

MDL POWERUP LIMITED

Dalston Carlisle

MDL POWERUP
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OPERATORS MANUAL

BHM 95 / 195 / 225



Please read through manual thoroughly before operation



For any technical issues please call the
workshop on 01228 712121

Or email info@mdlpowerup.com

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SAFETY INSTRUCTIONS



Before operating the your AGF flail mower, please read the following safety instructions. Failure to comply with these warnings may result in serious injury or death.



Please review these safety instructions with all users annually.



SIGNAL WORDS: The signal words DANGER, WARNING and CAUTION are used with the safety messages in this manual and with each safety sign. They are defined as follows:

DANGER: Indicates an immediate hazardous situation that, if not avoided, could result in serious injury or death. This signal word is to be limited to the most extreme situations typically for machine components that, for functional purposes, cannot be guarded.

WARNING: Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practice.

Introduction

The purpose of this manual is to assist you in Maintaining and operating your Hanmey backhoe. Read it carefully, it provides information and instructions that will help you achieve years of reliable 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 position operator is facing 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 backhoe. Refer to the Safety Precautions section of this manual for information concerning safety, consult your dealer for further information.

Serial Number and Location

The serial and model number is important information about the machine and it may be necessary to know it before obtaining the correct replacement part. The identification plate is located on the right side of control console. It is also recorded by your dealer on back page of this manual.

1.1 SAFETY

Understand that your safety and the safety of other people is measured by how you service and operate this Backhoe.

Know the position and operations of all controls prior to operation. Make sure you check all controls in 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 Backhoe 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.



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.

1.2 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 usage.

A frequent cause of personal injury or death is people 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.

Operate the Backhoe smoothly when lowering or lifting loads. Stay off slopes too steep for safe operation.

Use low range gear before you start up or down a hill with a heavy load. Avoid "free wheeling".

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.

1.2 SAFETY PRECAUTIONS (CONT.)

Never use your hand to check for suspected fuel or oil 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 other injuries. If this happens seek medical attention immediately.

To prevent personal injury, relieve all pressure before disconnecting fluid lines.

Before operating hydraulic controls, make sure all hydraulic connections are tight and components are in good condition.

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

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

Add water to rear tires or fit rear wheel weights for increased stability.

A backhoe 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 backhoe attachment unless it is mechanically secured in position. Accidental movement of a control lever or leak in the hydraulic system could cause the backhoe to drop, or attachment to dump, causing severe injury.

Make sure all parked backhoe on stands are on a hard level surface with all safety devices engaged to prevent backhoe from falling and being damaged or injuring someone.

When using a backhoe, be alert of bucket, boom and arm position at all times.

Only operators who have been specially trained in backhoe operation and fully understand this manual can operate the backhoe.

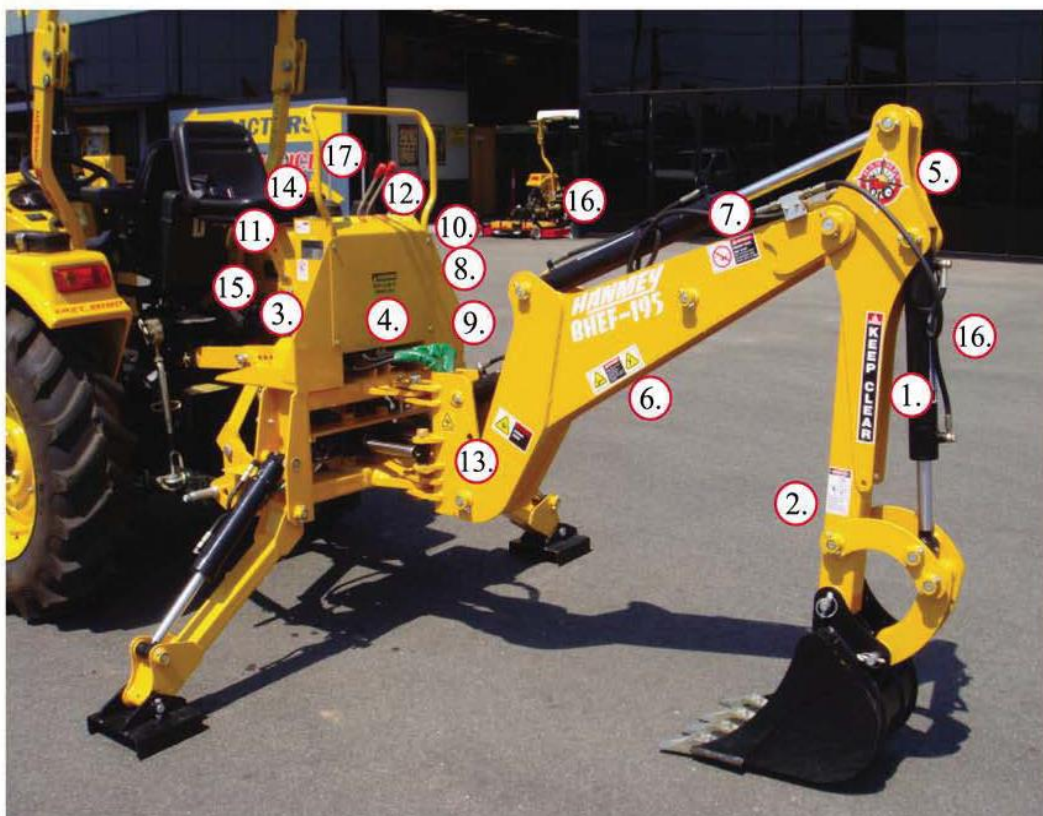
Keep hands, feet and clothing away from all moving parts. Wear close fitting clothing and appropriate safety equipment (Which includes, steel cap shoes, protective gloves, hard hat, safety glasses and dusk mask). Prolonged exposure to loud noise can damage hearing. Wear suitable approved hearing protection such as ear muffs or plugs. Operating equipment safely requires your full attention. Do not wear radio or music headphones. Secure hair above shoulder length.

You must be in good physical and mental health to operate the backhoe safely. Do not operate the backhoe when you are ill, fatigued or under the influence of any substance or medication that could affect your vision, co-ordination or judgment.

HIVIS clothing required when operating backhoe on work sites and road sides.

SAFETY DECALS

1. Keep safety decals clean and free of obstructing material
2. Replace damaged or missing safety decals with new decals from your dealer.
3. If a component with a safety decal(s) affixed is replaced with a new part, ensure new safety decal(s) are attached in the same locations on the replacement components.
Refer below for correct location of decals. Note decals appear on both sides of backhoe.



4.



5.



6.



7.



8.



9.



10.



11.



12.



13.



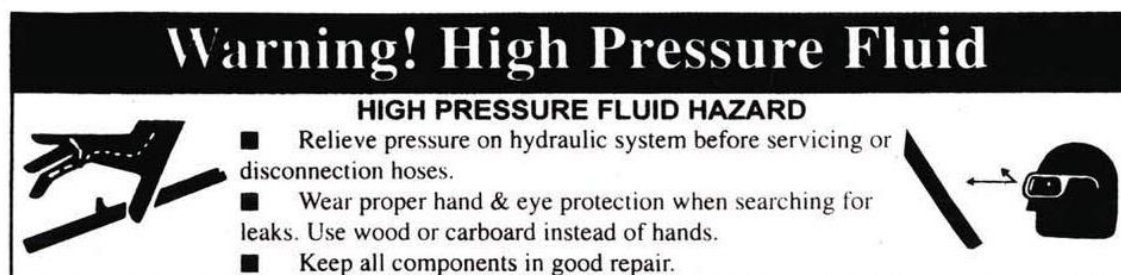
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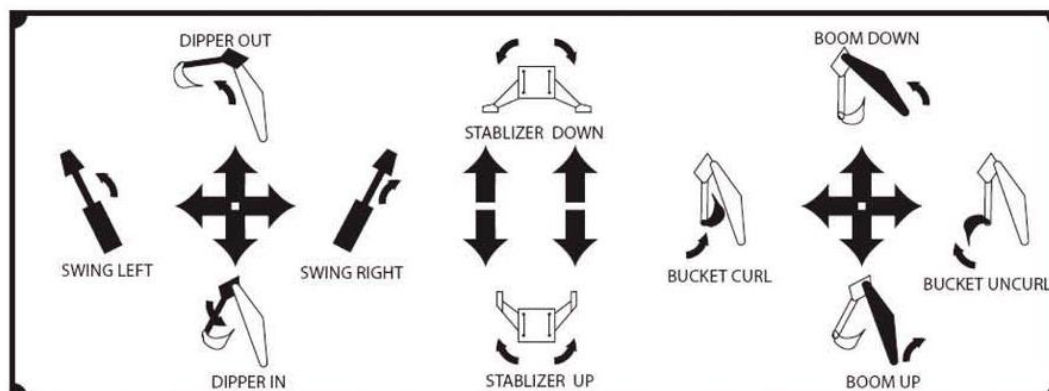
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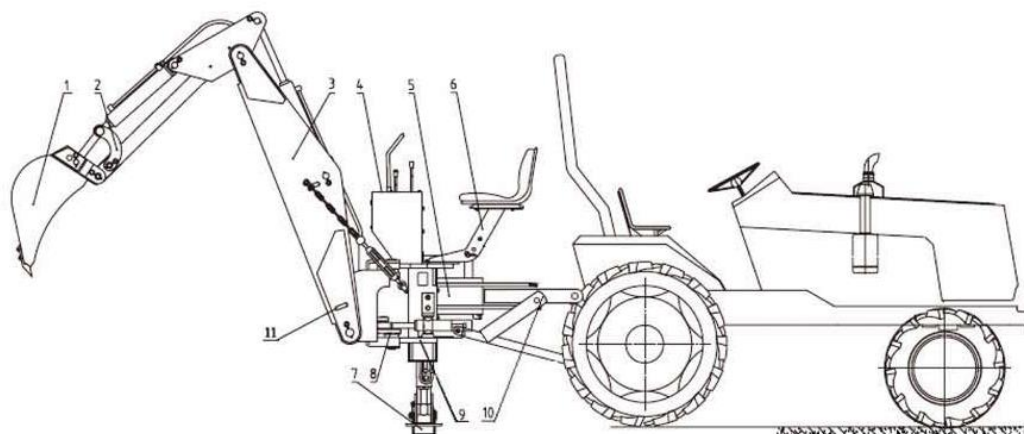
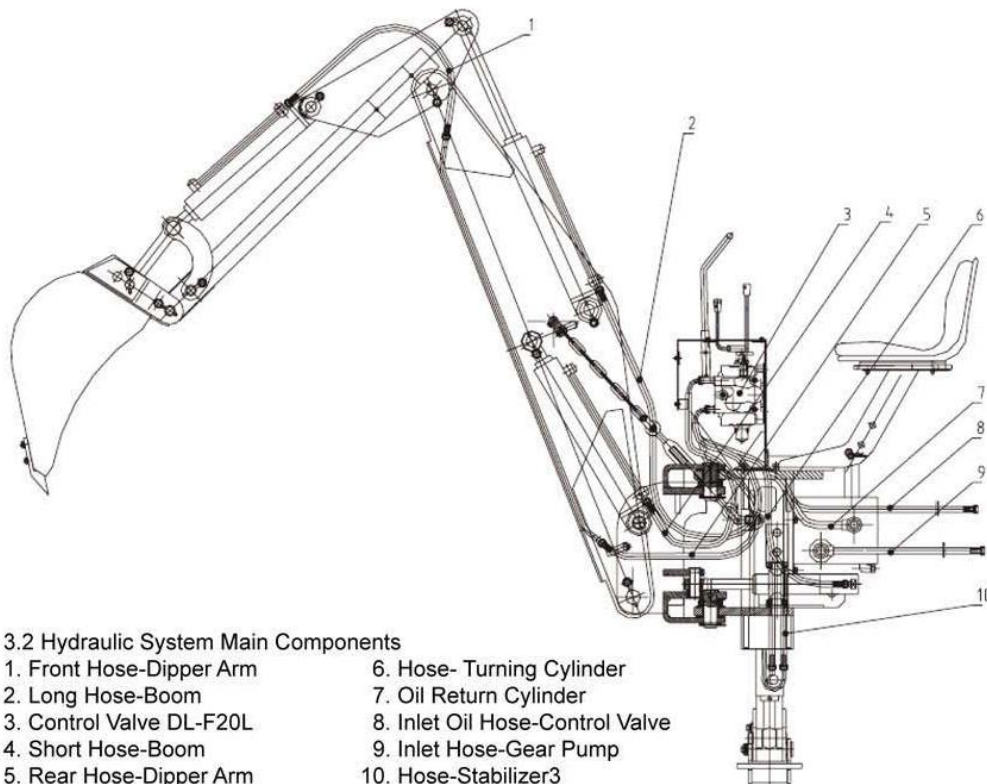
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17.



BACKHOE SPECIFICATION



PREPERATION



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

4.1 ROPS SYSTEM

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

These Models are driven by the tractors Power Take Off, and are fitted with an in-built Hydraulic pump and tank. Check fluid level daily, ensure PTO shaft is greased and change hydraulic filter (refer to Lubrication and Maintenance).



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

4.3 TYRE INFLATION

Front Tyres must be maintained at the maximum recommended inflation to maintain normal tyre profile with the added weight of backhoe/material.

Rear tyres must be maintained at equal pressure within the recommended tyre inflation range. Unequal rear tyre inflation reduce stability and increases tipping hazard.

4.4 WHEEL TREAD SETTINGS

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

4.5 ATTACHMENT

Ensure your tractor's 3 point linkage system is fitted with sway chains before attaching the backhoe. Failure to do can cause the backhoe to swing when travelling potentially causing bodily injury or machine failure.

Inspect for any worn or damaged parts between the tractor and backhoe. Replace if necessary with parts of suitable strength and quality.

4.6 COUNTER WEIGHT

Add recommended ballast (either front weights or front end loader) to the tractor's front-end for increased stability. Refer to tractor operator' manual for specific recommendations on counter weighting tractor.

BACKHOE MOUNTING

5.1 PTO SHAFT CONNECTION (BHUF AND BHUS MODELS)

Ensure PTO shaft is correct length, correct PTO shaft length must have a minimal overlap of 150mm in drive position. Connect PTO shaft to tractor PTO output shaft and backhoe hydraulic pump shaft. Check PTO shaft has suitable angle prior to operation. Angle of PTO shaft universals must be less than 25°, to prevent major damage. Engage PTO Speed 540RPM for operation.

5.2 HYDRAULIC CONNECTION (BHEF AND BHES MODELS)

Connect the Hydraulic quick connectors to the tractor's hydraulic remote outlets. Detent tractor hydraulic remote's control lever forward or back for correct flow of oil to backhoe.

5.3 FITTING BACKHOE TO TRACTOR

- Choose some firm level ground to work on
- Use hoist to raise the backhoe mainframe onto 3 secured stands.
- Align the backhoe with boom parallel to tractor (Refer to Photo 1)
- Connect backhoe to tractor 3.P.L lower Arms (Refer to Photo 2)
- Connect solid top link at tractor end first (Refer to Photo 3)
- Fit short bolt to rear hole loosely (Use podge bar to align holes) (Refer to Photo 4)
- Connect A-frame lockout bars to aligning holes and ensure all bolts are tight (Refer to Photo 5)
- Connect PTO Shaft for BHUF & BHUS Model (Refer to Photo 6)
- For BHEF & BHES models, connect backhoe hydraulic hoses to tractor hydraulic remotes (Refer to Photo 7)
- Lift boom stabilizer legs into transport mode, fit boom safety pin and adjust 3.P.L sway chains. (Refer to Photo 8)



Photo 1



Photo 2

5.3 FITTING BACKHOE TO TRACTOR (CONT.)

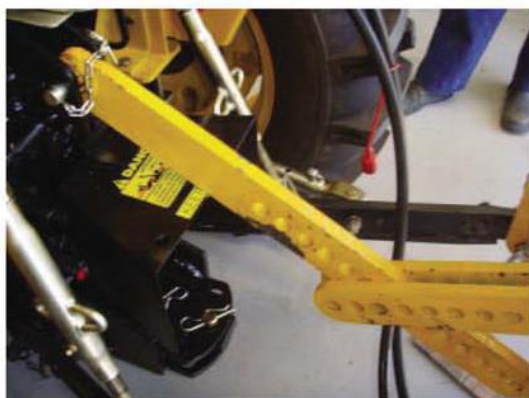


Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8

5.4 REMOVE BACKHOE FROM TRACTOR

- Choose some firm level ground to work on.
- Place 3 secure stands under backhoe main frame and boom carrier. (Refer to Photo 1)
- Lower stabilizer legs to ground. Position bucket flat on the ground with dipper arm vertical. (Refer to Photo 2)
- Remove A-frame lockout upper and lower bolts. (Refer to Photo 3)
- Remove A-frame lockout bars. (Refer to Photo 4)
- Remove 2 piece solid top link. (Refer to Photo 5)
- Lower 3.P.L onto 3 secure stands. (Refer to Photo 6)
- Remove lower 3.P.L arm pins. (Refer to Photo 7)
- Remove PTO shaft for BHUF & BHUS models. (Refer to Photo 8)
- Disconnect backhoe hydraulic hoses from tractor remote outlet for BHEF & BHES models. (Refer to Photo 9)
- Drive tractor forward slowly. (Refer to Photo 10)



Photo 1



Photo 2



Photo 3



Photo 4

5.4 REMOVE BACKHOE FROM TRACTOR (CONT.)



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



CAUTION: Backhoe should be mounted to the tractor three point linkage.



CAUTION: Never operate backhoe without secured solid top link and A-frame



CAUTION: Never store backhoe without bucket attached to the backhoe.



CAUTION: Keep Feet and Hands well clear of underside of backhoe.



CAUTION: Never raise 3.P.L position / draft lever while backhoe is connected, damage could occur to linkage and hydraulic system. Use mechanical means to secure these levers in down positions.



CAUTION: It is owner / Operator responsibility to ensure that the tractor 3.P.L top link & Hydraulic lift cover area is strong enough to accept 3.P.L rigid connection and backhoe while in operation as extra forces are exerted through top link. No liability can be accepted for damage to tractor.



Caution: The backhoe unit when not fully connected to the tractor is potentially unstable. Proceed with caution.
Do not raise the backhoe boom until it is fully connected to the tractor.
Failure to comply with these requirements could cause death, bodily injury or property damage.



Caution: Do not operate the Backhoe if the fittings are leaking or if the hoses are damaged. A sudden line burst would cause the boom to drop suddenly potentially causing death, bodily injury or property damage.



Caution: Before disconnecting hydraulic lines, turn the tractor off, relieve all hydraulic pressure. Escaping hydraulic oil under pressure can have sufficient force to penetrate the skin causing serious personal injury.

OPERATION



CAUTION: The tractor/backhoe should only be operated with all safety equipment properly installed. Keep assistants or bystanders a safe distance from the equipment operating area.

6.1 PRECAUTIONARY NOTE.

- Read and understand this manual to avoid accidents.
- Check the hydraulic lines are correctly attached and not leaking.
- Maintain and repair (if it is needed) all parts or assemblies, check bolts and pins to be sure they are positioned tightly.
- Check tractor is prepared for operation. Refer tractor operators manual.
- Warm up and operate the tractor and backhoe carefully. Purge any air in the hydraulic lines and cylinders by fully cycling all cylinders several times.
- Check hydraulic level in the tank to be at specified level. Add as required.
- Do not operate the hydraulics when not seated in the backhoe operator's seat/
- Keep all assistants out of area of operation.
- Do not operate rapidly.
- Do not allow riders other than the operator to be on the tractor while operating.

Important

Limit tractor engine speed inline with your experience. At first set PTO RPM of the tractor to slow.

Do not use the boom, dipper arm, swing and stabilizers to lift, push or pull objects. Use only to maneuver and operate the bucket.

Important

Practice turning off the engine or stopping the backhoe immediately in case of an emergency situation.

Important

Do not operate while the rear tractor wheels are raised off the ground by the stabilizer. It is dangerous to operate the backhoe while rear wheels are off the ground.

Position the backhoe as near as possible and in such a direction as to minimize the amount of turning required to dump.

Keep the unit clean and perform regular servicing.

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 the job, or to do it 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 backhoe 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 backhoe 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.



CAUTION: Do not operate the backhoe if the fittings are leaking or if the hoses are damaged. A sudden line burst would cause the boom, or dipper arm bucket to drop suddenly, causing damage to the tractor or backhoe or injury to personnel.

6.2 INITIAL BACKHOE OPERATION

Before operating the backhoe, fully raise and lower the boom, arm, swing and stabilizers two or three times. Then raise the bucket above the ground and cycle the bucket cylinders three times. Lower the bucket to the ground. Check the tractor hydraulic oil level and add as required.



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.

When possible keep cylinders in a retracted position when the backhoe is not in use to guard against rust and contamination which may cause damage to the cylinder rods or hydraulic system. Also, lock the swing and boom while backhoe is being transported and storing for an extended period of time.

6.3 COLD WEATHER OPERATION

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



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

6.4 BACKHOE HYDRAULIC CONTROLS

The backhoe hydraulic valve features 4 control levers. Refer to the diagram below for backhoe control functions. "Left" and "Right" are determined by the direction the operator is facing when seated in the backhoe.

The Diagram is located on the rear of the control valve bracket and is visible when operating the valve.

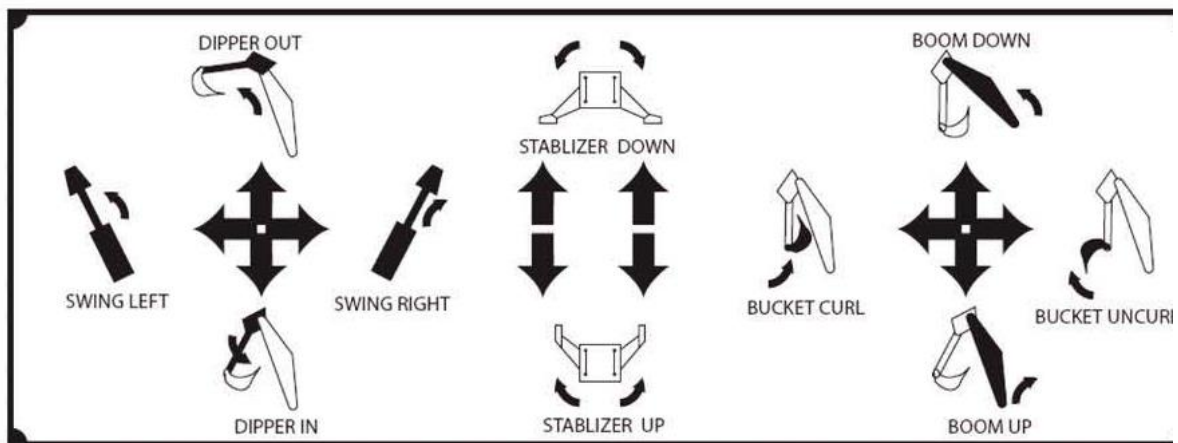


1. Boom / Bucket

2. Dipper Arm / Swing

3. Right Stabilizer

4. Left Stabilizer



The two levers, 'Boom and swing control lever' and 'Bucket and dipper arm', provide simultaneous operations. Both experience and practice are needed to eliminate excess movement and increase operating efficiency.

Do not dig near the stabilizers to avoid possible accident

Do not lift the tractor rear wheels by stabilizers. Also, be sure the stabilizers are seated on the ground to support the backhoe / tractor.



Swing Lock Pin

Boom Lock Pin



LEFT: BHUF, BHEF
 BOTTOM LEFT: BHES, BHUS
 BOTTOM: Store Lock Pins



6.5 SWING LOCK AND BOOM LOCK

When transporting or dismounting backhoe, you must lock the backhoe's swing and boom. For models BHUF and BHEF, position boom straight back and the place the lock pins through holes in swing frame and boom. For models BHES and BHUS, side shift boom carriers to one side, swing boom to opposite side and drop pin through holes in swing frame and boom. When not in use, store pins in the adjustable top link.

6.6 STABILIZER CLIPS (BHEF & BHUF MODELS ONLY)

Stabilizer clips are also to be used for transporting.



6.7 OPERATING HYDRAULIC SIDE SHIFT (BHES AND BHUS MODELS)

1. When operating any service on the backhoe you must be in the operator's seat, with the seat belt on. Do not operate the unit from the ground beside it.
2. Ensure all bystanders and other machinery are well clear of the swing and slide radius when testing and operating the unit
3. When operating the side shift on the relevant models ensure the boom is lifted fully, the dipper arm is fully in and the bucket is fully crowded back. It is also a good idea to swing the boom around 10-15 Degrees in the opposite direction to the slide movement. This takes the load off the boom hitch plate and will allow it to slide freely. If you slew the boom in the same direction you are about to slide it, the leading edge of the boom hitch plate with catch and dig in when you attempt to slide it across, this will eventually wear out the slides or create holes for the slide plate to catch in..
4. The stabilizer legs are to be on the ground at all times when operating the backhoe.
5. Before digging with the slide models ensure the hydraulic locks are engaged and locked into place. Do Not attempt to slide the frame with the locks engaged
6. Ensure the boom and slew safety pins are removed before use and are reinstalled after use.

Observe the following safety warnings when working with your new backhoe / tractor.



CAUTION: Boom Carrier must be locked prior to operation.



CAUTION: When using a backhoe, be aware of bucket and boom location at all times. When raising Boom and Dipper Arm, material can spill onto non-target areas causing injury or damage.



WARNING: Do not side shift Boom Carrier unless the boom, dipper arm and bucket are centralised and retracted.



WARNING: Do not dig near stabilizers. Ground under stabilizers could collapse. Make all movements slow and gradual when practicing operation.



CAUTION: Operate from backhoe operators seat only. Pay attention, be ready to stop immediately in case of emergency.



CAUTION: To help prevent roll-over, adjust the rear wheels to their widest setting to maximize stability. Refer to your tractor Operator's Manual for recommendations.



1. Lock Cylinder Control Valve
2. Shift Control



Boom / Dipper Arm / Bucket Position
for Side Shifting Movement

LUBRICATION AND MAINTANCE



Total of 27 grease nipples on BHEF & BHUF series
Grease nipples are located on every moving part



Sliding bars for frame carrier require greasing
Total of 19 grease nipples on BHUF & BHUS series
Grease nipples are located on every moving part

Item	Service	Service Interval
Hydraulic System Oil Level	Check	Daily / 10 Hours
Hydraulic System Oil / Filter	Replace	Every 50 Hours
Tyre Inflation	Check	Weekly / 50 Hours
Backhoe Pivot Points	Lubricate / Grease	Daily / 10 Hours
Backhoe Hydraulic Lines, Hoses, Connections	Check for leaks, wear	Daily / 10 Hours
Boom, Arm, Swing 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
Pin Wear	Check, replace if necessary	Daily / 10 Hours
Backhoe Mount Hardware	Check visually	Daily / 10 Hours
Structural Bolts and Nuts	Re-torque	Every 25 Hours



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

Important

Securely support backhoe and relieve pressure in hydraulic lines prior to performing any service or maintenance operations on the tractor or backhoe.



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, ensure all connections are tight and that lines, pipes and hoses are not damaged. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood rather than your hands to search for suspected leaks. If injured by escaping fluid, seek medical attention immediately. Serious infection or reaction can develop if correct medical treatment is not administered immediately.

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



CAUTION: Do not operate the backhoe if the fittings are leaking or if the hoses are damaged. A sudden line burst could cause the boom, dipper arm or bucket to drop suddenly, causing damage to the tractor or backhoe or injury to personnel.



CAUTION: OPERATE THE BACKHOE FROM THE OPERATOR SEAT ONLY.



CAUTION: Do not stand or walk under a raised backhoe. Accidental movement of control lever or leak in hydraulic system could cause boom or dipper arm to drop, causing severe injury.



CAUTION: Operate from backhoe operators seat only. Pay attention, be ready to stop immediately in case of emergency.



CAUTION: To help prevent roll-over, adjust the rear wheels to their widest setting to maximize stability. Refer to your tractor Operator's Manual for recommendations.

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

Note: when checking hydraulic system oil level, the backhoe should be on the ground and bucket fully retracted (all cylinders in retracted position).

Grease all backhoe pivot points daily (10 Hours). Refer to the tractor Operator's Manual for lubricant recommendations.

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

Tractor tyres should be maintained at maximum recommended inflation to maintain normal tyre profile with added weight of backhoe/material. Unequal rear tyre inflation reduces stability and increase tipping hazard.

TROUBLE SHOOTING



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

Important

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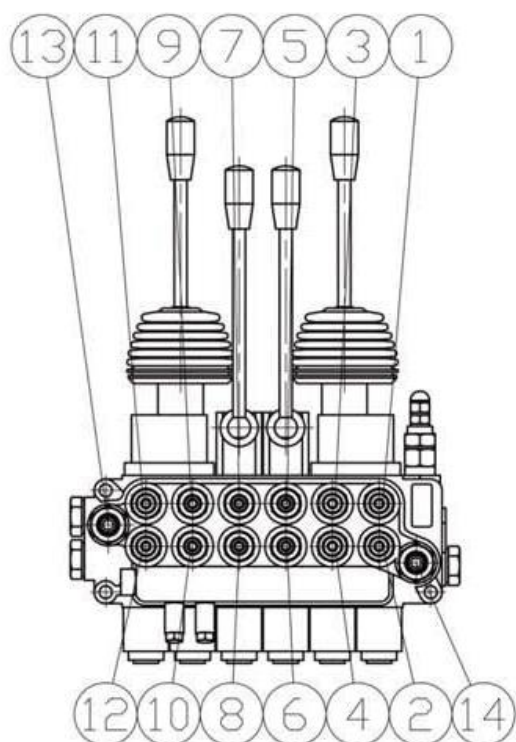
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PROBLEM	Possible Cause	Correction
Cylinders operate in wrong direction relative to control valve lever position.	Hydraulic Hoses connected incorrectly.	Correct hydraulic hoses connections.
Slow or erratic movement of cylinders (Noisy operation of cylinders)	Low hydraulic fluid level	Check and replenish hydraulic fluid.
	Cold hydraulic fluid	Allow hydraulic system to warm up to operating temperature
	Hydraulic oil viscosity too heavy or Incorrect oil	Check oil number and viscosity, refill correct hydraulic oil.
	Engine R.P.M too slow (hydraulic pump R.P.M too slow).	Increase engine speed to obtain satisfactory backhoe operation.
	Excessive weight in bucket. Material weight exceeds maximum specified backhoe capacity.	Reduce material load. (Digging load)
	Control valve linkage binding / defective	Check control valve linkage and repair if work / 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 tube line restriction. Possibly kinked or pinched	Check hoses and tubelines for evidence of restriction.
	Boom, Dipper arm or Bucket cylinder piston assembly leakage.	Check cylinders for leakage. Repair as needed.
	Relief valve erratic or set below specifications	Check and reset relief valve. Setting as needed.
	Control valve leaking internally. (bypassing fluid within valve).	Replace control valve and recheck operation.

PROBLEM	Possible Cause	Correction
Inadequate lifting capacity	Engine R.P.M too slow	Increase engine R.P.M
	Excessive load. Material loading exceeds specified backhoe capacity.	Reduce Load
	Relief valve setting below specifications	Check and reset relief valve setting as needed.
	Bucket, Boom and Dipper arm 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 appearance of fluid)	Low Hydraulic fluid level	Check and refill hydraulic system to proper level.
	Air leaking into suction side of hydraulic pump	Check for loose or defective connections between reservoir and hydraulic pump.
	Hydraulic fluid foaming due to improper hydraulic oil usage	Refer to tractor Operator's Manual and replace hydraulic oil using recommended hydraulic oil
System relieve valve squeals	Cold Hydraulic Fluid	Allow hydraulic fluid to warm up to operating temperature.
	Hydraulic Oil viscosity too heavy or Incorrect Oil	Check Oil Number and Viscosity, refill using correct hydraulic oil
	Excessive load in bucket. Loading exceeds specified backhoe capacity	Reduce Load
	Relief Valve setting below specifications.	Check and reset valve setting as needed.
	Hydraulic hose, tube line or quick disconnect coupler restriction	Check for evidence of restriction in the hydraulic oil flow. Repair or replace defective components.

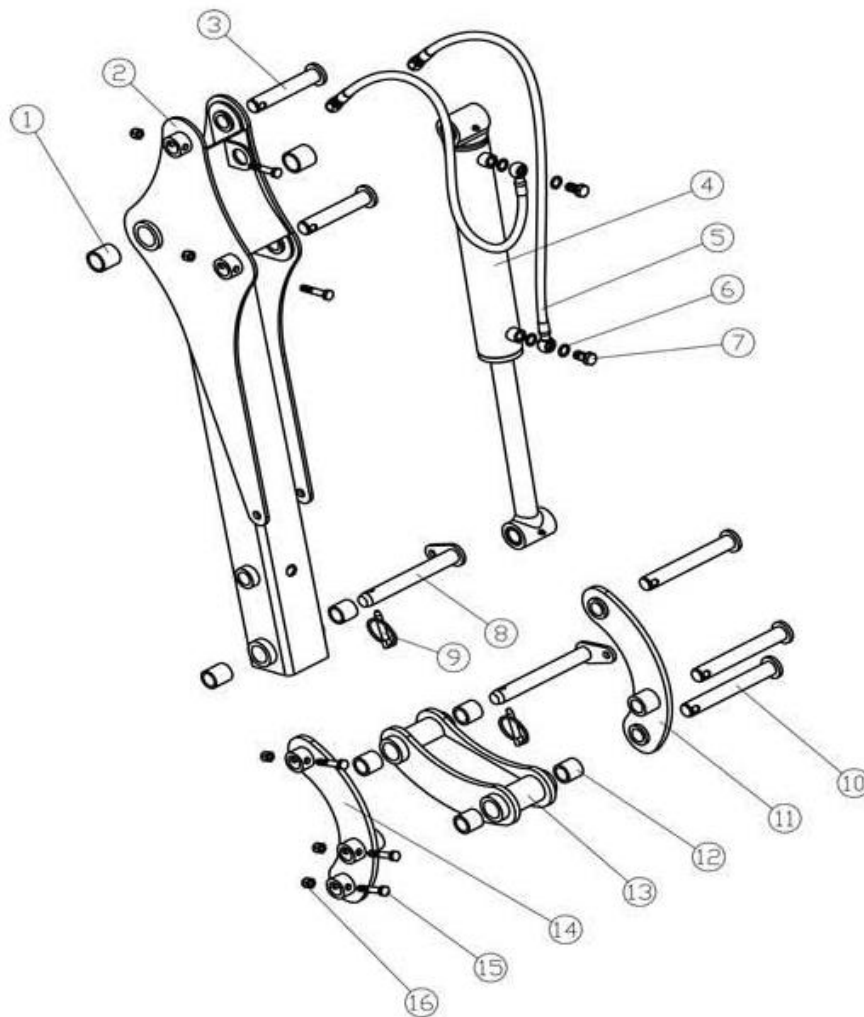
PROBLEM	Possible Cause	Correction
Backhoe Drops with valve spool in "centred" position (no external oil leakage evident). Note: A gradual drop over an extended period of time is a normal condition.	Cylinder piston assembly leakage	Check cylinders for leakage
	Control valve internal leakage	Replace control valve and recheck
Control Valve spool(s) will not return to centred position	Control lever linkage binding	Determine origin of binding and repair
	Control valve spool centring is broken	Replace Centring Spring
	Control valve spool binding in valve body spool bore	Disassemble valve for inspection and repair.
External Hydraulic fluid Leakage	Loose Hydraulic connection	Tighten loose connections
	Defective hydraulic hose, tube line, adapter fitting or adapter fitting o-ring.	Check for origin of oil leak and replace defective part.
	Control valve o-ring defective	Replace defective o-rings
	Control valve spool or body damaged or worn	Replace control valve
	Cylinder rod packing seal 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	
Cylinder Rod bend when cylinders extended	Excessive shock load on cylinders during transport	Replace defective parts. Review and observe proper and safe operational practices.

HYDRUALIC CONTROL VALVE



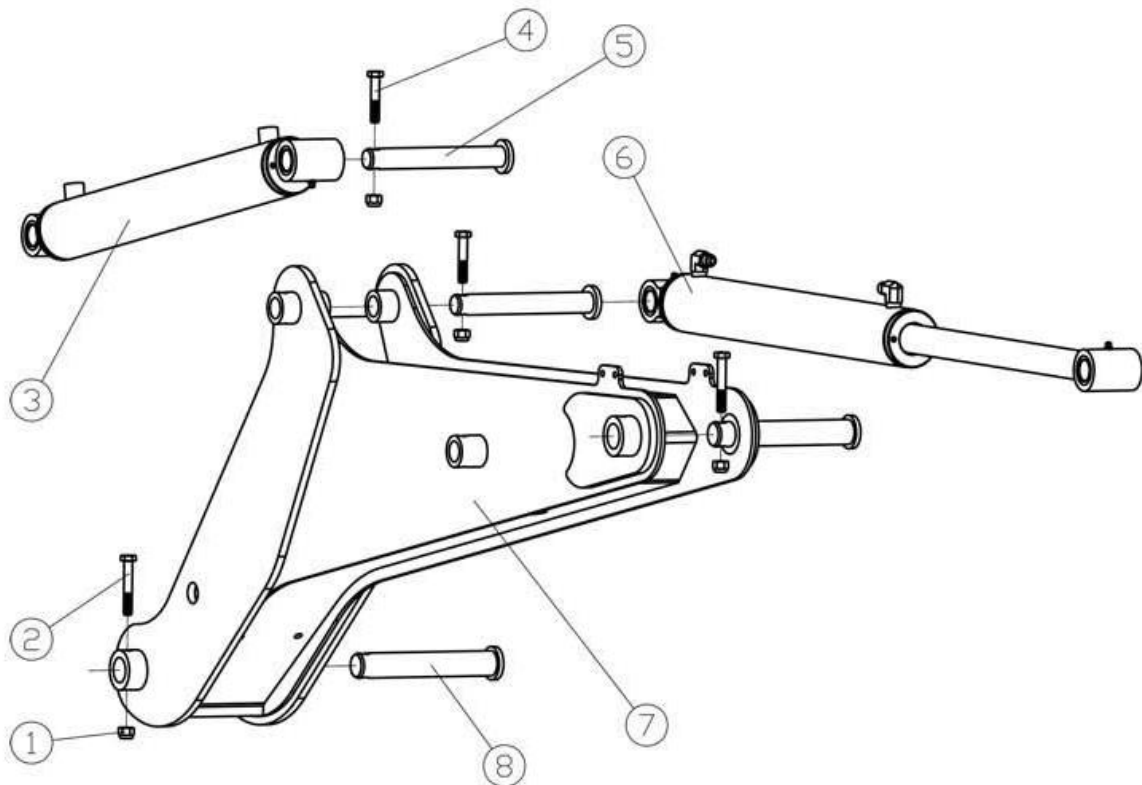
- ① ② to bucket cylinder
- ③ ④ to arm cylinder
- ⑤ ⑥ to right stabilizer cylinder
- ⑦ ⑧ to left stabilizer cylinder
- ⑨ ⑩ to swing cylinder
- ⑪ ⑫ to boom cylinder
- ⑬ out oil
- ⑭ in oil

PARTS



FRONT ARM

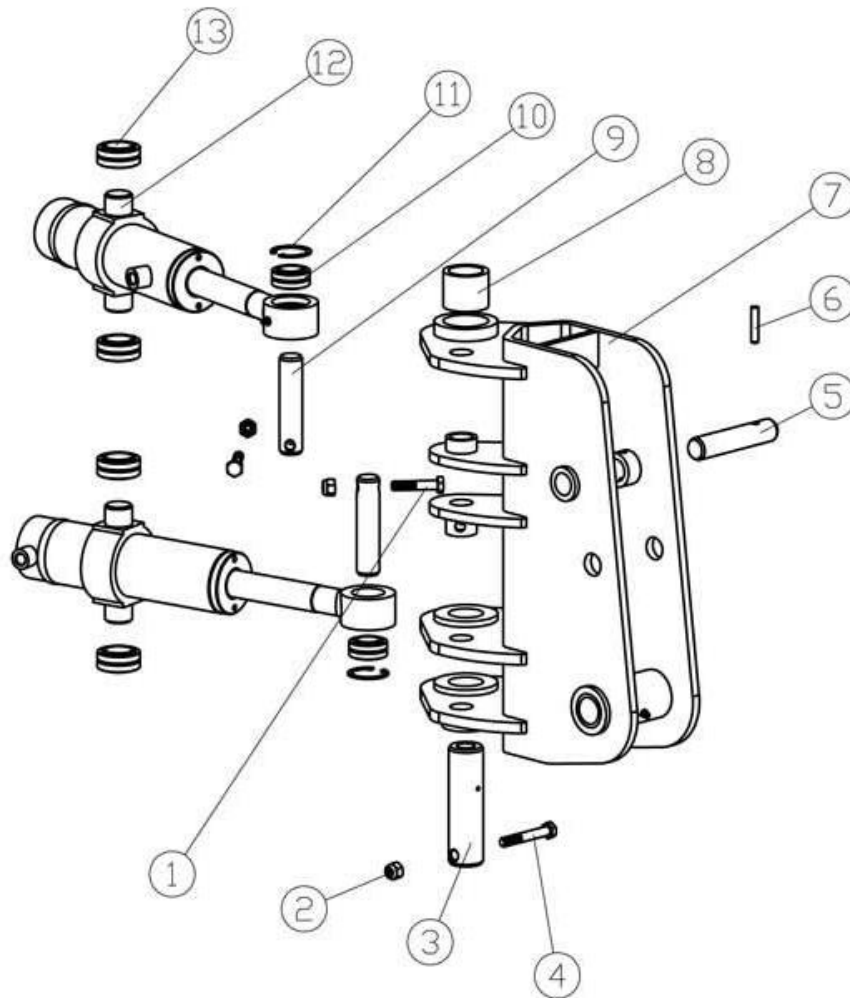
Ser. No.	175	Part No. 195	225	Name & Specification	Quantity
1	MBH-6.02.101	MBH-6.02.101	MBH-6.02.101	SLEEVE	2
2	MBH-6.02.011	MBH-7.02.011	MBH-8.02.011	FRONT ARM WELDMENT	1
3	MBH-6.02.017	MBH-6.02.017	MBH-6.02.017	PIN SHAFT 136	2
4	MBH-6.08.011	MBH-6.08.011	MBH-8.08.011	BUCKET CYLINDER	1
5	MBH-5.08.035	MBH-5.08.035	MBH-5.08.035	HOSE FOR BUCKET CYLINDER	2
6				WASHER 14	4
7	GB3541-83	GB3541-83	GB3541-83	BOLT M14X1.5	2
8	MBH-6.02.015	MBH-6.02.015	MBH-6.02.015	PIN SHAFT FOR BUCKET	2
9	200.56.011	200.56.011	200.56.011	LOCKING PIN	2
10	MBH-6.02.016	MBH-6.02.016	MBH-6.02.016	PIN SHAFT 185	3
11	MBH-6.02.013	MBH-7.02.013	MBH-8.02.013	MOON PLATE WELDMENT LEFT	1
12	MBH-6.02.102	MBH-6.02.102	MBH-6.02.102	SLEEVE	6
13	MBH-6.02.014	MBH-7.02.014	MBH-8.02.014	BUCKET ADAPTOR WELDMENT	1
14	MBH-6.02.012	MBH-7.02.012	MBH-8.02.012	MOON PLATE WELDMENT RIGHT	1
15	GB5782-86	GB5782-86	GB5782-86	BOLT M10X55	5
16	GB6182-86	GB6182-86	GB6182-86	NUT M10	5



MAIN BOOM

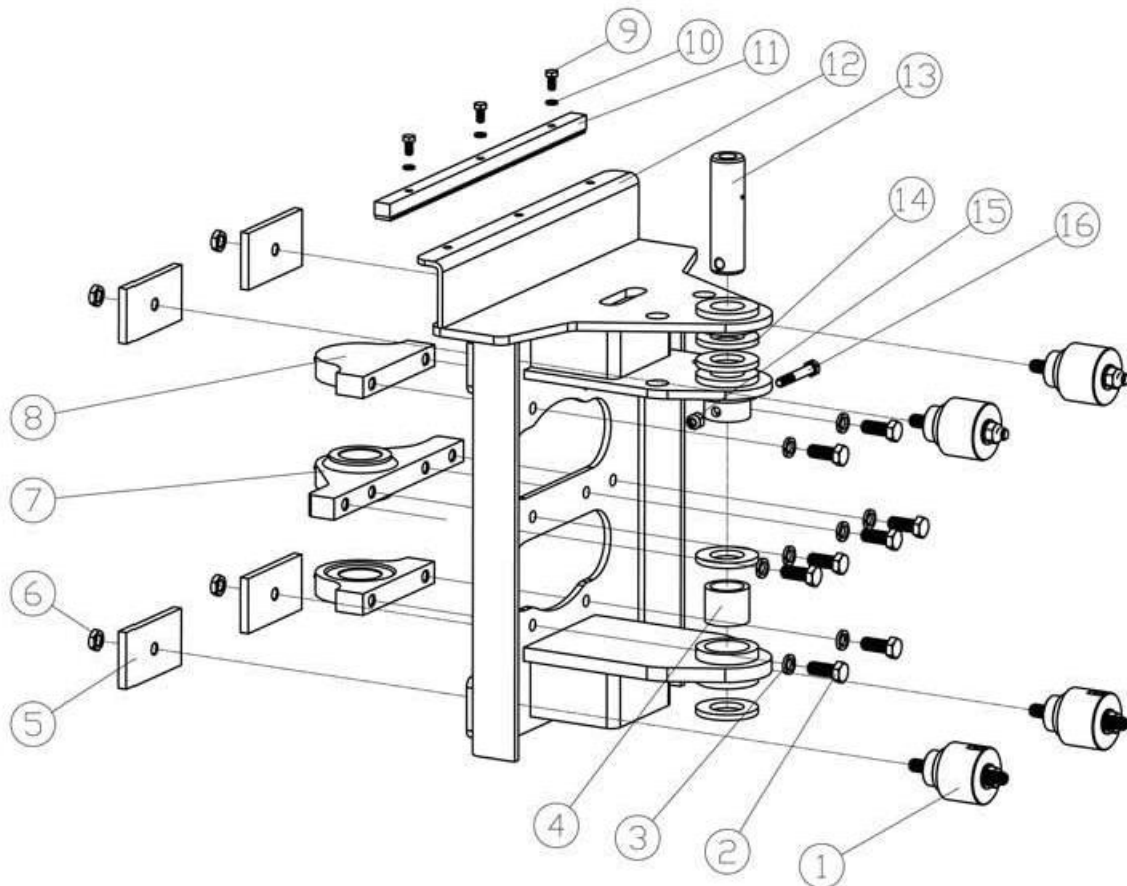
Ser. No.	175	Part No. 195	225	Name & Specification	Quantity
1	GB6182-86	GB6182-86	GB6182-86	NUT M10	4
2	GB5782-86	GB5782-86	GB5782-86	BOLT M10X65	2
3	MBH-6.08.013	MBH-7.08.013	MBH-8.08.013	BOOM CYLINDER	1
4	GB5782-86	GB5782-86	GB5782-86	BOLT M10X55	2
5	MBH-6.02.016	MBH-6.02.016	MBH-6.02.016	PIN SHAFT 185	2
6	MBH-6.08.012	MBH-7.08.012	MBH-8.08.012	FRONT ARM CYLINDER	1
7	MBH-6.03.011	MBH-7.03.011	MBH-8.03.011	BOOM WELDMENT	1
8	MBH-6.03.012	MBH-6.03.012	MBH-6.03.012	PIN SHAFT 186	2

CHAPTER 10. PARTS LIST - SIDE SHIFT



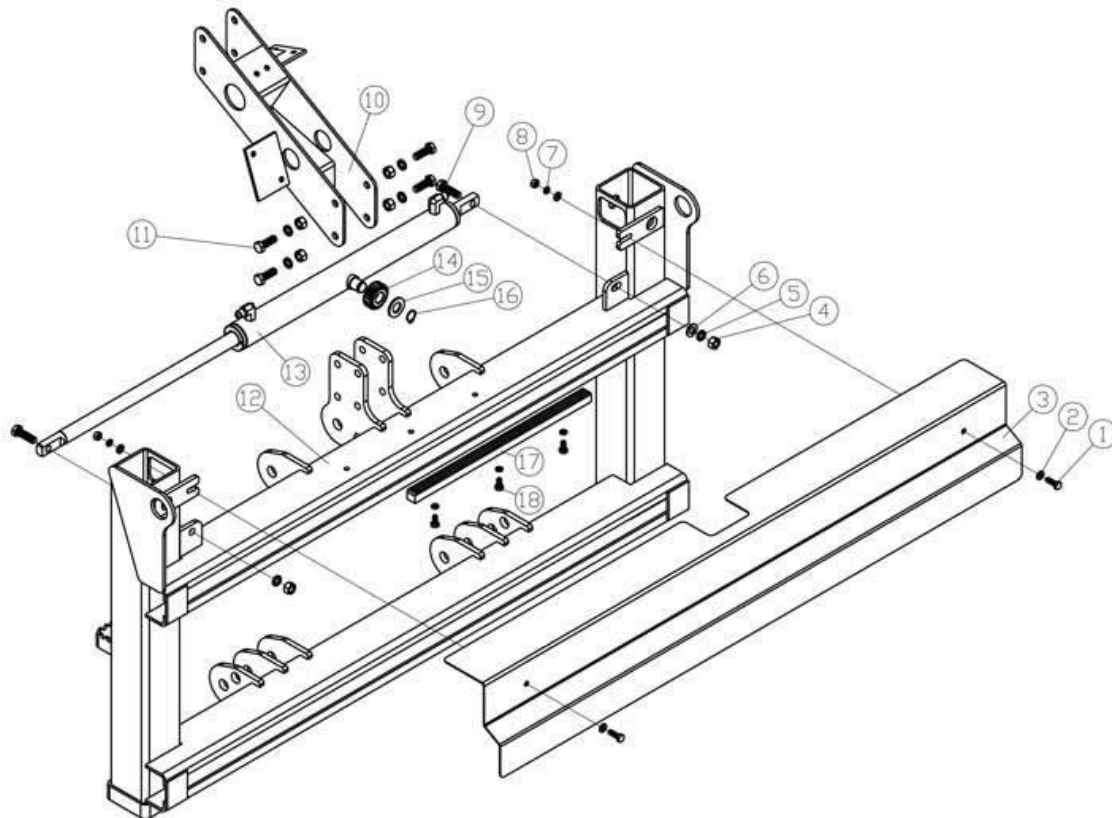
SWING JOINT

Ser. No.	175	Part No. 195	225	Name & Specification	Quantity
1	GB5782-86	GB5782-86	GB5782-86	BOLT M10X55	2
2	GB6182-86	GB6182-86	GB6182-86	NUT M10	3
3	MBH-5.04.103	MBH-5.04.103	MBH-5.04.103	SWING SHAFT	1
4	GB5782-86	GB5782-86	GB5782-86	BOLT M10X70	1
5	MBH-6.04.101	MBH-6.04.101	MBH-6.04.101	PIN SHAFT 118	1
6	GB879-86	GB879-86	GB879-86	PRING SHAFT 8X40	1
7	MBH-6.04.011	MBH-6.04.011	MBH-6.04.011	KNUCKLE	1
8	MBH-5.04.119	MBH-5.04.119	MBH-5.04.119	SLEEVE	1
9	MBH-5.04.104	MBH-5.04.104	MBH-5.04.104	PIN SHAFT 110	2
10	GE25ES-2RS	GE25ES-2RS	GE25ES-2RS	JOINT BEARING A	2
11	GB893.1-86	GB893.1-86	GB893.1-86	CIRCLIP 42	2
12	MBH-5.08.023	MBH-5.08.023	MBH-8.08.023	SWING CYLNDER	2
13	GE30ES-2RS	GE30ES-2RS	GE30ES-2RS	JOINT BEARING B	4



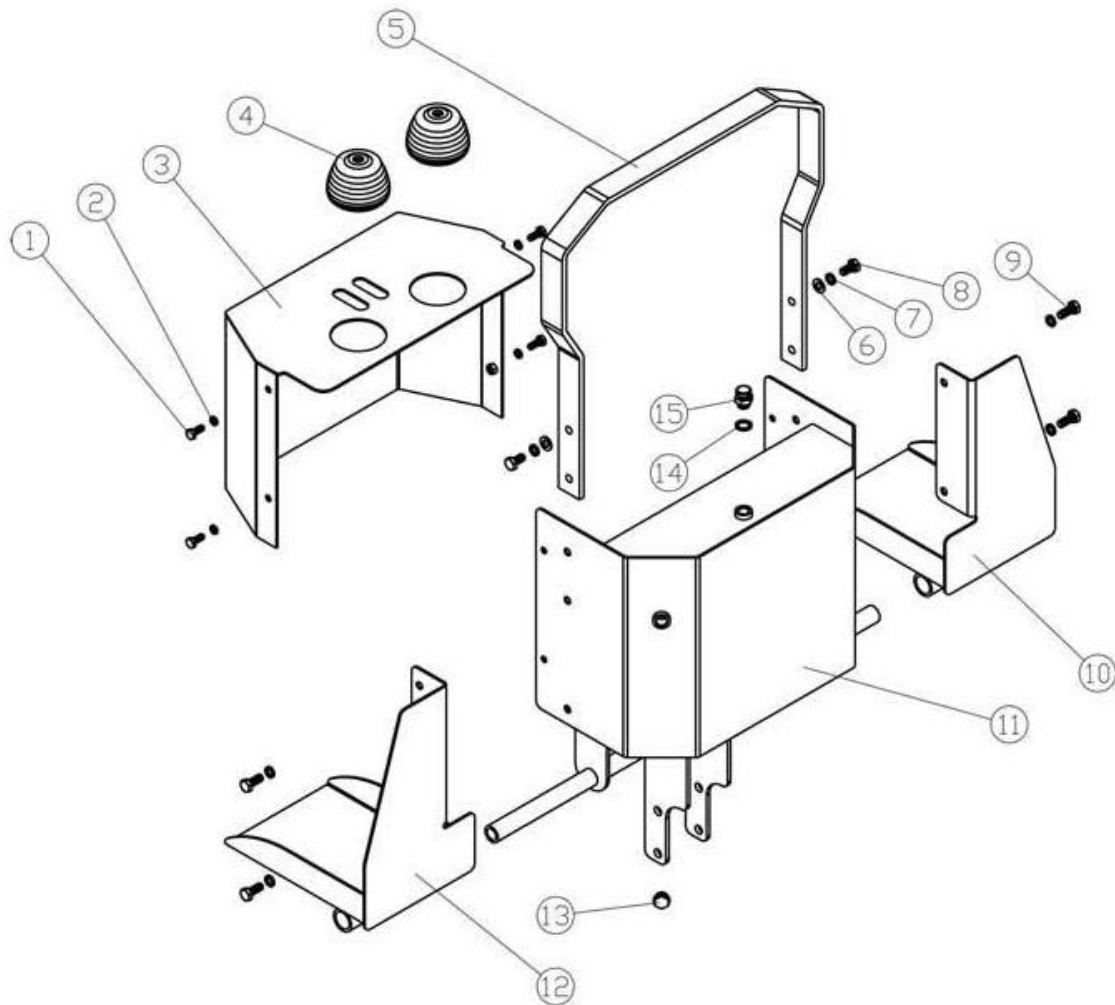
SIDE SHIFT FRAME

Ser. No.	175	Part No. 195	225	Name & Specification	Quantity
1	MBH-5.08.040	MBH-5.08.040	MBH-5.08.040	LOCKING CYLINDER	4
2	GB5783-86	GB5783-86	GB5783-86	BOLT M14X35	8
3	GB93-87	GB93-87	GB93-87	SPRING WASHER 14	8
4	MBH-5.04.119	MBH-5.04.119	MBH-5.04.119	SLEEVE	1
5	MBH-5.08.103	MBH-5.08.103	MBH-5.08.103	LOCK PLATE	4
6	GB6172-86	GB6172-86	GB6172-86	BOLT M14X1.5	4
7	MBH-5.04.013	MBH-5.04.013	MBH-5.04.013	SWING CYLINDER BASE WELDMENT MIDDLE	1
8	MBH-5.04.108	MBH-5.04.108	MBH-5.04.108	SWING CYLINDER BASE WELDMENT OUTER	2
9	GB5783-86	GB5783-86	GB5783-86	BOLT M8X16	3
10	GB93-87	GB93-87	GB93-87	SPRING WASHER 8	3
11	MBH-6.04.106	MBH-6.04.106	MBH-6.04.106	RACK	1
12	MBH-6.04.012	MBH-6.04.012	MBH-6.04.012	SIDE SHIFT BASE WELDMENT	1
13	MBH-5.04.103	MBH-5.04.103	MBH-5.04.103	SWING SHAFT	2
14	MBH-5.04.105	MBH-5.04.105	MBH-5.04.105	SUPPORTING WASHER	4
15	GB5782-86	GB5782-86	GB5782-86	BOLT M10X70	2
16	GB6182-86	GB6182-86	GB6182-86	NUT M10	2



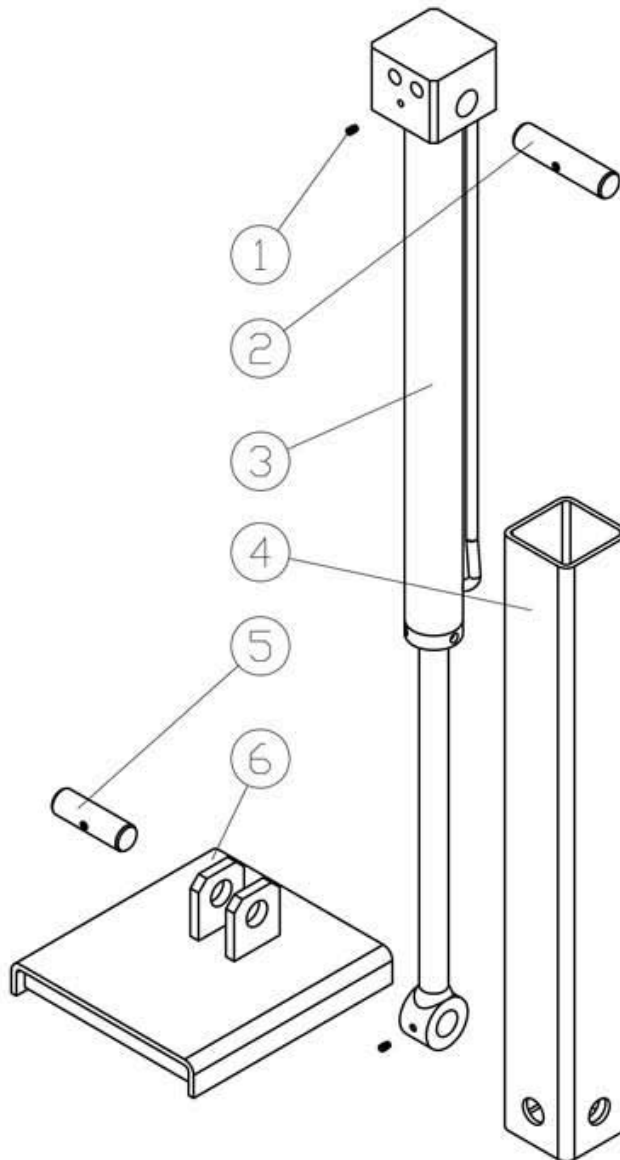
BASE

Ser. No.	175	Part No. 195	225	Name & Specification	Quantity
1	GB5783-86	GB5783-86	GB5783-86	BOLT M10X25	2
2	GB97.1-85	GB97.1-85	GB97.1-85	PLAIN WASHER 8	4
3	MBH-6.05.102	MBH-6.05.102	MBH-8.05.102	COVER	1
4	GB6170-86	GB6170-86	GB6170-86	NUT M12	6
5	GB93-87	GB93-87	GB93-87	SPRING WASHER 12	6
6	GB97.1-85	GB97.1-85	GB97.1-85	PLAIN WASHER 12	1
7	GB93-87	GB93-87	GB93-87	SPRING WASHER 8	2
8	GB6170-86	GB6170-86	GB6170-86	NUT M8	2
9	GB5783-86	GB5783-86	GB5783-86	BOLT M12X40	2
10	MBH-5.05.016	MBH-5.05.016	MBH-5.05.016	SEAT BASE WELDMENT	1
11	GB5783-86	GB5783-86	GB5783-86	BOLT M12X35	4
12	MBH-6.05.011	MBH-6.05.011	MBH-8.05.011	SLIDE BASE WELDMENT	1
13	MBH-6.08.041	MBH-6.08.041	MBH-8.08.041	SLIDE CYLINDER	1
14	MBH-5.08.102	MBH-5.08.102	MBH-5.08.102	GEAR	1
15	GB97.1-85	GB97.1-85	GB97.1-85	PLAIN WASHER 20	1
16	GB894.1-86	GB894.1-86	GB894.1-86	CIRCLIP 20	1
17	MBH-6.04.106	MBH-6.04.106	MBH-6.04.106	RACK	1
18	GB5783-86	GB5783-86	GB5783-86	BOLT M8X16	3



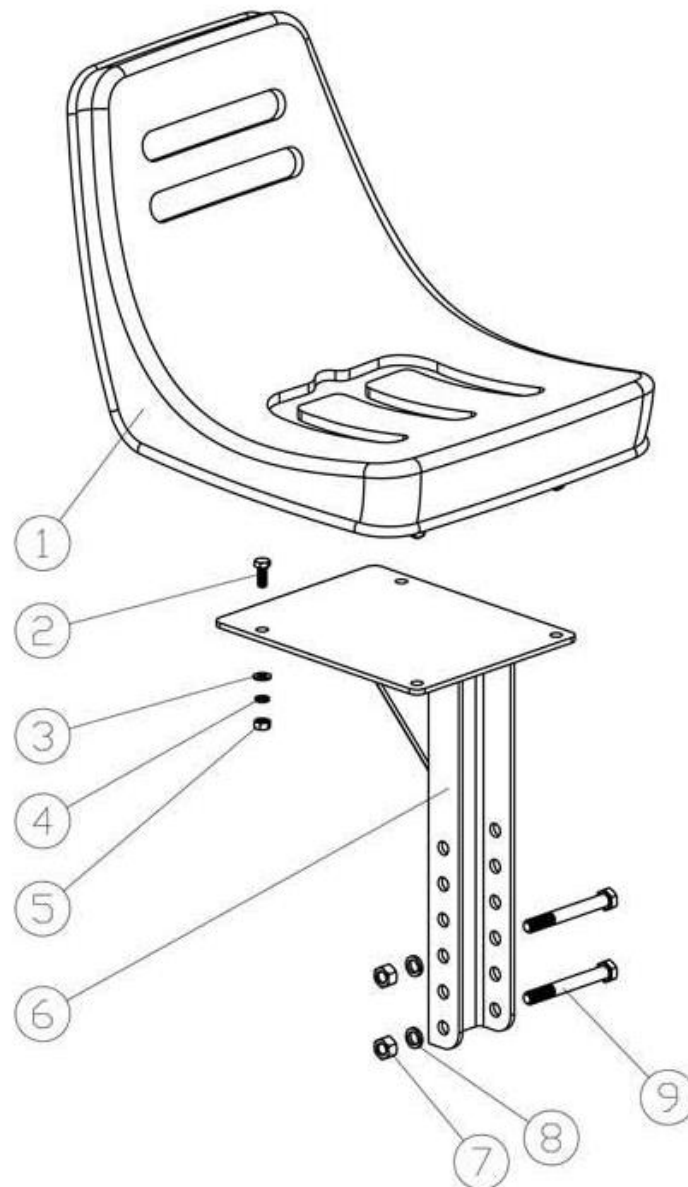
OPERATION PANNEL AND OIL TANK

Ser. No.	175	Part No. 195	225	Name & Specification	Quantity
1	GB5783-86	GB5783-86	GB5783-86	BOLT M8X20	4
2	GB93-87	GB93-87	GB93-87	SPRING WASHER 8	4
3	MBH-5.05.015	MBH-5.05.015	MBH-8.05.015	REAR COVER WELDMENT	1
4	BH-6.08.105	BH-6.08.105	BH-6.08.105	RUBER COVER	2
5	MBH-5.05.106	MBH-5.05.106	MBH-8.05.106	PROTECTION ROD	1
6	GB97.1-85	GB97.1-85	GB97.1-85	PLAIN WASHER 10	2
7	GB93-87	GB93-87	GB93-87	SPRING WASHER 10	6
8	GB5783-86	GB5783-86	GB5783-86	BOLT M10X20	2
9	GB5783-86	GB5783-86	GB5783-86	BOLT M10X25	4
10	MBH-5.05.013	MBH-5.05.013	MBH-8.05.013	LEFT PEDAL WELDMENT	1
11	MBH-6.05.014	MBH-6.05.014	MBH-8.05.014	CONTROL BOX WELDMENT	1
12	MBH-5.05.012	MBH-5.05.012	MBH-8.05.012	RIGHT PEDAL WELDMENT	1
13				OIL NUT M16X1.5	1
14				WASHER 16	1
15	CBW-00.011	CBW-00.011	CBW-00.011	OIL SEALING BOLT	1



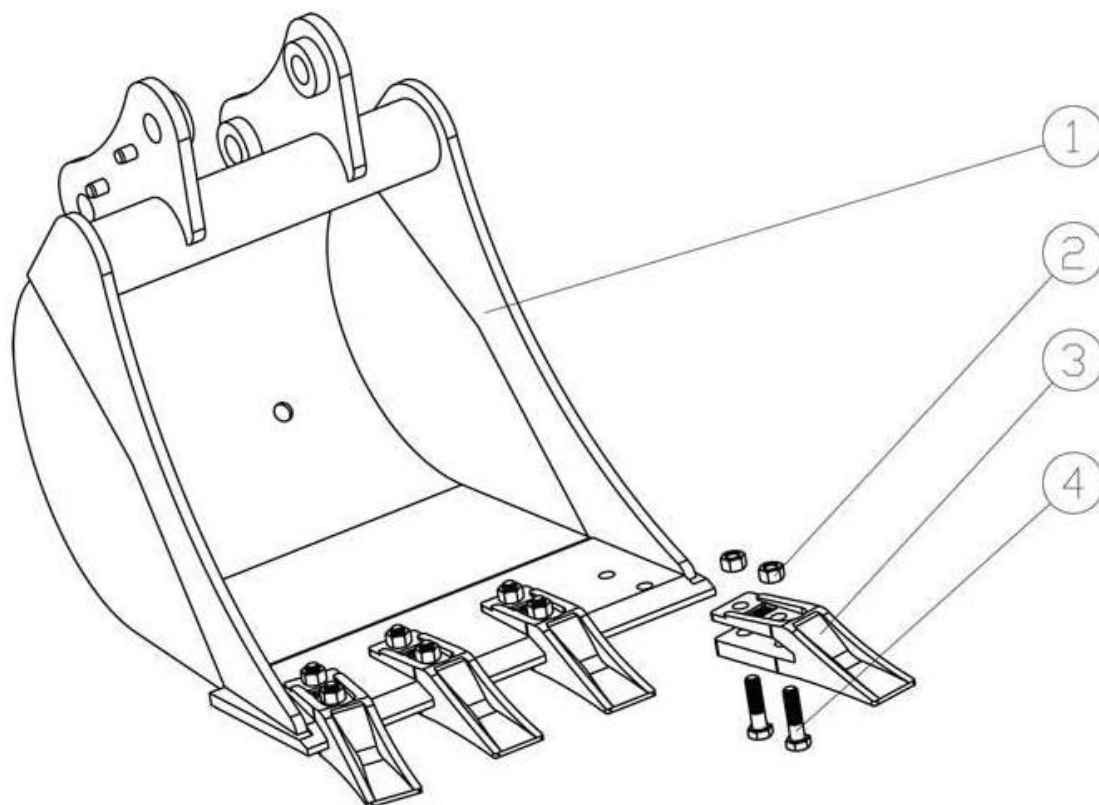
SUPPORTING LEG

Ser. No.	175	Part No. 195	225	Name & Specification	Quantity
1	GB78-85	GB78-85	GB78-85	BOLT M8X12	2
2	MBH-6.08.101	MBH-6.08.101	MBH-8.08.101	UPPER SHAFT	1
3	MBH-6.08.019	MBH-6.08.019	MBH-8.08.019	SUPPORTING LEG CYLINDER	1
4	MBH-6.06.012	MBH-6.06.012	MBH-8.06.012	SUPPORTING LEG WELDMENT	1
5	MBH-6.08.104	MBH-6.08.104	MBH-8.08.104	BOTTOM SHAFT	1
6	MBH-6.06.011	MBH-6.06.011	MBH-8.06.011	SUPPORTING FEET WELDMENT	1



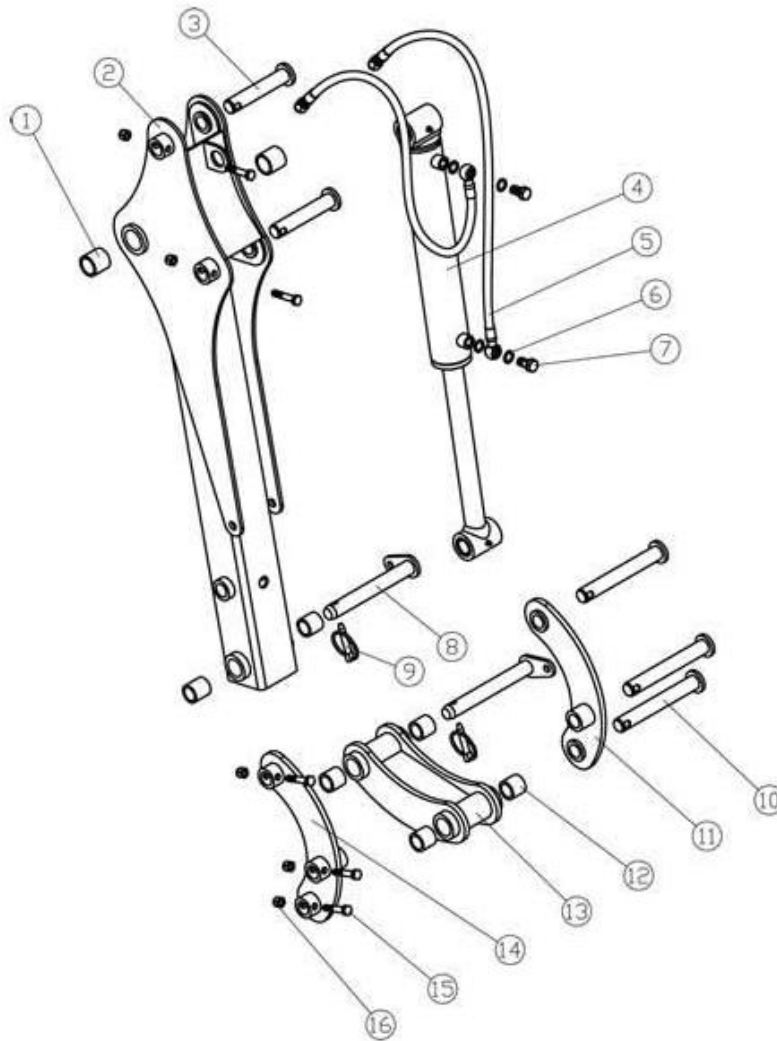
SEAT

Ser. No.	175	Part No. 195	225	Name & Specification	Quantity
1	LW-7.06.101	LW-7.06.101	LW-7.06.101	SEAT	1
2	GB5783-86	GB5783-86	GB5783-86	BOLT M8X20	4
3	GB97.1-85	GB97.1-85	GB97.1-85	PLAIN WASHER 8	4
4	GB93-87	GB93-87	GB93-87	PRING WASHER 8	4
5	GB6170-86	GB6170-86	GB6170-86	NUT M8	4
6	MBH-5.07.011	MBH-5.07.011	MBH-5.07.011	HEIGHT ADJUSTING WELDMENT	1
7	GB6170-86	GB6170-86	GB6170-86	NUT M12	4
8	GB93-87	GB93-87	GB93-87	SPRING WASHER 12	4
9	GB5782-86	GB5782-86	GB5782-86	BOLT M12X100	4



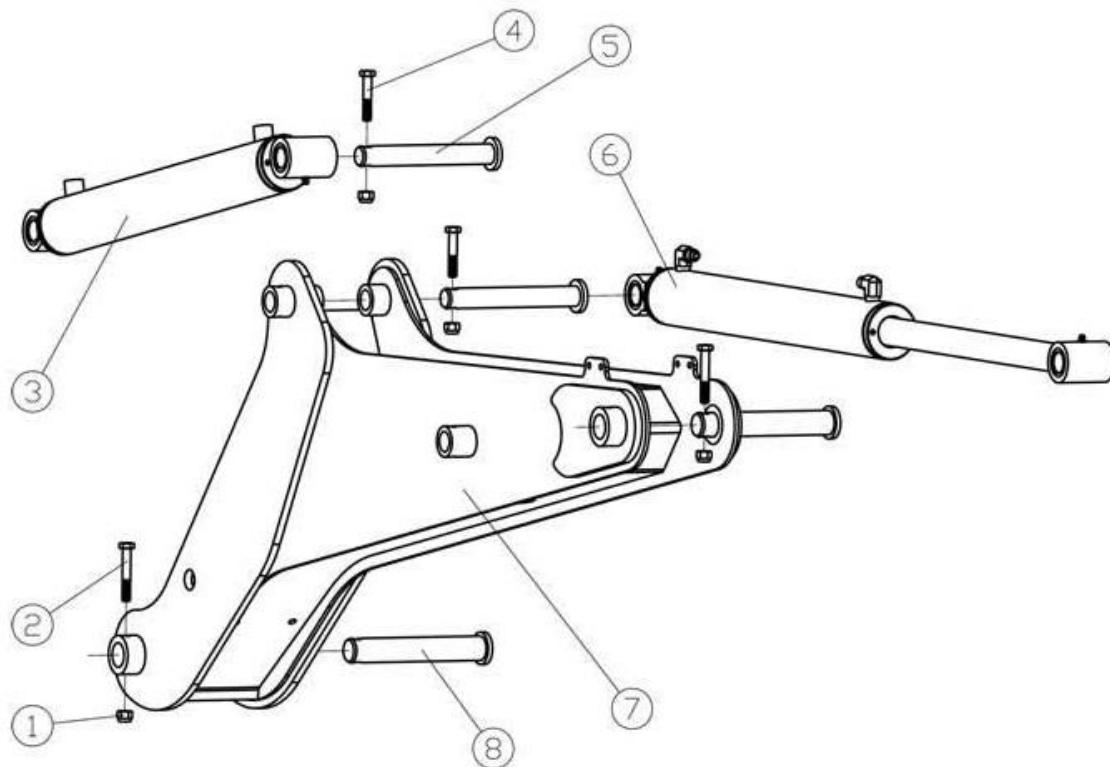
BUCKET

Ser. No.	175	Part No. 195	225	Name & Specification	Quantity
1	MBH-6.01.011	MBH-6.01.011	MBH-6.01.011	BUCKET WELDMENT	1
2	GB6170-86	GB6170-86	GB6170-86	NUT M12	8
3	GB5782-86	GB5782-86	GB5782-86	BOLT M12X45	8
4	MBH-5.01.101	MBH-5.01.101	MBH-5.01.101	BUCKET TEETH	4



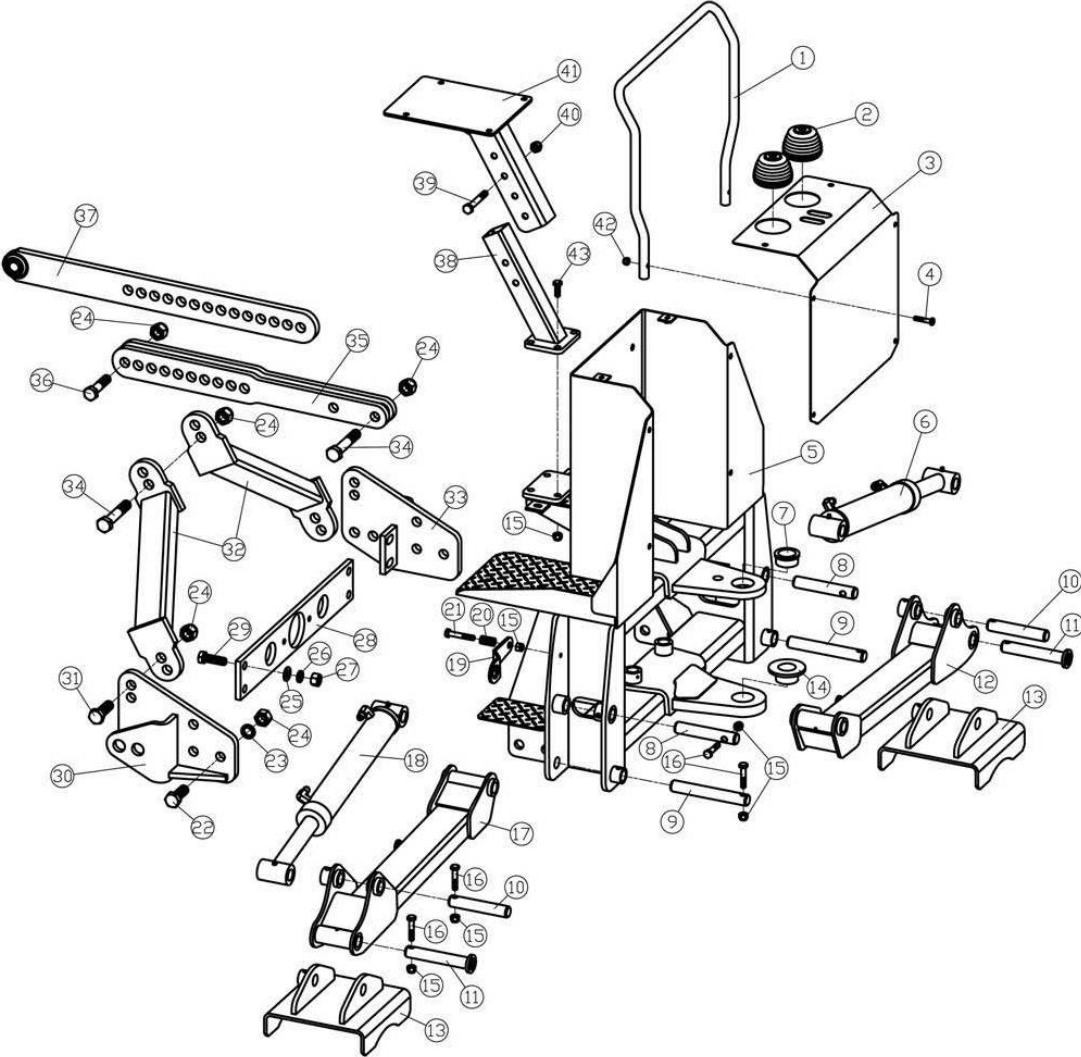
FRONT ARM ASSEMBLY

Ser.No	Part No.		Name & Specification	Quantity
	175	195		
1	MBH-6.02.101		Sleeve	2
2	MBH-6.02.011	MBH-7.02.011	Arm weldment	1
3	MBH-6.02.017		Pin	2
4	MBH-6.08.011		Bucket cylineder	1
5	MBH-5.08.035		Hose	2
6			Bonded washer 14	4
7	GB3541-83		Swing bolt m14x1.5	2
8	MBH-6.02.015		Pin	2
9	200.56.011		Lockpin	2
10	MBH-6.02.016		Pin Shaft 185	3
11	MBH-6.02.013		Left moon board weldment	1
12	MBH-6.02.102		Sleeve	6
13	MBH-6.02.014		Bucket connector weldment	1
14	MBH-6.02.012		Right moon board weldment	1
15	GB5782-86		Bolt M10X55	5
16	GB6182-86		Nut M10	5



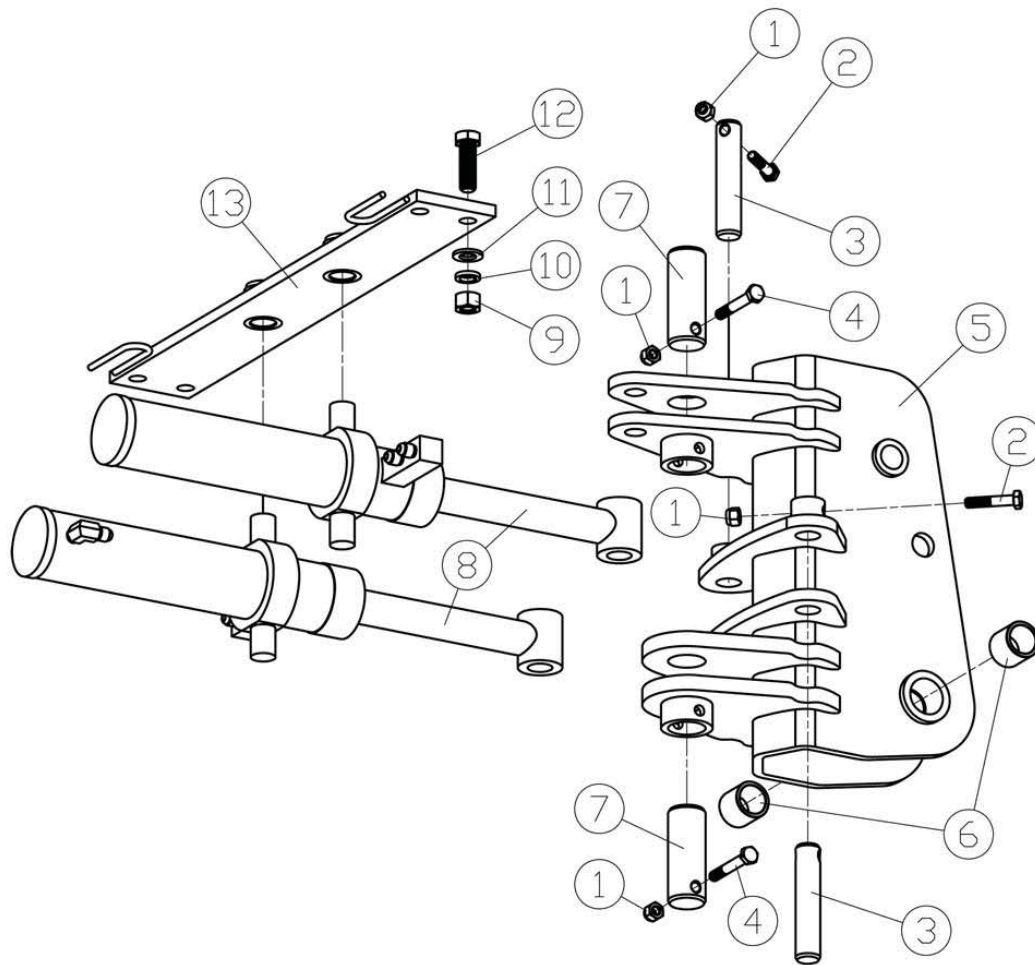
MAIN BOOM

Ser.No	Part No.		Name & Specification	Quantity
	175	195		
1	GB6182-86		Nut M10	4
2	GB5782-86		Bolt M10X65	2
3	MBH-6.08.013	MBH-7.08.013	Boom cylinder	1
4	GB5782-86		Bolt M10X55	2
5	MBH-6.02.016		Pin	2
6	MBH-6.08.012	MBH-7.08.012	Front Arm cylinder	1
7	MBH-6.03.011	MBH-7.03.011	Boom weldment	1
8	MBH-6.03.012		Pin	2



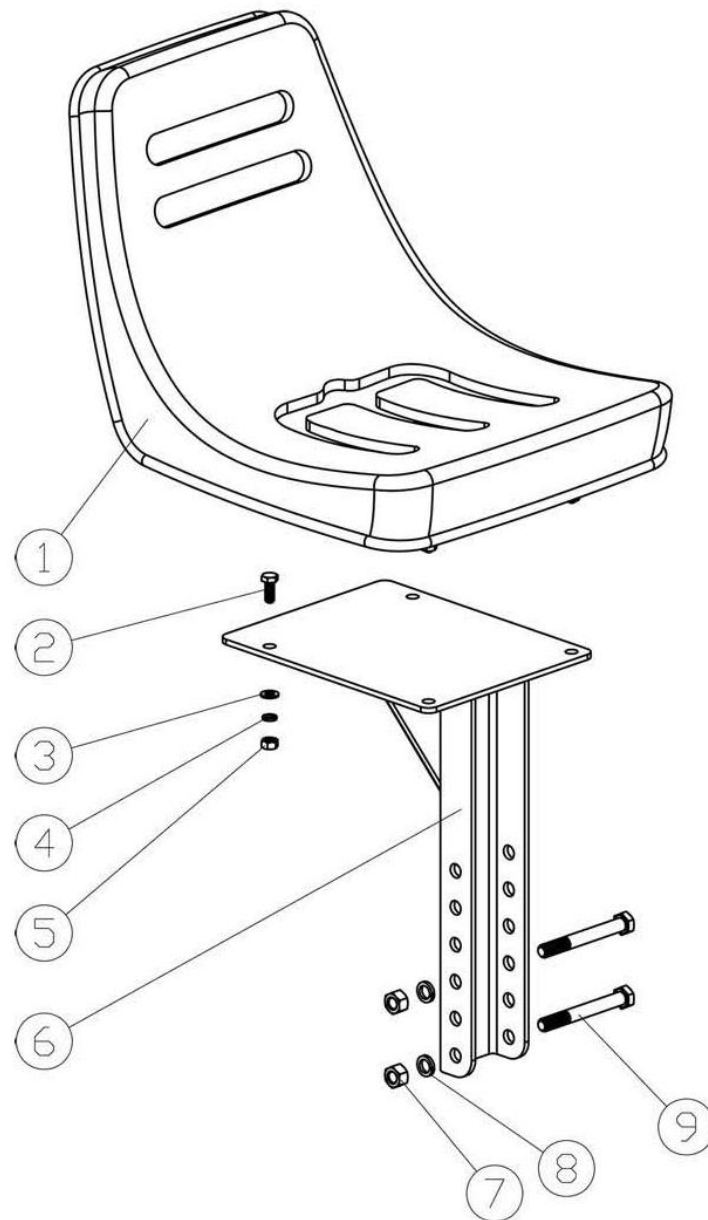
BOTTOM SEAT ASSEMBLY

Ser.No	Part No.		Name & Specification	Quantity
	175	195		
1	BH-6.05.101		Handrail	1
2	BH-6.08.105		Rubber cover	2
3	BH-6.05.102		Up cover board	1
4	GB5782-86		Bolt M8X40	2
5	BH-6.05.011		Bracket of valve weld	1
6	BH-6.08.019		Left stabilizer cylinder	1
7	BH-6.05.110		Copper bush	1
8	BH-6.05.104		Pin shaft 25x146	2
9	BH-6.03.102		Pin shaft 25x182	2
10	BH-6.02.101		Pin shaft 25x140	2
11	BH-6.06.012		Pin shaft assembly	2
12	BH-6.06.013		Stabilizer rod	1
13	BH-6.06.011		Stabilizer board weld	2
14	BH-6.05.108		Copper bush	1
15	GB6182-86		Nut M10	10
16	GB5782-86		Bolt M10x50	8
17	BH-6.06.014		Right stabilizer rod	1
18	BH-6.08.025		Right stabilizer cylinder	1
19	BH-6.05.106		Fix plate for stabilizer	2
20	BH-6.05.107		Spring	2
21	GB5782-86		Bolt M10x65	2
22	GB5783-86		Bolt M20x55	6
23	GB93-87		Adjusting washer	6
24	GB6170-86		Nut M20	11
25	GB97.1-85		Plain washer	4
26	GB93-87		Adjusting washer	4
27	GB6170-86		Nut M16	4
28	BH-6.05.141		The plate fix the pump	1
29	GB5782-86		Bolt M16X50	4
30	BH-6.05.015		Right bracket	1
31	GB5783-86		Bolt M20X60	2
32	BH-6.05.016		Suspensive plate	2
33	BH-6.05.013		Left bracket	1
34	GB5782-86		Bolt M20X110	2
35	BH-6.05.017		Pull plate	1
36	GB5782-86		Bolt M20X80	1
37	BH-6.05.018		Adjusting plate	1
38	BH-6.07.012		Seat sustain plate	1
39	GB5782-86		Bolt M12	2
40	GB6170-86		Nut M12	2
41	BH-6.07.011		Adjusting seat plate	1
42	GB6170-86		NUT M8	4
43	GB5782-86		Bolt M10X40	4



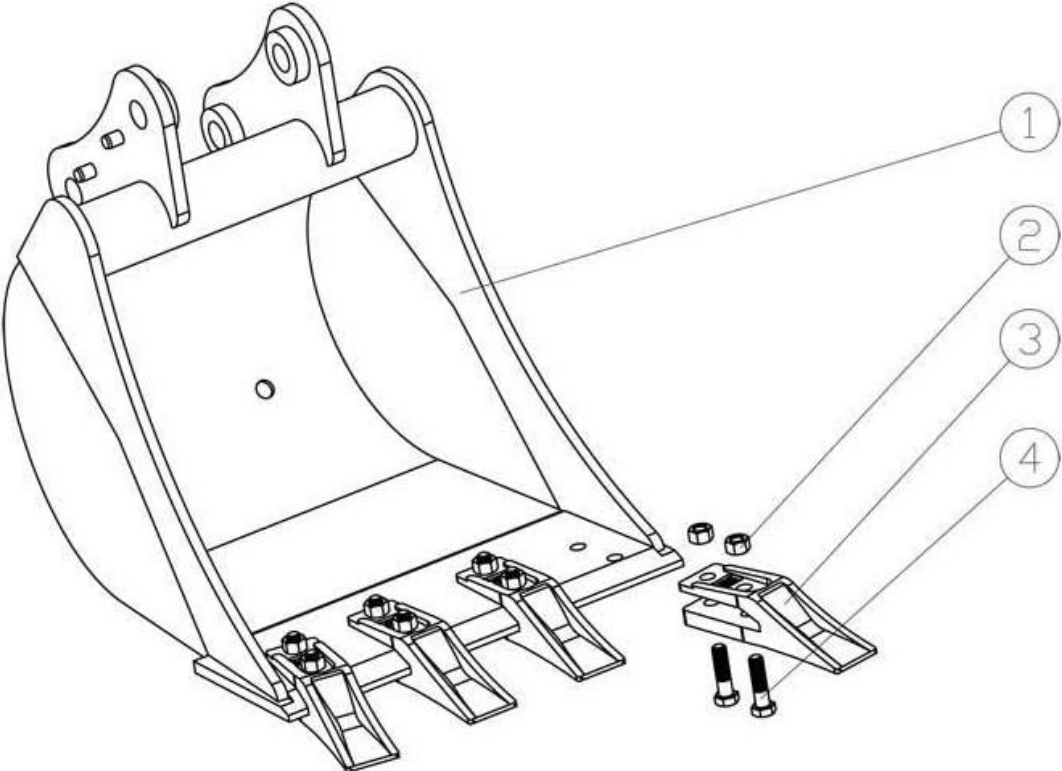
SWING POST ASSEMBLLY

Ser.No	Part No.		Name & Specification	Quantity
	175	195		
1	GB6182-86		Nut M10	4
2	GB5782-86		Bolt M10X50	2
3	BH-6.04.104		pin shaft 25x122	2
4	GB5782-86		bolt M10X70	2
5	BH-6B.04.011	BH-7.04.011	swing post weld	1
6	BH-6.02.102		bush	2
7	BH-6.04.103		pin shaft	2
8	BH-6.08.023		swing post cylinder	2
9	GB6170-86		nut M16	4
10	GB93-87		Adjusting washer16	4
11	GB97.1-85		plain washer 16	4
12	GB5783-86		nut M16X50	4
13	BH-6.05.012		up sustain plate	1



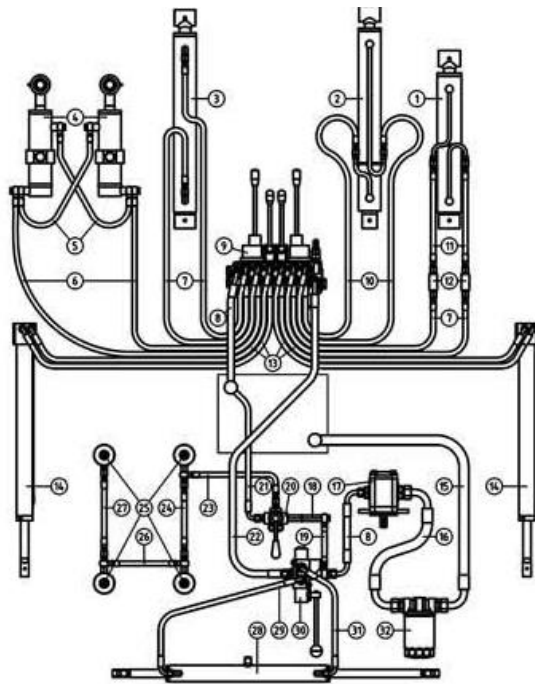
SEAT

Ser.No	Part No.	Name & Specification	Quantity
	175	195	
1	LW-7.06.101	Seat	1
2	GB5783-86	Hex.head bolt M8x20	4
3	GB97.1-85	Plain washer 8	4
4	GB93-87	Spring lock washer 8	4
5	GB6170-86	Hex.nut M8	4
6	MBH-5.07.011	Seat bracket weldment	1
7	GB6170-86	Hex.nut M12	4
8	GB93-87	Spring lock washer 12	4
9	GB5782-86	Hex.head bolt M12x100	4

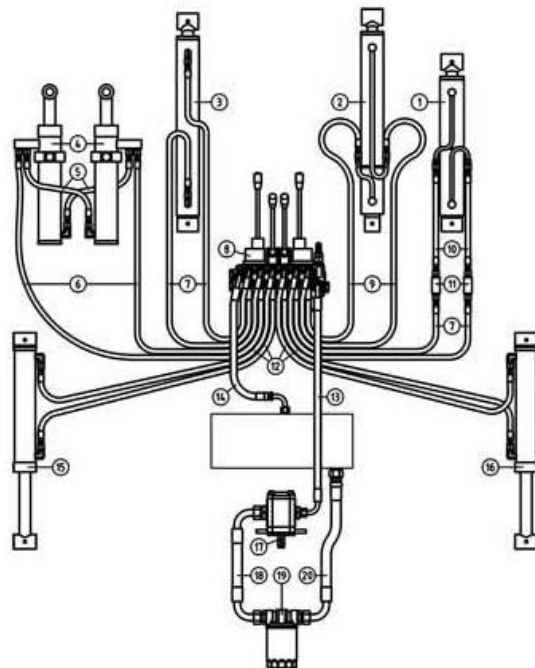


BUCKET

Ser.No	Part No.	Name & Specification	Quantity
1	175 MBH-6.01.011	Bucket weld	1
2	195 GB6170-86	NUT M12	8
3	GB5782-86	Bolt M12X45	8
4	MBH-5.01.101	Blade	4



UNIVERSAL SIDE SHIFT BACKHOE 175		
No.	Part No.	Parts Name & Descriptions
1	MBH-6.08.011	BUCKET CYLINDER
2	MBH-6.08.013	BOOM CYLINDER
3	MBH-6.08.012	FRONT ARM CYLINDER
4	MBH-5.08.023	SWING POST CYLINDER
5	MBH-5.08.024	HOSE BETWEEN SWING POST CYLINDERS
6	MBH-5.08.027	HOSE FROM VALVE TO SWING POST CYLINDER
7	MBH-5.08.029	HOSE FROM VALVE TO FRONT ARM CYLINDER
8	MBH-5.08.015	HOSE FROM PUMP TO VALVE
9	ZT8-F15-T / 60-5	CONTROL VALVE
10	MBH-6.08.028	HOSE FROM VALVE TO BOOM CYLINDER
11	MBH-6.08.035	HOSE OF BUCKET CYLINDER
12	MBH-5.08.133	HOSE TRANSIT
13	MBH-5.08.026	HOSE FROM VALVE TO SUPPORTING LEG CYLINDER
14	MBH-6.08.019	SUPPORTING LEG CYLINDER
15	MBH-5.08.021	HOSE FROM FILTER TO OIL TANK
16	MBH-5.08.020	HOSE FROM FILTER TO PUMP
17	CBF-F425-ALPL	GEAR PUMP
18	MBH-5.08.046	NON-RETURNING VALVE
19	MBH-5.08.018	HOSE BETWEEN VALVE II
20	MBH-5.08.045	LOCKING CYLINDER CONTROL VALVE
21	MBH-5.08.017	HOSE BETWEEN VALVE I
22	MBH-5.08.022	HOSE BETWEEN VALVE III
23	MBH-5.08.036	HOSE OF LOCKING CYLINDER
24	MBH-5.08.039	HOSE BETWEEN LOCKING CYLINDERS III
25	MBH-5.08.040	LOCKING CYLINDERS
26	MBH-6.08.038	HOSE BETWEEN LOCKING CYLINDERS II
27	MBH-5.08.037	HOSE BETWEEN LOCKING CYLINDERS I
28	MBH-6.08.041	SLIDE CYLINDER
29	MBH-5.08.043	HOSE OF SLIDE CYLINDER (L)
30	MBH-5.08.044	SLIDING CONTROL VALVE
31	MBH-5.08.042	HOSE OF SLIDE CYLINDER (R)
32	YX0811A	FILTER



UNIVERSAL FIXED BACKHOE 175		
NO.	Part No.	Parts Name & Descriptions
1	MBH-5.08.011	BUCKET CYLINDER
2	MBH-5.08.013	BOOM CYLINDER
3	MBH-5.08.012	FRONT ARM CYLINDER
4	BH-6.08.023	SWING POST CYLINDER
5	BH-6.08.024	HOSE BETWEEN SWING POST CYLINDERS
6	BH-6.08.027	HOSE FROM VALVE TO SWING POST CYLINDER
7	MBH-5.08.029	HOSE FROM VALVE TO FRONT ARM CYLINDER
8	ZTG-F15-T / 60	CONTROL VALVE
9	MBH-5.08.028	HOSE FROM VALVE TO BOOM CYLINDER
10	MBH-5.08.035	HOSE OF BUCKET CYLINDER
11	MBH-5.08.133	HOSE TRANSIT
12	BH-6.08.026	HOSE FROM VALVE TO SUPPORTING LEG CYLINDER
13	BH-6.08.015	HOSE FROM PUMP TO VALVE
14	BH-6.08.016	HOSE FROM VALVE TO OIL TANK
15	BH-6.08.025	SUPPORTING LEG CYLINDER (R)
16	BH-6.08.019	SUPPORTING LEG CYLINDER (L)
17	CBF-F425-ALPL	GEAR PUMP
18	BH-6.08.020	HOSE FROM FILTER TO PUMP
19	YX0811A	FILTER
20	BH-6.08.021	HOSE FROM FILTER TO OIL TANK

WARRANTY

This warranty refers to the product listed in this Operation Manual, sold or distributed by Midway Sales or through an authorised dealer. In order to qualify for this warranty, the registration form attached must be completed and returned to Midway Sales at their registered address within 10 days from date of purchase.

The Hanmey product shown in this operation manual is warranted against defects in workmanship and materials for a period of six (6) months from the date of purchase. In the case of products purchased specifically for agricultural use the warranty shall be extended to a period of twelve (12) months provided that this intended use is made known to the manufacturer/dealer at the time of purchase.

Hydraulic components, including cylinders and controls, are warranted against faulty parts and/or workmanship for a period of six (6) months commercial use/(12) twelve months agricultural use from the date of delivery of the implement to the original end-user.

This warranty is limited to faults or defects occurring in the product under normal operating conditions. The replacement or repair of any defective parts, or correction of operating parts under this warranty is made only after Midway Sales or their authorised representatives have examined the unit to their satisfaction. Implements are to be returned to Midway Sales or their authorised dealer, freight forward and return pre-paid. The manufacturer shall not be liable for indirect, special or consequential damages arising out of or in connection with the use or performance of the product including damage with respect to economic loss, loss of property, loss of revenue or profits, cost of removal, installation or reinstatement.

This warranty does not extend to cover any products manufactured to the purchaser's specifications, or modifications or repairs by customers or third parties, carried out without the written permission of the manufacturer.

This warranty does not extend to cover parts subject to normal wear such as, but not limited to chains, bearings, seals, filters and blades.

This warranty extends only to the original purchaser and is not transferable. This warranty does not extend to cover damage in transit, damage or failure caused by or attributed to Acts of God, exceeding the power limits specified in the technical data, abuse, using non-genuine parts, improper or abnormal use by the purchaser, its servants, employees or agents, faulty installation, improper maintenance or any repair other than those provided by the manufacturer or its duly authorised dealers.

This warranty does not authorise any person to create for it any other obligation or liability in connection with its products.

Other than the warranty hereby expressly given, the manufacturer makes no implied warranty of merchantability or fitness for purpose in so far as any such implied warranty is deemed to be given under any Commonwealth or State Law, then the manufacturer shall only be liable to the extent expressed in any such law.

PRODUCT IMPROVEMENT

Due to a continual product development program, Hanmey reserves the right to change models and specifications without notice.