-A	Retaining rings for shaft	1	
5	3120200003	GB/T119.1-5-m6×16-St-N	Parallel pin	2	
6	3100100027	GB_T276-6010	Deep groove ball bearing	2	
7	3100100021	GB/T276-6007	Deep groove ball bearing	2	
8	3170100040	GB/T13871.1-FB-50×72×8-NBR	shaft seal	1	
9	3170500067	F11001A57100-008	Sheet gasket	1	
10	3170300012	BS-16.4×22×25-Q235	Combined sealing gaskets	2	
11	2010000129	F11001A57100-007	The spring card	1	
12	2010000128	F11001A57100-006	A spring card	1	
13	3160600010	F11001A57100-005	Gear	1	
14	3160600009	F11001A57100-003	Gear	1	
15	3220300016	F11001A57100-001	The body	1	
16	3080700023	GB/T894-35-A	Retaining rings for shaft	2	
17	3170100006	GB/T13871.1-FB-35×50×7-NBR	shaft seal	1	
18	3170100001	EG-0×24×7-NBR	shaft seal	1	
19	3170100002	EG-0×38.1×7-NBR	shaft seal	1	
20	3140400003	F11001A57100-009	Steel ball	3	
21	3040500006	JB/ZQ4770-M16×1.5	Outer hexagonal plug	1	
22	3080500006	GB/T93-6-EP•Zn	Spring washer	8	
23	3050100003	GB/T41-M6-5-EP•Zn	Locknut	8	
24	3060100018	GB/T70.1-M6×35-8.8-EP•Zn	Hexagon socket head cap screws	8	
25	3110200011	YⅡ-2.5×51×28×2-L-65Mn-EP•Zn	Pressure spring	1	
26	3170400013	QC-T412(JYG-82) -M16×1.5	Grease nipple	1	

## 8. Tank components



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POS.	COD.	Specification	Description	Qty	Remark
1	2020000398	F11001A55100-000	The fuel tank welding	1	
2	3180800001	QUQ1-10-1-W	Breather filter	1	
3	3060700001	GB/T818-M4×8-4.8-EP•Zn	Pan head screws with cross recPs	3	
4	3040100046	GB/T5783-M10×35-8.8-EP•Zn	Full-thread hexagon bolts	4	
5	3080500008	GB/T93-10-EP•Zn	Spring washer	4	
6	3080100006	GB/T95-10-EP•Zn	Plain washer	4	
7	3180200015	2SN13BL×M22512-08-08 / M22593-08-10×1250- 6B	Hose	1	
8	3181100001	YWZ-80T	Content gauge	1	
9	3180800004	RFA-25-10 L	Breather filter	1	
10	3180100096	TL-GE12M22×1.5EDOMDCF	Transition joints	1	
11	3060100025	GB/T70.1-M8×16-8.8-EP•Zn	Hexagon socket head cap screws	4	
12	3180200002	1SN16BL×M22513-10-12 / M22513-10-12×1150	Hose	1	
13	3180200016	2SN13BL×M22512-08-08 / M22593-08-10×1750- 6A	Hose	1	
14	3040100021	GB/T5783-M8×16-8.8-EP•Zn	Full-thread hexagon bolts	6	
15	3080500007	GB/T93-8-EP•Zn	Spring washer	6	
16	3060100026	GB/T70.1-M8×20-8.8-EP•Zn	Plain washer	4	
17	2020000399	F11001A55200-000	Plate	1	
18	3170500012	F11001A55000-001	Sheet gasket	1	
19	3040500006	JB/ZQ4770-M16×1.5	Outer hexagonal plug	1	
20	3170300023	BS/A-16.4×22×2.5-Q235	Combined sealing gaskets	1	
21	3180800006	WU-25X100-J	Breather filter	1	