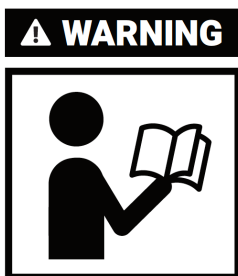


TRACTOR BACKHOE



- Please read and understand the product manual completely before assembly
- Check against the parts list to make sure all parts are received
- Wear proper safety goggles or other protective gears while in assembly
- Do not return the product to dealer. They are not equipped to handle your requests.

Missing parts or have questions on assembly?

Please call: 1-877-761-2819 or email: cs@tmgindustrial.com

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IMPORTANT SAFETY INFORMATION

Safety always

Thoroughly read and understand the instructions given in this manual before operation. Refer to the "Safety Decal", read all instructions noted on them.

Do not allow anyone to operate this equipment who has not fully read and comprehended this manual and who has not been properly trained in the safe operation of the equipment.

1. Operator should be familiar with all functions of the unit. Operate implement from the driver's seat only.
2. Make sure all guards and shields are in place and secured before operating the implement.
3. Do not leave tractor or implement unattended with engine running.
4. Dismounting from a moving tractor could cause serious injury or death.
5. Do not stand between tractor and implement during hitching.
6. Keep hands, feet, and clothing away from power-driven parts.
7. Wear snug fitting clothing to avoid entanglement with moving parts.
8. Watch out for wires, trees, etc., when raising implement. Make sure all persons are clear of working area.
9. Turning tractor too tight may cause implement to ride up on wheels. This could result in injury or equipment damage.

Look For the Safety Alert Symbol

The SAFETY ALERT SYMBOL indicates there is a potential hazard to personal safety involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

Be aware of signal words

A signal word designates a degree or level of hazard seriousness. The signal words are:



DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purpose, cannot be guarded.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, 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 which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

For your protection

Thoroughly read and understand the "safety label" section, read all instructions noted on them.

Shut down and storage

Lower machine to ground, put tractor in park, turn off engine, and remove the ignition key.

Detach and store implements in a area where children normally do not play. Secure implement by using blocks and supports.

Use safety lights and devices

Slow moving tractors, self-propelled equipment, and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.

Flashing warning lights and turn signals are recommended whenever driving on public roads. Use lights and devices provided with implement.

Transport machinery safely

1. Comply with state and local laws.
2. Maximum transport speed for implement is 20 mph. Do not exceed. Never travel at a speed which does not allow adequate control of steering and stopping. Some rough terrain require a slower speed.
3. Sudden braking can cause a towed load to swerve and upset. Reduce speed if towed load is not equipped with brakes.
4. Use the following maximum speed - tow load weight ratios as a guideline:
5. 20 mph when weight is less than or equal to the weight of tractor.
6. 10 mph when weight is double the weight of tractor.
7. **IMPORTANT:** Do not tow a load that is more than double the weight of tractor.

Keep riders off machinery.

Riders obstruct of operator's view, they could be struck by foreign objects or thrown from the machine.

Never allow children to operate equipment.

Practice safe maintenance

1. Understand procedure before doing work. Use proper tools and equipment. refer to Operator's
2. Manual for additional information.
3. Work in a clean dry area.
4. Lower the implement to the ground, put tractor in park, turn off engine, and remove key before performing maintenance.
5. Allow implement to cool completely.
6. Do not grease or oil implement while it is operation.
7. Inspect all parts. Make sure parts are in good condition and installed properly.
8. Remove buildup of grease, oil or debris.
9. Remove all tools and unused parts from implement before operation.
10. Prepare for emergencies
11. Be prepared if a fire starts.
12. Keep a fist aid kit and fire extinguisher handy.
13. Keep emergency numbers for doctor, ambulance, hospital and fire department near phone.

Wear protective equipment.

1. Protective clothing and equipment should be worn.
2. Wear clothing and equipment appropriate for the job. Avoid loose fitting clothing.
3. Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
4. Operating equipment safely requires the full attention of the operator. Avoid wearing radio headphones while operating machinery.

Avoid high pressure fluids hazard.

1. Escaping fluid under pressure can penetrate the skin causing serious injury.
2. Avoid the hazard by relieving pressure before disconnecting hydraulic lines.
3. Use a piece of paper or cardboard, not body parts, to check for suspected leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
4. If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be treated within a few hours or gangrene may result.

Safety Labels

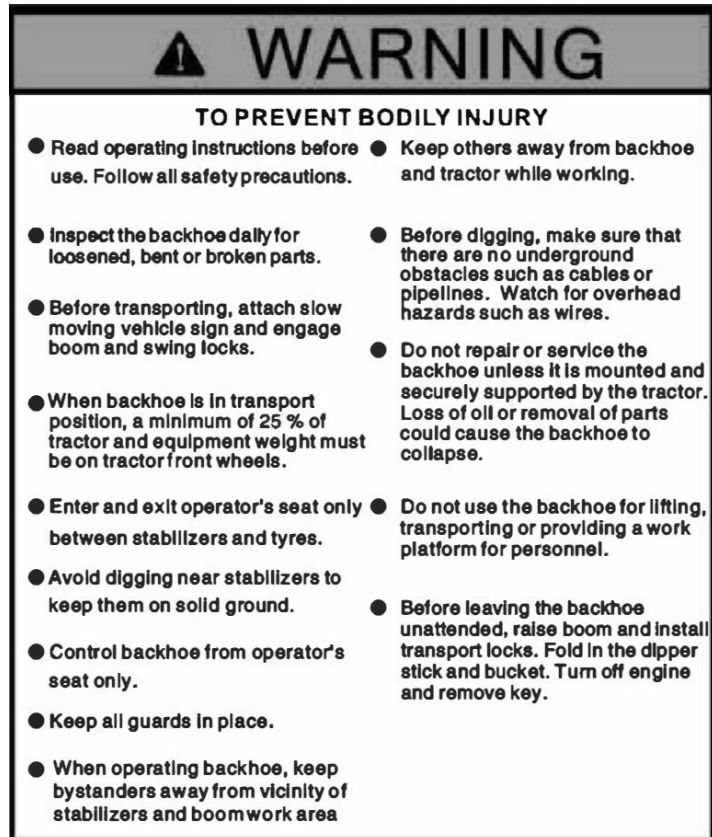
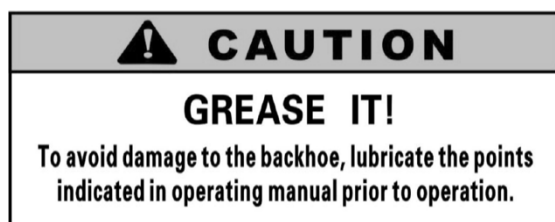
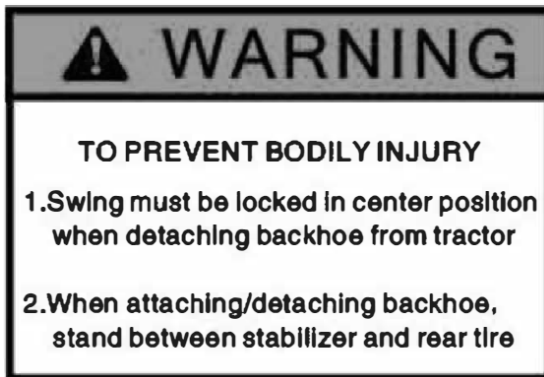
Your Backhoe comes equipped with all safety labels in place. They were designed to help you safely operate your implement.

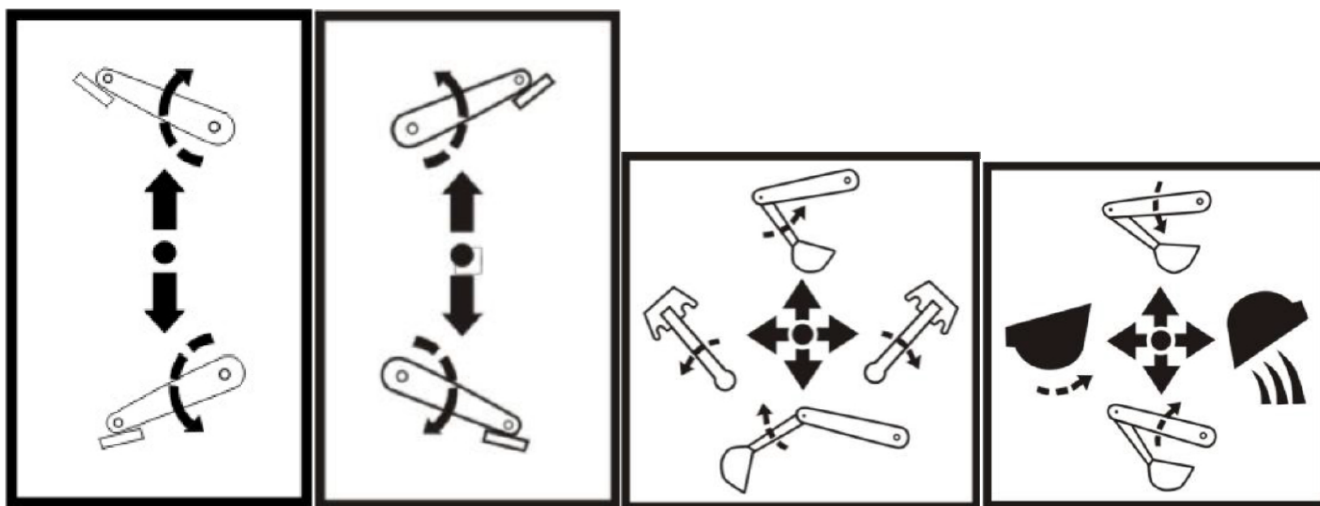
Read and follow their directions.

1. Keep all safety labels clean and legible.

2. Replace all damaged or missing labels. To order new labels go to your nearest TMG dealer or visit our dealer locator at TMG.com.
3. Some new equipment installed during repair requires safety labels to be affixed to the replaced component as specified by TMG. When ordering new components make sure the correct safety labels are included in the request.
4. Refer to this section for proper label placement. To install new labels:
 - a. Clean the area the label is to be placed.
 - b. Spray soapy water on the surface where the label is to be placed.
 - c. Peel backing from label. Press firmly onto the surface.
 - d. Squeeze out air bubbles with the edge of a credit card.

Safety labels





INTRODUCTION

TMG welcomes you to the growing family of new product owners. This implement has been designed with care and built by skilled workers using quality materials. Proper assembly, maintenance, and safe operating practices will help you get years of satisfactory use from the machine.

The Backhoes are designed for Category 1 - three point hitch or Quick-Hitch System mounting. These Fixed Bar Backhoes are ideal for ripping, leveling, finish grading, and backfilling applications at feedlots, outdoor arenas, building sites, and maintenance operations on farm and ranch lanes or roadways.

Using This Manual

1. This Operator's Manual is designed to help familiarize you with safety, assembly, operation, adjustments, troubleshooting, and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.
2. The information contained within this manual was current at the time of printing. Some parts may change slightly to assure you of the best performance.
3. To order a new Operator's or Parts Manual contact your authorized dealer. Manuals can also be printed from the TMG Service & Support Center by your dealer.

Terminology

"Right" or "Left" as used in this manual is determined by facing the direction the machine will operate while in use unless otherwise stated.

Note: A special point of information that the operator must be aware of before continuing.

Important: A special point of information related to its preceding topic. The intention is that this information should be read and noted before continuing.

Owner Assistance

The Warranty Registration card should be filled out by the dealer at the time of purchase. This information is necessary to provide you with quality customer service. If customer service or repair parts are required contact a dealer. A dealer has trained personnel, repair parts and equipment needed to service the machine.

The parts on your machine have been specially designed and should only be replaced with genuine parts.

Serial Number Plate

For prompt service always use the serial number and model number when ordering parts from your dealer. Be sure to include your serial and model numbers in correspondence also.

SECTION 1: ASSEMBLY AND SET-UP

Tractor Requirements

The purpose of this manual is to assist in setting up, operating, and maintaining your backhoe. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance. The illustrations and data used in the manual were current (according to the information available to us) at the time of printing, however, we reserve the right to redesign and change the backhoes as may be necessary without notification.

Prepare tractor



WARNING

Never let anyone operate this tractor and backhoe without first reading the safety precaution and operating instruction sections of this manual. Always choose hard, level ground to park the tractor on and set the brake so that the tractor cannot roll. Before you install a 3-point hitch backhoe on any tractor, there are certain critical that must be checked. Failure to address these points could result in serious damage to the equipment, and serious injury or even death to the operator. Do NOT attempt to install the backhoe until you have gone through the following points and made any corrections to the equipment that might be deemed necessary.

Preliminary check

The first point to consider is if there will be adequate clearance between the backhoe operator and the tractor. Proper clearance is essential for operator safety. When mounted, there must be a minimum of 60 cm horizontal clearance (with seat in the forward position), and a minimum of 72 cm horizontal clearance (with seat in the extended position). There must also be a minimum vertical clearance of 20 cm between the operator's head and any portion of the tractor.

Follow the procedure below to check for minimum clearances.

1. With the tractor 3-point hitch lower links set approximately 20-23 cm off the ground, measure the horizontal distance between the lower link ball joint and any object the comes the closest to interfering with the backhoe seat (such as the ROPS or cab).
2. To check the vertical clearance, first make sure the lower links are approximately 20-23 cm off the ground. Measure the vertical distance between the lower link ball joint center and any solid object that could interfere with the backhoe operator's head (such as the tractor cab or ROPS). The distance found must be at least 2 m. This distance allows for the height of the backhoe, the height of the seated operator, and the minimum 20 cm clearance. This figure assumes the operator the is 183 cm tall. You will have to add 1 cm for every 3 cm your operator is over 183 cm to achieve the correct figure. The distance found must be greater than this distance to safely operate the backhoe. Do not mount the backhoe if the distance found is than than the 198cm minimum.



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

Tractor ROPS system

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

Tractor Hydraulic System

Tractor operation in a backhoe application significantly demands on the tractor hydraulic system. Check the tractor hydraulic system fluid level daily. Refer to your tractor operator's manual maintenance section for instructions regarding tractor hydraulic system maintenance. Adhere to recommendation in your tractor operator's manual concerning hydraulic fluid and filter specifications, and change intervals.



CAUTION

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

Tire Pressure

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

Backhoe mounting

The following instructions will help you mount the backhoe to the tractor 3-point hitch. Read all safety instructions, decals, and operating instructions before operation.



WARNING

3-point hitch backhoes connected to tractors with ROPS or a cab can be dangerous if they are not installed, operated and maintained correctly causing serious injury or death. Always read instruction manual. Keep 20 cm clearance between the operator and ROPS or a cab. Install always correct size and quality screws, nuts and pins in 3-point installation.

Mounting instructions

1. Reverse the backhoe to the tractor.
2. Remove the top link from the tractor.
3. If the tractor is equipped with draft control, render it inoperable. If this is not possible, adjust the draft lever to its heaviest load position.
4. Attach the 3-point hitch to the tractor using the cap screws from the single and double link, and remove the double link. Allow the hitch lock out arms to drop.
5. Check to be sure that the single link is installed onto the backhoe with pin, thrust washers, and snap rings.
6. Install the center double link onto the tractor top link location using the existing high strength pin supplied by your tractor manufacturer.
7. Connect hoses to the 180° bulkhead connectors on the console that are coming from the backhoe valve. (Left connector goes to backhoe inline filter and right connector comes from backhoe shut-off valve). Install the connectors (from your dealer) to the hoses. Connect the male connector to the hose coming from the right side shut-off valve and the female connector to the hose coming from the left side inline filter.
8. Following the proper operating procedures listed in your tractor operator's manual, slowly back the tractor up to the backhoe. (Back the tractor only close enough to connect the hydraulic system.)



WARNING

Escaping fluid under pressure can have sufficient force to penetrate the skin causing serious personal injury. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands to search for suspected leaks. Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene, or other permanent disabilities.

9. Hook up the hydraulic system to the tractor with the hydraulic pressure going to the backhoe inline filter and coming from the backhoe check valve and going to the tractor.



WARNING

We recommend that you involve your dealer for the initial hydraulic hook-up. Install the correct hydraulic couplers that fit your tractor onto the backhoe pressure and return hoses.

10. Start the tractor engine and operate at low RPM. Activate the tractor valve to provide hydraulic power to the backhoe. (Check for any hydraulic leaks.)



WARNING

Until the backhoe is securely mounted onto the tractor, keep all people clear of your work area and make sure that no portion of the operator's body is beneath any part of the backhoe.

11. Raise the backhoe using the stabilizer and boom control levers until the swing is approximately 20 cm above ground level. Make sure the backhoe is vertical (perpendicular to the ground).
12. Back the tractor until the lower link ball joints are in line with the mounting holes in the backhoe mainframe.



CAUTION

While backing tractor be aware of the location of the hydraulic hoses and top links.

13. Install the hitch pins connecting the lower links to the backhoe mainframe. Secure in place using the two pins provided.
14. Position the single top link in-between the double link. Adjust the backhoe height until at least one hole lines up between the two links. Keep backhoe vertical while adjusting the height. Install the cap screw, two hard flat washers (both sides) and lock nut provided.
15. If the hitch lock-out arms were not installed at the factory, position them to the inside of the mounting holes, and bolt into place using the two cap screws, hard flat washers (both sides), and lock nuts provided. Position the hitch lock-out arms on each side of the top links, align one of the holes (as far away from the cap screw installed in step 16 as possible), and install the cap screw, two hard flat washers (both sides), and lock nut provided.

It is important to pick a set of holes that place the backhoe in a vertical position in relationship to the ground with about 20 cm of ground clearance at the boom pivot pin.

16. Torque all mounting bolts. Refer to the torque chart of this manual.
17. Check hose routing to ensure that they are kept away from the operator during backhoe operation. Do not let them touch the ground. Secure all hydraulic lines in place for operator safety and to prevent them from being damaged.
18. Double check clearance between the backhoe operator and any solid portion of the tractor, such as the cab or ROPS. If 20 cm of head clearance is not available, **DO NOT USE THIS BACKHOE ON THIS TRACTOR**. Failure to observe these instructions may cause severe personal injury or death.

Do not attempt to modify the mounting in any way. Incorrect mounting or modifying of the backhoe 3-point mounting could allow the backhoe to raise up during use, resulting in injury or death.

DO NOT attempt to raise the backhoe with the 3-point hitch. The backhoe center links along with the hitch lock out arms make the backhoe a solid mount that is immovable. Any attempt to raise the backhoe with the 3-point hitch will cause the hydraulic lift oil to go over relief and eventually damage the hydraulic system due to excessive heat build-up.

Attaching backhoe to tractor hydraulics

Attach male disconnects to quick disconnects on tractor. Make sure there is ample room to operate all functions of the backhoe safely. Operate backhoe slowly to fill all cylinders, hoses, and valves with oil.

Tractor hydraulic oil supply must be maintained at proper level during initial operation. Do not overfill. Final check should be taken with backhoe in transport position.

Should the backhoe fail to operate after connecting to tractors quick disconnect, reverse coupling.

Seat adjustment

The backhoe seat can be adjusted to facilitate operator comfort and head clearance. There is a lever under the seat for sliding forward/backward. The seat can be adjusted on the base up/down and the base can be moved forward/backward. Before mounting the backhoe on to your loader/tractor move the seat forward and position it into the lowest position. After installation the seat may be moved back if clearance is not a factor.

Mounting kit

The three-point hitch adapter kit will adapt the backhoe to any three-point hitch tractor. The seller makes no claims, implied or otherwise, as to the compatibility or structural integrity of any tractors when backhoe is installed with 3-point hitch. Since many

models of tractors have standard category hitches and backhoes have standard category attaching points, it is possible to mount tractor/backhoe combinations that are not compatible. Dealers and/or owners must determine that compatibility between the tractor and backhoe exists.

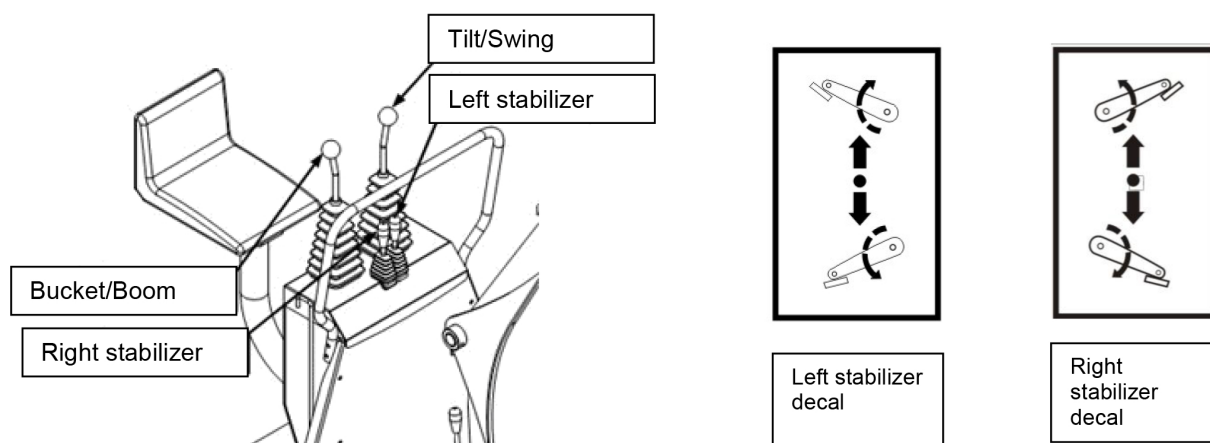
Compatibility includes but is not limited to items such as operator clearance, hitch component strength, tractor case strength and hydraulics. Suggestions given as to hitch categories and horsepower ranges used with various models of backhoes are suggestions only and not recommendations as to suitability of any combination of tractors and backhoes.

SECTION 2: OPERATING INSTRUCTIONS

Stabilizers

The backhoe is equipped with two hydraulic stabilizers that keep the backhoe in place and stabilize digging especially while dumping to the side. Digging is more effective with stabilizers and should be used during digging. Stabilizers extend wider than tractors rear wheels giving balance to digging.

Your backhoe is operated by four different control levers. Two are for stabilizer operation and the other two operate the swing, boom, dipperstick, and bucket functions. The information contained below will help you become familiar with the operation of each control lever. Read the safety precautions of this manual before attempting to use the backhoe. Remember, right and left when referred to on this page are determined by the operator's position seated at the backhoe controls facing the bucket.



Do not dig near the stabilizers to prevent an accident. Do not lift the tractor tires with the stabilizers. Ensure that the stabilizers are set on firm ground to support tractor and backhoe.

Stabilizer levers

Moving the stabilizer lever(s) forward will bring the backhoe stabilizer (s) "down". Moving the stabilizer lever(s) backward will raise the backhoe stabilizers "up". Both stabilizers are required to be down for proper stability of the backhoe when in operation.

Boom/Swing lever (Left hand lever)

Pushing the boom/swing lever forward will "lower" the boom dipstick and bucket. Full forward is the "float" position. Pulling the lever backward will "lift" the boom, dipperstick, and bucket. Pushing the boom/swing lever to the left will swing the boom and bucket to the "left". Pushing the lever to the right will swing the boom and bucket to the "right".

Dipperstick/Bucket Lever (Right hand lever)

Pushing the dipperstick/bucket lever forward will move the dipperstick "out" or away from the operator. Pulling the lever backward will move (crowd) the dipperstick "in" or toward the operator. Pushing the dipperstick/bucket lever to the left will "fill" or curl the bucket (move inward). Pushing the lever to the right will "dump" the bucket (move outward).

Bucket and Boom levers

These two levers (crowd and swing control lever, bucket and boom control lever) provide four simultaneous operations. Both experience and practice are needed to eliminate excess motion and increase operating efficiency.

Excavation

Starting operation

When operating the backhoe, smoothness of technique should be strived for at all times. Smoothness will come with experience and practice at feathering the controls. Establish a flowing digging cycle to increase operator efficiency and save unnecessary wear on the machine. Observe the following points to obtain the best results and to fully utilize the digging force of the backhoe.



WARNING

Check the prospective digging area for hidden utility lines before operating the backhoe or when in doubt of their location, contact the local utility companies. When operating the backhoe in an area where utilities are expected to be present, throttle the backhoe down and proceed with caution. If you feel the backhoe bucket made contact with anything out of the ordinary, stop digging at once. Have the obstruction checked by hand. If a utility line has been damaged, contact the affected utility at once.

Preparing for excavation

Before any excavating is started, it is always a good idea to plan out the job first. Various things need to be considered and taken into account prior to the actual digging. The operator should inspect the job site and take notice of any potential hazards in the area. He should have a complete understanding of the tasks he is expected to perform. Figure out what will be done with the spoil (excavated soil), will it be used to backfill or be moved out? What is the soil conditions like? Will you have to work around others? Etc. Once you have become familiar with the job site and understand the job requirements, it is time to set up for the actual digging. Position the backhoe in such a way as to minimize repositioning the unit and to maximize digging efficiency. Consider the placement of spoil and position the backhoe to be able to dig the maximum amount of soil, accurately, while leaving enough room for the spoil removed to be piled in the desired area.

Once the unit is positioned, lower the stabilizers to the ground. The tires should still be supporting most of the vehicle weight with the stabilizers relieving only part of the weight, and mainly acting to give the unit a wider base for increased stability and to keep the unit from moving or bouncing with backhoe use. The front end loader should also be lowered if the unit is so equipped. The vehicle should at no time be supported by the stabilizers and loader with any of its wheels off the ground. Severe damage to the vehicle could result. When operating the unit on a delicate surface (such as concrete, or stone work) or on sandy, loose, or soft ground place plywood under the stabilizers to help distribute the load over a wider area.

Warm up

Warm up actions before initial backhoe operation: Fully raise and lower the boom, dipperstick, swing and stabilizers two or three times. Fully raise the bucket from the ground and operate the bucket cylinders couple of times, lower the bucket. Check the tractor hydraulic oil level and correct it if necessary.

Front weight

Due to the hydraulic power and weight of the backhoe, it may be desirable to place additional weight for stability on the front of the tractor. To achieve the full efficiency of the backhoe, it is necessary to know the correct angle for digging. At initial contact with the ground, the boom and the dipperstick should be positioned at an angle for best penetration. The boom and dipperstick should not be extended in a straight line.

Basic digging technique

When starting an excavation, make the first cut of each section shallow, being careful to follow the exact layout of the excavation. The reason for the shallow cut is to minimize damage to the sod and to facilitate replacement.

These first cuts are also important because they will act as guides for the remaining cuts, thus getting the first few cuts as accurate as possible will help in keeping all future cuts accurate.

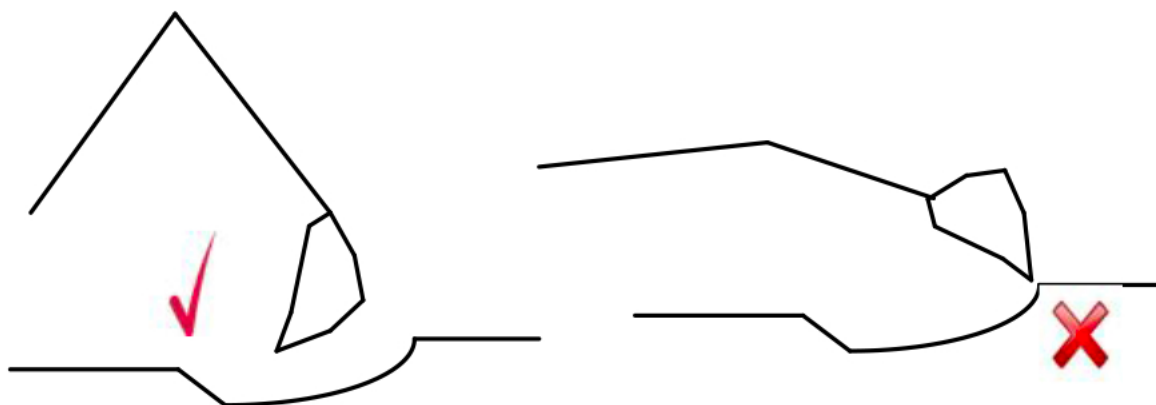
When digging with the backhoe, extend the boom, dipperstick and bucket out, away from the operator. Lower the boom and dipperstick to start the digging process. The bucket teeth should be at a 30° to 45° entry angle. As the digging starts, curl the bucket until the cutting edge is level with the horizon. Crowd the bucket in toward the operator working the bucket lever to keep the bucket level. As the bucket moves toward the operator, manipulate the boom lever to keep the cut level. At the end of the digging cycle, crowd the dipper out and completely curl the bucket while lifting it from the excavation. Once you have cleared the excavation, swing the bucket to the spoil pile. Start to dump the bucket before the pile is approached. Once the bucket is empty,

swing the unit back to the excavation, positioning the bucket and dipperstick for the next cut in the process. The whole digging process should be one smooth cycle that is repeated until the excavation is completed. When the excavation has been dug to within 15 cm of the finished bottom, clear and touch up the sides of the excavation. Use the flat sides of the bucket to scrape off any high spots.

Dislodge any exposed rocks if they seem loose. When finishing walls, finish the far wall by curling the bucket out, crowding the dipperstick out, and forcing the bucket down. To finish the closest wall, lift the bucket up and curl it in.

Once the sides are cleaned up, finish grading the bottom of the excavation. This is done by making the remaining cuts long and shallow, concentrating on making them level and smooth. Remove any remaining spoil. Check the excavation bottom for depth and levelness, making any adjusting cuts as needed.

The basic steps just listed are the same regardless of the excavation. All other digging jobs are simply variations of this basic procedure. Remember to make your cuts in smooth cycles. This will reduce operator fatigue and machine wear while increasing productivity and efficiency.



No work can be performed by dragging a full bucket. Any time the dipperstick cylinder cannot move the dipperstick, it is then necessary to actuate the bucket. This will lessen the "bite" and ease the bucket so the dipper can be moved.

The manner in which to obtain a full bucket every time is to work from the top down and taking a shallow enough "bite" to enable the operator to make a clean, smooth pass. When performing digging operations, be sure the bucket teeth are at the correct angle for break-out and ease of filling the bucket.

When the filled bucket is being raised, do not pull the dipperstick closer to the boom than necessary to clear the hole. This will eliminate the need for extending the dipperstick to dump the bucket on the spill pile. All operations should be made smoothly for efficient operation. Yanking on the control levers and jamming the bucket will not do the work, but can result in heating of the oil and inefficient operation. Once the bucket is clear of the ditch or hole, it can be swung to the side for dumping. At the start of the work, dump the material far enough to the side so there will be ample room to pile the entire spill.

Loading trucks is performed satisfactorily with the backhoe by curling the bucket close to the dipperstick to prevent spillage from the bucket when it is raised. With the 3-point hitch mounted backhoe you can make full 180 degree swing, so it is possible to dump either side of the excavation as desired. The swing on the backhoe is completely hydraulic and needs no pin moving or other mechanical changes to make the 180 degree swing.

When digging trenches, usually it is important to obtain a level bottom. Inexperienced operators sometimes have difficulty in achieving this. Level bottoms are achieved by setting the bucket teeth on a slight angle and maintaining this angle by gradually uncurling the bucket as the dipperstick is drawn toward the operator. At the same time, pull back intermittently on the boom control lever. This will feather the boom and maintain a level bottom.

To dig a straight trench, it is best to chalk a mark about 30 cm off the center of the intended trench. Then, make a marking on the backhoe frame about 30 cm off center. The operator can maintain a straight line by keeping the mark on the backhoe directly over the chalk marking on the ground.

When digging a pipe leak, always dig along the line of pipe and never across it. Excavate around the leak to give ample room for the repair to be made.

When trenching on a slope, always start at the top and work down. When working across a slope make full use of the stabilizers on the backhoe to level the machine. Always pile the dirt on the uphill side. Caution should be exercised when working on slopes. The rate of travel on slopes, hillsides and curves should always be such that there is no danger of tipping.

Always 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 tractor is moving and storing for an extended period of time.

Special applications

Trenching between a building and an open excavation

Start the trench at the building and trench toward the open excavation. Dig toward the open excavation until there is just enough room to move the unit out from between the trench and open excavation.

Position the unit so the backhoe swing is over the centerline of the trench connection. Dig with the backhoe at an extreme swing position and as close to the stabilizers as possible. Pile the soil on the opposite side of the trenches. Position the unit forward so the two trenches can be connected. Pile the spoil on the opposite side of the trench.

Excavating on slopes

When digging on slopes always face the backhoe up slope whenever possible. It may be necessary to cut a level surface in the hill for the backhoe to sit in when operating on slopes. This will allow the backhoe to sit level for digging the main excavation. Pile the spoil from the surface downhill. When digging the main excavation, pile the spoil uphill.

Pipeline leak repair

To check for pipeline leaks, start by digging a bell hole about six feet wide and ten feet long. Then, dig lengthwise along the pipeline to locate the leak. Once the leak is located, position the unit to dig at grade level on both sides of the pipeline. If a section of pipe is to be replaced, strip the soil from both ends of the bell hole. Enlarge the hole enough to allow the workmen adequate working space in the leak area.

Backfilling

To backfill an excavation, lower the extended bucket into the spoil pile. Curl the bucket and lift it clear of the spoil pile. Swing the bucket to the excavation and extend the bucket. Return the bucket to the spoil pile and continue the cycle until the job is completed.

Do not backfill by using the swing circuit and dragging the bucket sideways. Doing so could cause damage to the dipperstick, boom, and swing cylinders or mainframe. Avoid constant jarring or hammering contact between the spoil pile and the loaded bucket as this may cause premature wear to the backhoe pins and bushings.

Cold weather operation

For smooth operation in cold weather, let the tractor warm up. Slowly circle 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 temperature.

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

Do not operate the backhoe if fittings are leaking or if hoses are damaged. A sudden line burst can cause the boom, or dipperstick bucket to drop suddenly, causing damage to the tractor or backhoe or personal injury.

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 using a backhoe, be aware of bucket and boom location at all times. When raising dipperstick with bucket rolled forward, material can spill onto non target area causing injury to assistant or damage other objects. Do not dig near stabilizers. Ground

under stabilizers could collapse. Make all movements slowly and gradually when practicing operation. Operate from backhoe operators' seat only. Pay attention; be ready to stop immediately in case of an emergency. 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.

Detaching backhoe

Move backhoe to a flat, firm and wide enough place to remove the equipment. Do not remove bucket or stabilizers. Dump the remaining material from the bucket to empty it. Use other lifting equipment if backhoe is damaged.

Position the tractor on hard, level ground into wide enough area when the backhoe is to be removed.

Step 1. Transport the backhoe to storage facility.

Step 2. Use two inner levers to lower stabilizers until they touch the ground. Use the boom and dipperstick levers to lift up the dipperstick and boom completely.

Step 3. Center the boom and lock with a latch.

Step 4. Using the levers, set the dipperstick upright, roll the bucket until it is level to the ground, lower boom until the bucket touches the ground.

Step 5. Remove pins that lock backhoe main frame to the tractor.



WARNING

Remove the backhoe on firm level ground. Do not allow bystanders in the area. Be careful to avoid injury during removal of the backhoe. The hydraulic oil is dangerous for skin or eyes. Wash skin and seek medical service if necessary.

Step 6. Using both the stabilizer and the boom lever, set the backhoe frame horizontally to relieve the weight of the backhoe from the mounting brackets of the tractor.

Step 7. Move the tractor slowly forward until the backhoe frame disengages of the mounting brackets.

Step 8. Turn off the tractor engine. Relieve hydraulic pressure by actuating all the control levers in each direction, then disconnect the backhoe hose couplers from the tractor hydraulic couplers.

Transporting

Follow the simple steps listed below when preparing the backhoe for transportation between work sites. Read and follow the safety precautions for backhoe transporting listed in safety section of this manual before moving the backhoe.

1. Before transporting the backhoe, raise the boom, dipperstick and bucket to the transporting position.
2. Set the boom lock latch.
3. Lock the boom in the center position for transport.
4. Raise all stabilizers.

Boom lock

When transporting or dismounting backhoe, you must lock the backhoe's boom. Position boom straight, centered and set latch.

SECTION 3: MAINTENANCE AND LUBRICATION

Maintenance

Proper servicing and adjustment is the key to the long life of any farm implement. With careful and systematic inspection, you can avoid costly maintenance, time and repair.

This section of the instruction manual is designed to help you with minor maintenance and repairs that are necessary time to time. If there is a requirement for more substantial maintenance work, please call you dealer.

All maintenance work will be repaid by the performance and length of service life. Economical and effective operation depends on regular and correct lubrication of all moving parts. Failure to do so will lessen the efficiency, slow the movement, increases wear of parts and causes unnecessary part replacement. All parts with grease nipples must be lubricated as indicated in the picture. If any

grease nipple is missing replace it immediately. Clean all joints before using grease gun.

Avoid excessive greasing. Dirt collects on exposed grease and greatly increases wear. After greasing, wipe off excessive grease from fittings.

When servicing your backhoe, remember to use only manufacturer replacement parts. Substitute parts may not meet the standards required for safe, dependable operation. To facilitate parts ordering, record the model and serial number of your unit. This information may be obtained from the identification plate located on the product. The dealer needs this information to insure that you receive the correct parts for your specific model.

Maintenance chart

Item	Service	Service interval
Hydraulic System Oil Level	Check	Daily/10 hours
Hydraulic System Oil/Filter	Replace	As specified in tractor operator's manual
Tire Inflation	Check	Weekly/50 hours
Backhoe pivot points	Lubricate	Daily/10 hours
Backhoe hydraulic lines, hoses, connections	Check for leaks, wear	Daily/10 hours
Boom, dipperstick, swing and bucket cylinder rod packing	Check for seepage, service as needed	Daily/10 hours
Pivot pin bolts and dust covers	Check, replace if missing	Daily/10 hours
Friction of all pins	Check, replace if necessary	Daily/10 hours
Backhoe mount hardware	Check visually	Daily/10 hours
Check all driving bolts and swing pins.	Check, replace or maintain when necessary.	Daily
Check hydraulic cylinders, connectors, hoses and control valves for oil leakage.	Check for leaks and wear, repair or change when necessary.	Daily
Check hydraulic cylinder piston rod for scrapes and nicks. Check for sharp objects embedded in slider.	Check and repair when necessary	Daily

Scratches and score marks should be polished out or if excessively deep, have the piston rods replaced. They can be removed by using a fine grit stone. Do not use coarse grit sandpaper or emery cloth.

If the hydraulic cylinder will not hold the load (when the control valve is in neutral) it could mean that the piston packing is worn. If it is determined that the leak is in the packing, the cylinder must be serviced.

In order to obtain an accurate measure of the reservoir oil level, the tractor must be level. The oil level must be checked after filling the system and again after the machine has operated sufficiently to expel all air from the system. All checks are to be made with the backhoe in transport position and all cylinders retracted.

Relief valve

The backhoe is equipped with a main relief valve in the hydraulic circuit set at 138 bar. The swing circuit relief is set 172 bar. This is a delicate precision made part and a very small piece of foreign material may sometimes be trapped in the relief valve causing it to stick in the open position. When this occurs the backhoe loses most of its power and cannot be operated satisfactorily. It is recommended that a spare relief valve be carried with the backhoe at all times. These valves can be disassembled and cleaned without damaging the valve. This must be done, however, under very clean conditions and all parts washed thoroughly before reassembling.

Control Valve

The hydraulic control valve maintenance is normally limited to the replacement of o-ring seals, cleaning and the replacement of valve sections or relief valve cartridges. The most common cause of premature wear and malfunctioning of the hydraulic system components is the ingress of contaminants and incorrect high pressure inlet and low pressure return connections (cavitation).

Observe a high standard of cleanliness when doing valve maintenance.

Bucket teeth

The bucket teeth are self-sharpening and require little attention: however, the points on the bucket teeth shanks can be replaced when they become worn or broken.

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

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

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

Do not operate the backhoe if the fittings are leaking or if the hoses are damaged. A sudden line burst could cause the boom, dipperstick or bucket to drop suddenly, causing damage to the tractor or backhoe or injury to personnel. Operate the backhoe from the operator seat only. Do not stand or walk under a raised backhoe. Accidental movement of control lever or leak in hydraulic system could cause boom or dipperstick to drop, causing severe injury.

Check the tractor hydraulic system as outlined in the tractor operator's manual.

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 tractor operator's manual for lubricant recommendations.

Inspect hydraulic hoses, connections, control valve and cylinders for evidence of leakage. Tractor tires should be maintained at maximum recommended inflation to maintain normal tire profile with added weight of backhoe/material. Unequal rear tire inflation can result in bucket not being level to the ground.

Lubrication

The lubrication of the backhoe will require only a few minutes of regular daily attention and will greatly increase the life of the machine. Use only a high grade multi-purpose type grease of unvarying specification in all lube fittings. Always buy lubricant from a reputable dealer who handles a reliable product.



CAUTION

If the backhoe is operating in mud or water, lubricant immersed fittings several times a day.



CAUTION

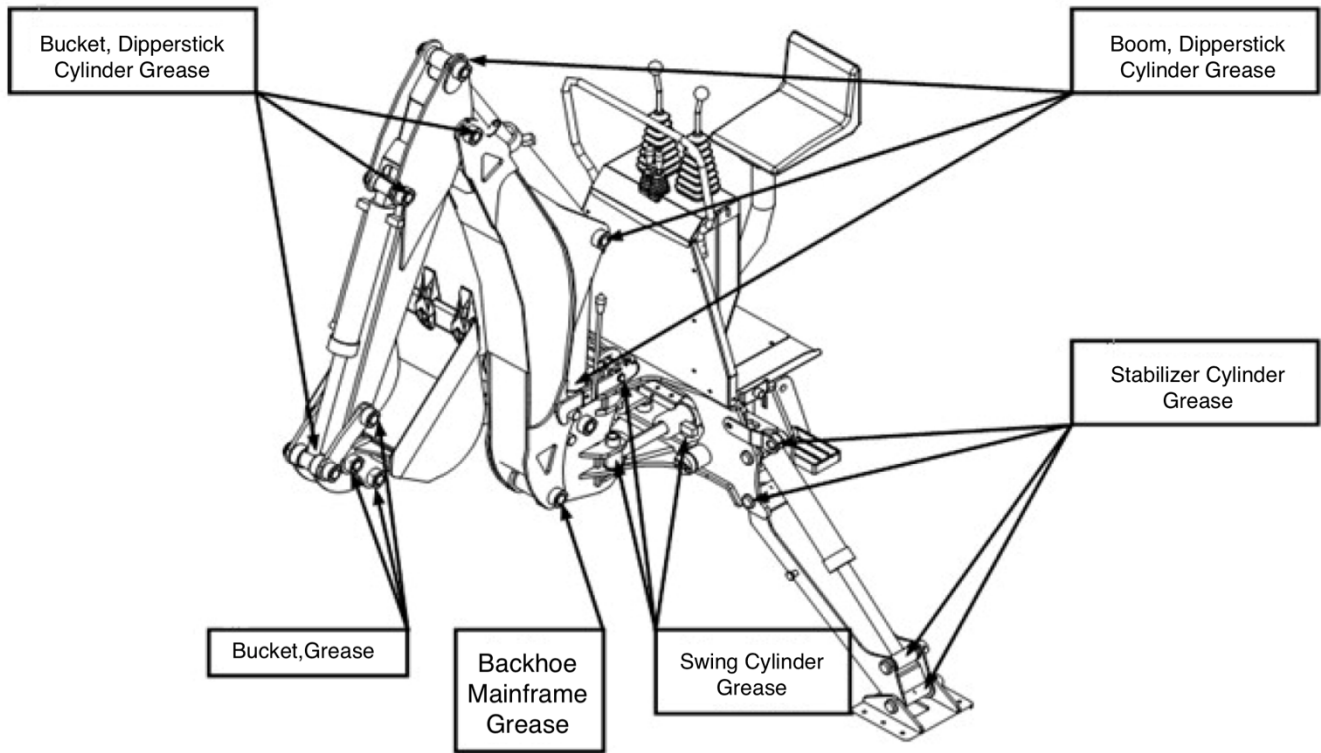
Clean all grease fittings before applying grease. Replace all lost or damaged fittings immediately.

Use high quality hydraulic fluid in the system. Dirt is an enemy of the hydraulic system. The best way to fight this enemy is to prevent its entry into the system. Therefore, complete cleanliness is necessary when serving the hydraulics. Any part that is reassembled under dirty conditions could result in serious problems and costly repairs.

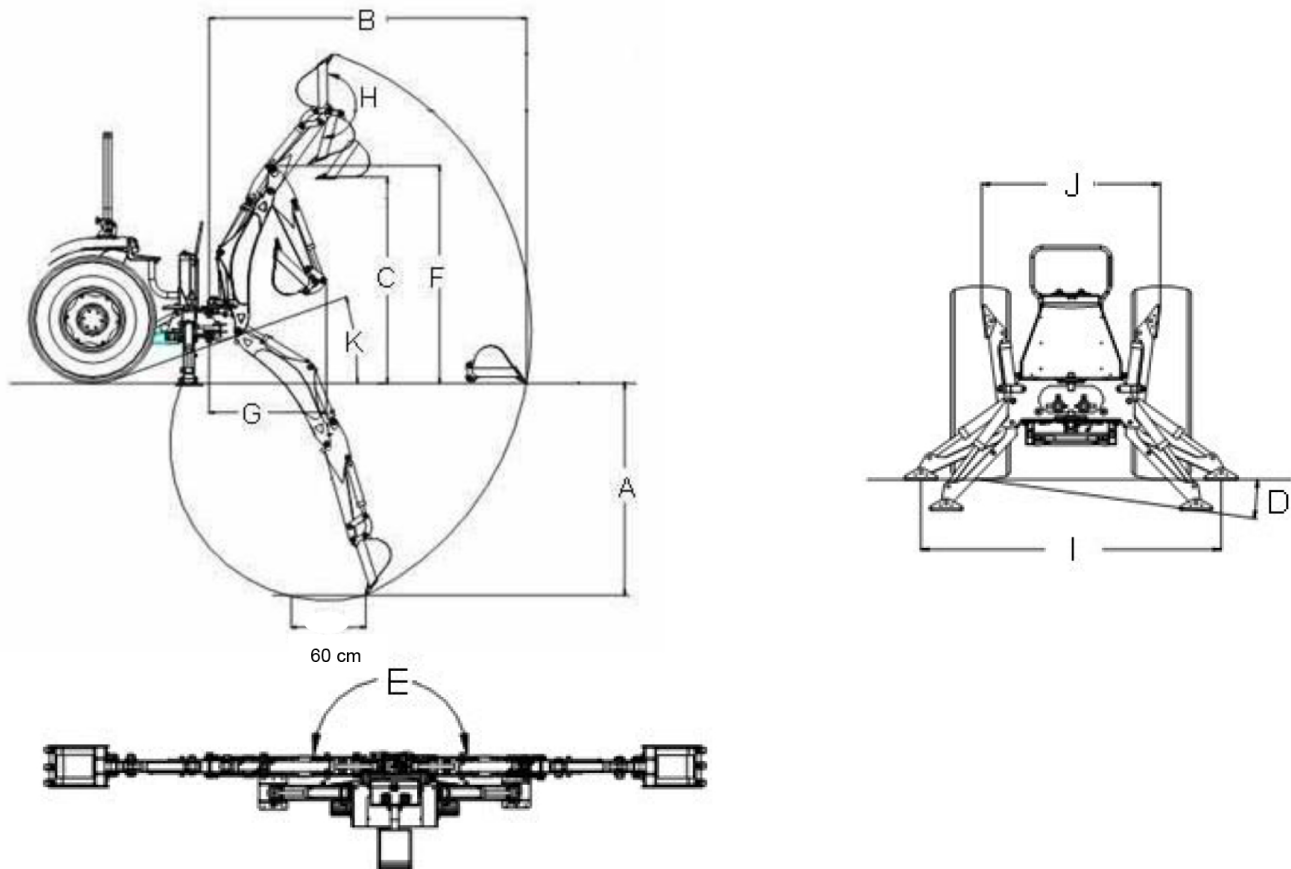
Clean containers must be used when draining the hydraulic system and must always be covered and protected from dust, sand and other foreign material.

Any oil being returned to the system should be strained through a fine mesh screen or cloth. Always clean around the filter plug before removing the plug and filling the reservoir.

Lubricate daily:



SECTION 4: SPECIFICATIONS & CAPACITIES



A	Digging depth (60 cm flat bottom)	1813 mm
B	Reach from the center line of swing pivot	2458 mm
C	Loading height (bucket 60°)	1421 mm
D	Maximum levelling angle	7°
E	Swing arc	180°
F	Transporting height (Max.)	1675 mm
G	Transport overhang	885 mm
H	Bucket rotation	172°
I	Stabilizer spread (down position)	1962 mm
J	Stabilizer spread (up position)	991 mm
K	Angle of departure	19°
	Shipping weight (without bucket)	332 kg
	Bucket digging force	900 kg
	Dipperstick digging force	600 kg
	Operating pressure	160 bar

SECTION 5: TROUBLESHOOTING

The failure can be mechanical or hydraulic, and many things can be contributing to the cause of the failure. Isolation of the particular cause involves a systematic approach, to determine which components are functioning improperly.

This troubleshooting chart is provided for reference to possible backhoe operational problems. Determine the problem that best describes the operational problem being experienced and eliminate the possible causes as listed by following the correction procedures.

As an initial step in the troubleshooting procedure, various preliminary checks should be made. These checks are important in that once performed they need no longer be considered as a possible cause of the immediate malfunction.

1. Check oil level.
2. Check for external oil leaks.
3. Check for external mechanical damage such as kinked hoses or tubes, damaged cylinders, bent or binding structural members.

After having performed the preliminary checks and failing to locate the cause of the malfunction, the following procedure should be used:

4. If possible, operate the backhoe making a note of the operating characteristics and failure. Cycle each control lever to operate each of the cylinders in both the extended and retracted positions.
5. Compare the operating characteristics observed in step 1 with the problems covered in the trouble shooting chart to determine the areas of failure.

Troubleshooting diagram

Problem	Possible cause	Correction
Very slow operation	Low RPM	Set RPM at recommended level
	Incorrect oil	Use high quality tractor oil or equivalent

	Slow oil supply	Fill oil tank to measure
	Restriction in hydraulic hose	Check for twisted or clamped hydraulic hoses.
	Restriction in the inlet hose	Check for damaged hose
Swing, boom, dipperstick and bucket cylinders not operating properly	Low hydraulic fluid level.	Check and replenish hydraulic fluid.
	Hydraulic hoses connected improperly	Check and correct hydraulic hose connections
	Hydraulic hoses to/from control valve blocked	Check for damage (kinked) hoses, etc
	Backhoe control valve or tractor main relief valve stuck open	Check system pressure. Repair or replace relief valve. Refer to the tractor operator's manual
	Low system pressure supplied from hydraulic pump	Check system pressure. Repair or replace pump.
	Control valve linkage broken	Inspect. Repair as required
	Quick disconnect coupler(s) are not fully connected or "flow check"	Check coupler connections. Replace coupler(s) if necessary
	Hydraulic hose or tube line blockage	Check for evidence of damage to hoses or tube lines that would block flow of oil between cylinders and control valve
	Cylinder piston assembly defective (not sealing)	Check cylinders for internal leakage.
	Control valve blockage	Inspect for blockage. Disassemble valve if necessary.
Cylinders operate in wrong direction relative to control valve lever position	Hydraulic hoses connected incorrectly	Correct hydraulic hose connections
	Incorrect oil	Use high quality tractor oil or equivalent
Slow or erratic movement of cylinders (Noisy operation of cylinders)	Slow oil supply	Fill oil tank to the measure
	Foaming oil	Use high quality tractor oil or equivalent.
	Low hydraulic fluid level.	Check and replenish hydraulic fluid
	There is air in the system, oil level is too low	Check all inlet connections making sure that they are tight. Use all valves to purge air from the system
	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 worn/defective.
	Quick disconnect coupler restriction or coupler "Flow checks"	Check coupler connections. Repair or replace
	Hydraulic hose or tube line restriction (hoses/tube line) kinked or pinched	Check hoses and tube lines for evidence of restriction
	Boom, dipperstick 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.
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 dipperstick cylinder piston assembly leakage	Check cylinders for leakage. Repair as needed
	Control valve leaking internally	Replace control valve and recheck operation
	Hydraulic pump defective	Check and repair
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 relief 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 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 hydraulic oil flow. Repair or replace defective components
Backhoe drops with valve spool in "centered" position (no external oil leakage evident) Note: A gradual drop over an extended period of time is a normal condition.	Cylinder piston assembly leakage	Check cylinders for leakage
	Control valve internal leakage	Replace control valve and recheck
Control valve spool(s) will not return to centered position	Control lever linkage binding	Determine origin of binding and repair
	Control valve spool centering is broken	Replace centering spring
	Control valve spool binding in valve body spool bore	Disassemble valve for inspection and repair.
External hydraulic fluid leakage	Loose hydraulic connection	Tighten loose connections
	Defective hydraulic hose, tube line, adapter fitting or adapter fitting a-ring	Check for origin of oil leak and replace defective part.
	Control valve a-rings defective	Replace defective a-rings

	Control valve spool or body damaged or worn	Replace control valve
	Cylinder rod packing set leakage	Check cylinders for leakage. Repair as needed
Hydraulic pump capacity inadequate	Cold hydraulic fluid	Allow hydraulic fluid to warm up to operating temperature
	Engine RPM too slow	Increase engine RPM's
	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 bent when cylinders extended	Excessive shock load on cylinders during transport	Replace defective parts. Review and observe proper and safe operational practices



WARNING

Do not try to repair or fix damaged hose.

SECTION 6: APPENDIX

Warranty

TMG warrants to the original purchaser that this product will be free from defects in material and workmanship beginning on the date of purchase by the end user according to the following schedule when used as intended and under normal service and conditions for personal use.

Overall Unit and Driveline: One-year.

Blades and Belts: Considered wear items.

This warranty is limited to the replacement of any defective part by manufacturer and the installation by the dealer of any such replacement part, and does not cover common wear items such as blades, belts, tines, etc. TMG reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

This warranty does not apply to any part or product which in TMG's judgment shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or reliability, or which has been used for a purpose for which the product not designed. Misuse also specifically includes failure to properly maintain oil levels, grease points, and driveline shafts.

Claims under this warranty must be made to the dealer which originally sold the product and all warranty adjustments must be made through such dealer. TMG reserves the right to make changes in materials or design of the product at any time without notices.

This warranty shall not be interpreted to render TMG liable for damages of any kind, direct, consequential, or contingent to property. Furthermore, TMG shall not be liable for damages resulting from any cause beyond its reasonable control. This warranty does not extend to loss of crops, any expense or loss for labor, supplies, rental machinery or for any other reason.

Bolt Torque

The tables shown below give correct torque values for various bolts and cap screws. Tighten all bolts to the torques specified unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

ENGLISH TORQUE SPECIFICATIONS

Bolt Diameter	Bolt Torque					
	SAE 2		SAE 5		SAE 8	
	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft
1/4"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
1/2"	61	45	110	80	155	115
9/16"	95	60	155	115	200	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650

METRIC TORQUE SPECIFICATIONS

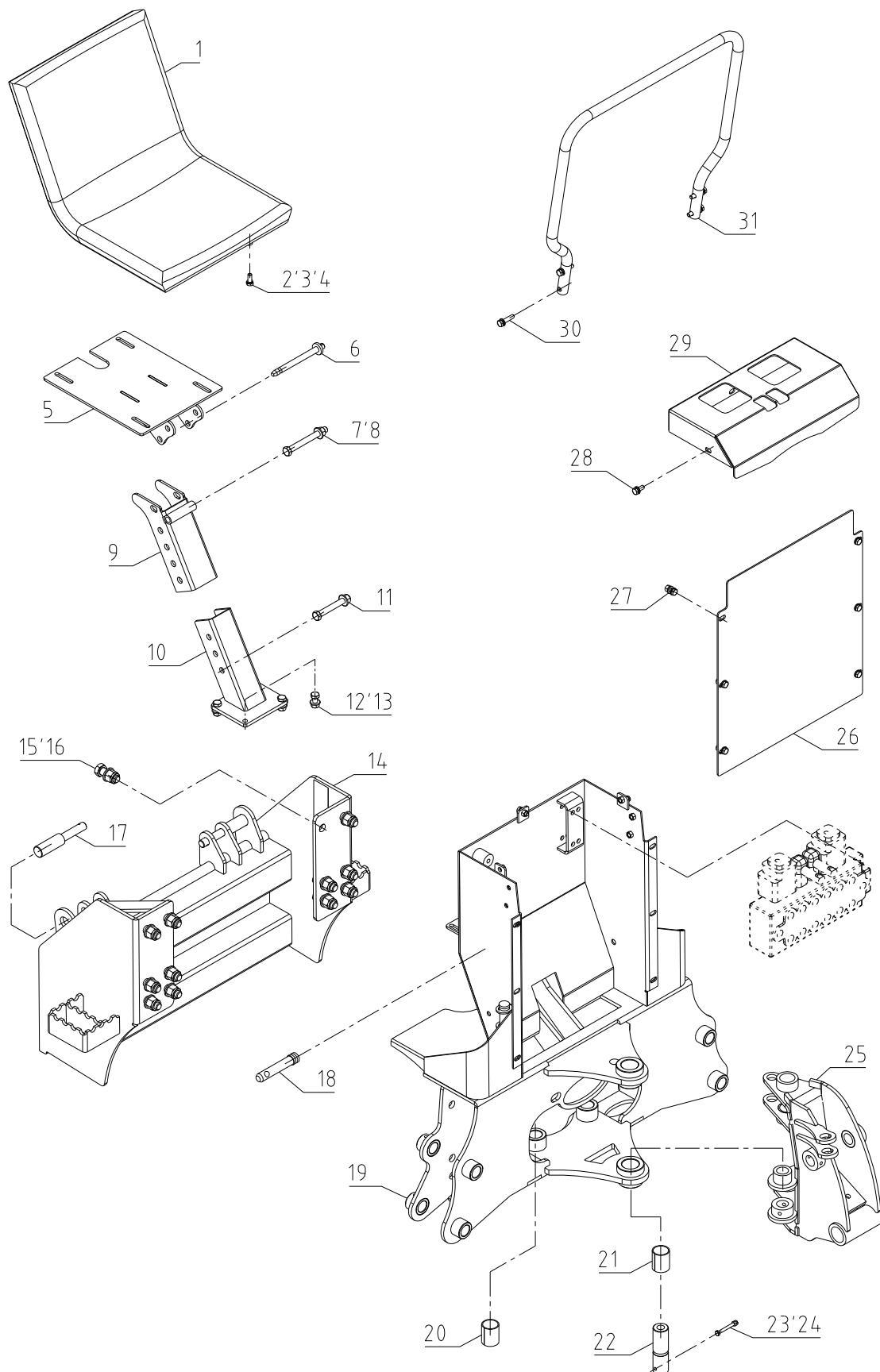
Bolt Diameter	Bolt Torque			
	8.8		10.9	
	N.m	lb-ft	N.m	lb-ft
M3	0.5	0.4	1.8	1.3
M4	3	2.2	4.5	3.3
M5	6	4	9	7
M6	10	7	15	11
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	744
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710

Torque figures indicated above are valid for non-greased or non-oiled threads and heads otherwise specified. Therefore, do not grease or oil bolts or cap screws unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

No other warranty of any kind whatsoever, express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.

PART BREAKDOWN LIST

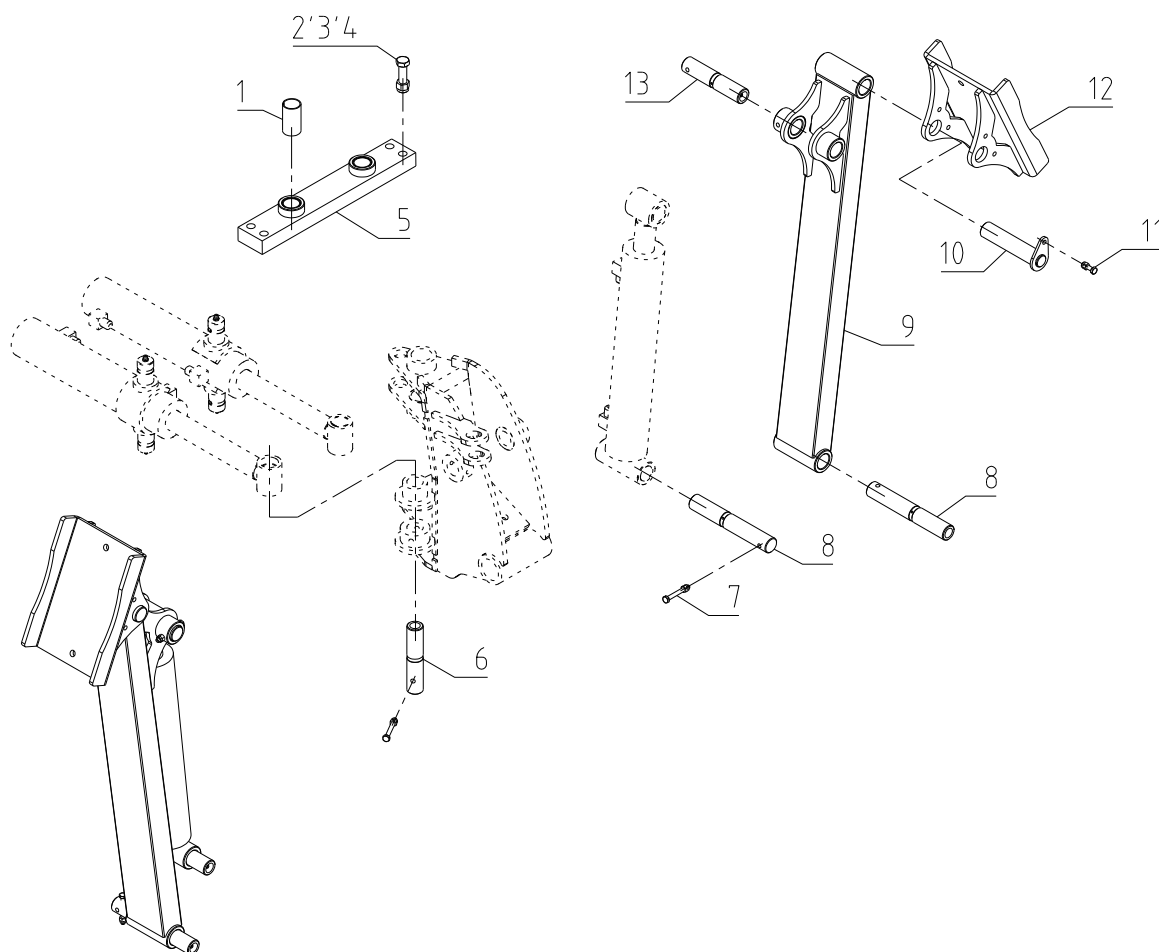
TMG-TBH72 SEAT, CONTROL ASSEMBLY (A)



TMG-TBH72 SEAT, CONTROL ASSEMBLY BREAKDOWN LIST(A)

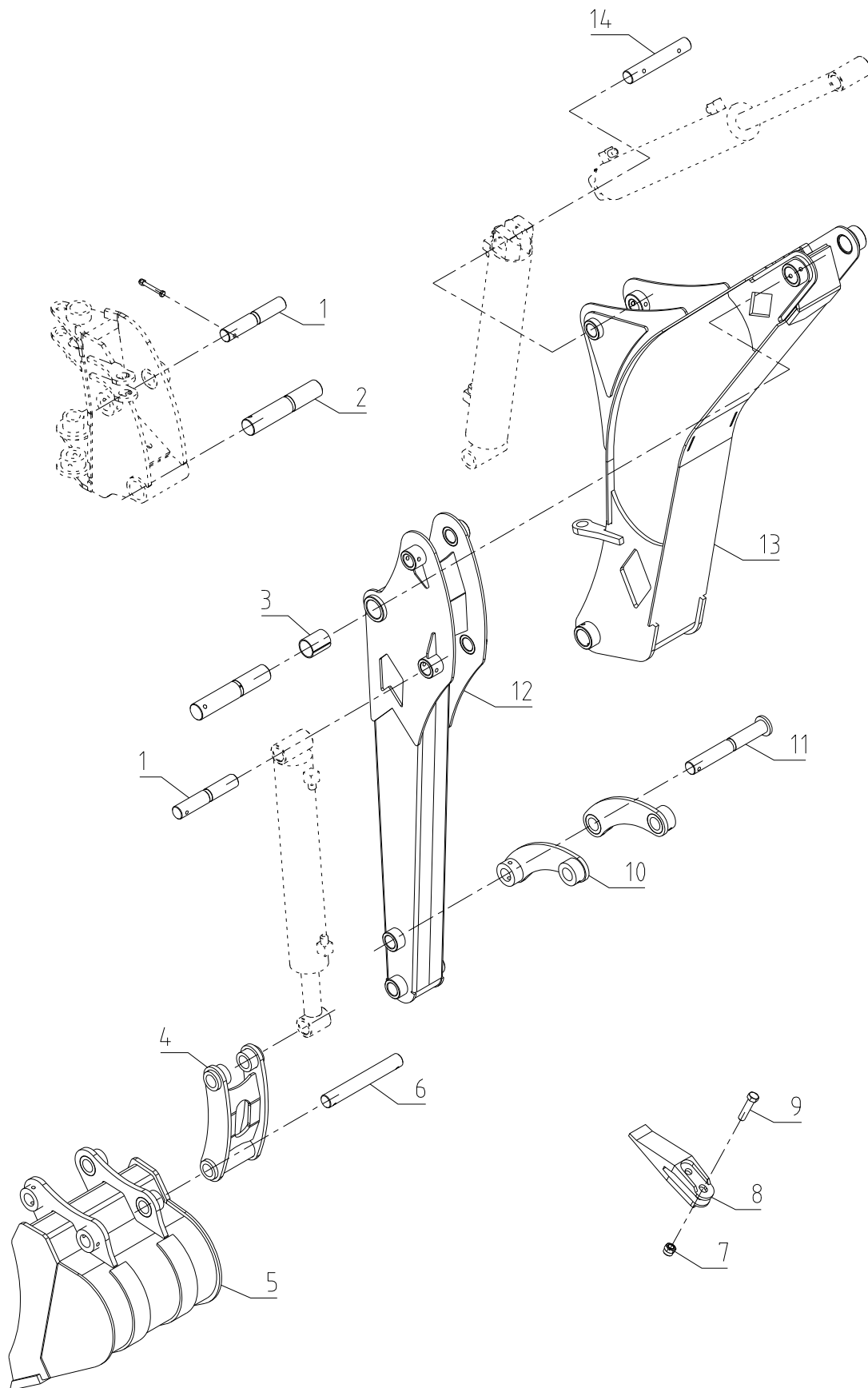
PART NO.	REF. NO.	PART DESCRIPTION	QTY.
A1	BK215.033	Seat	1
A2	GB/T5782-2000	Bolt-M8x20	4
A3	GB/T93-2002	Spring Washer 8	4
A4	GB/T97.1-2002	Plain Washer 8	4
A5	BK175.1000.900	Seat Plate Weldment	1
A6	BK175.1000.006	Pin- Seat Adjust	1
A7	GB/T5782-2000	Bolt-M12x110	1
A8	GB/T889.1-2000	Nut Lock -M12	2
A9	BK175.1000.1500	Seat Frame Weldment	1
A10	BK175.1000.800	Seat Base Weldment	1
A11	GB/T5782-2000	Bolt-M12x90	1
A12	GB/T5782-2000	Bolt-M10x25	4
A13	GB/T889.1-2000	Nut Lock -M10	4
A14	BK175.1000.1000	Base Weldment	1
A15	GB/T5782-2000	Bolt-M16x45	12
A16	GB/T889.1-2000	Nut Lock -M16	12
A17	BK175.1000.1600	Pin-Low Suspension	2
A18	BK175.1000.0005	Pin-Safety	3
A19	BK175.1000.400	Contral Base Weldment	1
A20	BK175.1000.004	Copper Sleeve(28x25)	2
A21	BK175.1000.015	Copper Sleeve(36x32)	2
A22	BK175.1000.014	Pin-Swing Arm	2
A23	GB/T5782-2000	Bolt-M6x55	2
A24	GB/T889.1-2000	Nut Lock -M6	2
A25	BK175.1000.300	Swing Base Weldwent	1
A26	BK175.1000.007	Cover Plate	1
A27	GB/T5782-2000	Bolt-M8x20	6
A28	GB/T5782-2000	Bolt-M8x20	2
A29	BK215.105	Top Cover	1
A30	GB/T5782-2000	Bolt-M8x35	4
A31	BK215.107	Guide Bar	1

TMG-TBH72 LEG SUPPORT ASSEMBLY (B)



TMG-TBH72 LEG SUPPORT ASSEMBLY BREAKDOWN LIST(B)

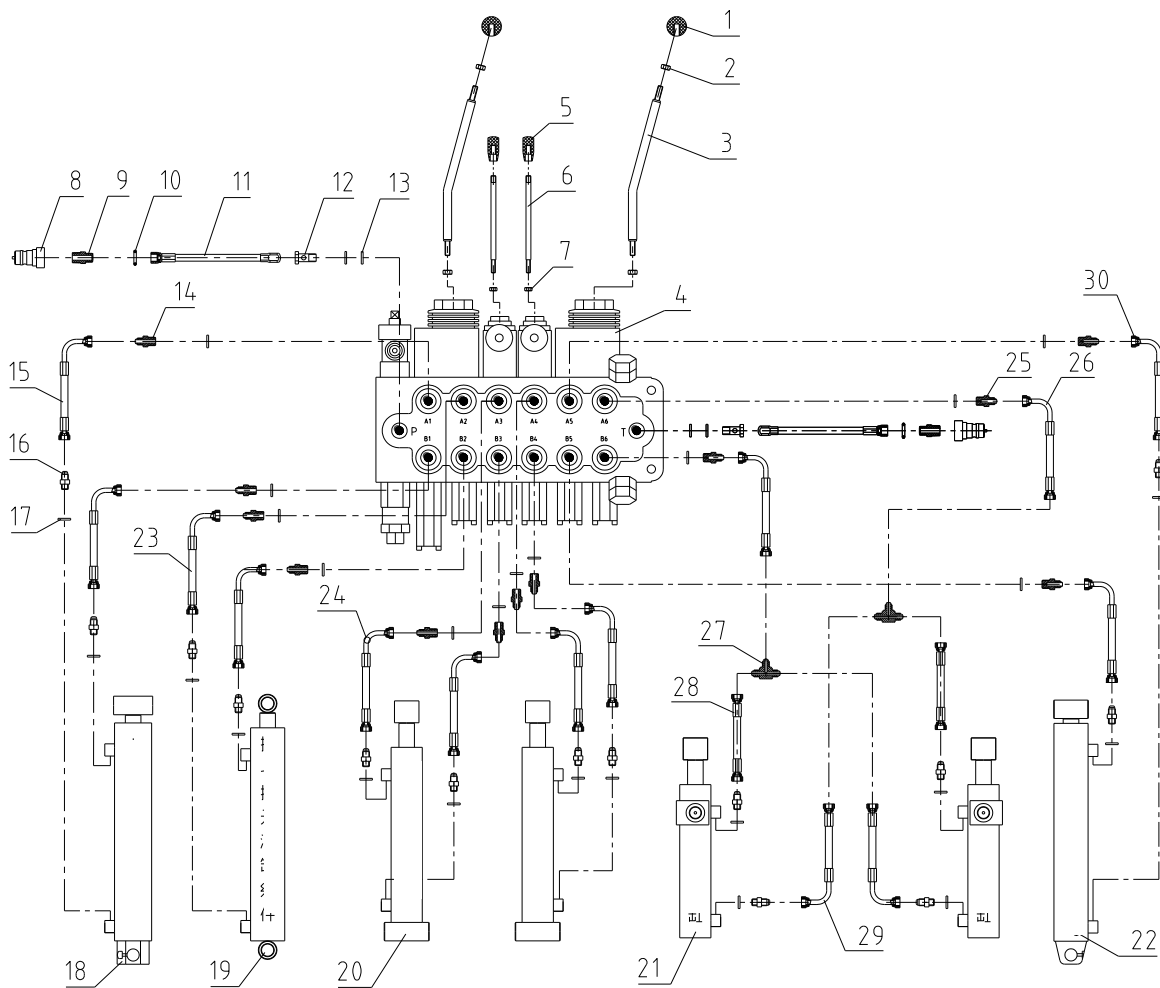
PART NO.	REF. NO.	PART DESCRIPTION	QTY.
B1	BK175.1000.001	Copper Sleeve(28x25)	2
B2	GB/T5782-2000	Bolt-M12x50	4
B3	GB/T97.1-2002	Plain Washer 12	4
B4	GB/T889.1-2000	Nut Lock-M12	4
B5	BK175.1000.700	Swing Cylinder Base	1
B6	BK175.1000.013	Pin-Swing Cylinder	2
B7	GB/T5782-2000	Bolt-M6x50	6
B8	BK175.1000.002	Pin-Leg Support 1	4
B9	BK175.1000.500	Leg Support Weldment	2
B10	BK175.1000.1400	Pin- Foot Plate	2
B11	GB/T5782-2000	Bolt-M6x20	2
B12	BK175.1000.600	Foot Plate Weldment	2
B13	BK175.1000.003	Pin-Leg Support 2	2



TMG-TBH72 BUCKET, DIPPERSTICK ASSEMBLY BREAKDOWN LIST(C)

PART NO.	REF. NO.	PART DESCRIPTION	QTY.
C1	BK175.1000.010	Pin-Dipperstick 1	3
C2	BK175.1000.009	Pin-Dipperstick 2	2
C3	BK175.1000.015	Copper Sleeve(36x32)	2
C4	BK175.1000.1300	Inner Link Weldment	1
C5	BK175.1000.1100	Bucket Weldment	1
C6	BK175.1000.011	Pin-Bucket 2	2
C7	GB/T889.1-2000	Nut Lock -M12	3
C8	BK6N.01.105	Bucket Teeth	3
C9	GB/T5782-2000	Bolt-M12x45	3
C10	BK175.1000.1200	Outer Link Weldment	2
C11	BK175.1000.012	Pin-Bucket 1	2
C12	BK175.1000.100	Dipperstick Weldment	1
C13	BK175.1000.200	Boom Weldment	1
C14	BK175.1000.008	Pin-Boom	1

TMG-TBH72 HOSE FITTING ASSEMBLY (D)



TMG-TBH72 HOSE FITTING ASSEMBLY BREAKDOWN LIST(D)

PART NO.	REF. NO.	PART DESCRIPTION	QTY.
D1	JB/T7271.1-2000	Plastic Ball-M10x32	2
D2	GB/T6172.1-2000	Nut-M10	4
D3	BK215.040	Hand Lever	2
D4	HC-TR55/6	Control Valve	1
D5	JB/T7271.5-2000	Plastic Ball-M10x50	2
D6	BK215.401	Lever stick	2
D7	GB/T6172.1-2000	Nut-M8	6
D8	GB/T8606-2000	Quick Coupler-G1/2-M	2
D9	BL25.40.102	Adapter, M18-R1/2	2
D10	GB/T3452.1-2000	O-Ring, 13x2.4	2
D11	BK175.2000.100	Hose-Valve To In Out	2
D12	BK215.403	Hollow Bolt-G3/8	2
D13	JB/T982-2000	Copper Washer 18	16
D14	BK215.405	Adapter, M14Z-G3/8	8
D15	BK175.2000.200	Hose-Valve To Boom	2
D16	BK6N.06.104	Adapter, M14Z-M14	16
D17	JB/T982-2000	Copper Washer 14	16
D18	BK175.2000.300	Boom Cylinder	1
D19	BK175.2000.400	Bucket Cylinder	1
D20	BK175.2000.500	Stabilizer Cylinder	2
D21	BK175.2000.600	Swing Cylinder	2
D22	BK175.2000.700	Dipperstick Cylinder	1
D23	BK175.2000.800	Hose-Bucket	2
D24	BK175.2000.900	Hose-Valve To Stabilizer	4
D25	BK215.408	Adapter, M14Z-G3/8	4
D26	BK175.2000.1000	Hose-Valve To Adapter	2
D27	BK175.2000.0001	Tee join	2
D28	BK175.2000.1100	Hose- Swing To Tee1	2
D29	BK175.2000.1300	Hose- Swing To Tee2	2
D30	BK175.2000.1200	Hose- Dipperstick	2