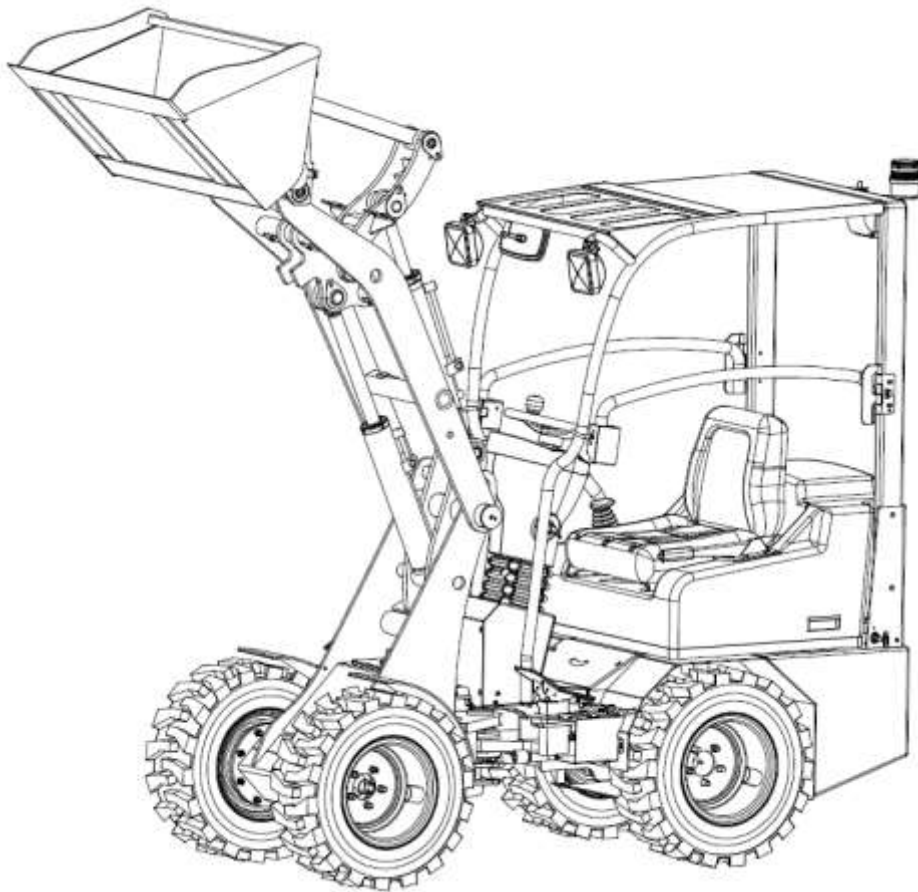


W10 Mini Loader operation manual



Foreword

W10 Mini loader is one of self-developed multi-function mini loaders, this loader is a ideal product for material loading and unloading, short-distance transport, can be matched with many tools, can be realized more kinds of uses, such as lifting, pulling, clamp hold, digging drill, ground, weeding, feeding fodder, etc. It can widely used in farm, ranch, infrastructure, road construction, stations, boatyard and other work places, this machine has the characteristics of the best economy, safety, and driving comfort. And these good characteristics depend on you, loaders and other operators to maintain, fully play during operating.

This manual covers all important knowledge of the starting use of the new loader, driving and operation, care and maintenance for W10 mini loaders. Please follow the instructions of the loaders, regular inspect and maintenance the working content specified on the table, and use the provisions of the working media.

This manual can be used for W10 and the improvement model..

For some special technical skills and knowledge about maintenance and repair, because of needing to use special tools, be not mentioned in this statement, please contact the dealer.

Loader maintenance and repair work is only allowed to be done by qualified professionals who are authorized by manufacturer

In order to make your loader to obtain a valid warranty services, the maintenance must be must be done on time by qualified professionals who is authorized by manufacturer.

This loader already passed the CE certification of European Certification Organization and got certificate of conformity.

This manual follows the CE directive relative safety requirements of.arrangement of information corresponds to this accepted format. Page numbers run consecutively within each chapter. Pages are identified in the lower corner of each page with chapter number, section number, page number within that section, and the date of publication or revision.

Catalogue

Foreword.....	2
Catalogue.....	3
Section 1 : Revision record.....	5
Section 2 General guarantee.....	7
Section 3 General warning.....	8
Section 4 Information and operation.....	10
A. Main configuration.....	10
B. Operator's responsibility.....	10
C. MACHINERY RESPONSIBILITY	12
CHAPTER 1 GENERAL INFORMATION & OPERATING INSTRUCTIONS	15
SECTION 1 MAIN COMPONENTS	16
A. ENGINE AND PUMP	16
B. CYCLOID MOTOR AND DRIVE AXLE	16
C. BRAKE SYSTEM	16
D. WHEEL AND TYRE	16
E. OIL TANK	16
F. ELECTRIC SYSTEM	17
G. QUICK REMOVAL DEVICE	17
H. SEAT	17
I. ATTACHMENT	17
J. MULTI-FUNCTION CONTROL HANDLE	17
K. MULTI-FUNCTION CONTROL HANDLE	17
L. PEDAL	17
M. Steering wheel.....	18
N. DISPLAY PANEL	18
SECTION 2 OPERATING PROCEDURE	20
SECTION 3 SPECIFICATIONS AND PERFORMANCES	29
SECTION 4 TRANSPORT PROCEDURE	32
SECTION 5 TRAILER PROCEDURE	33
SECTION 6 STORAGE PROCEDURE	34
CHAPTER 2 MAINTENANCE PARTS	35
SECTION 1 SERVICE	38
A. USING PREPARATION	38
B. REGULAR MAINTENANCE TABLE	39
C. OIL&LUBRICATING OIL	43
SECTION 2: CORRECTIVE MAINTENANCE	44
A . ENERGY OF MOTION REDUCTION	44
B . BRAKE SYSTEM	45
C . GENERATOR	46
D . BATTERY	47
CHART 1: HYDRAULIC DIAGRAM	48
CHART 2: ELECTRIC DIAGRAM	49
CHART 3: FRAME LABEL DIAGRAM	50
ANNEX 1: DAILY EQUIPMENT INSPECTION	51

SECTION1:RECORD OF REVISIONS

Continuing improvement and advancement of product design may cause changes to the model group which may not be included in this publication.

Each publication is reviewed and revised, as required, to update and include the changes in late additions.

We reserves the right to modify or make changes within a specific model group without notice and without incurring any liability to retrofit tractors previously shipped from the factory.

Contact your dealer for maintenance that is not covered in this publication.

	Issue Date		
Update Number	Disassembly	Inserted	Description of change

SECTION2:GENERAL WARRANTY CONDITIONS

This document presents the warranty conditions offered to any customer for all the pieces of equipments manufactured in the manufacturer facilities and sold to him through the authorized Sales and Service network.

The general warranty conditions hereunder described do govern the relationship between final customers of a manufacturer product, hereunder called “the buyer” and manufacturer factory, called “the manufacturer”.

The fact that the buyer places an order of a product means that he has read the present policy and does accept its provision. Any other general or particular provision, that differs from or contradicts one of the general or particular conditions described hereafter which may appear in any document from the buyer and especially in its general purchasing conditions, cannot be used against the manufacturer unless accepted by manufacturer in a written agreement.

ARTICLE 1:

Manufacturer warrants that each new item of equipment is of good workmanship and is free from mechanical defects provided that:

- 1) The product is installed and operated in accordance with printed manufacturer Equipment’s Instructions.
- 2) The product is used under normal operating conditions, for which it is designed,
- 3) The product is not subject to misuse, negligence or accident,
- 4) The product receives proper care, lubrication, protection and maintenance under the supervision of trained personnel,
- 5) The product is normally protected from exterior aggressions whatever their origin.

ARTICLE 2:

This warranty expires, unless otherwise agreed by manufacturer in a special provision, 15 months after shipment by the manufacturer, or 12 months after being placed in service, or after 1000 operating hours.

ARTICLE 3:

The manufacturer Warranty is strictly limited to the replacement of defective parts and if the repair does justify it, to the assistance of a technician. Parts shipping expenses, traveling and housing expenses of personnel are to be paid by customer.

ARTICLE 4:

The manufacturer Warranty does not apply to fluids, oils, fuses, bulbs, accumulators, paint, seals, tires, bumpers, pads and other consumables or normally wearing type items unless found to be defective prior to use.

ARTICLE 5:

All warranty claims from the Buyer must be sent by written to Seller who will be in charge of dealing with the Manufacturer to address the problem in a timely manner.

ARTICLE 6:

All the expenses related to a warranty claim will be invoiced to the buyer until manufacturer employees have evaluated the claim. Whatever the circumstances, the buyer should not refuse or delay the payment. If the evaluation concludes to manufacturer’ s full responsibility, a credit memo will be issued in favor of the buyer.

Under no circumstance other than those accepted by manufacturer, the buyer of the defective parts at the manufacturer address can accept without a formal letter from the buyer and without the effective return no warranty claim.

ARTICLE 7:

This warranty is extended by manufacturer only to the buyer of new products from manufacturer or of its authorized distributors. The products purchased under this warranty are intended for use exclusively by the buyer and his employees and by no other person. Therefore, there shall be no third party beneficiary of this warranty.

ARTICLE 8:

This warranty does only apply to the primeval reason. In other words, the consequences on the product linked to its use after first problem are not covered by this warranty.

ARTICLE 9:

Under no circumstances whatever shall manufacturer and the seller be liable for any special or consequential damages, whether based on lost goodwill, lost resale profits, work stoppage, impairment of other goods or otherwise, and whether arising out of breach of any express or implied warranty, breach of contract, negligence or otherwise, except only in the case of personal injury as may be required by applicable law

ARTICLE 10:

The warranty is automatically void in the following cases:

- 1) The product has received some modification, not advised by Manufacturer or not done following Manufacturer requirements
- 2) Some original parts have been replaced by parts not provided by Manufacturer.


ARTICLE 11:

This warranty and all undertaking of Manufacturer shall be governed by the laws of manufacturer's country and discussed in front of nearest court from the manufacturer's facility even in case of multiple of defenders.

Section 3 GENERAL WARNING

FOREWORD

This instruction manual is intended for all users of the machine: the company manager, the Department Head, the driver, as well as the whole personnel who works with or near to the equipment

-  **GENERAL WARNING:**
1. Before using the machine, go through this manual and comply with all its instructions
 2. Also carefully read the instructions that appear on the plates fixed onto the machine and keep them readable
 3. Keep this instruction manual at the disposal of all operators
 4. Make sure that any person to whom you entrust the machine is qualified to fulfill the safety requirements linked to its use
 5. Avoid unsupervised interventions on your equipment when not being used
 6. Never use a machine which does not look to be in good condition
 7. Never apply a load or a stress exceeding the maximum operating load of the machine
 8. Never use the machine for an operation it is not designed to perform
 9. Become thoroughly familiar with the safety regulations applicable to the machine and enforce them scrupulously
 10. The manufacturer declines his responsibility for the consequences of a disassembly of the machine or any modification made without his supervision

OBLIGATION TO GO THROUGH THE USER'S MANUAL



The company manager is compelled to make the operators fully acquainted with the regulations of the instruction manual.

Read this entire chapter BEFORE attempting to operate this loader

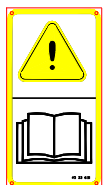
The company manager is responsible for the enforcement of the applicable "user's regulation"

The user must imperatively read and assimilate this instruction manual in order to be able to comply with it during start-up and use

The instruction manual must be kept during the life-span of the machine, including in the event of a resale, of a change of user or manager

The instruction manual is not a training manual but it specifies, when required, if training is necessary.

GENERAL INSTRUCTION



The company manager must make sure that the machine is delivered with the instruction manual and the certificate of conformity for the member states of the European Community

* The location of the instruction manual is specified on the dispatch note when leaving the factory

The certificate of conformity is placed with the dispatch note

Only trained and qualified operators with appropriate driving license and accredited by the company manager may operate the vehicle within the scope of the use for which it has been designed

The loader may only be used in accordance with the conditions established by the manufacturer in this instruction manual and declines the manufacturer his responsibility. Any use that does not comply with the regulations of this instruction manual might cause risks of injury to people, property and the environment

The manufacturer's responsibility is limited to the assembly configuration of the equipment as described in the certificate of conformity. Before each use, the driver should

check that the machine is in good condition
The certificate of conformity is placed with the dispatch note

MACHINE NORMAL USING DOMAIN

W10 Wheel loader – THE ALLOWED MAXIMAL LOAD AND THE GENERAL USING CONDITIONS ARE INCLUDED IN THIS DOCUMENTATION PROHIBIT THE USE OF LOADERS TO LOAD ANYTHING OTHER THAN THE SCOPE THE ADAPT TEMPERATURE RANGE OF THIS LOADER IS - 30°C-50°C MAKE IN THESE CIRCONSTANCES CAN'T BE HELD TO RESPONSIBILITY OF MANUFACTURER

MODIFICATION OF THE LOADER

The manufacturer is not responsible in case of any modification, addition or combination with equipment from another origin.

The manufacturer declines any responsibility for consequences resulting from changes in the characteristics or modifications made without his written consent, and concerning either the mechanical, electrical, hydraulic part or the mechanically welded structure.

If the client wants a modification to be made, he must imperatively consult the manufacturer.

For your safety and in order to benefit from the total guarantee of the manufacturer, you must only use guaranteed genuine spare parts.

NOTE

Safety is more than quality design and construction. It also requires proper operation and maintenance practices.

Every component is specifically designed and carefully built by Manufacturer to produce the safest equipment available

Your responsibility is operating safely.

Good understanding of the instructions mentioned below will enable operators to use the loader in safe

SAFETY INFORMATION

This manual provides important information to familiarize you with safe operating and maintenance procedures for Manufacturer loader.

Even though you may be familiar with similar equipment, you must read and understand this manual before operating this loader.

Safety is everyone's business and must be one of your primary concerns.

Knowing the guidelines covered in this manual will help provide for your safety, for the safety of those around you, and for the machine's proper operation

SECTION 4: INFORMATION AND OPERATION

The following features are standard equipment on the Loader series: :

1. Diesel engine
2. Hydrostatic traveling drive system
3. Power steering
4. Recessed multi-function rear lights
5. Mechanically operated parking brake
6. Multi-function hydraulic control joystick
7. Fast change and lock attachment system
8. Adjustable absorbing seat with belt
9. Six linkage lifting system
10. Anti-skid floor
11. Roll cage with shade cover
12. Working lights
13. Combination meter
14. Adjustable steering wheel
15. Front steering light

B. OPERATOR RESPONSIBILITIES

This chapter must be read and thoroughly understood prior to operating or performing any maintenance on this equipment.



WARNING: FAILURE TO COMPLY WITH THE FOLLOWING SAFETY PRECAUTIONS CAN RESULT IN SERIOUS INJURY OR DEATH AS WELL AS EQUIPMENT DAMAGE.

1. Always follow the global safety rules applicable in your field.
2. Before using this loader, always check for proper operation and condition of the lights, brakes, steering, transmission shifter, park brake and tires.
3. Do not operate a loader with defective features; refer to the maintenance section of the Operation and Service Manual.
4. Always wear suitable footwear when operating this equipment and avoid loose fitting clothing that might get caught in moving parts.
Before starting this loader, should wear seat belts, and confirm the lock had been fastened.
5. Always bring the unit to a complete stop, place the transmission in neutral, and set the park brake before quit the unit.
6. Always bring the unit to a complete stop before shifting from forward to reverse or from reverse to forward.
7. Always check the path clear prior to backing.
8. When loading the speed should be reduced to 5KM / H
9. Lift the bucket up to the transport position (about 20cm from the ground)
10. In crowded areas and when close to the Blind corners and a row of car, be more careful. Be vigilant to other equipment and personnel.
11. Do not operate when the speed does not meet the operational conditions. Always limit a good speed in order to ensure sufficient time for emergency braking.
12. Do not allow to use loaders to transport hazardous materials.
13. Do not allow to carry person by this loader.
14. The loader does not allow to drive on the soft road if do not know very clearly about the road condition.

15. Before operating this loader, the roll cage must be raised, and make sure the pin in the locking position.
16. In addition to the dragging outside hook, any form of traction is not allowed in loaders.
17. Do not remove the radiator cap when the engine is hot, otherwise, can cause severe burns. Allow to remove the radiator cap after cooling.
18. Do not try to touch the just being run or down engine exhaust pipe and muffler, otherwise it will cause serious burns.
19. After open the engine back cover, do not try to start the engine, if must start, take care the hurt from the fan to hand.
20. Never refuel the unit while the engine is running.
21. When injecting the fuel, it can stop when the refueling gun automatic cut off, don't inject too much. When refueling, no smoking, don't storage or use the fuel at fire place.
22. Do not fill the fuel cell above the bottom of the filler screen. Do not overfill. Clean off any spilled oil or fuel. Do not smoke while refueling. Do not store, spill or use fuel near an open flame.
23. Do not check the engine oil while the engine is running.
24. Do not use the battery in this unit to start other vehicles.



Before starting this loader, should wear seat belts, and confirm the lock had been fastened.



The maximum ear noise measured value of this loader is 88dB, for your good health, please wear personal protective equipment (such like the earplug isolated the noise) when controlling the machine, to reduce the hurt of the machine noise to your body.



Always exercise good common sense, stay alert and be aware of what is happening around the loader all times.



When a vehicle roll or roll-over, the loader roll cage can protect driver's safety completely, do not jump. At this point your hands should get hold of the steering wheel; feet clamp the mounting bracket under the Orientation column.



The damaged roll cage can't be reused after repair, unless get the written authorization or approval from Manufacturer Group.



The rated capacity of this manual mentioned is based on the machine located in the solid level ground, when operating on non-standard ground (such as the soft, uneven ground, or on slopes), should consider fully about those factors impact on the load capacity.



Before open the boonet, please make sure the operating handle was press down and forward.

C.MECHANICAL RESPONSIBILITIES

This chapter must be read and thoroughly understood prior to performing any maintenance on this equipment.



WARNING: FAILURE TO COMPLY WITH THE FOLLOWING SAFETY PRECAUTIONS CAN RESULT IN SERIOUS INJURY OR DEATH AS WELL AS EQUIPMENT DAMAGE.

1. Always follow the Station Safety Rules. If a written list of safety rules is not posted at the station, obtain one prior to operating this loader.
2. Always review the Operator Responsibilities Section prior to operating this equipment.
3. Always keep hands and feet away from rotating parts and tires. Wear secured clothing.
4. Always wear suitable footwear when operating or servicing this equipment. Avoid wearing loose-fitting clothing that might get caught in moving parts.
5. Always stop the engine when adjusting fan and alternator belts.
6. Always keep hands clear of the cooling fan.
7. Do not remove radiator cap when the engine is hot, as serious burns may result. Allow the radiator to cool before removing the cap.
8. Do not run the engine long time in the closed room.
9. Do not start the engine in the easy explosion environment.
10. Do not check the engine oil while the engine is running.
11. Always disconnect the battery positive cable when working on the engine or under the hood.
12. If electrolyte is spilled, always wash hands or clothing immediately.
13. Do not touch the engine, exhaust or hydraulic components when they are hot as serious burns may result.
14. Do not smoke near the battery. Fumes from charging electrolyte are explosive. Always keep the battery away from sparks, flame and smoking materials.
15. Always remove metal bracelets, watch bands, etc. prior to installing, removing or servicing the battery.
16. Do not short circuit the battery terminals.
17. When connecting the battery, the positive terminal must always be connected first prevent sparks from accidental grounding.
18. Do not substitute the throttle return springs with lighter or other springs.
19. Check all lights.
20. Check the horn operation.
21. Check the neutral start only switch for proper adjustment and operation.
22. Check tire and wheel condition along with proper inflation pressures. Unless beads are seated when mounting tires, over-inflation can result in explosion.
23. Torque all lug nuts to 100 ft-lbs. Check again the torque after 5 hours of operation.
24. Always use proper lifting equipment safely when removing or replacing heavy components.
25. When working underneath the loader, be sure it is supported properly on secure jack stands. Do not rely on hydraulic jacks to support the loader.
26. If the loader is on a hydraulic or air operated lift, always be sure the safety support or lock is in position prior to working under the loader.
27. Always use a proper transmission jack, and secure the transmission when removing or replacing it.
28. Always jack the drive wheels off the floor when troubleshooting the drive system.
29. Never refuel the unit when the engine is running.
30. Do not smoke while refueling.
31. Do not store, spill or use fuel near an open flame.
32. Do not use the battery in this unit to start other vehicles.
33. Do not attempt to install or adjust control cables with the engine running.
34. Always replace a control cable which exhibits any gradual or sudden increase in no-load friction or resistance or decrease in usable stroke, or which have moisture inside or have been frozen.
35. Do not use heat to attempt to dry or thaw a control cable.
36. Do not remove the seals from a control cable or attempt to lubricate it. Any control cable which exhibits possible lubrication problems should be replaced.
37. Do not attempt to repair or modify a control cable. Any damaged control cable should be

replaced immediately.

38. Always avoid exposing control cables to fuels, oils, chemicals, paint, water or dirt as damage may result.

39. Always adjust each control cable so that the utilized stroke of the cable is centered within the cable's available stroke.

40. Always deflate a tire and wheel assembly prior to removing it for servicing or dismounting.

41. Do not use wheels or wheel components that are cracked, bent pitted or corroded. Insure that all wheel components are of the same type and size, and that wheel size and tire size match. Inspect all components carefully prior to use.

42. Do not attempt to seat a tire by using explosive substance.

43. Do not hammer, pry or weld on or near an inflated or partially inflated wheel and tire assembly.

44. Do not rework, weld, heat or braze any wheel parts for any reason.

45. Always use a safety cage and a clip-on air chuck with a remote valve and pressure gauge when inflating a tire. Insure the tire and wheel assembly is properly assembled prior to inflating it. Visually inspect it for proper seating of beads or sides or lock rings prior to removing it from the cage.

46. Do not add air to a tire that has been in service with less than 80% pressure without first fully deflating, removing, disassembling and inspecting the tire assembly for damage.

47. Canopy guard is main part protect operator from injury by falling objects. If any dismantle, change and install loosen will bring dangerous which may lead big accident

CHAPTER 1. GENERAL INFORMATION & OPERATING INSTRUCTIONS

SECTION 1: MAIN COMPONENTS

The W10 is a four-wheel drive mini-loader. It contains:

- o 3-cylinder diesel engine,
- o Hydrostatic travel drive system,
- o Multi-function operating handle,
- o 12 Volt electrical system.

A. ENGINE AND PUMP

The loader is powered with industrial engines, with four stroke cycle and direct injection. The engines are certified by the manufacturer to meet the more advanced emissions standards.

W10 series loader has an automatically variable piston pump.

B.MOTOR

There is no drive axle in W10, the four wheel of front and rear axle are hydraulic gerotor motors.

C.BRAKING SYSTEM

Hydrostatic drive can serve as a driving brake, and be installed on the drum brake of the two rear wheel as a parking brake.

D.WHEELS AND TIRES

Four bolts are used to fix the tires on the drive wheel. The LOADER tires are pneumatic type which gives a smooth ride combined with maximum drawbar pull. Remember to check the pressure of your pneumatic tires regularly. Uneven tire pressure will not only increase tire wear, but will also decrease tractive performance.

W10 Tire model : 23 x8.5-12NHS Tire pressure : 4.5 bar

E.FUEL CELL

The fuel cell is integrated in the front frame, and it is equipped with a filler cap and a fuel gauge.

F.ELECTRICAL SYSTEM

The W10 uses a 12 Volt, automotive type, negative ground, electrical system. The system includes a 45 A.h battery, one combination instrument, three working lights, two turn lights, two taillights, horn, various sensors and other circuits.

G. QUICK REMOVAL DEVICE

The demolition equipment of the tool is controlled by a Joint Multi-way valve, which can realize a quick assembly and disassembly.

H.SEAT

Seats of the loader with seat belts can be adjusted forward and backward. The class of seat is EM8.As an option the loader can be fitted with a comfortable suspended seat.

I.ATTACHMENT

Loader is equipped with a standard six-bar working device which can maintain the balance of the bucket while in the rising process.

J.MULTI-FUNCTIONAL CONTROL HANDLE

The control handle is on the right of the driver's position.W10 adopt simple handle without shift control(Shift control was achieve by foot brake), handle can only control multi-channel valve, to make raise and tilt movements can be separated or join together. Before open the boonet, please make sure the operating handle was press down and forward.

K.PARKING BRAKE LEVER

The accelerator pedal which on the operator right is connected with engine by cable, it can control drive speed by controlling engine speed. The parking brake lever is connected by a rod to the park brake drum mounted on the drive axle. The park brake is used for parking or holding the loader on grades and should always be set for parking and released before driving. The brakes are engaged as the lever is pulled toward the operator. Push the lever away from the operator (down) to release the brake.

L.PEDALS

The foot brake pedal on the left of the driver is connected to the Pump, which can control the oil supply, so as to control the speed of the loader, forward and reverse.

M. STEERING WHEEL

Steering wheel is just like normal that is when steering wheel rotate right, the loader will turn right, when steering wheel rotate left, the loader will turn left.

N.INSTRUMENT PANEL

Monitoring the status of machine, feedback the operation information to operator in time..



IT IS ESSENTIAL THAT THE OPERATOR BECOMES ACCUSTOMED TO BOTH THE LOCATION AND OPERATION OF THE CONTROLS, BEFORE ATTEMPTING TO DRIVE THE LOADER FOR SAFE OPERATION.

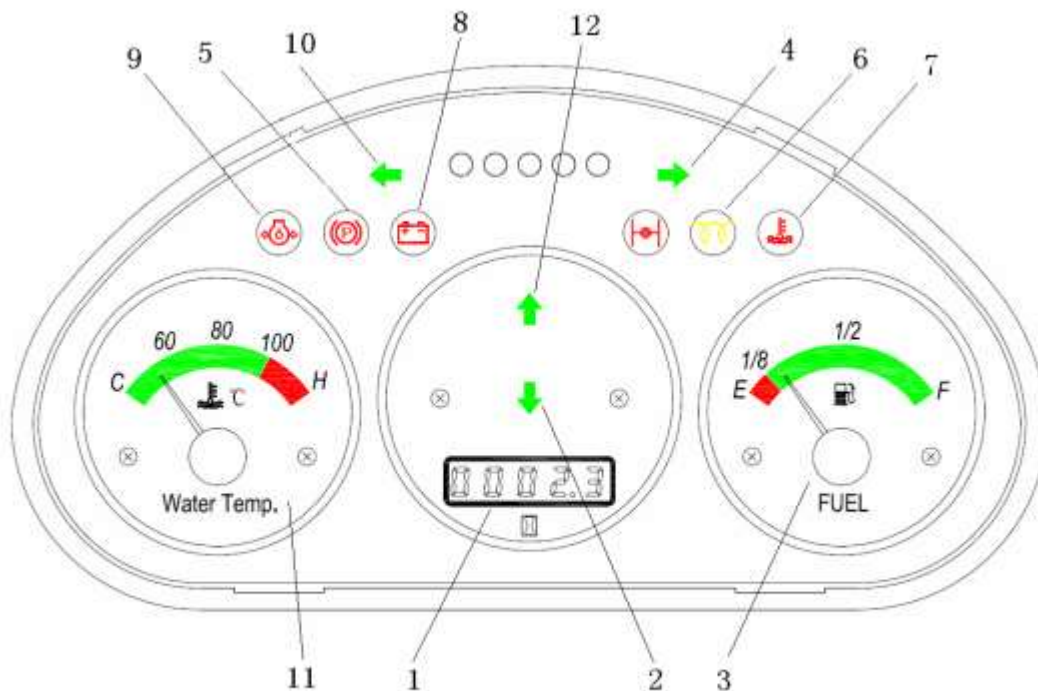


**The root are value of machine vibration acceleration to the arm is lower than 2.5m/s²
The root are value of machine vibration acceleration to the body is lower than 0.5m/s²**

Switches	
Ignition Switch	<ul style="list-style-type: none"> Waterproof loader ignition switch, including the anti-re-start function.
Horn control switch	<ul style="list-style-type: none"> Installed in the steering gear box
Headlamp Switch	<ul style="list-style-type: none"> Installed in the steering gear box
Direction-indicator switch	<ul style="list-style-type: none"> Installed in the steering gear box

Light	
Preheat indicator light	<ul style="list-style-type: none"> Instructs when the engine is warm
Parking brake lamp	<ul style="list-style-type: none"> Show if the parking brake brings
Low battery capacity light	<ul style="list-style-type: none"> Show when the battery level is low
Turn signal / warning lights	<ul style="list-style-type: none"> Show when the turn signal / warning lights are light
Low oil pressure light	<ul style="list-style-type: none"> Show when the engine pressure is low
High-temperature light	<ul style="list-style-type: none"> Show when the coolant temperature is above 115 °C

Indicator	
Fuel Level Indicator	<ul style="list-style-type: none"> Read the status of the remaining fuel
Engine timer	<ul style="list-style-type: none"> Read the cumulative time when the vehicle is running
The engine coolant temperature indicator	<ul style="list-style-type: none"> Measure the temperature of the engine cooling system



- 1.Hourmeter
 2—Backward indication light
 3—Fuel gauge
 4—High-temp. water alert light
 5—Low oil pressure light
 6—Low battery capacity light
 7—High-temp. water alert light
 8—Battery charging,

- | | |
|------------------------------|------------------------------|
| 3—Fuel meter | voltmeter |
| 4—Turn right alert indicator | 9—Oil pressure alert light |
| 5—Parking brake lamp | 10—Turn left alert indicator |
| 6—Preheat indicator light | 11—Water temp meter |
| | 12—Forward indication light |

SECTION 2: OPERATING PROCEDURE

Read this entire chapter BEFORE attempting to operate this loader

- No unauthorized person may drive this loader
- Be familiar with the controls and their functions before you start the loader
- Inspect your machine by doing a pre-operational inspection
- Observe the limits on weight of the loads to be towed and unloaded weight of the loader
- Maintain the loader in accordance with the instructions of the manufacturer
- Have any broken or missing parts, correct or replace before use
- Verify that all maintenance has been performed
- Verify that all the instruction and safety labels are in a place and readable



These are as important as any other equipment on the loader

Before putting the loader into service, the following items must be checked and executed

BEFORE DRIVING

- At each team work beginning, check condition of the battery, pneumatic and bandages of trails and be sure that tire pressures are correct .Be sure that all driving parts are in good working condition and fill all the fluid levels if necessary .Advise immediately all defects and use a defective trail before it is not repaired Verify the brakes of trails
- Set parking brake
- Walk around and inspect the loader for damage or missing equipment
Check for :
 - Pressure and the good state of the pneumatic tires
 - Look for cuts, cracks in side walls, foreign objects in treads
 - Look for loose wheel nuts
 - Damage to lights
 - Fire extinguishers fully loaded and in place (if have)
- Look underneath loader for leaks of coolant, hydraulic fluid, transmission fluid, or lubricating oil. If leaks are detected, repair as soon as possible
- Check engine oil level
- Check engine coolant level. Add coolant as necessary, but do not overfill. Make a visual check for leaks
- Check hydraulic system reservoir by removing filler cap to ensure there is enough fluid for operation
A very low fluid level indicates a serious leak in the system. Repair as soon as possible
- Inspect engine compartment for loose hardware, loose wires, and leaking lines or fittings
- When all mechanical checks are completed, check the operation of the stop and tail lights, head lights, and dash panel lights
- Check fuel level gauge to make sure tank is full
- Make sure the roll cage arise and fasten.
- Check that the driving seat whether damaged (change the seat if damaged), adjusted to your requirements
- Check that all controls are in working order



WARNING: DO NOT LOOSEN OR REMOVE RADIATOR CAP WHILE COOLANT IS HOT, HOT COOLANT UNDER PRESSURE CAN CAUSE SEVERE BURNS



Fuel contamination due to moisture condensing on the inner surfaces of fuel tank can be minimized or eliminated by keeping the fuel tank as full as possible. The fuel tank should always be filled up at the end of the day's operation (as part of the post-operation maintenance routine)

DRIVING INSTRUCTION

- Place shift lever in park.
- Adjust the driver seat and steering wheel to the comfortable location, fasten the seat belt.
- Make sure parking brake is set.
- Verify that nobody and nothing is ahead of you BEFORE starting any motion of the wheel loader.
- Turn ignition switch and engage starter.
- Press the micro-pedal (left pedal).
- Press the parking brake, forward or backward, release and the pedal will return to parking position.
- Proposal on the drivers' own facility with the empty wheel loader.
- Press foot valve pedal and gently press the accelerator pedal, further press the accelerator until the required speed is obtained. Foot valve can change drive speed and direction by control pump displacement. Accelerator pedal change drive speed by control engine speed.
- To slow the wheel loader, slowly release the accelerator pedal and the foot valve pedal. For stop, release the accelerator pedal and then release foot valve pedal. Release the foot valve pedal slowly or quickly, wheel loader can be controlled flat or sharp braking. For emergency stop, release the foot valve pedal or press slowly the foot valve pedal on reverse direction.
- Each time you park, apply the hand brake, turn the starter switch to the OFF position and return the transmission shift lever to park.



Release the foot valve pedal or press slowly the foot valve pedal(left side) on reverse direction. when emergency brakes .



Warning: one operator can drive less than 6 hours one day.



Warning: The driving speed depend on the loader load and weather conditions. Especially on the full load or the damp and the frozen surface road should be slow down the speed.



Warning: When load the goods, the speed need to reduce to 5km/h and keep the bucket to the transport position(20cm above the ground).



Warning: When the loader is moving (uphill),if parking immediately, the driver can not leave the driving seat, can not change the switch gear, need to press the accelerator pedal by you right foot in order to eliminate the slippage phenomenon due to technical reasons, then pull the brake. When the loader is moving downhill, if parking immediately, the driver can not leave the driving seat, keep the switch on the reverse gear, press the accelerator pedal on you right foot, parking the loader slowly, then pull the hand brake.



Warning: It is forbidden to parking on the ramp, if it' s necessary to parking on the ramp, pull the hand brake and use the wedge cushion under the wheel loader.

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动器, 同



Warning: Before moving, confirm the roll is installed firmly, to fixed the unreliable roll stand, it can not protect the driver.

Loading instruction

- Lifting device and attachment(the standard bucket)can only be used for the earmarking.
- Ensure the loads of the loader is safe and the loads is within the scope of rated load.(See the technical parameters on page 26)
- Before loading, make sure the quick switch device is in the locked position.
- On load moving, the speed should be down to 5km/h.
- On load moving, confirm the bucket is on the transport location(20cm above ground)
- On the ramp, the goods must be in uphill direction. It is forbidden to horizontal drive or turn around on the ramp.
- When the line of sight is blocked, should be worked with the wizard.
- When unload, lifting the buckler to the suitable height, as careful as you can, accurate approach to loader truck or goods pile up; careful manipulation the multi-way valve lever, unloading and reset; confirm the bucket and the loader(shelves) are completely separated, the loader slowly driving back from shelves, then falling down the shelves.
- Ensure that the loader width to load is narrow than the traffic road.
- Arrived the parking position, after the machine stopped completely, pull the parking brake, and close the ignition switch.



Safe and efficient loading, depends entirely on the operator. If you are an experienced driver, the following rules will refresh your memory. If you are a student, they will help you become a professional pilot.



Warning: Only qualified and authorized driver allowed driving.



Warning: Before loading, please confirm the quick switch device of cylinder is in the locked position, locked the attachment, cut-off the two three-way ball valve.



Warning: When it' s moving on the ramp (forward or backward), the goods must be on the uphill direction; it' s forbidden to transverse moving or turn around.



Warning: When the goods is on the raising status, stay in the loaders.



Warning: When the goods is on the lifting status, forbidden the loader swerve; keep not in the high speed condition.

Multi-way valve focus controlling lifting devices and tools :

Locking tools - push the back of a small handle to the right.

Releasing tools - push the back of a small handle to the left.

Skips forward – push the master-control lever to the right.

Skips backward – push the master-control lever to the left.

Lifting skips – push the master-control lever to the back.

Lowering skips – push the master-control lever to the front.

Change the attachment

1. Push multi-way valve small handle to the left side and make the locked joystick indentation
2. Fall down the working device, lean forward to the suitable position.
3. Hang the hooks
4. Lift and backward the attachment;
5. Push multi-way valve small handle to the right side and make the locked joystick indentation, insert the installation hole of the attachment.
6. Turn the two three-way valve rotates 90°, locking the cylinder oil.

Remove the attachment:

Contrary to steps of attachment change



Warning: The lifting device and the attachment can also be used in the specific purpose. The driver must be abide the correctly use rules, pay attention to the maximum lifting height. Keep you arm away from the space between the lifting arm and the shovels.



Warning: Before operate the hydraulic system, please check if all the function of the hydraulic joystick is OK.



Warning: Pay attention to the operation symbol that was marked with the direction arrow.



Warning: Before remove the pipes of attachment, you must be release the residual stress of the pipes, then demount the quick switch, the method of release the residual stress: Please swings a few times of the first multi-way valve handle.



WARNING: EVEN IF THE ENGINE FLAMEOUT CAN ALSO LOWER THE LIFTING DEVICES AND TOOLS.





WARNING: IF THE TOOL IS NOT DELIVERED TOGETHER WITH THE LOADER, IT CAN BE ONLY USED AFTER THE AUTHORITARIAN OF STABILITY AND LOAD CAPACITY BY THE DEALER OF MANUFACTURER.

一般预防措施

- Do not operate any levers or pedals if anyone is in any position to be hurt by the machine's movement.
- Pay extra attention when working in narrow congested areas or in case of blind-travel.
- Always look around in all directions BEFORE changing your direction of travel.
- Always follow all safety rules or each particular site during operation.
- Maintain a running speed which is compatible with the load and the ground conditions.
- Maintain a running speed which is compatible with the load and the ground conditions.
- Slow down when approaching corners
- Observe pedestrians carefully and do not follow the vehicle in front too closely.
- Do not brake sharply and only select neutral once the loader has effectively stopped.
- Maintain a safe distance from the edge of loading wharf.
- When turning, pay close attention to the trajectory of the skips.
- Make sure that bridges and ramps are able to withstand the weight of the loader and the load being towed.
- Before climbing or descending from vehicles (trucks, trails etc), ensure that the adequate precautions are been taken to avoid all movements including the dumping.
- Stop, look at and listen when arriving to a rail way then to cross it in diagonal, slowly and only to the authorized points.
- Always park at more than 2,5m of the rails.
- Hold the wheel steering in hand during the operation.
- When loading a larger load, more space for the overtaking of parked vehicles, objects or pedestrians should be predicted.
- Never overtake another vehicle on crossroad or on bifurcations or when something affects the visibility for you.
- Never drive in elevators, truck or other until you have received the order and you are sure that they can stand the combined weight of loader and the load.
- Doesn't brake roughly.
- Pay attention to the driving speed and be careful to the pedestrians approaching and other vehicles and to the passage heights.
- Slow down on wet, irregular grounds and in the turning.
- Remove all objects in your way.
- On the crossroad, in the passages and the corridors, slow down and horn and drive on the right side of the road.
- Be careful to the pedestrians which can appear suddenly in the way.
- If your trip involves crossing road bridge, ensure they are secure and are strong enough to withstand the combined weight of the loader and load

- When approaching the destination, reduce the speed to ensure a smoothly slow stop in the far enough distance. A sudden halt could cause the load displacement.
- Do not impede the fire fighting equipment from use before parking or depositing the equipment of loading.
- Report any mechanical or electrical irregularities immediately.
- Always be alert; Watch out for pedestrians and never drive too close to the vehicles in front.
- Travel at a speed consistent with load and road conditions.
- Never operate the loader with any part of your body outside of the operator's compartment.
- DO NOT leave the driver's cab with the loader running.
- ALWAYS properly shut down the loader before leaving the loader.
- ALWAYS park the loader on solid, level ground.
- On severe slopes
- ALWAYS park the loader perpendicular to the steepest slope to prevent accidental movement.
- Use proper flags, warning marks or barriers when parking in areas of traffic.
- Do not park your vehicle in the access points where obstruct the fire brigade
- During parking, use the parking brake and put the key on the STOP position.
- If the tractor must leave with nobody watching it, remove the ignition key.
- Never park your vehicle on a slope.
- If it is necessary to park tractor on a slope (break down etc), use the wedge under the wheels of loader.

 **PROBLEMS OR EQUIPMENT MALFUNCTIONS OCCURRS WHILE OPERATING THE LOADER, IT MUST BE PROPERLY TO SHUT DOWN AND CORRECT THE PROBLEM. CONTINUING TO USE MALFUNCTIONING EQUIPMENT CAN NOT ONLY BE UNSAFE FOR THE OPERATOR AND OTHER PERSONNEL, BUT CAN LEAD TO FURTHER DAMAGE TO THE LOADER AS WELL.**

 **WARNING: IN CASE OF AN ACCIDENT, REPORT TO YOUR SUPERIOR IMMEDIATELY NEVER NEGLECT AN INJURY EVEN IF IT APPEARS INSIGNIFICANT, GO IMMEDIATELY TO THE DOCTOR, WHICH COULD AVOID COMPLICATIONS.**

AREA	RISK	SAFETY STEPS
CAUSES OF FAILURE	WHAT CAN HAPPEN IF PRECAUTIONS AND SAFEGUARDS ARE NOT OBEYED	HOW TO PREVENT THE FAILURE
ENTIRE MACHINE	A moving tractor can run over or crush body parts between tractor and other object and cause irreparable injury or death.	Keep away all people from around tractor and always switch off the engine before leaving the driver's cab.
DRIVING STATION	Personnel injuries may happen if parts of the body or members (hands, legs, ect) are outside of the driver's cab.	Keep head, arms, hands, legs and feet inside the operator's compartment all the time.
UNDERNEATH	Unit lifted for service could fall and injure or kill	If loader must be lifted for service, it

DURING SERVICE	personnel around.	must be securely blocked so that all 4 (four) wheels may safely turn.
ENGINE	Hot (engines) will cause severe burns And cause serious injuries if persons are struck by moving parts or caught in belts.	DURING SERVICE : The engine must be turned off. If procedures require the engine to be running during service, care must be taken to avoid touching the moving objects. The battery should be disconnected if possible to avoid having the engine accidentally started. Care should be taken to avoid the hot surfaces.
BATTERIES	Batteries produce flammable gasses that could be ignited causing burns and explosions .Batteries contain strong acid substances that may cause severe burns if spilled or splashed on body parts or in the eyes. A contact with batteries plug or all electric parts without protection (or when the protection has been removed) can cause an electric chock.	Batteries should be well ventilated before using particularly when welding is required near the batteries. Protective clothing, gloves and eyewear must be worn when working on batteries Avoid to remove the plastic protection, and avoid to touch electric parts where current can be.
ROLLING OR ROLLING-OVER OF VEHICLE	When a vehicle rolls or rolls over, do not jump off the tram, as the loader is installed with a safety roll cage, which may lead the driver's death.	At this point your hands should hold the steering wheel, and feet hold the mounting brackets under the direction of column.
TYRE	Welding near the tyre may damage the tyre or lead the lead an explosion and bring damages or dangers for people.	If welding has to be done on the wheel or near the wheel, remove the tyre first.

To avoid in a crowded area when after-sales service、 clean、 or test machines as long as possible.
To avoid loaders' accidental movement, put some wedge blocks under tires when provide services and maintenance vehicles.

- Always stop the engine when working after the wheels.
- Don't try to repair the machine by yourself if you haven't been approved by Manufacturer.
- Don't carry out any maintenance works in no reference maintenance manuals and driving under the condition of attention.
- Manufacturer is not responsible in case of any modification, addition or combination with equipment from another origin, which maybe cause danger.
- Don't change the structure and performance of vehicle when MANUFACTURER is not informed.

Electrical equipment

Don't change the electronic or hydraulic settings, because the factory has been set. To prevent short circuit when working in the electrical system disconnection with battery; similarly, it also can to prevent un-expected start-up when the engine is working.

Ensure storage area of battery well ventilated (remove the smoke), fumes from charging electrolyte are explosive. Always keep the battery away from sparks, flame and smoking materials.

Don't check the battery near the open fire, especially in the battery charging.

Don't smoke in the area of battery charging.

Welding

Before any welding operations of loader, the specific operation as follows:

Disconnect the battery.

Disconnect the electric control system and electrical equipment.

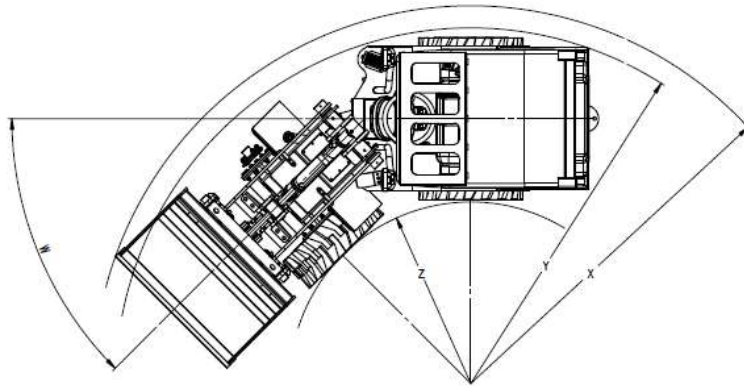
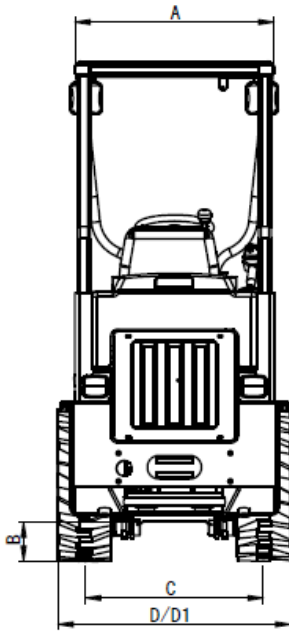
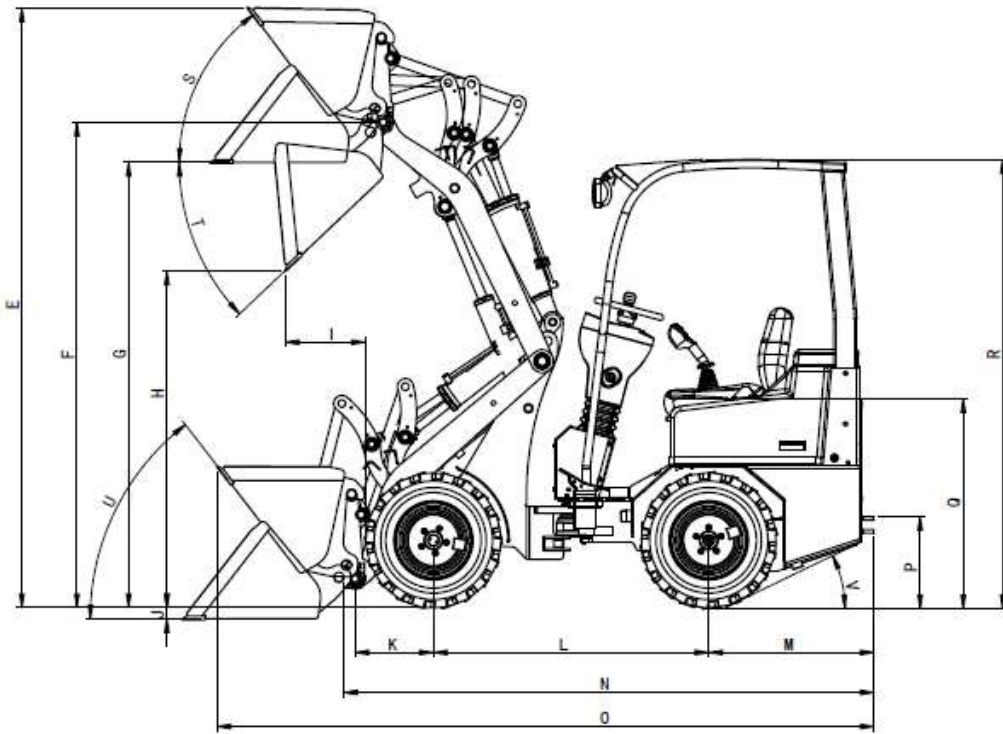
The earth wire clip in the welding place.

To weld as close as the earth wire possible.

Section 3: Specifications and Performance

Technical Data	
Type of Wheel load	W10
Engine date	
Manufacturer	KUBOTA
Engine type	D902-E3B-KEA-1
Cylinder	3
Max. power (kw)	16.1kw/3200rpm
Cooling	water-cooled
Electrical system	
Operating voltage	12V
Battery	45Ah
Generator	12V-150W
Weights	
Operating weight(standard)	1060
Rated capacity (0.12m ³ bucket) (KG)	350
Breakout force(daN)	900
tipping loads in bucket (according to ISO 8313/ISO14397)	
Lift frame horizontal /machine straight (KG)	700
Lift frame horizontal /machine articulated (KG)	480
Vehicle data	
Driving speed(km/h)	0-10
Capacity of fuel tank(l)	25
Hydraulic oil (l)	32
Hydraulic system	
Hydraulic driving	
Output(l/min)	57
Working pressure(bar)	250
Hydraulic operation device	
Output(l/min)	25

(bar)Working pressure		180
Dimensions		
A	Guard device width	760
B	Ground clearance	180
C	Track width	716
D	Total width(without bucket)	930 (820)
D1	Total width(with bucket)	980
E	Max operation height	2608
F	Max. height of bucket pivot	2107
G	Height of bucket horizontality	1928
H	Seat height	1474
I	Operating distance for M	382
J	Digging depth	58
K	Axle centre up to bucket hinge pin	343
L	Wheel base	1200
M	Rear overhang	720
N	Total length without bucket	2398
O	Total length with standard bucket	2894
P	Fifth wheel height	390
Q	Seat height	934
R	Height to top of ROPS bar	1945
S	Rollback angle at max. lifting height	53°
T	Max. dumping angle	42°
U	Back roll angle on the ground	52°
V	Departure angle	26°
W	Turn angle	45°
X	Max. turning radius	1967
Y	Radius at the outer edge	2123
Z	Inside turning radius	1000
Tyre specification		
Tyre width		
23×8.5-12NHS		930



SECTION 4: SHIPPING PROCEDURE



WARNING: EXTREME HAZARD EXISTS WHEN REFUELING AND DEFUELING THE TRACTOR - NO SMOKING, NO OPEN FLAMES, NO ELECTRICAL DEVICES.

Lifting

Using a reliable cable to lift the loader on the label location which marked lifting.

Battery

Disconnect battery terminals from battery plugs.

Leave battery in battery box.

RADIATOR

Drain engine coolant from radiator and engine block

FUEL CELL

Drain fuel from fuel tank into appropriate container.

Disconnect fuel line at lowest readily accessible connection and drain fuel from fuel line.

Reconnect fuel lines.

Leave fuel cap on tank, but loosened.

CHECKS

Make certain fuel line is connected.

Make certain shut-off valve on radiator is closed.

Make certain fuel cell drain valve is closed.

FIXATION

With the locking plate lock the front and rear frame

Using the sturdy rope package on the loader banding point, be careful not to damage the paint surface

Using the wood block to stop moving of the front and rear tyre.

SECTION 5: TRAILER PROCEDURE

When the loader needs help, just only allow dragging short-distance, but should according to the following step before drag the loader:



Warning: This dragged loader has been unable to implement the brake and steering, the tractor should have sufficient traction, in order to pull and control the loaders without braking system. Only allow to use the rigid parts

(draw bar) to connect with trailer.

Trailer Steps

- Place the skids (wedge) after the slip edge at the wheel.
 - Lower the goods until the cargo compartment does not hit the ground while working.
 - Removing the goods and attachments.
 - Starting the tractor.
 - Using the rigid drawbar to connect the tractor (with adequate traction and braking force) with the traction pin which located on the counterweight back side of the loader.
- Release hand brake
Open the manual bypass valve on the plunger pump

After traction

- Use the wedge to wedge the wheel slip.
- Tighten hand brake

Restore the braking force

- Tighten the manual bypass valve
- Install a the seat mounting plate

After repairing, check the brake function.



The focus point of the machine salvage can be the vehicle lifting point, the traction point when dragged is in the back of counterweight. The allowed maximum force points value : 10KN.



This machine can be used for short-drag powerless trailer:

1. The location of Traction is at the rear of counterweight.
2. The maximum traction value of this machine is: 5.2KN
3. Maximum traction speed is $\leq 5\text{km / h}$
4. Just only allows rigid drawbar traction
5. Not for long traction
6. When used as a tractor, please pay close attention to the hydraulic oil temperature, can't exceed the maximum temperature of piston pump.

Section 6: Storage procedure

	one month	indefinite duration
Piston pump	No special attention	Discharge the oil in piston pump. Refill piston pump with oil.
Driving axle	No special attention	Dismantle oil extraction plug under differentiator shell to discharge of oil of drive axle, remounted plug after discharge.
Tyre	Loader must be raised or put blocks under the wheel axle, prevent tyre from contacting the ground. Tyre pressure must be reduced to 15 PSI.	Loader must be raised or put blocks under the wheel axle, prevent tyre from contacting the ground. Tyre pressure must be reduced to 15 PSI and sprayed with rubber preservative.

lubrication oil	Ensure that all points with special oil lubrication	Ensure that all points with special oil lubrication
Liquid	Check all liquid level, fill up if necessary.	Let out all liquid.
Wheel bearing	Wheel bearing must be repacked.	Wheel bearing must be repacked.
Battery	Switch off battery end.	Battery must be separate stored by dismantled. And it must be stored in cool and dry condition. If battery was put in an open place, it should be covered in order to avoid contaminated by sewage and water. There must be a slow charging for battery every 1 or 2 months.

Caution

1. Storage environmental temperature scope: -30°C-50°C
2. Long-term storage maybe damages sealing gasket of hydraulic system

Chapter 2

Maintenance part


General description

According to definition, preventative maintenance, includes regular maintenance and check as well as operate to avoid occurrence of failure.


Preventative maintenance makes operator early discover abrasion or worsen of equipment.

General description for clean

A thorough cleaning on the loader, please use normal wash method (do not use high pressure cleaning), to avoid wearing power equipment, security equipment, trademarks and labels etc. When clean electrical components, it is suggested under dried wind with the maximum pressure 29 PSI. Clean mechanical parts, use deoil product to clean oil stain firstly, then drying with dry-air blast. When cleaning battery, serious damage of chemical reaction and current branch must be prevented.

	<p>Warning: Solution maybe will affect skin, eyes and respiratory tract. Only can be used in ventilated area.</p> <p>Avoid breathing under water vapor by long time. Keep away from spark and flame. Avoid possible personal injury, do not use over 30PSI air pressure to carry out clean and dry procedure. Use eye protection and defense as well as air hose nozzle.</p>
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	<p>Warning: Before dismantle hydraulic oil pipe, filler cap must be unscrewed and release the residual pressure inside the tank.</p>
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	<p>Caution:</p> <p>Do not put electronic components, packaging, rubber products, plastic products and plastic parts immersed in the cleaning solvent.</p> <p>Scrub parts by clean cloth. Cleaning solvent will affect the material and cause serious parts damaged or destroyed.</p>
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- **Cleaning parts in the specialized tank for parts cleaning or spray cleaners on the parts' surface.**
- **Wash or spray to clean the parts. If necessary, the brush but not metal one can be used.**
- **Except bearing, dry parts by the compressed air after cleaning**
- **Do not use metal scraper, wire brush, grinding wheel, or abrasive compounds when cleaning parts, only if there is special request for maintenance program.**

- Clean electronic parts such as relay or switch by cloth stained with cleaning solvent.
- Clean the heat exchanger by vapor cleaners or pressure washer and soap. Don't use cleaner which could affect aluminum or copper.
- Clean surface of battery with weak solution soda and water.
- Using non-metallic brush to remove corrosion on the battery cable terminal.
- Clean paint surface of the whole car with a gallon of water in a quarter pound of soap slice. Clean by clean water and dry with linen or air.

Maintenance procedures for the first time

- Maintenance procedure for the first time must be carried out within 10 to 125 hours.
- Engine maintenance see engine operation manual (the wheel loader attached with engine operating manual).
- Check the oil leakage and correct if necessary.
- Check the hose and the connection as well as the wiring
- Check the rim nut torque after 10 hours operation, also same when more than 50 hours and replace the wheel after every time.

Section 1: service

A. Preparation for use

Fuel system

Check all the fuel line connection, ensure all connection correctly from the fuel tank to the filter, then to the fuel pump.

Ensure fuel drain plug of the fuel tank tightened.

Fill the fuel tank with correct fuel.

Battery

Check the battery level, if necessary, filled with distilled water or drinking water has been approved.

Connect the battery cable, if disconnected, connect positive electrode firstly.

Brake system

Check hydraulic oil leaked or not.

Start vehicles Slowly, loosen the accelerator, trample on the inch valve pedal, examine the braking effect.

Engine and piston pump

Check the engine oil level, refill if necessary.

Check joint leakage condition of piston pump and motor etc hydraulic components.

Rear axle and reducer

Check the driving axle and reducer oil level, refill if necessary,

Tyre inflation

Check air pressure of tyres, inflate if necessary.

After dismantle the wheels, the Suggestions for strengthen nut tightened.

After 2 hours, then 50 hours, and every 200 hours periodically:

Recommend wheel nut tightened: 280N.m

Suggested wheel pressure W10 : 4.5 Bar

Hydraulic oil

Check the hydraulic oil tank liquid level, oil filler of mesh marked on the minimum amount of liquid level.



Warning: Due to the hydraulic tank with pressure, loosen the filler cap, before opening, release pressure slowly.

Grease adding

Add in the each nozzle.

1. All joint bearing
2. All articulated body
3. All axle sleeves.

B. Regular maintenance table

The wheel loader must be maintained in accordance with the following table:

	Daily check	Check per week or per 50 hours	per month or per 200 hours	per two months or per 400 hours	per 6 months or 1200 hours	per year or per 2400 hours
Fuel volume	•					
Engine oil level	•					
Pressure of tyre - 3.0/4.5BAR	•					
Tyre tread, check; Remove substance such as the stones within the gap.	•					
working lamp, rear lamp, operation	•					
Horn	•					
Hydraulic oil level		•				
Wheel nut fastening 280N.M (*)		•				
Drive motor fixed bolt, if necessary, tightened		•				
Tighten all cylinder head bolts and nuts and bolts. If necessary; adjust to the special requirements of a specific torque.		•				
leakage of exhaust system		•				
Hydraulic oil		•				
Hydraulic suction oil filter			•			
Parking brake lever in the "lock" position, the loader should not move in the slope under 8%. But if the loader moves, suggest to adjust the hand brake.			•			
Engine belt: if necessary, tighten.			•			
Hydraulic oil			•			
Discharge the water in the oil-water separator (if installed).			•			
Check the engine cooling tube			•			
Change: air filter element			•			
Drive seat regulator			•			
pedal support			•			
Hand brake cable connection			•			
Accelerator cable connection			•			
Change: fuel pre filter			•			
Fill grease for all grease fitting.			•			

The cab door lock (if any)			•			
Replace the engine fuel filter				•		
Replace engine oil and engine oil filter				•		
Check the engine idle speed and rotate speed, if necessary, adjust				•		
Replace the belt of the engine.				•		
Replace the parking brake pads				•		
Hydraulic oil of hydraulic system, cleaning system and injecting new hydraulic oil						•

Tyre nut must reset in place: 280 n. M. The maintenance needs to do after each replacement of wheels and at any time the nut is loose within the specified time interval.

Appropriate regularly makes the operator to avoid any mechanical failure. Pay attention to lubricating oil filling schedule

Check engine oil level

Check engine oil level per week or 50 hours.

Check whether to add engine oil or not according to dipstick.

Note: Please add matched engine oil according to engine specification.

Cleaning for air filter

After loose the perimeter of the bolt screw, take off the lid.

filter element cleaning

Pat off filter dust on the filter paper, be careful not to damage the filter paper.

Note:

1. If filter damaged, replace component.
2. If serious pollution, cleaning components

How to clean the filter element.

1. Immerse the filter element in water containing neutral detergent, about 30 minutes, then rinse. Be careful not to scratch the filter paper
2. After washing, rinse the element with clean water
3. Allow to dry naturally or use a dryer (cold air). Never use compressed or hot air

Note:

Element should be replaced after being used for one year or washing six times

Battery electrolyte check

(The following steps are unnecessary if maintenance—free battery is used)

1. The battery electrolyte should be between the upper and lower levels
2. If the electrolyte level is below the lower mark, remove the cap and add distilled water to the upper level through the water inlet port.

Caution:

Be sure to use distilled water

Wear protective glass when working on battery

Tyre replacement

Caution

1. Never enter the loader after jacking it up.
2. Tightening torque of the hub nuts, 280 N.M.
3. Adjust the air pressure after tire replacement, W10 : 4.5Bar.
4. Pay attention of rim deformation, loose as well as matched bolt nuts
5. Pay attention of rim deformation, cracks and loose matching bolt nuts.

Front wheel

1. Locate the loader at a horizontal place
2. Apply the parking brake and insert the jack under the body
3. Jack the body up until tires are almost raised from the ground and loosen hub nuts
4. Jack the body up until tires are lifted from the ground and remove hub nuts and wheels
5. Reinstall the wheels in the reverse procedure after repairing and replacing the tyres. Tighten the hub nuts uniformly in diagonal directions in the sequence shown
6. Check and adjust the air pressure of the tyres after the wheels are reinstalled

Hydraulic oil replacement



Warning: Before draining hydraulic oil, the front working device should be totally descended.

- 1 Drive the loader on the trench.
- 2 Get down the attachments completely.
- 3 Put a container under the bottom of loader.
- 4 Open rear cap.
- 5 Unscrew hydraulic oil filler.
- 6 Unscrew return-suck oil filter.
- 7 Remove the drain plug of hydraulic oil tank.
- 8 Drain hydraulic oil thoroughly
- 9 Clean nearby area of drain plug.
- 10 Re-insert drain plug.
- 11 Add hydraulic oil to the tank from oil filler till it reaches oil filler.
- 12 Screw filler cap tightly.
- 13 Add hydraulic oil into tank from return-suck oil filter till filled.
- 14 Screw return-suck strainer cover tightly..
- 15 Start the engine under idle speed, turn over the steering from dead side to dead side several times , run slowly for several meters ,lift and descend several times ,then recheck the oil-level.


Caution:

The dumped engine oil should be disposed in accordance with relevant laws and regulations. The kid should be kept off in disposed oil. Also prevent the oil from flowing into gully drain or on the ground.

C. Liquid&Lubricants

Engine	
Model	Capacity
D902-E3B-KEA-1	3.8L
Engine oil should be has SAE engine oil class which matches below environmental temperature.	
At and above -10°C (14°F)	SAE10W-30 or 15W-40
below -10°C (14°F)	SAE10W-30

Cooling Circuit	
Model Specification	Anti-Freeze -35°
W10	

Hydraulic Circuit	
Model Capacity	Caltex HDZ -46# (Cold region 32#)
W10	32L

Fuel Tank	
Model Specification	Diesel fuel 0# -10#which depends on local temperature.
W10	25



NOTE::

THE OILS MENTIONED ABOVE ARE FOR USING UNDER ORDINARY CLIMATE, FOR A COUNTRY WITH EXTREME CLIMATE, CONTACT WITH MANUFACTURER OR LOCAL AGENCY

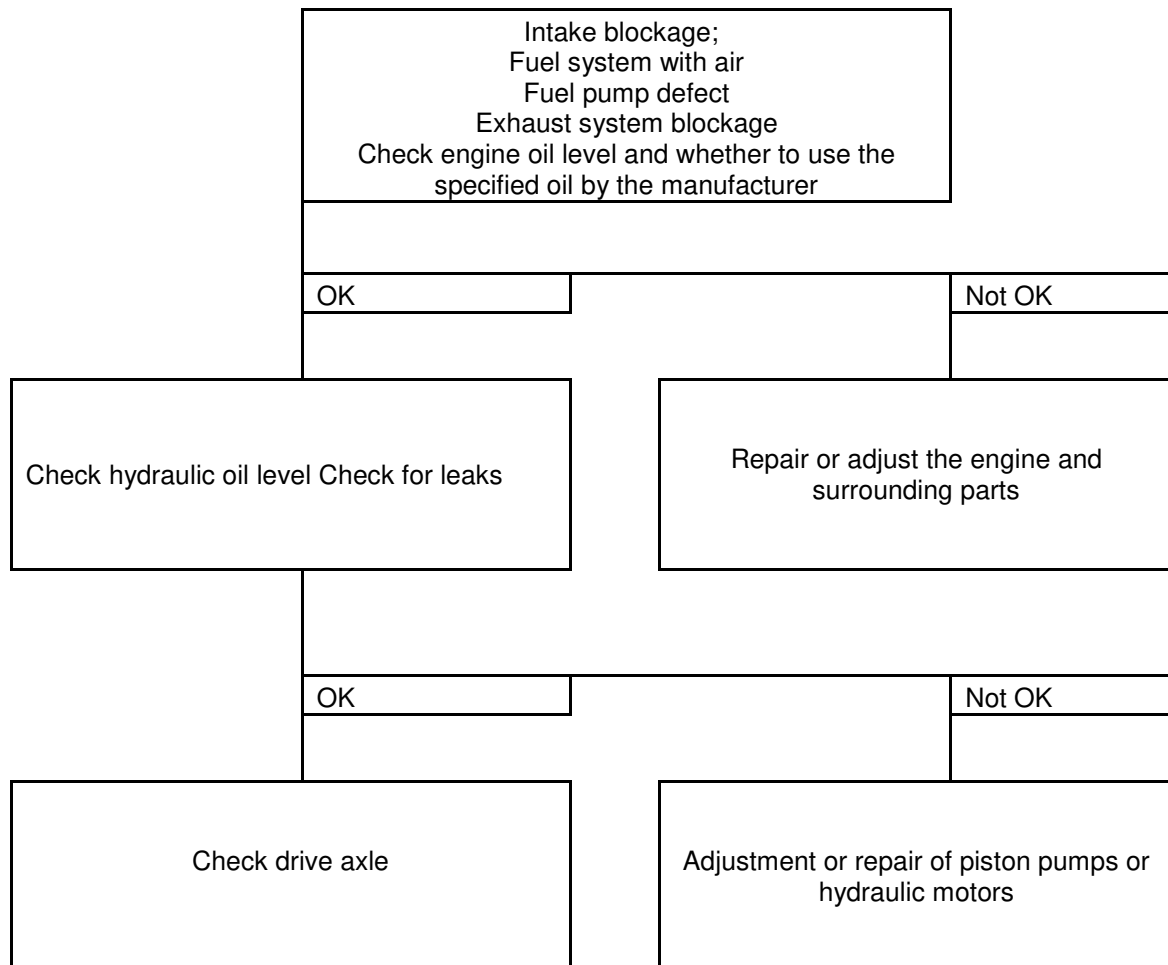


1. WHEN REPLACING HYDRAULIC PARTS OR COMPONENTS, IT IS INDISPENSABLE TO FILTER AND CHECK THE HUDRAULIC OIL BEFORE REUSING IT, IN ORDER TO AVOID DETERIORATION OF THE COMPONENTS.
2- IT'S FORBIDDEN TO MIX TWO OILS

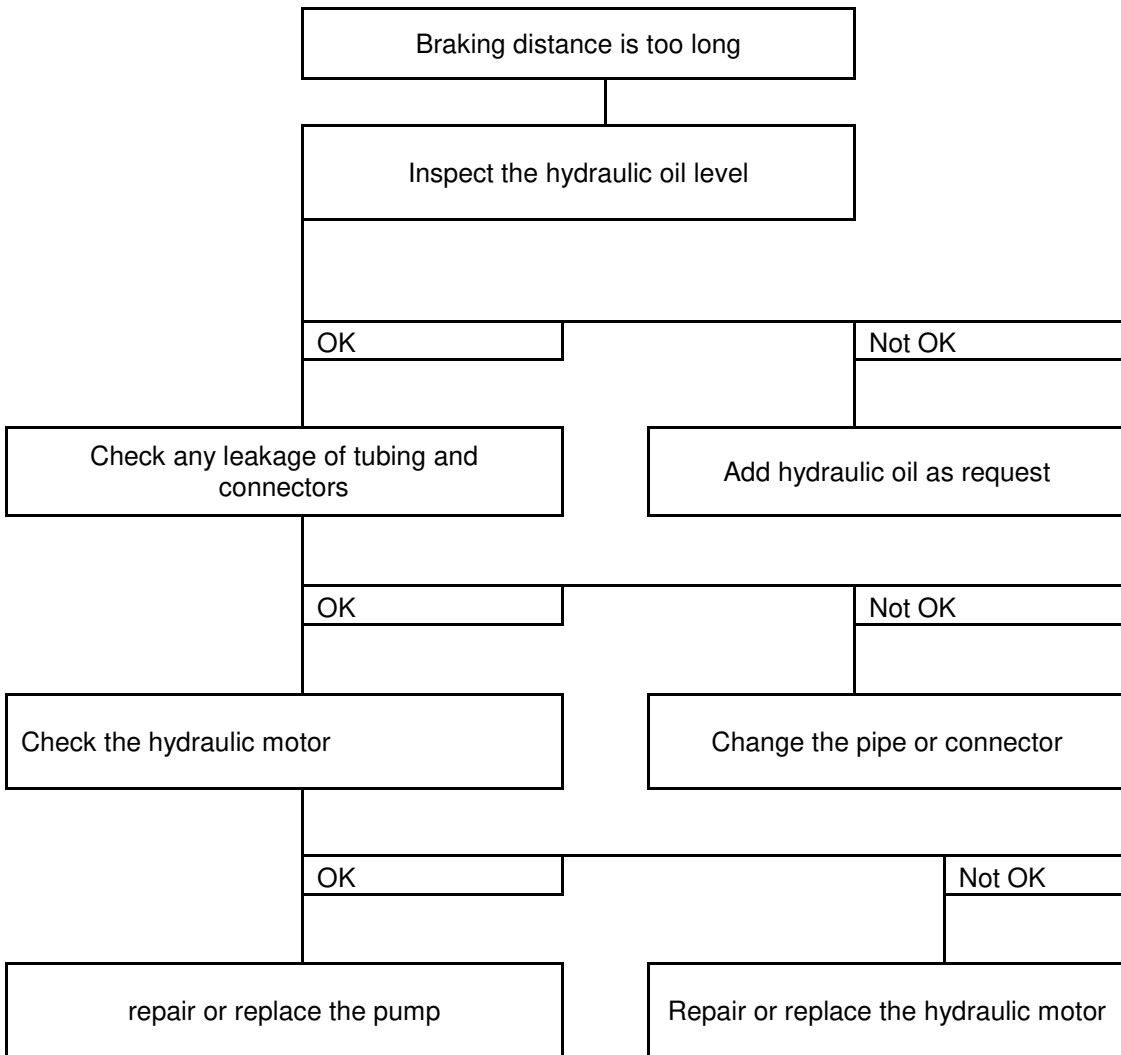
Knuckle Bearing Rod End	
Model	Lithium grease every 500 hours.

SECTION 2: TROUBLESHOOTING

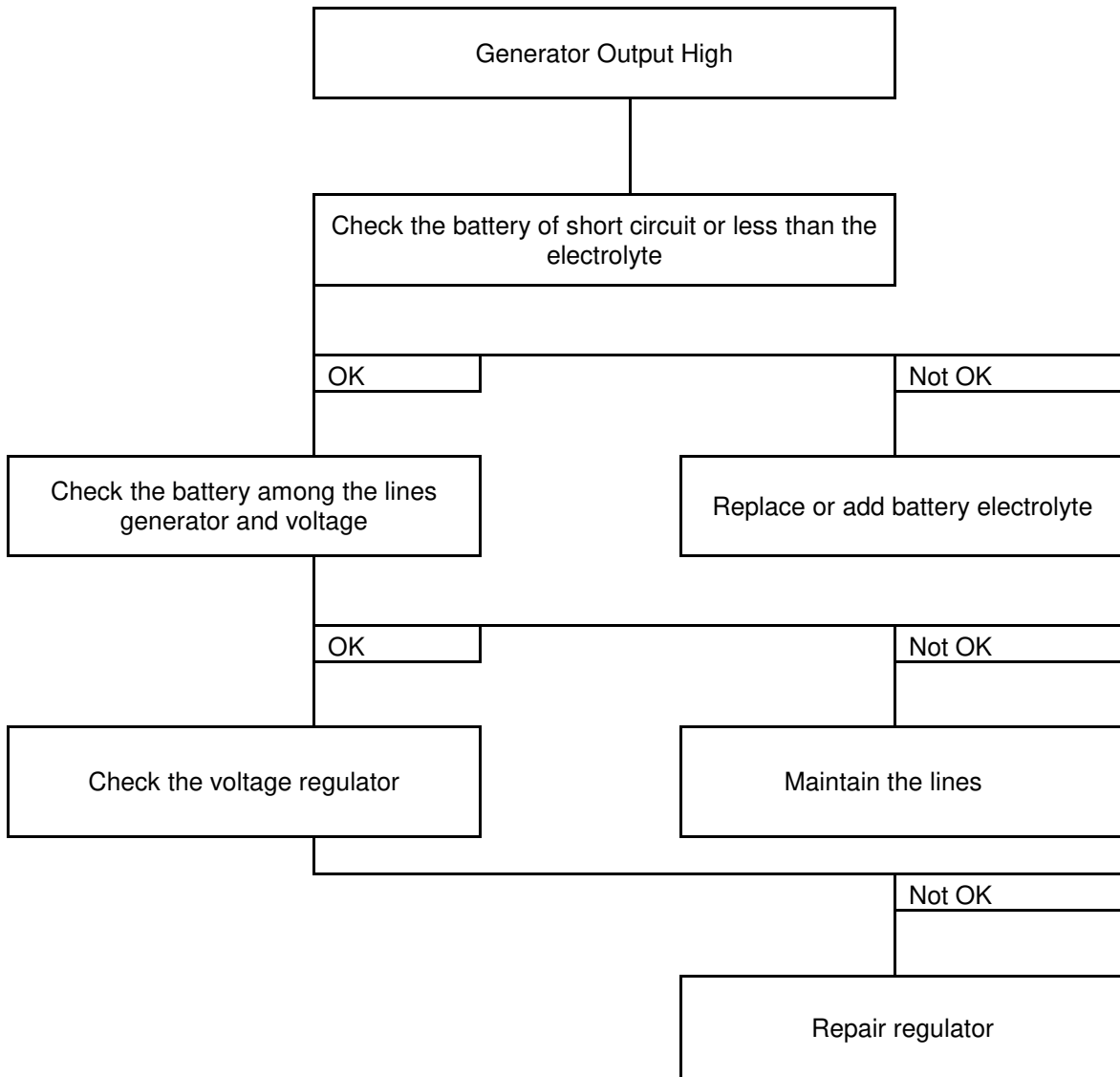
A. ENERGY TO REDUCE



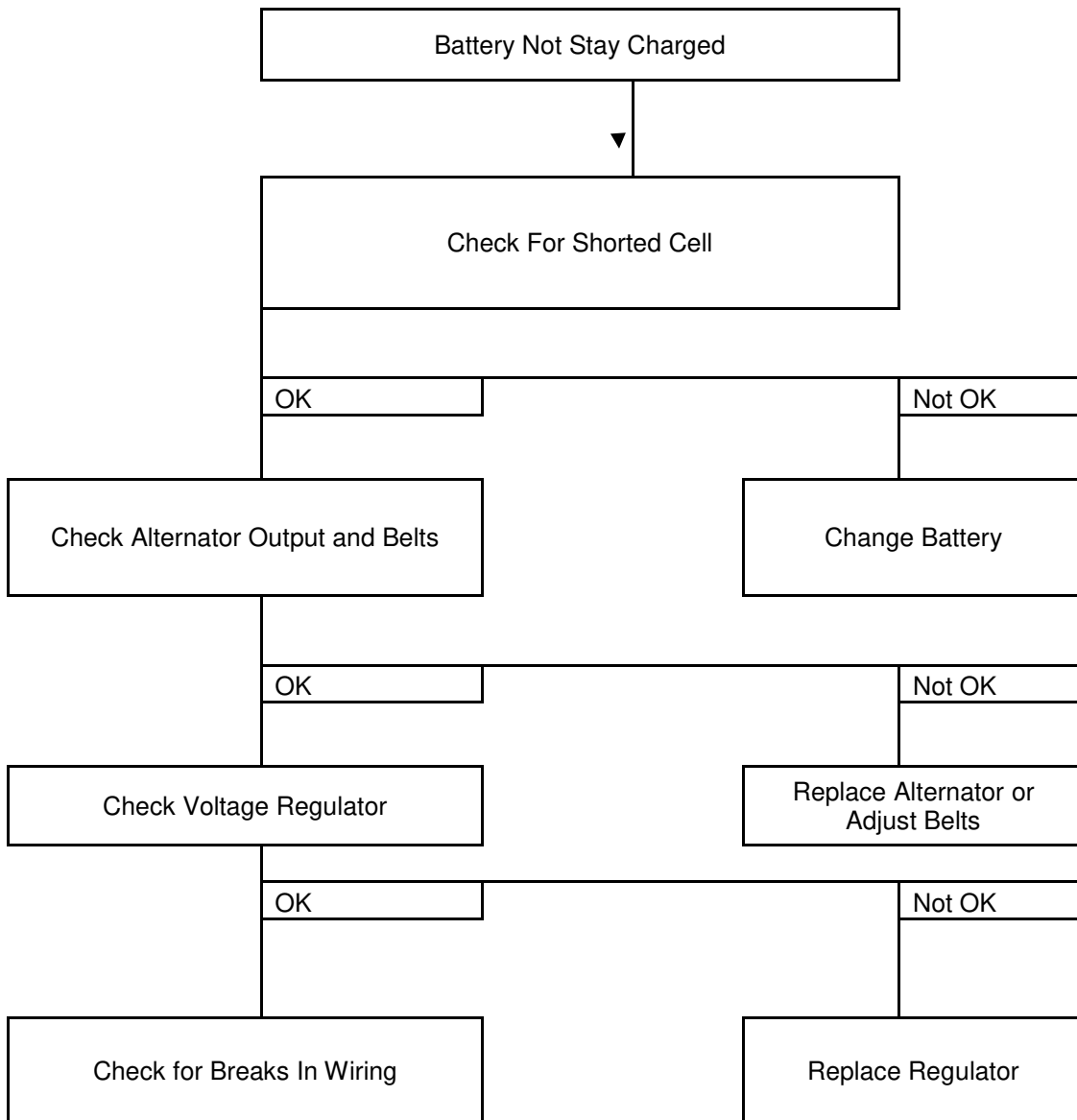
B . Brake System



C . Generator

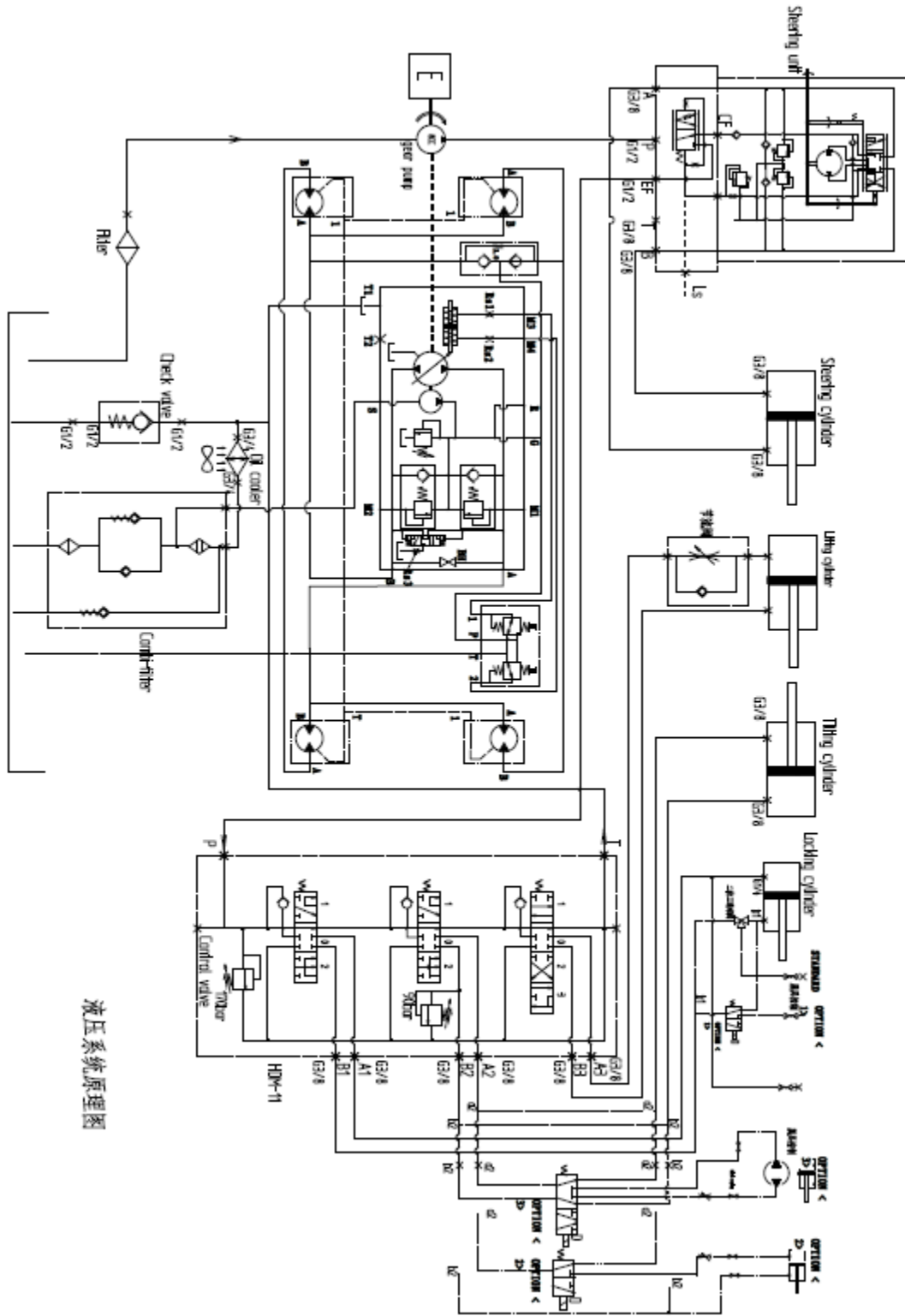


D . Battery

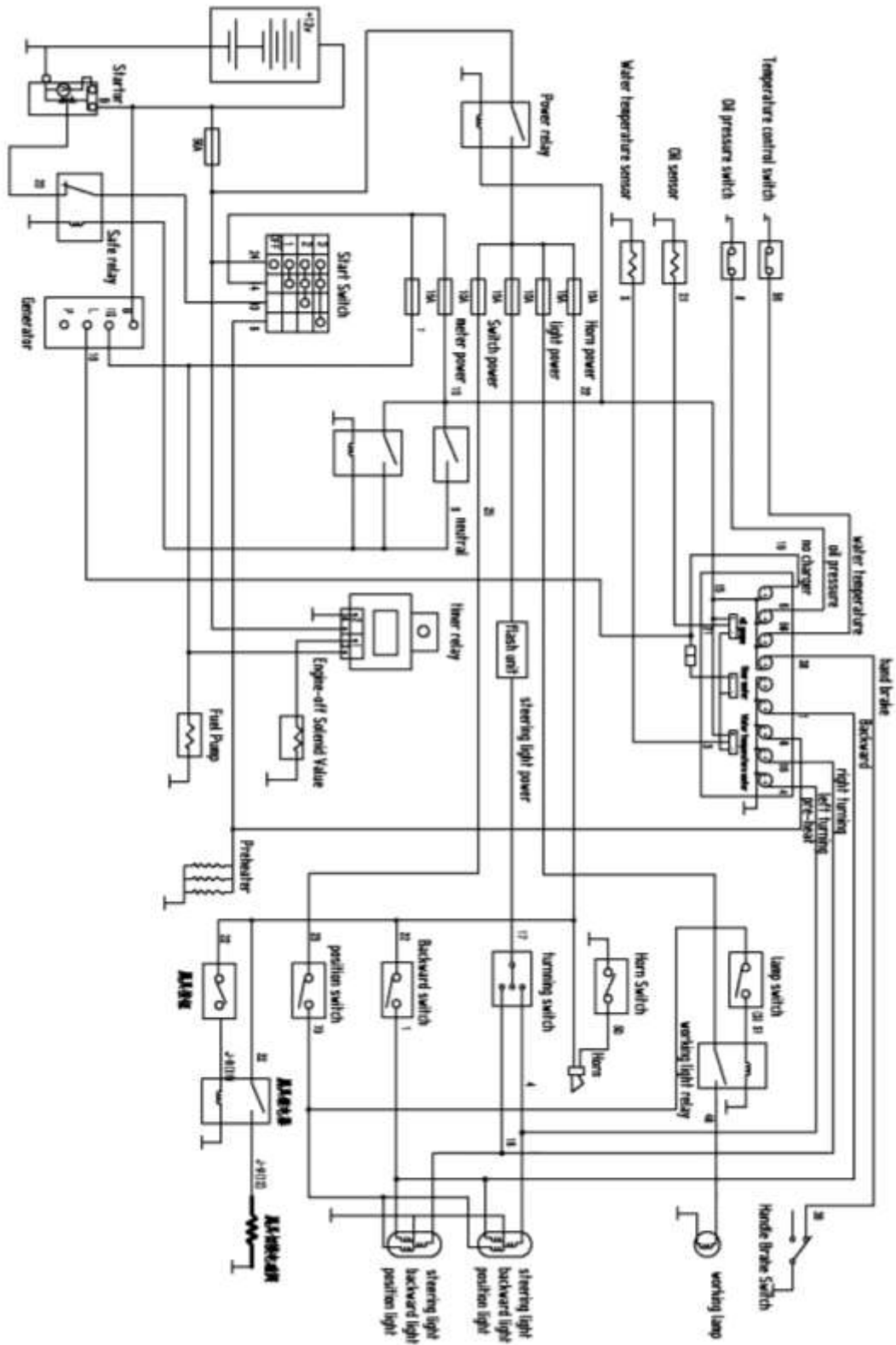


ANNEX 1: HYDRAULIC DIAGRAM

W10 Hydraulic Diagram

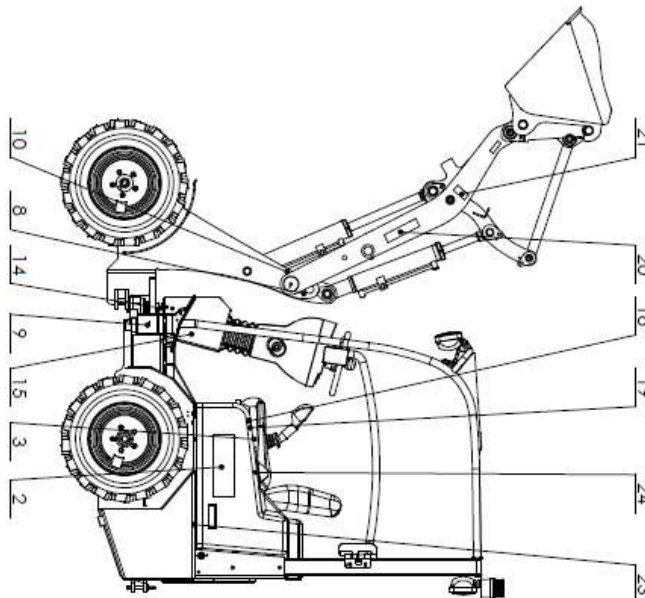
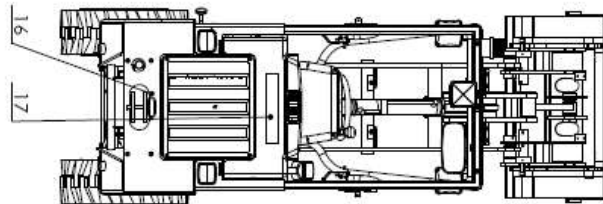
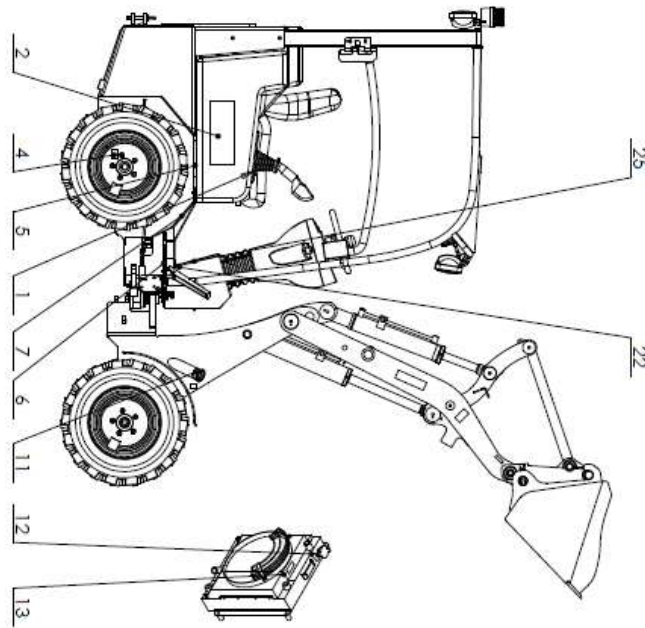


ANNEX 2 ELECTRIC DIAGRAM




ANNEX 3 THE LABEL LOCATION CHART OF MACHINE

1. Hydraulic Operation Notice
2. Model label
3. Parking brake label
4. Tyre label
5. Tyre pressure label
6. Non-slip mat
7. Machine nameplate
8. Crane label
9. Anti-pinch label
10. Clamp hand label
11. Fuel label
12. anti-scalded radiator
13. Anti-cross wrists label
14. Grease fit label
15. Noisy label
16. Transportation fixed point
17. Manufacturer label
18. Warning of reading instruction
19. Warning of reading maintenance
20. Manufacturer label
21. Lay over label
22. Rollover label
23. Hydraulic oil label
24. Safety belt label
25. Anti-near label



附件 1:DAILY EQUIPMENT INSPECTION-

	WHILE OPERATORS SHOULD NOT ATTEMPT TO PERFORM REPAIRS, THEY DO HAVE THE RESPONSIBILITY TO REPORT IMMEDIATELY ANY PROBLEMS TO THEIR SUPERVISOR, SO THAT REPAIRS CAN BE MADE IN A TIMELY FASHION BY QUALIFIED MAINTENANCE PERSONNEL.
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DAILY EQUIPMENT INSPECTION- -W10 Wheel Loader			
Vehicle S/N: _____		Date: ____/____/____	
Operator: _____			
<input checked="" type="checkbox"/> Good		<input type="checkbox"/> [A] Adjustments Completed	<input type="checkbox"/> [N] Needs Repairs
<input type="checkbox"/> []	Check the engine oil and ensure that the level is within operating range	<input type="checkbox"/> []	Checking the power steering fluid level by opening the cap to inspect the level.Ensure that the level is within operating range and then replace the cap
<input type="checkbox"/> []	On water-cooled systems, inspect the coolant/water level at the coolant surge tank.(Do not remove the radiator cap to perform a routine coolant level check.)	<input type="checkbox"/> []	Check the inflation pressure of each pneumatic tire. Wheels require 4.5bar.Adjust tire pressure as required.
<input type="checkbox"/> []	Inspect the tire surface for damage or wear. Remove stones from the surface and report any damage, cracked sidewalls, limited tire tread, or unusual wear.	<input type="checkbox"/> []	Make sure the headlights are working and properly
<input type="checkbox"/> []	Check other lights are working, including the rear light, tail stop and turn signal lights,(if the wheel load install this equipment)	<input type="checkbox"/> []	Ensure that the cab heater, wiper and the cab dome light and other are working,(if the wheel load install this equipment)
<input type="checkbox"/> []	The horn should be clearly heard in noisy voices	<input type="checkbox"/> []	Ensure that all controls are in good working. Report the faulty and do not use the equipment until repairs have been completed.
<input type="checkbox"/> []	Check the fuel level	<input type="checkbox"/> []	The correct position of the driver's seat, adjusting it to meet your requirements.