

TERROR XIX EXCAVATOR



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As the product is improved, technical data and parameters are likely to change

Chapter 1: Scope of use and parameters of TERROR XIX excavator

Section 1: Scope of use of TERROR XIX excavator

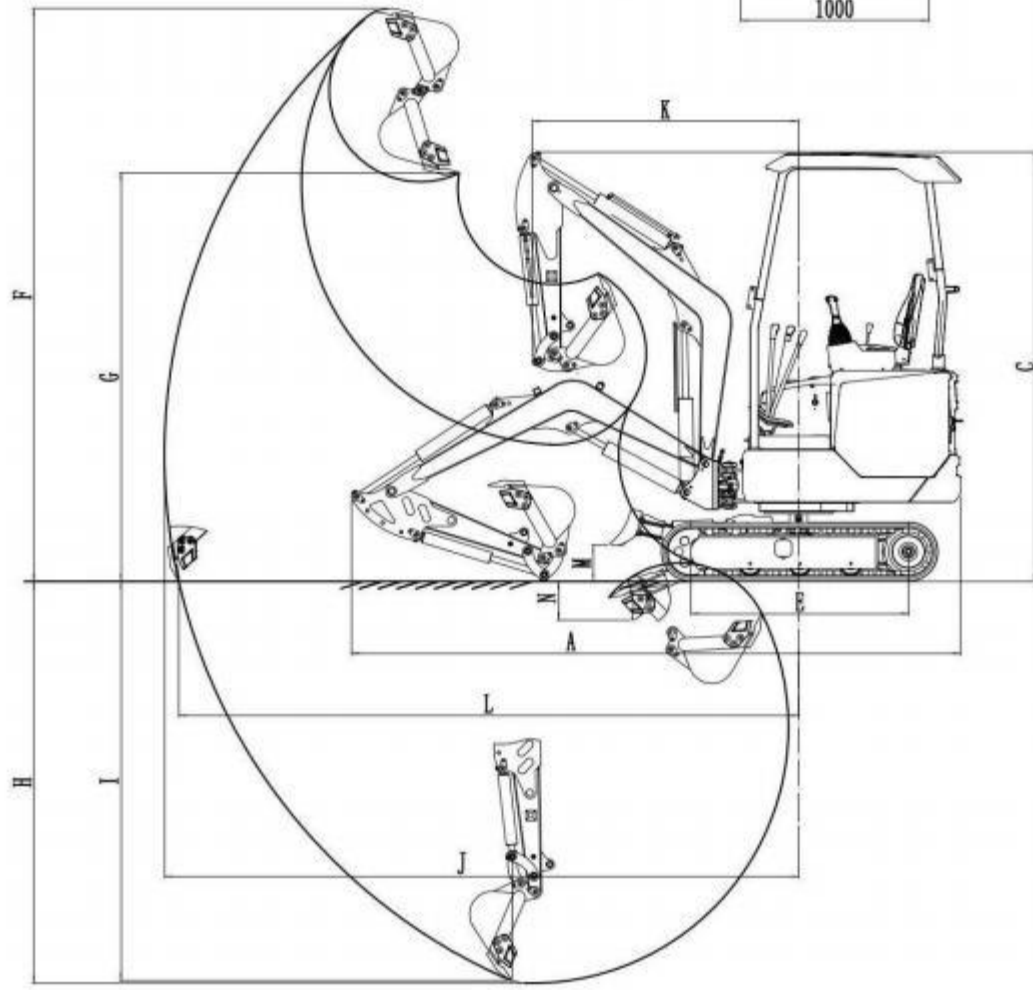
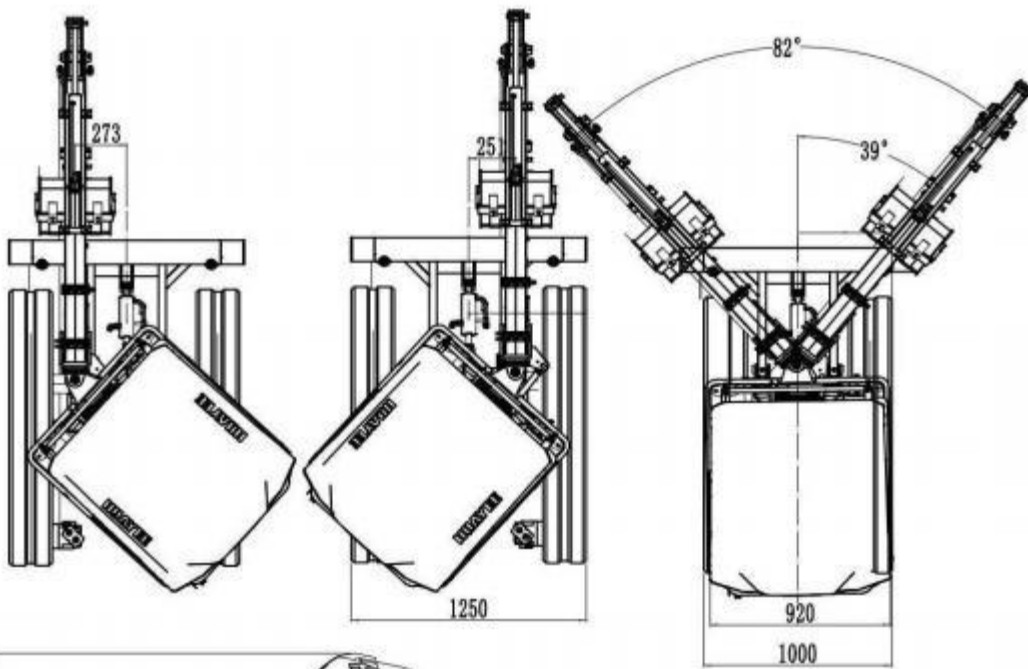
The TERROR XIX excavator is suitable for multiple tasks, with functions such as excavation, crushing, clamping, drilling, and bulldozing.

Additionally, they are easy to operate and transport while being flexible in tight locations.



This type of excavator is mainly used for: agriculture, landscaping, landscaping, greening and fertilization, vegetable greenhouses, agricultural transformation, indoor demolition, Small earthwork, civil engineering, road restoration, basement and indoor construction, concrete crushing, cable burial, water supply pipeline laying, gardening Cultivation etc.

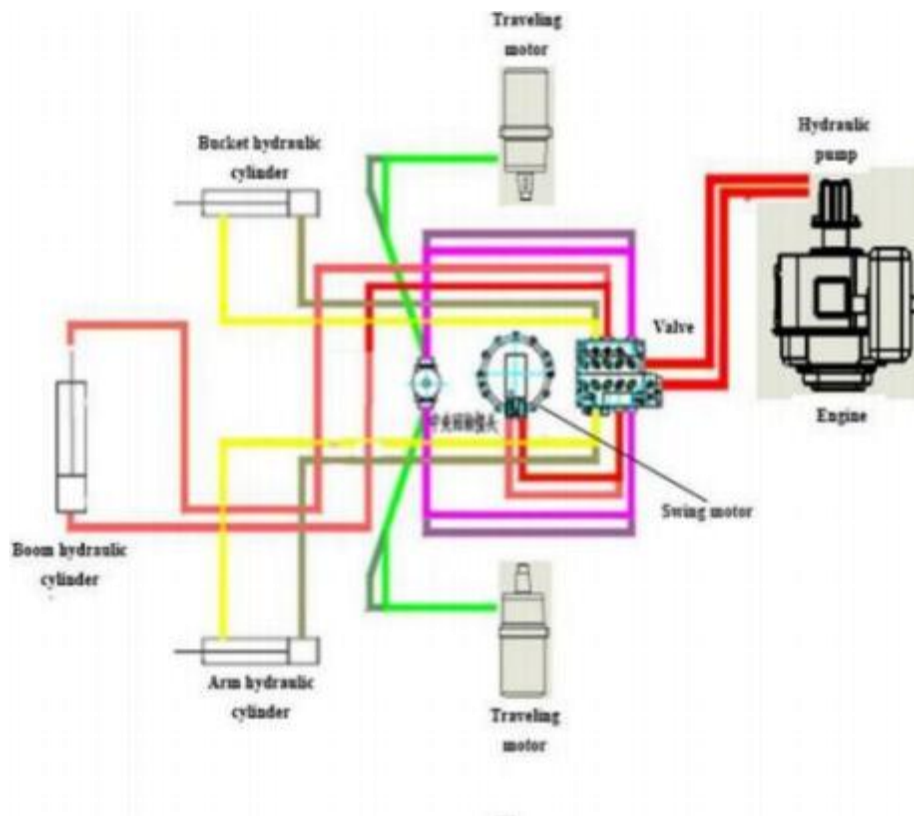
This excavator can be equipped with a variety of auxiliary tools such as: bucket, grass rake, wood grabber, breaker, auger, ripper, etc.



Overall size	Code	Unit	Standard
Total Length (transport time)	A	mm	3237
Total width (transportation / operation)	B	mm	1000/1250
Total height	C	mm	2282
Bulldozer blade width	D	mm	1000/1250
Bulldozer blade height		mm	205
Caterpillar band center distance	E	mm	1156
Standard caterpillar band board width		mm	230
Platform clearance		mm	418
Standard bucket width (with / without side teeth)		mm	430/400
Total length of caterpillar band		mm	1472
Scope of work	Code	Unit	Standard
Maximum excavation height	F	mm	3047
Maximum unloading height	G	mm	2270
Maximum excavation depth	H	mm	2137
Maximum vertical arm excavation depth	I	mm	2122
Maximum excavation distance	J	mm	3370
Minimum turning radius at front end	K	mm	1416
Maximum excavation ground distance	L	mm	3295
Maximum bulldozing height	M	mm	194
Maximum bulldozing height	N	mm	206

Chapter 2: Working principle and basic structure of TERROR XIX excavator

Section 1 Working Principle of TERROR XIX Excavator



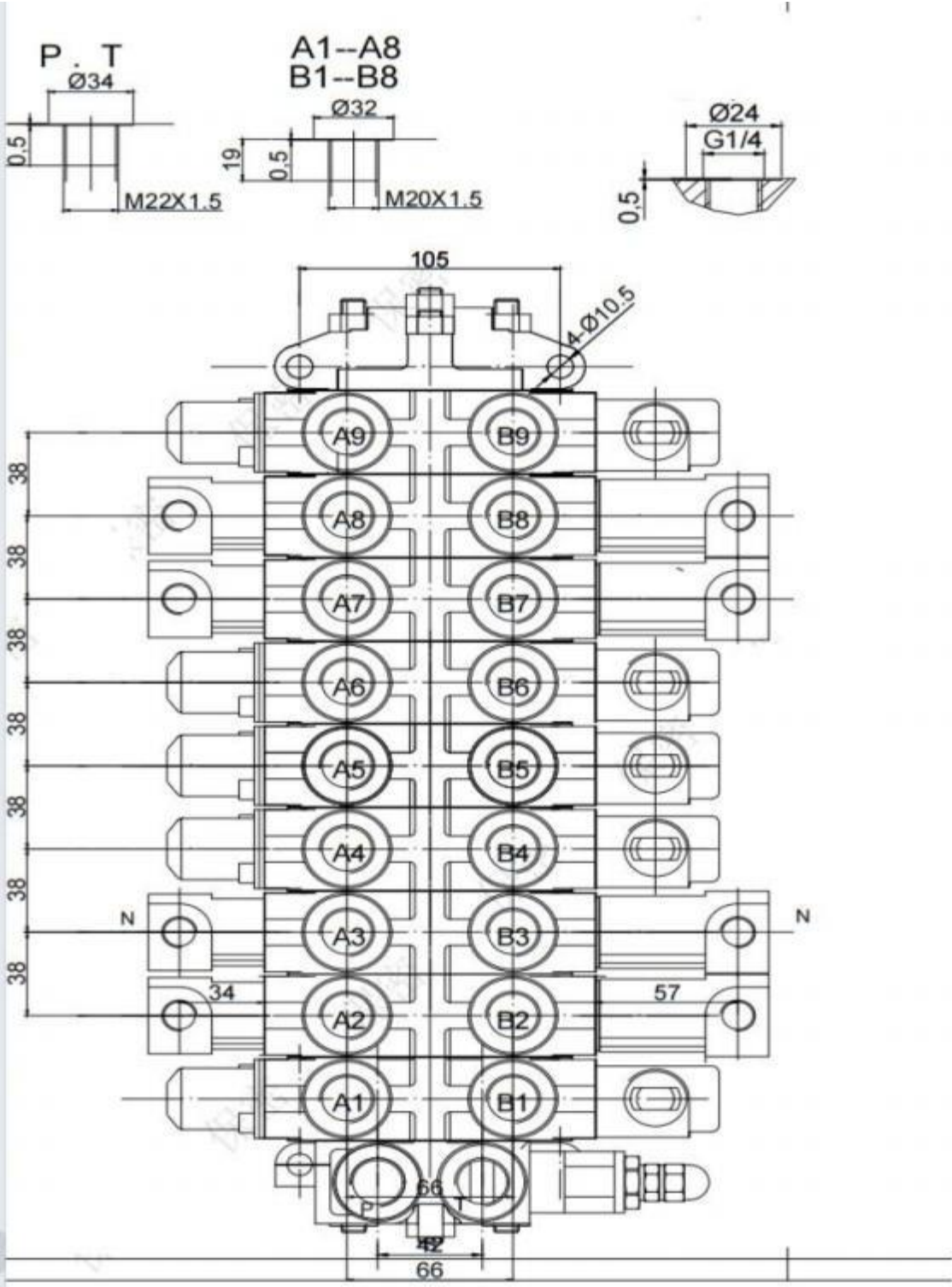
Working principle of TERROR XIX excavator

The TERROR XIX excavator works by running the engine - driving the hydraulic pump - generating power - and transmitting the generated power to various working devices through the distribution valve.

Make the excavator work by operating the execution handle of each device.

Section 2: Basic Structure

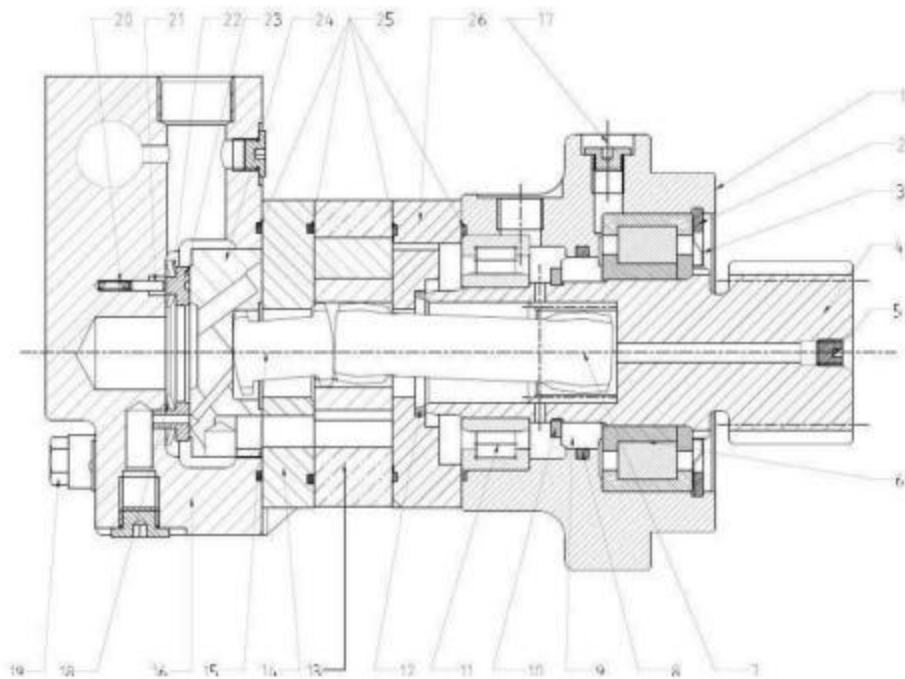
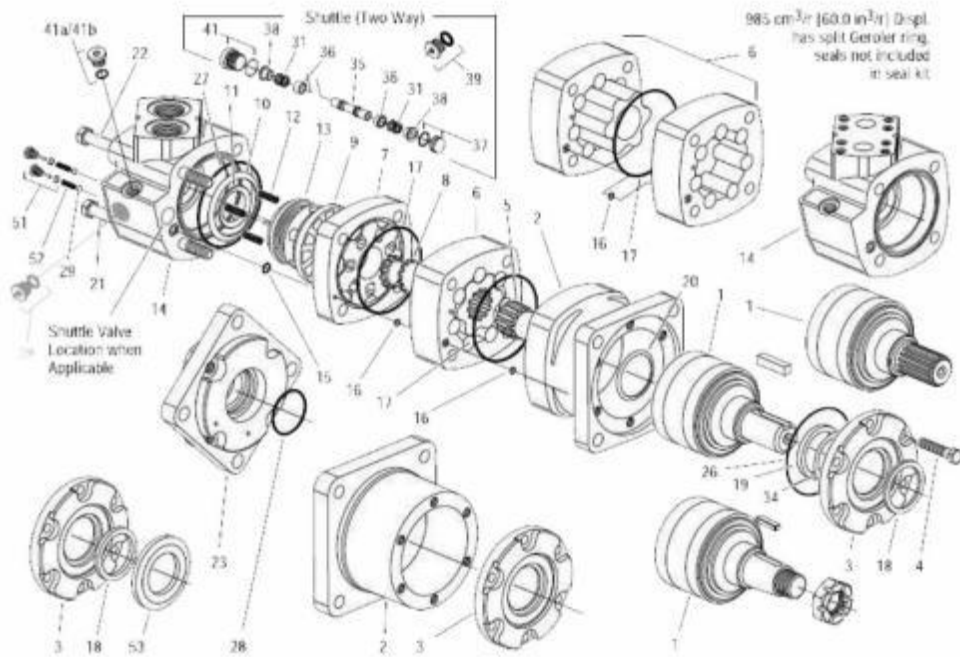
2.1:Hydraulic syste



SERIAL NUMBE	NAME
1	Spare valve plate
2	Turn
3	Two-arm cylinder
4	Traveling spool
5	Dozer blade
6	Traveling spool
7	Boom cylinder
8	Bucket cylinder
9	Side swing
10	Relief valve

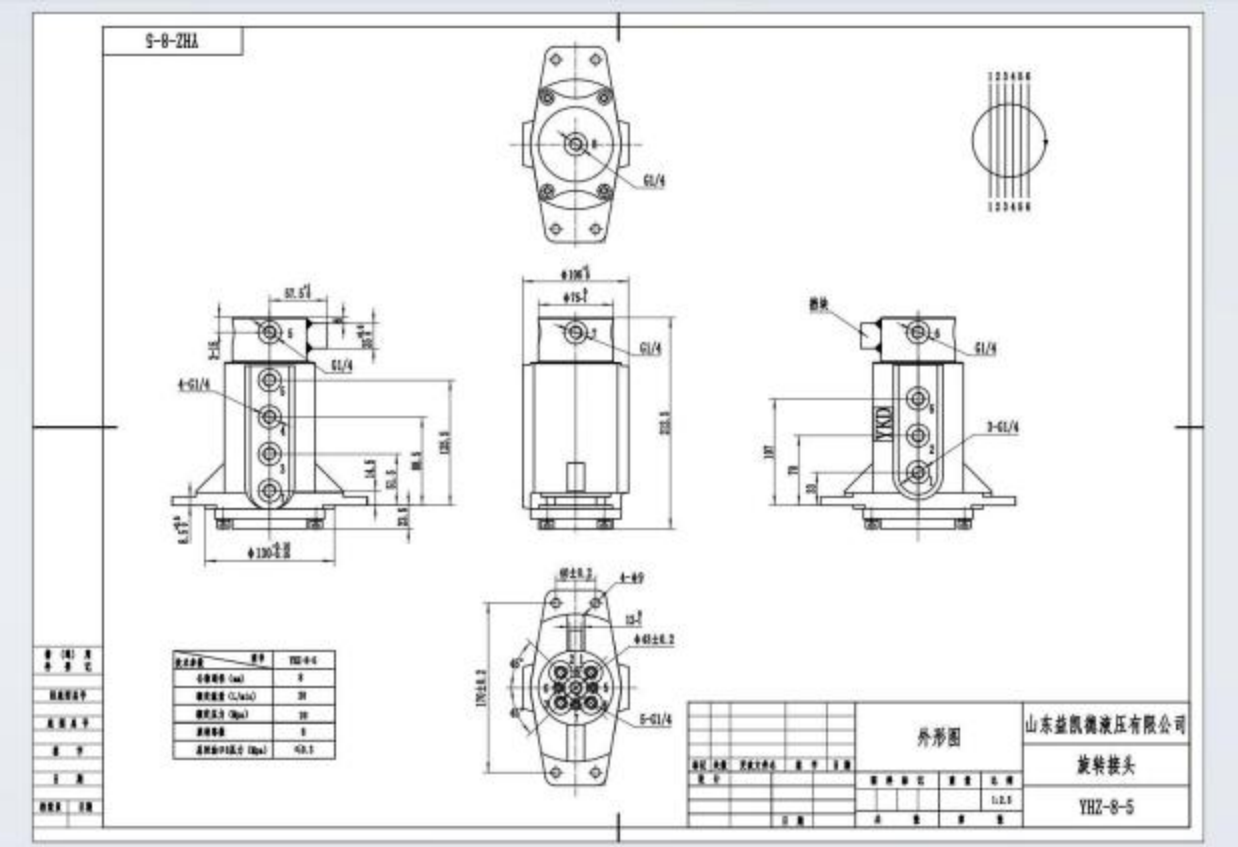
The main valve of the excavator is a valve that controls all actions. The power generated by the hydraulic pump is transmitted to the main valve through the hydraulic oil and distributed to each action through the main valve.

Travel motor



Travel motor is a device that provides walking power for machines

central swivel joint



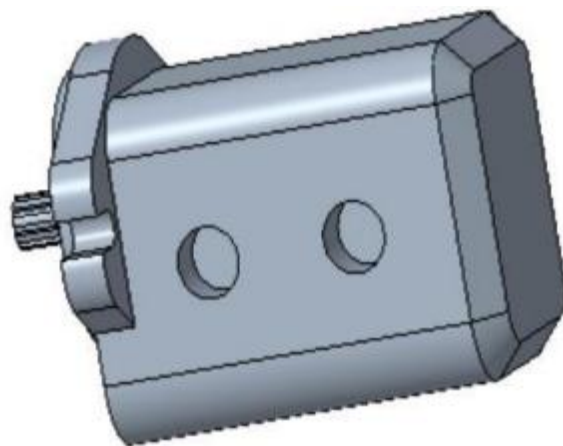
The central swivel joint can connect the hydraulic pipes of the fixed parts of the upper half of the excavator to the rotating parts of the lower half. able to avoid Pipe entanglement due to rotational movement

Rotary motor



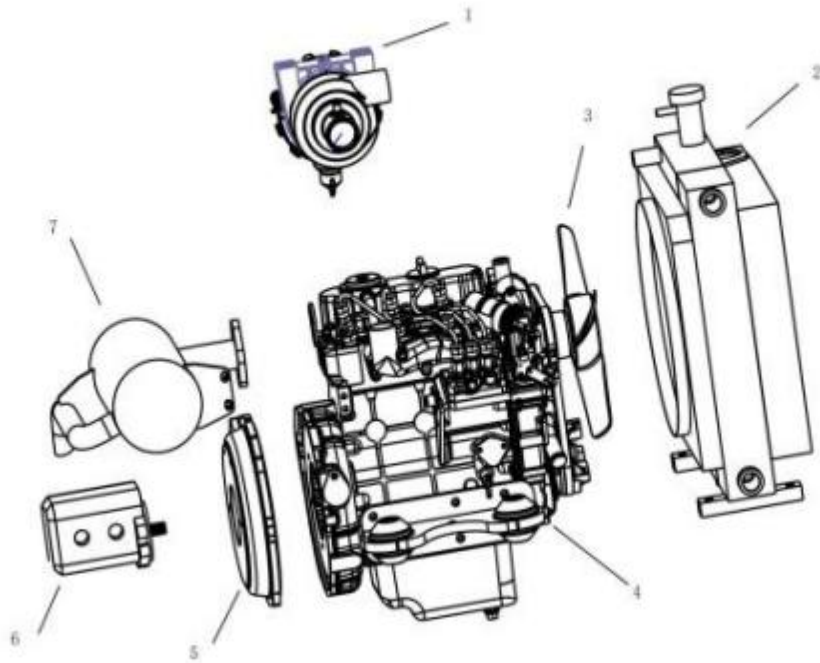
The slewing motor is a device that controls the left and right rotation of the excavator.

Hydraulic pump



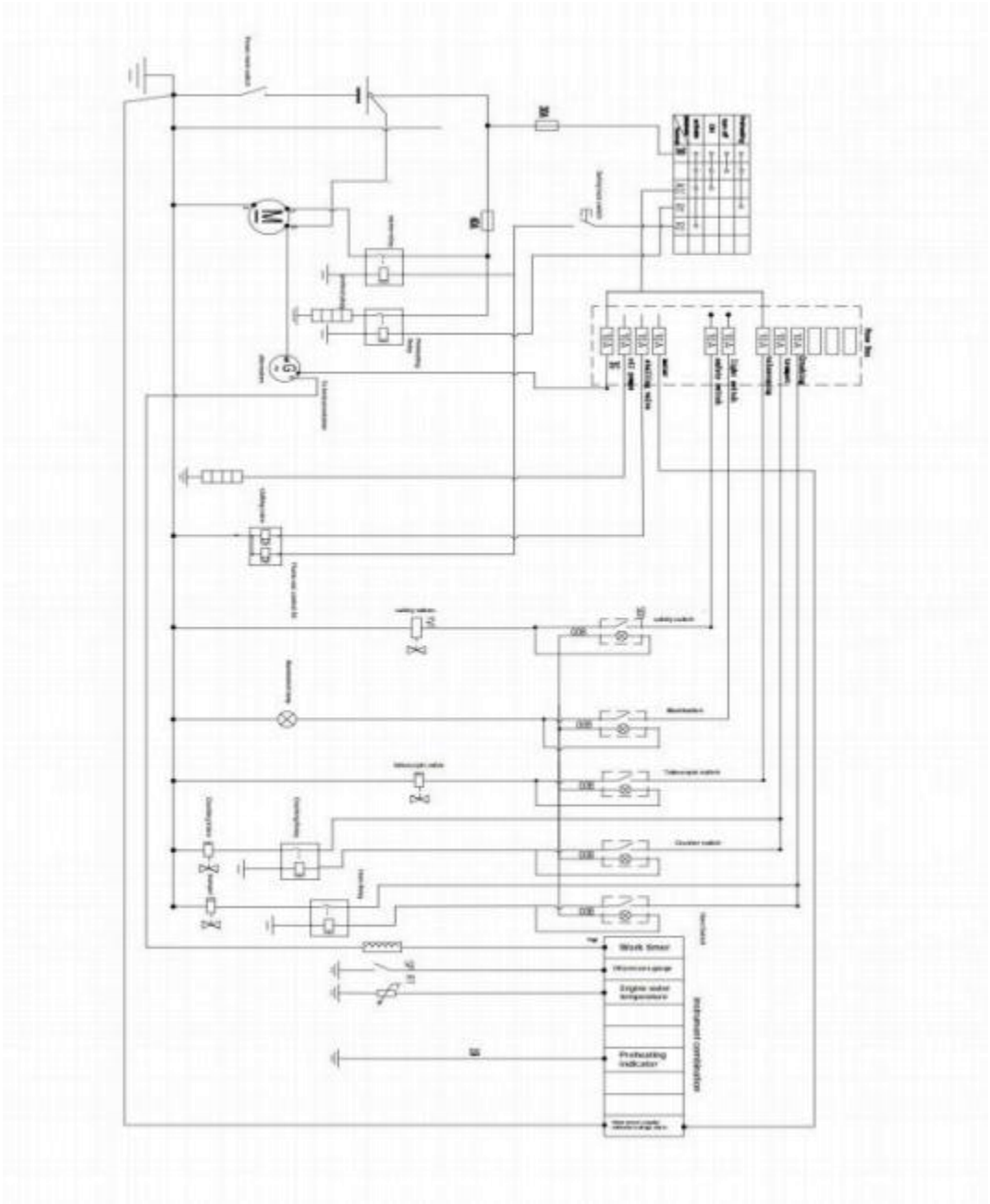
The hydraulic pump is the source of hydraulic power for the excavator. It is driven by the engine to generate hydraulic power.

2.2: Powersystem



SERIAL NUMBE	NAME
1	Air filter element
2	Radiator water tank
3	Engine fan
4	Engine block
5	Hydraulic pump connection plate
6	Hydraulic pump
7	Silencer

2.3: Circuit system



Chapter 3: Operation of TERROR XIX excavator

Section 1: Precautions before operation

In order to ensure the normal operation of the machine, the machine must be inspected before work

- 1: Check whether there is oil leakage in the machine
- 2: Check whether the hydraulic oil is sufficient
- 3: Check whether the fuel is sufficient
- 4: Check whether there is enough antifreeze in the engine radiator tank
- 5: Check whether the engine air filter is clean
- 6: Check whether the engine oil level is normal

Fuel indicator



Hydraulic oil indicator



Section 2: Precautions during operation

- 1: Operators must undergo professional training before they can operate the excavator.
- 2: During excavator operation, other people are prohibited within the rotation radius to avoid collisions.
- 3: It is prohibited to operate the excavator for overload work
- 4: It is prohibited to operate the excavator at a large angle.
- 5: It is strictly prohibited to use rotation to level the working surface to avoid overload damage to the rotation motor.
- 6: It is strictly forbidden for the cylinder to come into contact with corrosive liquids



Section 3: Post-operation inspection

After stopping the operation, perform a simple inspection on the machine

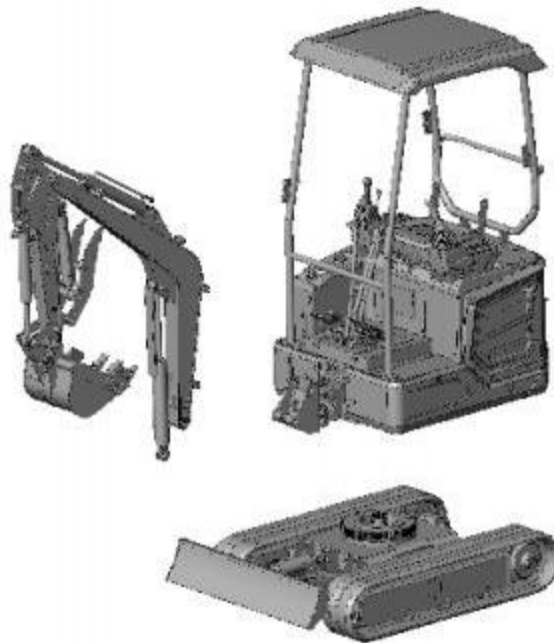
- 1: The machine should be parked on a stable place with the bulldozer touching the ground.
- 2: Check the machine for liquid leakage
- 3: Turn off the main power supply to prevent power loss caused by long-term parking.
- 4: According to the working hours, add lubricant to the hinges of the machine
- 5: Prevent the machine from being exposed to the sun or rain for a long time.

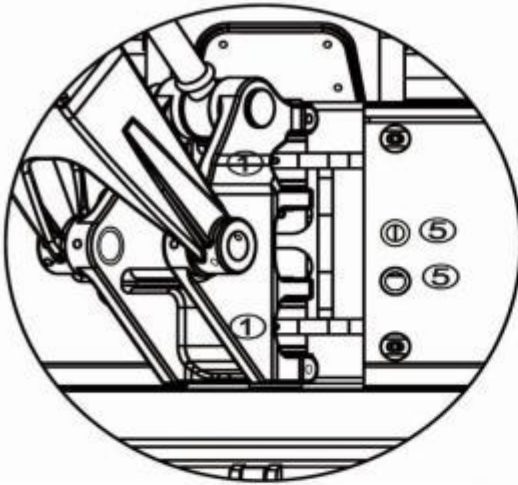
Chapter 4: Maintenance of TERROR XIX excavator

In order to enable the excavator to exert high-quality working performance and extend the service life of each component, it is necessary to perform regular maintenance on the excavator. Excavator maintenance is divided into daily maintenance and periodic maintenance.

Section 1: Daily maintenance

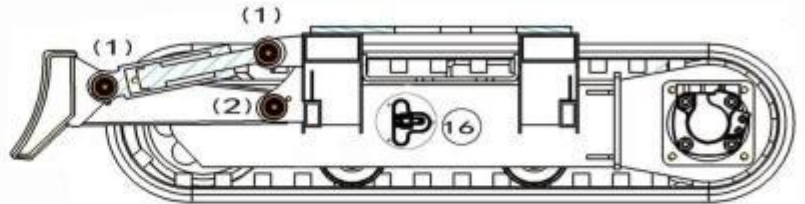
- 1: Add lubricant to each hinge to increase the lubrication between components and extend the service life.
- 2: Check whether the engine antifreeze is sufficient
- 3: Check the hydraulic oil fuel gauge to ensure there is sufficient fuel.
- 4: Clean the engine air filter to ensure the engine air intake is clean
- 5: Check the engine oil-water separator
- 6: Check engine oil level





Note(grease up):

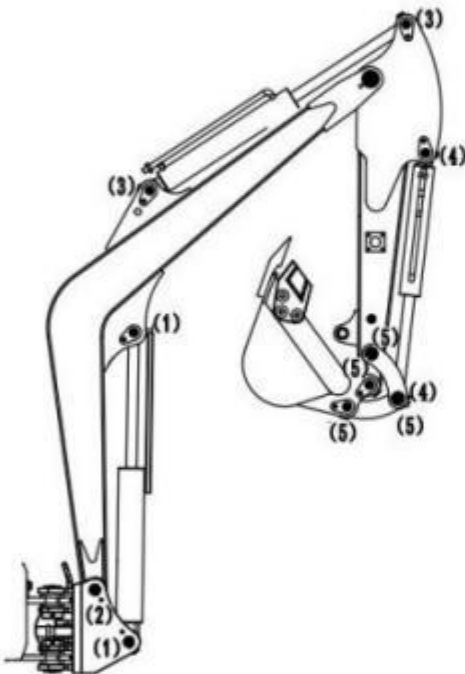
- ① Side swing fulcrum pin.
- ⑤ Root surface of rotary bearing.
At inner ring of rotary bearing.



Note (grease up) : ③ chassis and ⑬ guide wheel tension part.

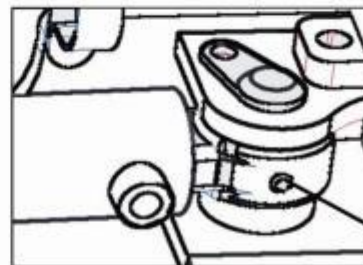
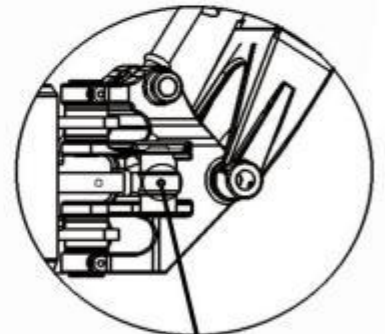
Chassis, such as:

- (1) Push and shovel cylinder 2;
- (2) Push the shovel 2.

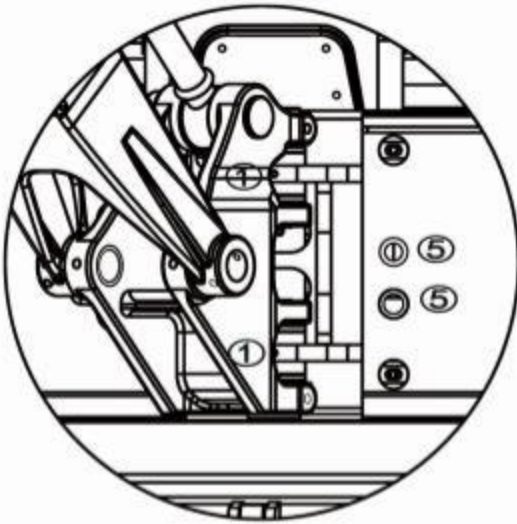


Note (grease up) : ② Lubricating grease is added to the working device as follows:

- (1) Big arm cylinder 2;
- (2) Big arm and side swing head 1;
- (3) Bucket rod cylinder 2;
- (4) Bucket cylinder 2;
- (5) Bucket connecting rod 3;
- (6) Boom bucket rod 1.

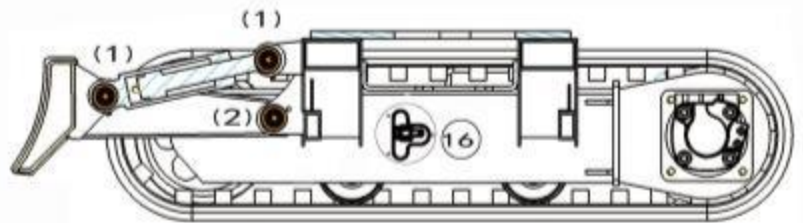


Note(grease up):⑥ Side of the cylinder



Note(grease up):

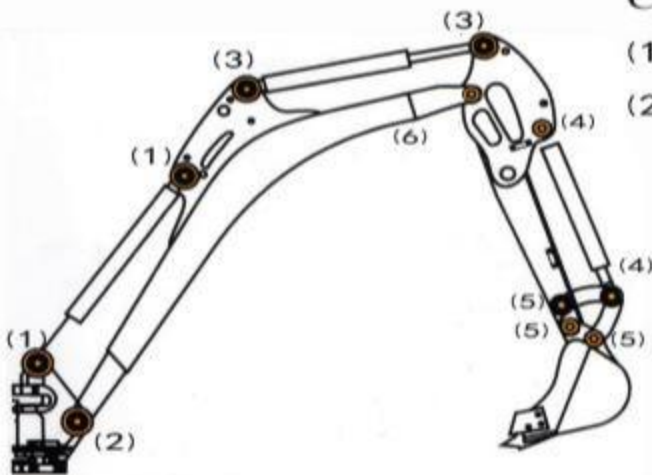
- ① Side swing fulcrum pin.
- ⑤ Root surface of rotary bearing.
At inner ring of rotary bearing.



Note (grease up) : ③ chassis and ⑬ guide wheel tension part.

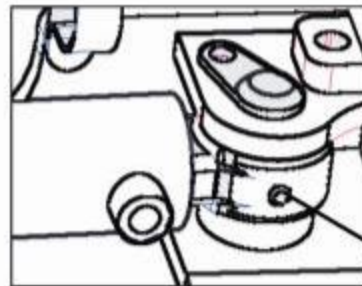
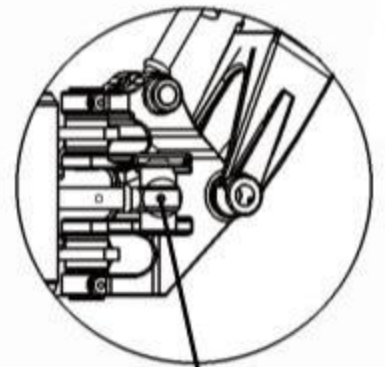
Chassis, such as:

- (1) Push and shovel cylinder 2 ;
- (2) Push the shovel 2.

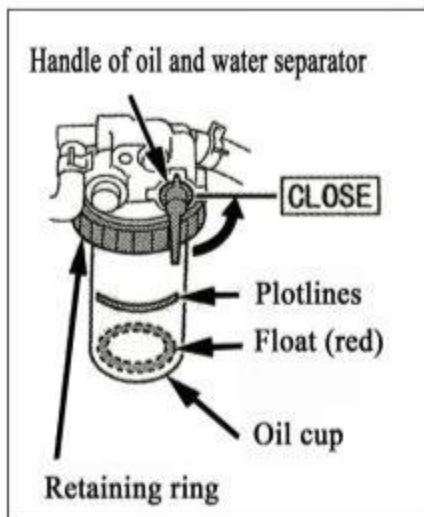


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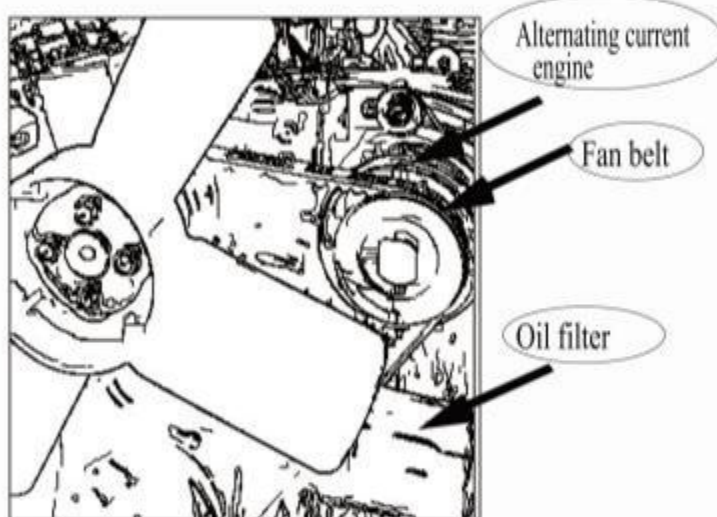
Note(grease up):⑥ Side of the cylinder



Note: ④ Oil water separator for drainage.

If there is water in the oil cup, the red float will float. At this time, please place the handle of the oil and water separator in the position of "close", loosen the fixing ring of the oil cup, remove the oil cup, and pour out the water in the oil cup.

Please be careful not to get dust or dust when assembling.

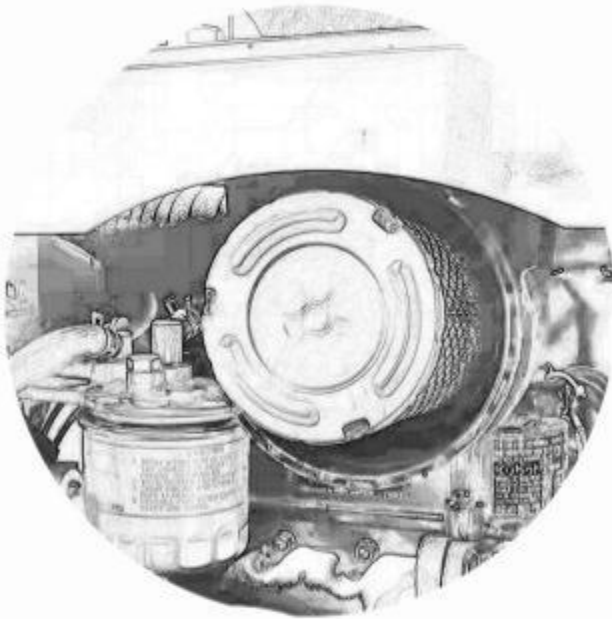


Note: ⑦ Press the central part of the belt with your fingertips [about 98N (about 10KGF)], if the bending degree is about 7mm, it means that the tightening is moderate. If the tension is not appropriate, loosen the bolt and move the AC engine according to the chute to tighten the belt.

If the belt wear belt stretching can not be adjusted, please replace in time.

Note: ⑫ Oil filter element.

Remove the filter element with the filter wrench, apply a thin layer of oil on the O-ring of the new filter element, and firmly tighten it by hand (do not use the filter wrench). Fill the engine with the prescribed amount of oil. Run for about 5 minutes, and turn off the engine after confirming that the oil indicator has no abnormal action. Please confirm the oil level at the secondary oil mark, and replenish the oil in time if it is insufficient.



Note: ⑧ Air filter element cleaning and inspection. Remove the clip, take out the external filter element, clean the external filter element and the inside of the shell, and then install it, do not remove the internal filter element.



Cleaning method:

With dry compressed air [0.49mpa (5kGF /cm²) below] blow the outer part of the filter element, coarse sweep the dust attached. Then it blows outwards from the inside to remove any dustC:



Note: ⑨ Inspection of radiator hoses and hoops.

Please check the radiator hoses every 200 hours.

1. When the clamp becomes loose or leaks, tighten the clamp.
2. If the hose of the radiator expands, hardens, or splits, replace the hose and tighten the hose clamp

Out li ne parameter I i st

	Technical parameter	Unit		
Mini-excavator weight		kg	1900	
Bucket capacity		m ³	0.035	
Working device form			Back-hoe	
Engine	Model		Kubota D902	
	Delivery capacity		1.93	
	Rated output power / speed	kw/r/min	11.8/2500	
	Maximum torque	N.m/r/min	42.9/2000	
Speed	Maximum travel speed	km/h	1.3	
	Slewing speed	rpm	8	
	Maximum climbing ability		30°	
Size	Total length (Transportation)		3237	
	Total width		1000/1250	
	Total height		2282	
	Bulldozer	Maximum cleaning depth		206
		Maximum ground clearance height		194
Caterpillar band part	Ground pressure	kgf/cm ²	0.3	
	Caterpillar band	Material	Rubber	
	Tension type		Grease cylinder	
Hydraulic pump	Form		Gear pump	
Hydraulic fluid capacity	Working pressure	MPa	16	
	Flow	L/min	22+6.6	
	Hydraulic tank capacity	L	21	
	Engine oil capacity	L	3.2	
	Fuel tank capacity	L	11	

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Platform clearance		mm	418
Standard bucket width (with / without side teeth)		mm	430/400
Total length of caterpillar band		mm	1472
Scope of work	Code	Unit	Standard
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Maximum excavation distance	J	mm	3370
Minimum turning radius at front end	K	mm	1416
Maximum excavation ground distance	L	mm	3295
Maximum bulldozing height	M	mm	194
Maximum bulldozing height	N	mm	206

Section 2: Periodic Maintenance

Periodic maintenance is regular comprehensive maintenance of the excavator to ensure stable performance and extend service life of the machine.

It is necessary to replace the hydraulic oil, engine oil filter (air filter, diesel filter), hydraulic oil tank inlet and outlet oil filter element

Please refer to the maintenance cycle schedule for maintenance details.



Periodic checklist

No.	period project		The number The amount	The hour watch shows the time																Since then
				5	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	
				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	Side swing fulcrum pin	grease up	2																	Every day
2	Working device	grease up	11																	Every day
3	chassis	grease up	4																	Every day
4	Oil-water separator	drainage	1	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Every 50 hours
5	Root surface of rotary bearing/ At inner ring of rotary bearing	grease up	1																	Every day
6	Side of the cylinder	grease up	1																	Every day
7	Fan belt	Check the adjustmen	1				○				○					○			○	Every 200 hours
8	Air filter element	Clean the check	1				○				○					○			○	Every 200 hours
		replace	1																	Every 1000 hours Or every 1 year
9	Radiator hoses and hoops	check	2 4				○				○					○			○	Every 200 hours
		replace	2 4																	Every 2 years
10	Oil (CF grade)	replace	1	◎						○						○			○	Every 250 hours
11	Oil filter	replace	1	◎						○						○			○	Every 250 hours
12	Hydraulic oil return oil filter ☆	replace	1						◎										○	Every 500 hours
13	Fuel filter element	replace	2													○				Every 500 hours
14	The hydraulic oil being☆	replace	1																	Every 1000 hours
15	Hydraulic oil suction filter element	replace	1																	Every 2000 hours
16	Tension part of guide wheel	replace	2																	Every 2000 hours
17	Ac engine, starter motor	check	-																	Every 2000 hours
18	Use of electrical wiring and fuse	check	-																	Every year
19	Cooling fluid	replace	1																	Every 2 years

Note: 1, ◎ Symbol indicates only the first time.

2, ☆Symbol indicates that the replacement time will be shorter when using hydraulic front working devices such as crushing hammers.

3, As the machine runs, the oil is gradually consumed and reduced. Consumption varies depending on the operation, engine, etc. Before use, be sure to confirm whether the oil level is in Between the upper and lower limits of the oil mark, and then refueling maintenance. In order to avoid the danger of shortening engine life and cylinder, please use the oil designated by Kubota and the authentic oil filter of Kubota. And comply with the specified replacement time.

Chapter 5: TERROR XIX Excavator Troubleshooting

Some common faults and maintenance methods of excavators

As a heavy-duty construction machinery, the excavator's long working load and complex working environment make it prone to some common failures. This article will introduce some common faults and repair methods of excavators.

1. Hydraulic system failure:

The hydraulic system of the excavator is one of its important working systems. Common faults include excessive hydraulic oil temperature, abnormal noise of the hydraulic pump, Weak hydraulic action, hydraulic oil leakage, etc. The repair method is as follows:

- Hydraulic oil temperature is too high: Check whether the hydraulic oil cooler is damaged or blocked, clean or replace the hydraulic oil cooler
- Abnormal noise from the hydraulic pump: Check whether the hydraulic pump is decelerated or worn, replace the hydraulic pump or repair the internal parts of the hydraulic pump.
- Hydraulic action is weak: Check whether the hydraulic oil is sufficient. If the hydraulic action is normal after the machine is started, but the machine gradually becomes weak after it heats up, the hydraulic oil or hydraulic pump needs to be replaced.
- Hydraulic oil leakage: Check whether the hydraulic system pipelines and seals are damaged, and replace or repair the pipelines and seals at the leaking location.

2. Engine failure:

- The engine cannot start: Check whether the battery voltage is normal, whether the fuel is sufficient, whether the ignition system is working properly, and deal with it according to the specific situation.
- Engine power decreases: Check whether the fuel filter is clogged and whether there are foreign objects in the air intake system, and clean or replace the corresponding parts.
- The engine emits black smoke: Check whether the fuel system is improperly adjusted, whether the air intake system is clean, confirm the fuel quality, and adjust or clean the corresponding parts.
- The engine cannot charge the battery: check whether the generator circuit is loose and whether the electronic regulator is damaged

3. Electrical system failure

The electrical system of the excavator includes circuits, switches, etc. Common faults include circuit short circuit, unstable battery voltage, etc. The repair method is as follows:

- Circuit short circuit: Check whether the circuit wiring is correct, whether the bulb is burned out, and repair or replace related parts.

-Battery voltage is unstable: Check whether the battery is aged or damaged, recharge or replace the battery.

- Check if the fuse is damaged

When repairing an excavator, in addition to repair methods for specific faults, you also need to pay attention to the following points:

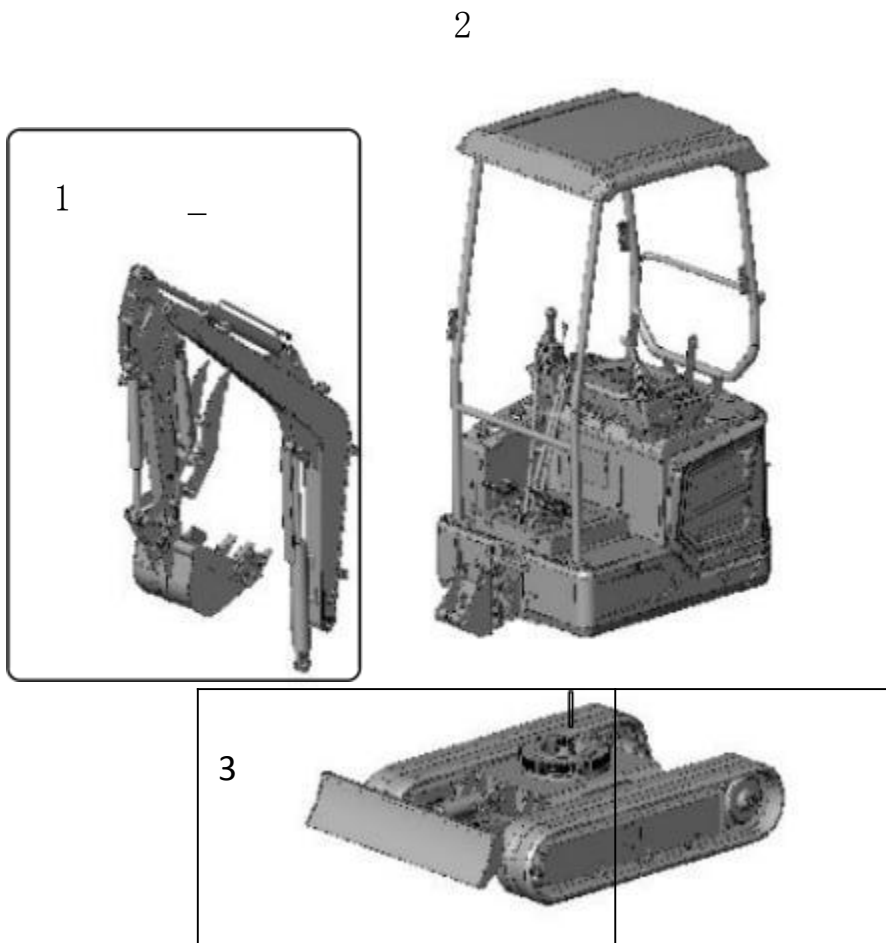
-Regular inspection and maintenance of the excavator, including replacement of hydraulic oil, fuel, engine oil, etc., and lubrication.

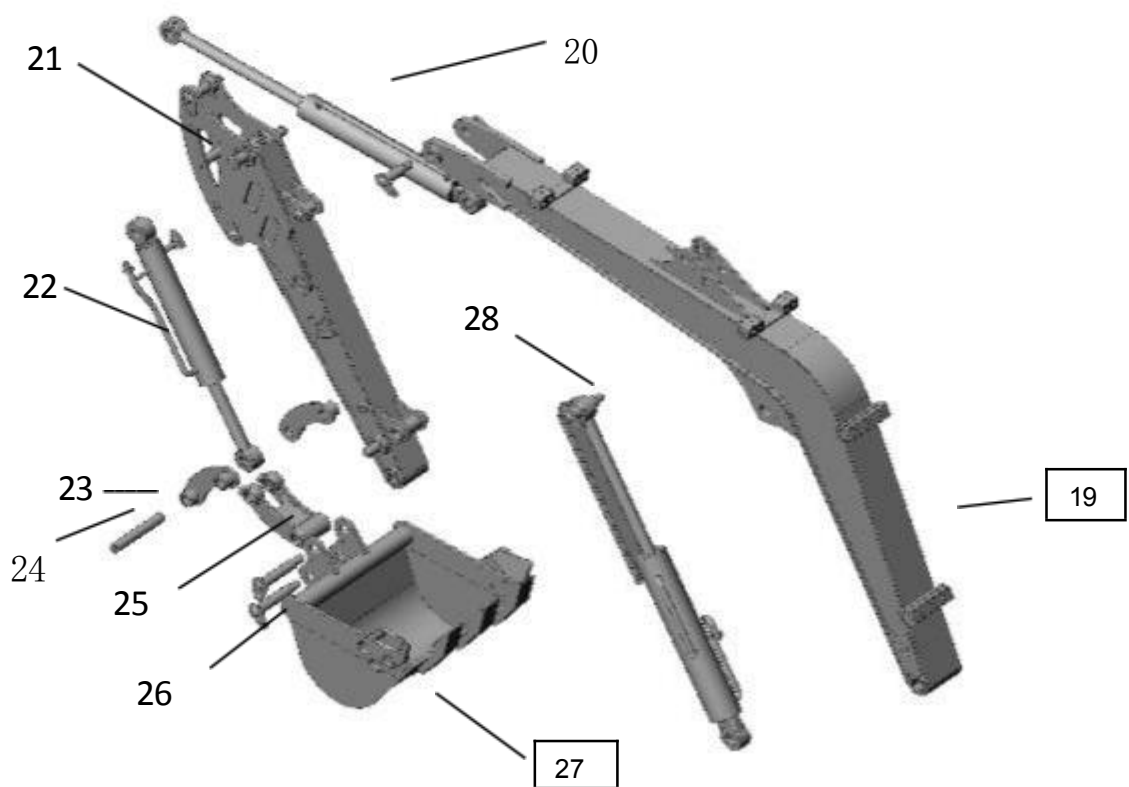
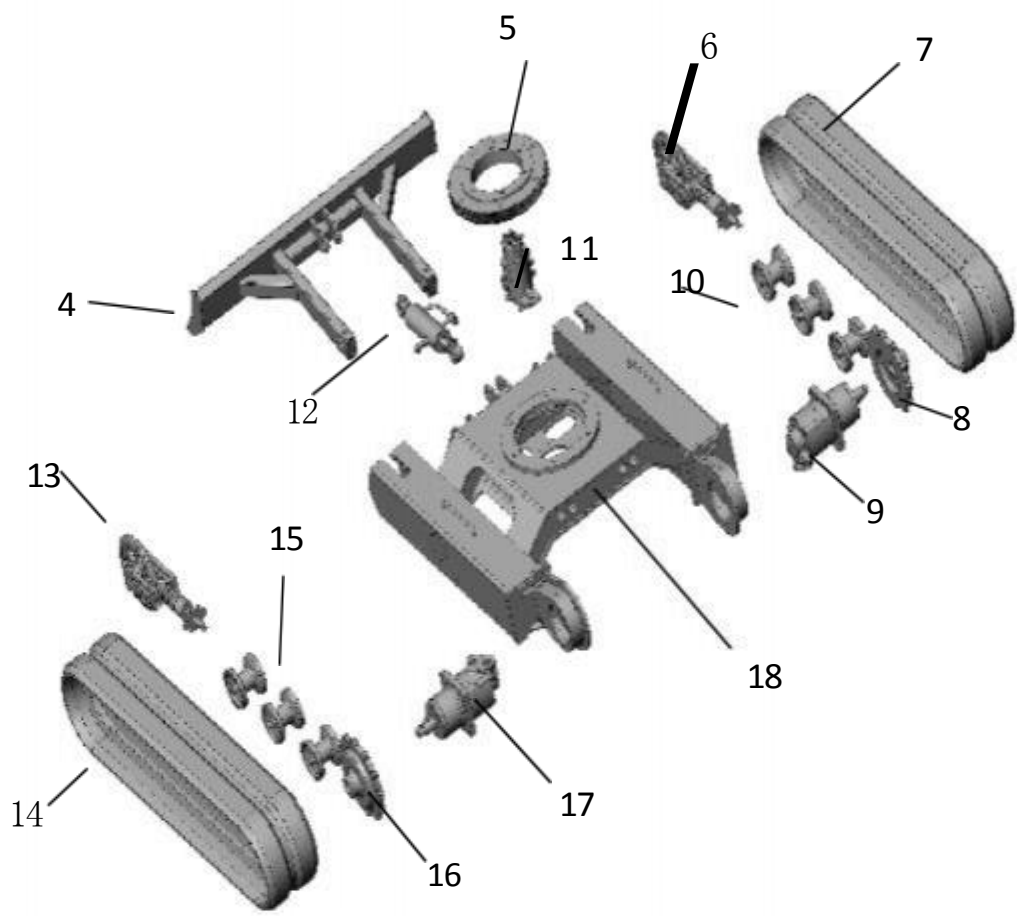
- Do a good job of dust prevention and regularly clean dust and debris on the surface of the machine to ensure the cooling effect and the normal operation of the machine.

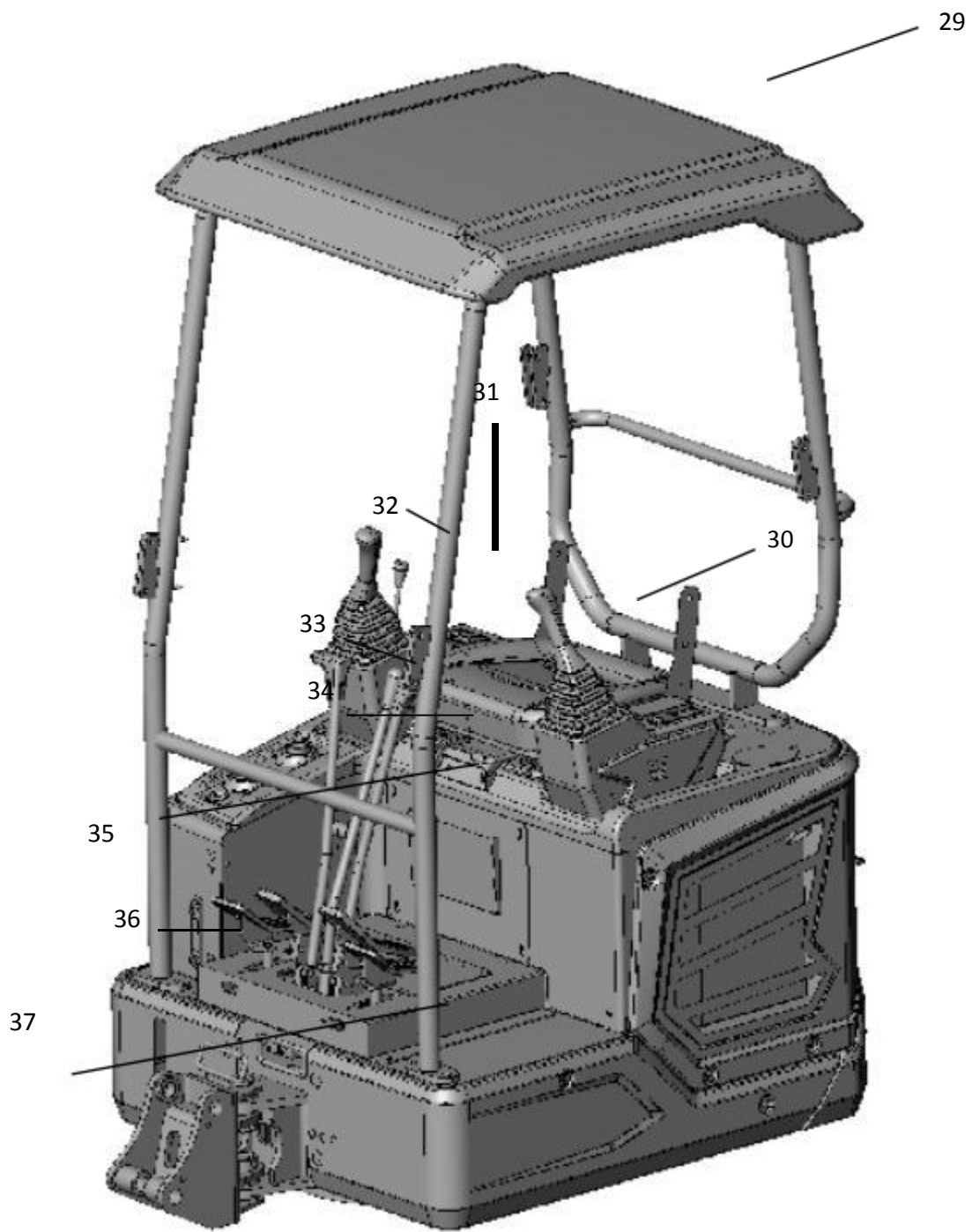
-The excavator should be used in accordance with the operating specifications to avoid overload work and improper operation and reduce the possibility of failure.

Chapter Six: TERROR XIX Excavator Parts List

Illustration of some parts of TERROR XIX excavator







EXCAVATOR PARTS LIST	
SERIAL NUMBE	PART NAME
1	Working equipment
2	Upper body
3	Excavator chassis
4	Dozer blade
5	Slewing support
6	Guide wheel
7	Chain rail
8	Disk drive
9	Travel motor
10	Support wheel
11	Central swivel joint
12	Dozer blade cylinder
13	Guide wheel
14	Chain rail
15	Support wheel
16	Disk drive
17	Travel motor
18	Lower body bracket
19	Excavator boom
20	Excavator two-arm cylinder
21	Excavator arm
22	Bucket cylinder
23	Bucket connecting rod plate
24	Pin
25	Connecting rod motherboard
26	Pin
27	Bucket
28	Boom cylinder
29	Carport
30	Left hand handle (small arm and swivel)
31	Throttle control lever
32	Right hand handle (boom and bucket)
33	walking pole
34	Dozer blade operating lever
35	walking pole
36	Side swing foot pedal
37	Breaker operating pedal

