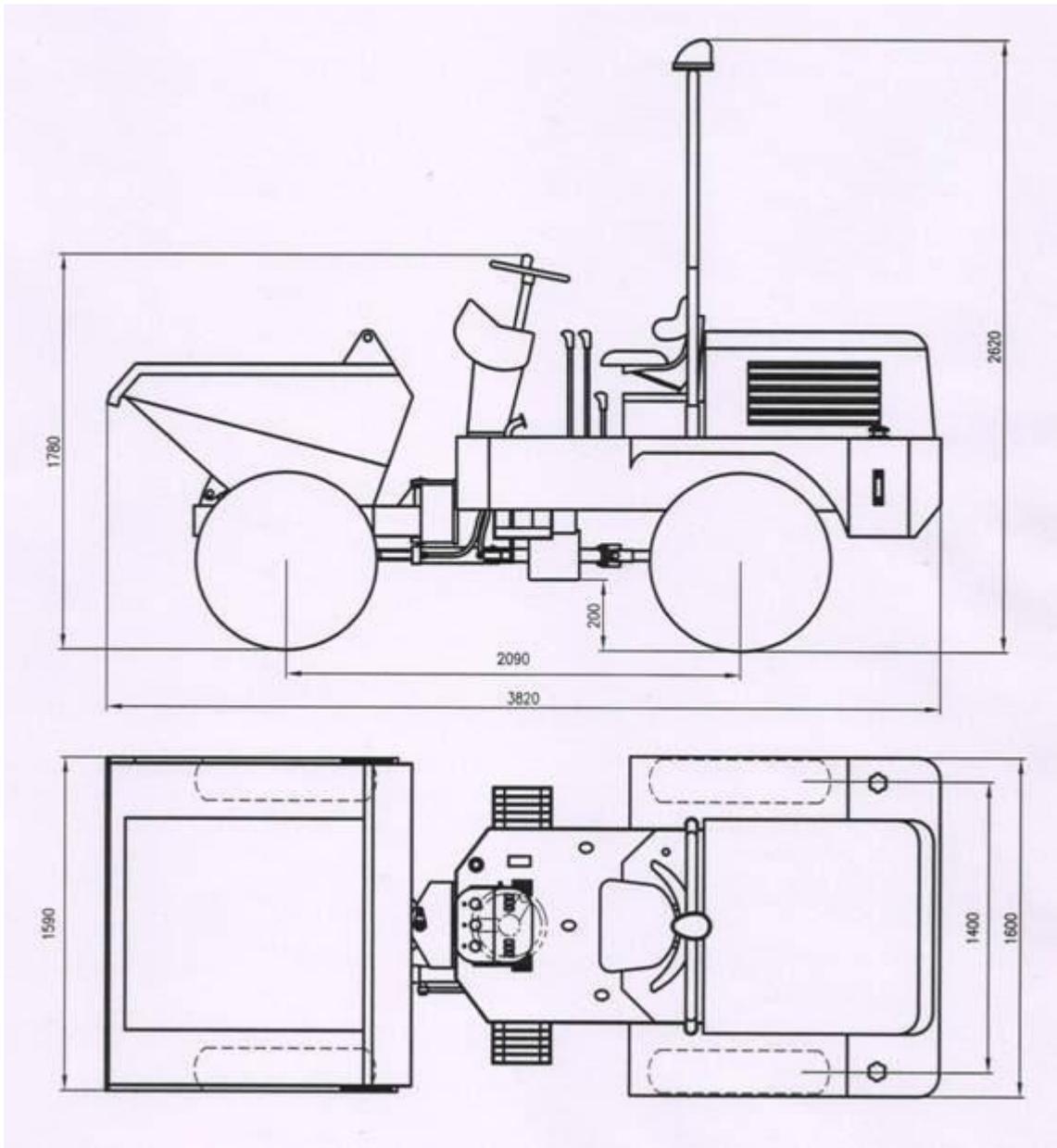


**Approved by ISO9001:2000 International
Certificate System**

FY30B MINI DUMPER TRUCK

User Manual





Thanks for selecting and purchasing our products, before to use the product, please read this product manual carefully. The manual will help you to operate the products correctly. It shows the products performance, technical parameter, the use and maintenance of the products, and the cautions.

Thanks for your trust and support!

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Chapter 1 Product Introducing, and Cautions

FY30B-type Mini Dumper is an articulated dump truck with single bucket and hydraulic unloading. It has been developed and designed in accordance with user requirements, reference models after absorption of domestic and similar structural features and advanced technology. The machine has been widely used in construction and field building.

FY30B -type Mini Dumper has the following characteristics:

- 1, Articulated frame, small turning radius;
- 2, The branded engine, front + rear axle drive, and robust power.
- 3, Improved hydraulic filtration system to ensure reliable circuit operation;
- 4, Rear diesel engine, hydraulic steering, operation simple and flexible.

The machine is reasonable in design, compact in structure, flexible in manipulation, and easy in maintenance. Its quality standard complies with national standards of China.

It is widely used in the construction, municipal engineering, urban and rural gardens, lime, sand, cement factories, mines and other enterprises and institutions and departments, in particular, apply to the narrow space for the loading operation of sand and construction machinery (mixer sand machine, mixer) . The main parts of the dump trucks are brand-name manufacturers products, interchangeability of good, reliable, and parts resources.

Cautions!

1. The driver shall be specially trained and read the operation manual before operation.
2. New machine shall be operated without loads before working in fields .
3. Check diesel oil level. Fill in diesel oil, hydraulic oil and lubricate the joints.
4. To avoid damage the coupling and other transmission parts , it is prohibited to start at high speed gear.
5. High speed or zero gear drive shall be prohibited during going-down slope.
6. In the cold-weather area, cooling water shall be drained out of water tank if the machine is not used, so as to avoid freezing and cracking.

The specifications may alter at any time due to continuous improvement of the design and requirements of different users. The factory's products may be associated with some of the similarities and differences of the explanatory . Any question, please contact our dealer in your country.

Chapter 2 Technical Performance and Parameters

2.1 Performance and Parameters

Rated load weight (kg)		3000
Rated bucket capacity (m ³)		1.5
Unload height (mm)		390
Max climb ability		21%
Travel speed	Low speed I gear (km/h)	.3
	Low speed II gear (km/h)	9
	High speed I gear (km/h)	8
	High speed II gear (km/h)	20
	Reverse gear (km/h)	7.5
Min turning radius (m)		5.0
Bucket width (mm)		1700
Overall dimension (length X width X high) (mm)		3800x1700x1780
Tread (mm)		2060
Wheelbase (mm)		1400
Minimum ground clearance (mm)		200
The weight of machine (kg)		1780
Engine Model		2110
Rate power (kw)		28
Rated speed (r/min)		2200
Start-up mode		Electric starter

Chapter 3 The security and warning Labels

Despite numerous security precautions, there are still some potential danger. Necessary security warning signs shall be pasted on the machine as follows:



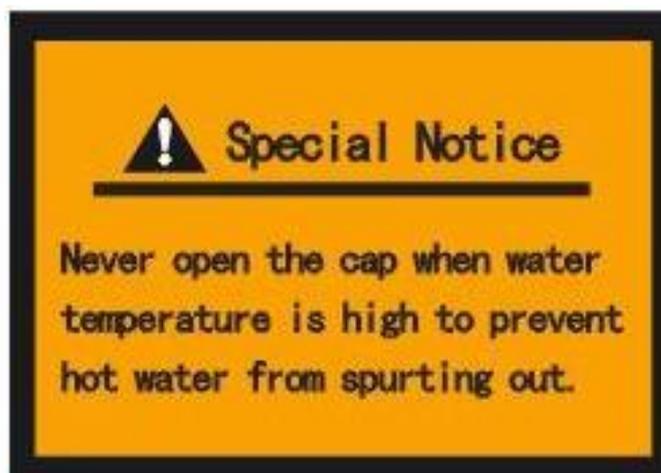
reversing warning Labels



safety warning Labels



safety warning Labels



safety warning Labels

Chapter 4 Inspect and adjust of dump trucks

All components of the dumper have been tested and adjusted to the best condition before delivery. It is unnecessary for the operator to make adjustment. Only after a period of working time, some of the components shall be appropriately adjusted by the methods as follows:

4.1 The engine

Pls see the diesel manual

4.2 Clutch:

1. Clutch pedal free travel adjustment: diagram 3

So as to ensure the clutch no slipping during power transmit, 2-2.5 mm gap(which is 25-30 mm free stroke for clutch pedal) shall keep between disengaging bearing and disengaging lever. During operations, the gap between disengaging lever and its bearing decreases gradually and even vanish. So, the pedal's free stroke shall be checked and adjusted periodically.

The adjustment of free stroke is achieved by the alteration of clutch pull rod's length. Lengthen the pull rod and the free stroke of pedal reduce; Shorten the pull rod and the free stroke increases.

2. Adjustment of clutch disengaging lever's position: diagram 3

The lower edges of 3 pieces release lever and the disengaging bearing shall be contacted with each other during operation. The gap of them shall not be over 0.10 mm. It can be adjusted by fasten/unfasten the screws.

Disengage swiftly and contact smoothly when operating clutch. Smash is prohibited when joining clutch.

4.3 Triangle belt loose and tight adjustment

1. drive transmission belt adjustment Illustration 4

The drive belt's loose and tight adjustment is achieved by adjusting stretching pulley position,(turn loose and tighten the stop nut to change the stretching pulley position.)

2. hydraulic pump belt's adjustment: Illustration 5

The hydraulic pump belt's adjustment is achieved by adjusting hydraulic pump's position to change belt's loose or tight. Loosens the stopping nut, and adjust the bolt's front and back position to realizes.



Clutch disengaging lever position's adjustment: Illustration 3



drive transmission shaft belt adjustment Illustration 4
The position: at the right corner of seat



hydraulic pump belt's adjustment: Illustration 5
The position: at the left corner of seat

4.4 Transmission shaft:

The dumper has four universal joints, compatible with those of BJ130 automobile. There is an inject nipple on the cross axle. After works for 150 hours should to pour the lubricating grease.

When assembling or disassembling the transmission shaft, the relative position of the two edge of flange cross shall be well noted, and kept in same surface. Any time shall attentions on tightness of the bolts on the two edge contact flange of the transmission shaft.

4.5 Drive axle:

Contact area of drive gear and driven gear shall in accordance with criteria. Therefore, it can be used for long-term and without adjusted. Adjustment is required only when replacement of defective parts or moving wear and tear parts.

Pay attention to the following items when adjusting:

- (1) Drive gear's bearing clearance: It is obtained by adjusting the thickness of drive gear inner bearing race's mat. No gap on shaft-direction and free rotation is required after adjustment.
- (2) Drive gear and driven gear tooth side clearance: measures the clearance around radius 45mm of drive gear's flange plate, its displacement (arc length) should between 0.2-0.4mm. Inspect contact face with tintage method, trace shall be not less than tooth depth and tooth length by 40%, and is in slight in-tendency to small edge. The joggle clearance and contact face are rectified by adjusted by the thickness of the race's mat and the adjustment nut of the two side trigger differential carrier.
- (3) After driving for 100 hours every time, check the driving axle oil level. The correct oil level is not less than oil filler lower level 10mm, when the necessity increases, After driving for 300 hours every time, should replace the gear oil, this dumper should apply No. 18th hyperbolic curve gear oil.
- (4) After driving for 100 hours every time, should replace shell bearing grease by one time. adjust bearing preload until a suitable degree.

4.6 Braking system:

The machine uses BJ130 hydraulic brake system with 160mm brake pedal full stroke and 8-10mm free stroke. Check when the brake pedal is too low.

- (1) Whether pipeline oil leak.
- (2) Whether the gap between the shoe and drum' is oversized or not.
- (3) Whether there is air in pipeline or not.

After working for 200 hours every time, should inspect the brake shoe attrition. When the shoe wears down causes the pedal travel is oversized, must adjust the gap between the shoe and drum's, the method is as follows:

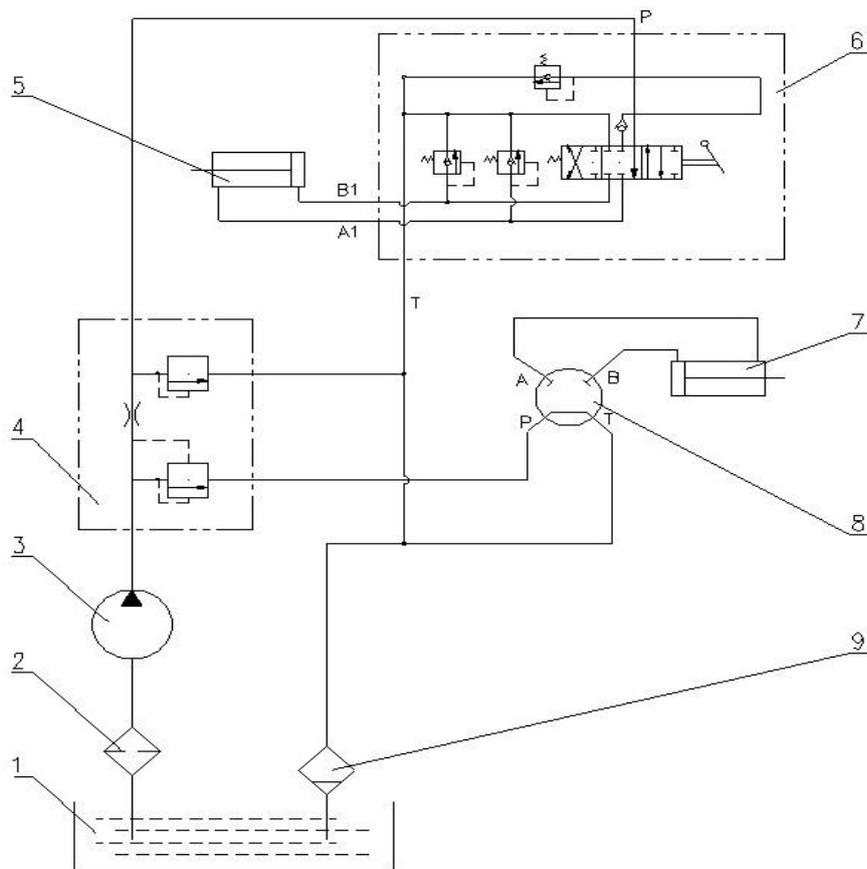
- (1) Prop up the wheels which need to be adjusted.
- (2) Find the eccentric bolt in brake shield plate's back, rotated the eccentric bolt, until the shoe contact the drum, then, release the eccentric bolt, until wheel free rotation, and the shoe and the drum no longer rubbed any time.

Drain the air out of the brake pipes and cylinders when replace brake fluid and fill in new brake fluid in case no oil in storage pot. Its method is as follows:

- (a) Step on the brake pedal continuously several times, loosen the bleeder valve, drain the air out of pipes, tighten up the air valve, and then loosen the brake pedal. Repeat several times until there is no air in the oil tubes.
- (b) During air deflation, please supplement brake liquid continuously with the lowering of oil storage tank level. No oil in storage tank is prohibited. Replenish the brake liquid after all air drained out. The dumper shall use No. 912 brake oil.

Brake pedal's free stroke is adjusted by the push rod of master brake cylinder.

Illustration 6.



- 1--hydraulic tank, 2--filter net
 3--hydraulic pump, 4--privilege valve
 5--dumping cylinder, 6--steering valve
 7--steering cylinder, 8--commutator
 9--cooler

hydraulic system schematic diagram

diagram 6.

1,hydraulic tank, 2. filter net, 3.hydraulic pump, 4.Privilege valve, 5.dumping cylinder,6 change valve, 7.steering cylinder, 8. commutator. 9.cooler

Hydraulic System is composed by the gear pumps, .multi-way valve, Privilege valve, dumping cylinder, steering cylinder, fuel tank and oil pipes.

Pressure oil from the gear pump by the multi-way valve, through the manipulation of the slide-valve to the oil supply to the fuel tank. Device does not work when the oil back to the oil tank by the middle of oil pipe.

Hydraulic system's use and maintenance should pay attention to the following several points:

1st, the oil in fuel tank' must pass through strict filters, not only check and clean oil filter frequently, but also maintains the normal level.

2nd, Normally please replace the oil when the working time accumulates about 1200 hours. For interrupted use, replace the oil about a half year or one year every time according to specific conditions.

3rd, when hydraulic system start should drain away air, and prevent the air to enter the hydraulic system again.

4th, do not allow to adjust hydraulic system's working pressure at will.

5th, During the hydraulic system steady work, should alert the hydraulic system various parts' working condition and the sound, so that prompt trouble clearing.

Chapter 5 Electrical Equipment

FY30B electrical system use voltage of 24 DC volts, negative earth system. Its electrical schematic diagram see **diagram 7**.

5.1 The battery

Battery model is 2pcs 6-QA-80. Its function is to supply electricity to starting motor when start-up the engine. When the engine is in normal working, if the generator voltage is lower than the battery voltage, it supply electricity to electrical appliances; if generator voltage is higher than the battery voltage, then the generator incharge the circuit to the battery to store electrical energy .

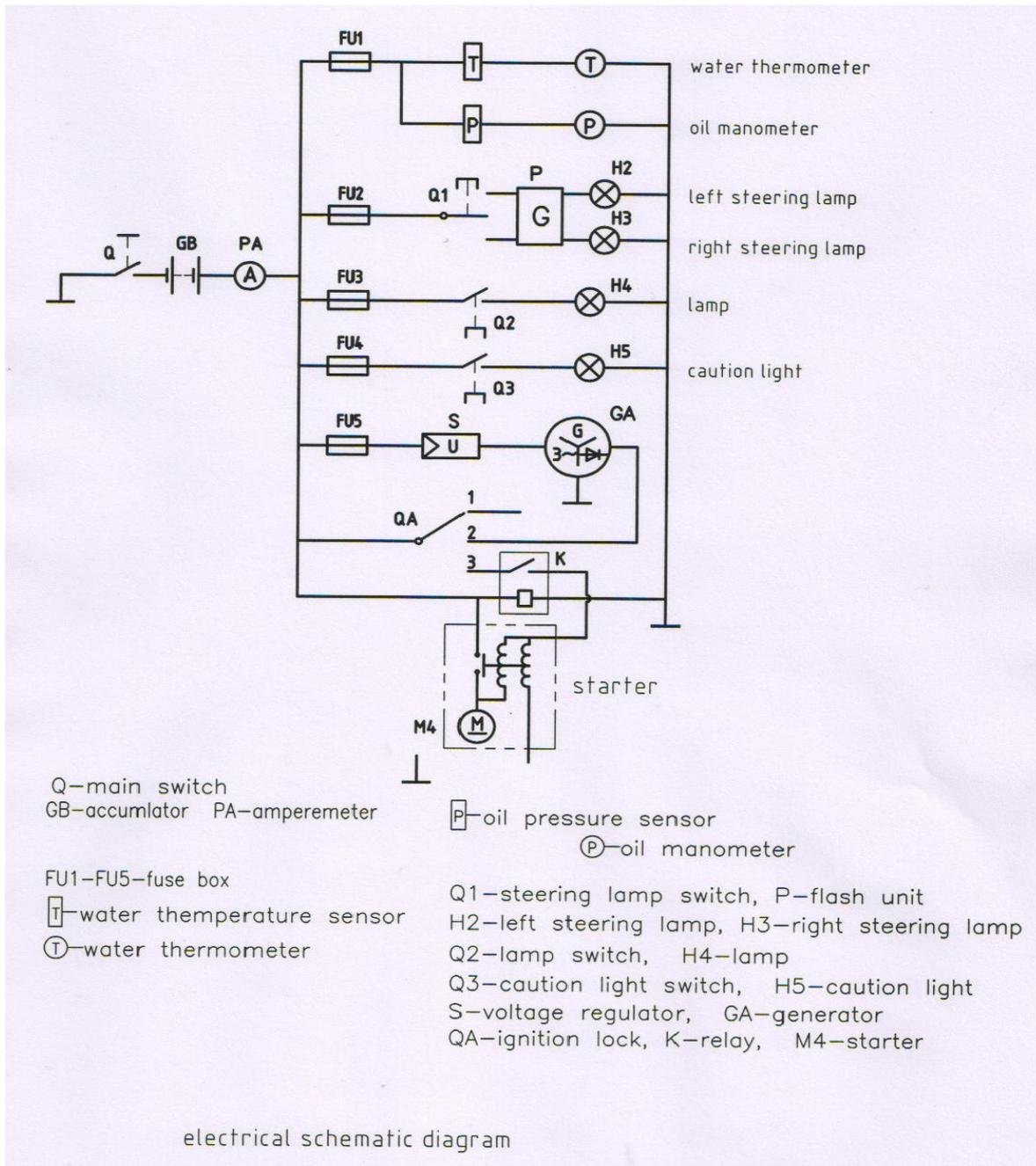


Diagram 7.

Q- main switch, GB-accumulator, PA- ampere-meter, FU1-FU5- fuse, T- water temperature sensor, T- water thermometer. P- oil pressure sensor, P- oil manometer, Q1- steering lamp switch, P- flash unit, H2- left steering lamp, H3- right steering lamp, Q2- lamp switch, H4-lamp , Q3- caution light switch, H5- caution light, S- voltage regulator, GA- generator, QA- ignition lock, K- relay, M4- starter

Cautions!

1. Keep in charging state. Charge once per month at least in case of no use for long time.
2. Check regularly the electrolyte liquid level. The liquid level should be 10-15 mm higher than the pole plate, and supplement distilled water in case of insufficiency. When certain electrolyte leaks or sprinkles, should add the proportion 1.28 electrolytes,
3. Check the battery vent plug regularly. Remove the external soil and dirt, clean spills of electrolyte, and electrodes coated with thin layer of calcium-based grease to prevent corrosion.
4. Battery should be fastened against vibration damaged.

5.2 Generator and regulator:

1, Silicon rectification generator:

Generator has two wire connecting pole marked "+" and " F ". They shall be connected respectively with the same marked connecting pole on rectification regulator.

Generators both ends fixed with bolts on the generator bracket; another generator bolster feet, adjust the belt triangle for the elasticity degree.

2, Relay Regulator

Relay regulator is composed by the circuit-intercepting device, voltage regulator, circuit limiter. Relay Regulator has two wire connecting poles marked "+", " F " and "-“ ground bolt. "+", " F" terminal should be connected with the same superscript marked terminal on the generator.

Battery "+" terminal connect with Ampere meter "-" terminal. The Ampere meter "+" terminal should connect with electric locking first gear.

In case abnormal work of regulator found or after 1000 working hours, the skilled electrician should make the adjustment.

5.3 The motor

Its application is to supply power from the battery to start the engine. Starter gears rotation is driven by the electromagnetic drive and with a unidirectional roller clutch, to prevent generator armature's to damage after starting engine high speed revolving.

The use time of the motor shall not surpass 15 seconds continuously. Two starting time interval is not less 45 seconds. In case several failure in starting, please check out the reason.

5.4 Others

1. The Ampere meter

The Ampere meter display for current incharge and discharge. when incharge current to the battery from the engine , the bias indicators "+"; contrariwise the bias indicators "-". when no current the bias indicators "0"

2. Electricity lock

The electricity locks control entire electrical system. After the key insertion locking hole, turn one gear toward right, and all electric appliance's power source connection; Turn two gear toward right, the generator starts. Loosen the electric lock at once and the key return automatic to first gear position, so as to protect starting motor.

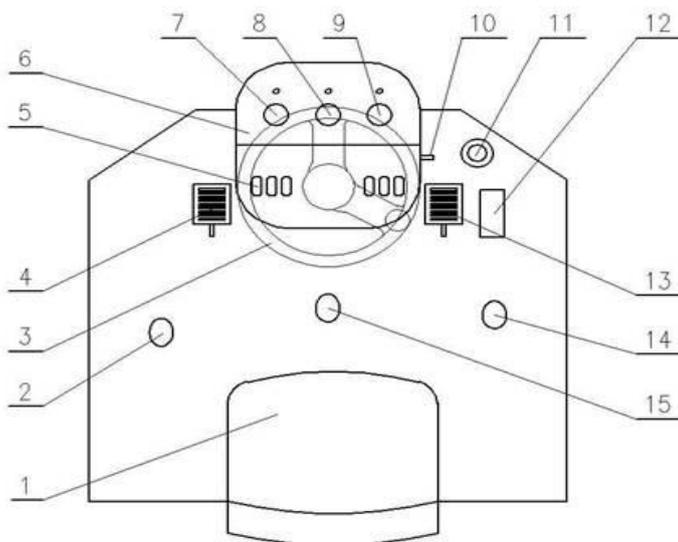
Chapter 6 Driving operation

Before to drive and operate, the driver should be familiar with the structure, technical maintenance, operation methods and so on, in order to ensure safe driving and operation, extend the life of dumper and productivity. During driving and operating, should pay attention to the following safety matters:

1. The driver must learn traffic rules, the mechanical structure, methods of operation, and read the operating instruction carefully.
 2. When traveling, no place is permitted for personnel riding except the cabin
 3. Alert at any time by the reaction of the appearance about the work of departments.
 4. During operation, people is prohibited to moving around bucket.
 5. When switch off the engine, stop and park the dumper to prevent accidents caused by steering failure.
- When carries on driving and the work operation should pay attention to the following security item:

6.1 Operate mechanism and appliance arrangement schematic drawing:

diagram 8



- | | |
|-----------------------------------|---------------------------------|
| 1—seat | 9—oil manometer |
| 2—high and low gear control crank | 10—ignition lock |
| 3—steering wheel | 11—brake fluid injection nozzle |
| 4—clutch pedal | 12—accelerator pedal |
| 5—switch | 13—brake pedal |
| 6—indicating panel | 14—hopper control lever |
| 7—water thermometer | 15—gearbow control lever |
| 8—ampere-meter | |

Operate mechanism and appliance arrangement schematic drawing

diagram 8

1, seat, 2. high and low gear control crank, 3. steering wheel, 4. clutch pedal, 5. switch, 6. indicating panel, 7. water thermometer, 8. ampere-meter, 9. oil manometer, 10. ignition

lock, 11. brake fluid injection nozzle, 12. brake pedal, 14. hopper control lever, 15.gearbox control lever

6.2 New dumper commissioning.

- 1.To use the new dumper, commissioning must be carried out. Any new dumper without commissioning shall not be used on formal working.
- 2.Commissioning of machines can run the friction parts, so as to avoid breakdowns and ensure reliable steady work.
- 3.This provision also applies to overhauled dumper.
- 4.The commissioning of new dumper includes 2 operations- commissioning on empty and full load.

6.3 Empty commissioning (about 8h)

1. Methods

- (1) By the method of starting the diesel engine, after the initial start-up with idling low speed working about 5min (not put into gear), then gradually speed up to the highest speed for 10mins.
- (2)Control the dump rod, to make the hopper roll-over and withdraw. The time goes about 10 minutes.
- (3) Put the forward gear, after reverse gear, empty run. At the first low-speed ,then high-speed, uniform arrangement of each running.

2.Inspection Items

- (1) Overall check various bolt, nut tight situation. Especially the cylinder cover bolts. , Exhaust pipes bolts , front and rear drive axle fixed bolts, ring rim nuts, transmission shaft bolts.
- (2) Inspects gear box's oil level.
- (3) The engine, gearbox, drive bridges are all normal parts of the voice.
- (4) The work of installation of hydraulic systems, gearbox, engine lubrication systems, braking systems, engine cooling system, such as the availability of oil, water leakage.
- (5) All instrument readings are normal or not.
- (6) Steering flexible or not, braking sensitive and reliable or not.
- (7)During working, devices is jammed or not.
- (8) Inspect electrical work.

6.4 Operating test (about 20 h)

1. Operation according the operation method, and gradual increase feeds the quantity.
2. During operation test, not only to check the empty commissioning projects, but also observe loader capacity with different materials.
3. During running-in, load capacity shall not surpass 70% of the rated load, the driving speed shall not surpass 70% of the maximum speed.

6.5 Driving operation:

(A) Caution:

1. Added diesel must be pure, diesel labeling requirements should be consistent with quality requirements.
2. Work devices used in the hydraulic system hydraulic oil must be clean.
3. Accordance the regular to maintenance and lubrication.
4. Keep the engine at idle rotation after started. Start running when the water temperature reached 55 °C
5. When the hopper reaches the required location, the control handle should be put in the middle position
6. After operating dumper achieves the right position, should put the control handle in the middle position.
7. Delivery of materials should be kept off the bottom stable, in order to maintain the stability of traveling.

B) drive with empty load:

1. Starting

To carry out pre-driving inspection, confirmed that ministries are conducted after the normal start-up engine. Starting As for the former should be a neutral position of the joystick, and then insert the key to the electric switch and rotate one position clockwise, connect power, treads the accelerator, and then start the engine. In case of low winter temperatures, the cooling water should be released, plus a start-up hot water or boiling water .Start-up should be to observe the hydraulic engine, adaptive control throttle to prevent bush-burning engine.

A start-up time 5-15S, if over time can not start, it should be stopped until a minute after starting for the second time. If there is no energy for more than three times in a row. Should check the reasons for lower emission energy failure.

2. Start with the drive

After starting the engine with middle gear speed, should be carried out under the warm-up and pay close attention to the direction of oil pressure gauge. At the same time, diesel engines and other systems checks are all normal Ministries are all right, then rise to the transport bucket position, first linked to progress stalls, slowly treads the accelerator pedal, you can travel loader, and then depending on the operation of roads and the need for speed, to choose a suitable stalls and for driving and operating the accelerator.

3. Parking and off

Engine shutdown before moving to idle 2-3 min, so that uniform cooling ministries. Winter Parking screw should be opened after the release valve engine, put the net all the water cooling system to prevent the mobile pieces of Frost Crack. When the water temperature to -20 °C -30 °C, the battery should be removed, and put in the warm room so as to avoid frost crack.

In addition, withdraw the hopper and shut off the electricity before stopping the dumper.

(C) operations to manipulate

Operating control is related to operation proficiency of the driver. Drivers of different proficiency have different operating practices. It may grasp voluntarily in the work operating practice, Improves and sum up operating procedure unceasingly, raises the production efficiency and machine's life.

Before operation ,should to clear the ground, filling pits, such as the eradication of hard stone prevent damage to tires and barrier operations.

Chapter 7 Technical maintenance

The operating work environment of dumper are more worse, often operation on bumpy road construction site, the part are vulnerable by strong vibration or impact, will cause machine parts loose or damaged, in order to ensure the dumper is in good performance, the normal operation, extend service life, not only be familiar with the various parts structure of the machine, but also required regular inspect the technical state of machinery and technical maintenance seriously. In addition to this chapter introduces many the technology maintenance of parts except the engine, engine maintenance please refer the engine instruction.

7.1 Oil and lubrication

1. Add fuel, hydraulic oil, lubricating oil and grease, should clean the inject oil tools, container and oil scrub to prevent water, mud, debris into the oil being.
2. Add variety of oils, it is important to make the machine in a horizontal position. Besides attaches the oil level indicating device to be possible to carry on the observation, up to generally overflows by the oil plug. The gear box oil dipstick on the covers of gear box.
3. when add lubricating oil, should put out the dirty oil , inject the clear wash oil to the right oil level, in the empty load situation, make the engine to work several minutes, then stopping work, puts out the wash oil , then inject clean oil, if the oil is too viscosity, may heat up slightly beforehand too greatly or dilutes, then inject.
4. Under the different working conditions, should use the different viscosity, the trademark oil, please strictly carry on according to Table 7-1.

7.2 Various oil type

(see table 7 - 1 shown)

Item model	
Fuel tank	Summer (10 °C above) No. 0 diesel, in winter (10 °C below) No. 10 diesel.
Oil Pan	Summer (10°C above) CC40, winter CC30 diesel engine lubricating oil
transmission gear box, drive axle bridge	18 # hyperbola gear oil
hydraulic oil container	Winter No.46, Summer No.68 anti-wear hydraulic oil (International oil)
Various grease nipple	Combination calcium base lubricating oil
Brake oil	plus "912" synthetic brake fluid

7.3 Lubricates

The correct lubrication may reduce machine's friction and the components attrition greatly, thus lengthens machine's life. when lubricate please note the fore-mentioned oil used instruction, the lubricating oil please select according to the Table 7-1.

Engine's lubrication please base on the engine instruction booklet stipulate to carries on.

Tilting skip lubrication points and filling-up area:



pre-and back – Twin-bridge filling-up area



transmission shaft lubrication filling-up area



Latter swings lubrication filling-up area



Hydraulic pump lubrication filling-up area



Hinge lubrication points (top and bottom each one) filling-up area



Hydraulic fluid tank refueling position



fuel tank refueling position



Brake fluid refueling position

7.4 Routine maintenance

The routine maintenance carries on each class of work , its content are not many, the time is short, but it is **very** important to minimum accidents in normal work. The routine maintenance's prime task is as follow:

1. Pre and after operation of the machine, outside parts of the machine should keep clean.
2. Check whether the loosening of fasteners or missing, and filled and tightened.
3. Check whether the mechanical parts damage or not.
4. Check whether increase full of lubricating oil for each lubricating part.
5. Inspection of all fuel tanks (fuel tank, working fuel tanks, brake pot), oil level must be up to the mustard .
6. Check the engine cooling water is adequate.
7. Check the electrical system to see if any loose on wire connections and battery power is adequate.
8. Check appearance , light is complete, good.
9. Check whether the manipulation flexible and reliable or not.
10. After starting ,check oil leakage, water leakage, and abnormal noises.
11. Test the reliability of the braking, steering is flexible or not.

7.5 Regular maintenance

(A) the technical maintenance of each week (about 50h after work)

besides routine maintenance project, but also needs to carry on as follows.

1. Inspect whether the brake pedal's traveling schedule does meet the requirement, if does not tally gives to adjust.
2. Fastening the front and rear drive shaft connecting bolts, drive axle connecting bolt, nut tire.
3. Inspect the battery to a single cell level within the height and the proportion of electro-hydraulic (15°C when proportion is 1.24-1.27), if insufficiency , add the distilled water and incharge current.
4. Inject the calcium-based grease to the nozzles

(B) the technical maintenance of each month (after about 200h)

In addition to daily, weekly technical maintenance, but also to add the following items:

1. Survey tire pressure. Tire's standard inflation pressure is 0.3Mpa. if insufficient should fill.
2. Clean the filter of fuel, hydraulic oil.
3. Check the brake system whether there is oil leak or damage.
4. Inspection and tightening wheel bolts, brake disc and the bearing cap bolts.

7.6 Technical maintenance of each quarter (after about 600h).

1. Inspects the multi-way valve, each kind of cylinder's leak situation, if has causes the work equipment drop phenomenon seriously, should be repaired and elimination.
2. Inspect whether there is a damage on the brake total pump leather cup.
3. To adjust the bush bearing gap, and causes the outside ending beat brake disc is smaller than 0.20mm

(D) technical maintenance every six months (after about 1200h)

In addition to daily, weekly, monthly, quarterly technical maintenance of the project, but also added the following items:

1. Replacing all the fuel and oil circuit system, hydraulic system oil, gearbox, the front and rear bridge and the brake oil, gear oil. And cleaning pipes, tubing, filter, etc., and then pour into the new oil after purification.
2. take apart and wash brake master cylinder, check the braking effect.
3. Inspection front and back the bridge, the main transmission gear meshing, the victims, the driven bevel gear of the gear gap is too large, should be adjusted to within 0.2-0.34mm.
4. The work installment and rack, whether there is distort, the welded joint break or not..

Chapter 8 General reasons and removing methods

ITEM	Trouble	Reasons	Removing methods
First, the engine		See Diesel Manual	
Second, clutch	1. joint slips	1. Footboard free stroke too small	1. Adjust
		2. The pressure spring weak	2. Replace pressure it
		3. There is greasy dirt on the friction piece surface	3. Clean
		4. Friction wear and tear excessive	4. Replace it
	2. when joint trembles	1. The spline wears excessive	1. Replace the clutch shaft or axis
		2. The bolts fastening Loosening	2. Wrap fastens
		3. There is fat on rubbing surface	3. Clean
		4. The separation lever to adjust inequality	4. Adjust
	3. the coupling is not easy to separate	1. Footboard free stroke oversized	1. Adjust
		2. The separation lever to adjust inequality	2. Adjust
Third, transmission gearbox	1. noise of sound	1. The gear attrition exceeds the time limit, tooth's lateral clearance oversized	1. Replace it
		2. Bearing attrition to exceed the time limit	2. Replace it
		3. The bolts fastening Loosening	3. Wrap fasten
		4. The lubricating oil insufficient	4. Added
		5. Gear and the axis spline wears excessive	5. Replace gear or shaft
	2. jump profile frequently.	1. Dials the fork axis retaining spring weak or no effect	1. Replace it
		2. Dial the fork axis located groove exceed wearing	2. Replace it
		3. Internal and external spline wear and tear	3. Replace axis or gear
	3. Shift is not flexible	1. Gear-side touch hair	1. Replace it
	4. driving bridge	1. Noise when driving	1. The main reduction gear meshing point bad
2. Bearing wear exceeds or loose			2. Adjust or replace it
3. Gear attrition to exceed			3. Replace it
2. Noise when brake		1. Brake boot plate curving	1. Repair or replace

		2. Brake friction burr rivet loose	2.Repair
		3.Brake drum damage	3.Repair or replace
	3. Deviation of vehicle braking	1. There is oil on Brake shoe surface	1.Clean
		2. Gap adjustment improper	2.Adjust
		3. Sub-standard tire pressure	3.Adjust
	4.brake is not flexible	1. Brake drum brake shoe and gap improper adjustment	Readjust
		2. Greasy dirt	2.Clean
3 . Brake friction burr wear to exceed.		3.Replace	
Fifth, steering system	1. the steering wheel idle run light, the quick extension sinks	1.Oil supply inadequate	1.Readjust shunt valve, priority valve
	2. Turned weak	2.Working Oil pressure low	2.Readjust priority valve, overflow valve
	3. the rotation steering wheel cylinder is motionless	3.The air is in the system or the oil mass is insufficient	3.Deaerate or makes up the oil charge
Six, Brake System ,Hydraulic System	1.Lifting arm or dumper force insufficiency	1. Pressure relief valve adjust improper, system pressure low	1.Adjust the presses rating according to the system working pressure
		2. Oil suction pipe and the oil filter plugged	2.Clean or replace
		3. Gear pump, cylinder, pipe internal leakage	3.Replace oil pump, and according to normal subsidence quantity checkout system leak-proof
		4 . Multi-way valve wear and tear excessive, stem and valve clearance should exceed the prescribed	4.Replace multi-tandem valve
	2. the operating system performance fall or unstable	1. Working oil deterioration	1. Replace.
		2. Pipe blockage	2. Cleaning oil duct system and fuel tank
		3. Oil filter jammed or damaged	3. Clean or replace
		4.there is air in the system	4.Inspect the oil system to leak air
	3. after lifting the arm, sinks voluntarily	1. Moves arm cylinder internal leakage	1.Takes apart to repair the cylinder, replace seal packing collar
		2. multi-tandem valve lever gap	2.Take apart to repair or

		oversized	to replace
	the oil temperature is excessively high	1.Load operating time excessively long	1. Stop or reduce the load.
		2. Oil mass insufficient	2.Refuel to stipulation oil level
	5. after the steering wheel returns to the position, continues to change	1. In the diverter returns to the position need to damage	1.Take apart to repair or replace
		2. Match between the oil jacket and the oil or fuel distribution axis the deactivation or matches between the oil jacket and the valve chest deactivation	2.Disassemble the diverter to repair
	6 . the foot braking force is insufficient	1. Brake to divide pump oil leak	1. Replace
		2.there is air in Brake hydraulic circuit	2. Deaerate
		3.Brake the total pump leather cup to damage	3.Replace
		4.Brake total oil pumping fluid insufficient	4. Refuel
		5. Push stroke adjustment Improper	5.Adjust traveling schedule
		6. Brake friction piece wears limit	6.Replace
Seven electrical systems	1. the engine is normal, but the accumulator cell does not charge or the charging rate is low	1. Battery plate vulcanize	1.Desulphurization processing,or replace pole plate
		2. Generator belt too loose or damaged	2. Adjusts or replaces
		3.Wiring is not strong, bad	3. Inspect and Elimination
		4. Regulator improperly adjusted or damaged	4.Adjusts or repairs
	2. the capacity of storage battery is insufficient	1. The Electrolyte proportion or liquid level excessively low	1.To re-adjust the proportion or adding electrolyte
		2. Pole plate short-circuit	2.Elimination of sediment, replacing electrolyte
		3. Pole plate vulcanize	3.Desulfurization process or replace the plate
		4. Wire connection is bad	4. Inspect and Elimination
		5. Pole plate active material Shedding	5.Replacement pole plate
	3. the generator does	1. Remanence disappears	1, according to the

	not generate electricity		original polarity generators, batteries
		2. The magnetic field coil circuit fault	2, connected to both ends of the magnetic field coil,
		3. Commutator bad contact	3, Use No. 0 or No. 00 sandpaper or polishing
		4. Not flexible brush jammed	4. amend the brush size, adjust the spring pressure
		5. Armature turn-to-turn short circuit	5. Inspects and repairs