MINI-ROLL BALER



Operator's Manual

MechMaxx

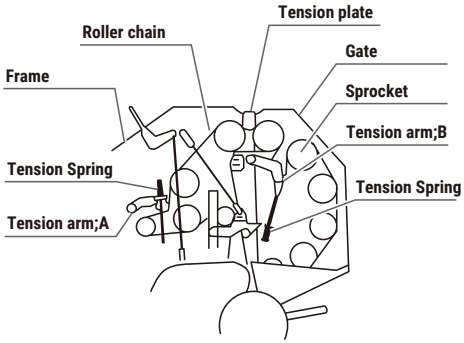
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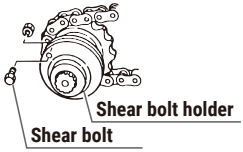
TABLE OF CONTENTS

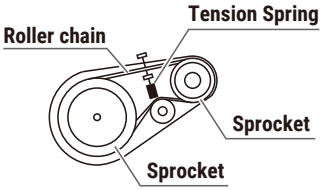
ATTACHING TO A TRACTOR 2
NAME OF FUNCTION 2
APPLICABLE TRACTOR SIZE 5
ASSEMBLE 6
TRACTOR OPERATION SAFETY 6
IMPLEMENT OPERATION SAFETY 6
ATTACHING TO A TRACTOR 7
ATTCHMENT OF UNIVERSAL JOINT 9
INSPECTION BEFORE OPERATION 12
INSPECTION BEFORE OPERATION 12
INSPECTION IN TRACTOR ENGINE RUNNING 12
LUBRICATION SPOTS TABLE 14
OPERATION METHOD 16
PURPOSE OF THIS MACHINE 16
ADJUSTMENT FOR OPERATION 16
OPERATION METHOD IN FIELD 17
TRANSPORTATION 18
OUT OF SEASON FOR STORAGE 19
MAINTENANCE AFTER OPERATION 19
DETACHING FROM TRACTOR 19
STORAGE IN OUT OF SEASON 19
INSPECTION AND MAINTENANCE 20
ADJUSTMENT FOR EACH PARTS 21
TROUBLE SHOOTING 24
TROUBLE SHOOTING TABLE 24
PARTS LIST 28
HOW TO ORDER PARTS 28
SUPPLY TIME(PERIOD) OF SPARE PARTS 28
PARTS DIAGRAM 29

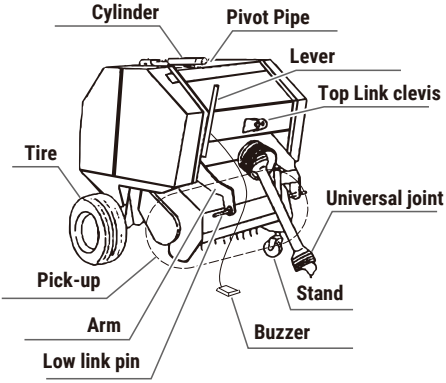
ATTACHING TO A TRACTOR

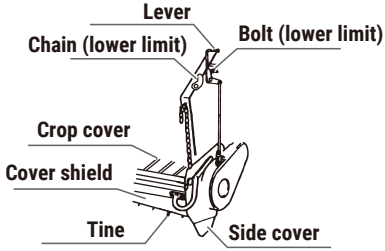
NAME OF FUNCTION

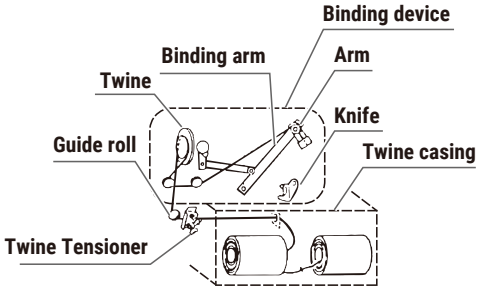


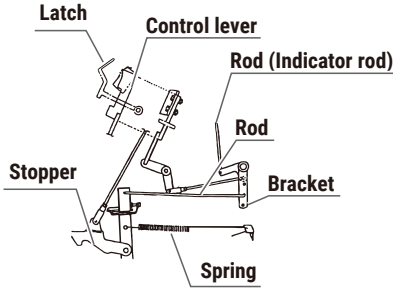






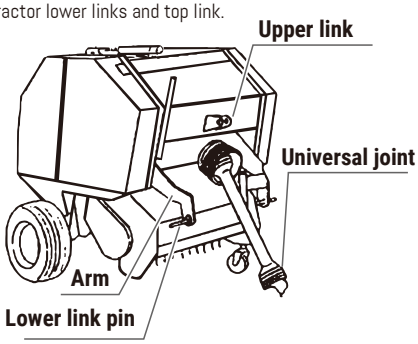






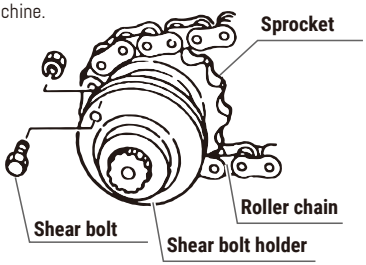
Lower link pin and upper link

Lower and upper link pins are connected with the tractor lower links and top link.



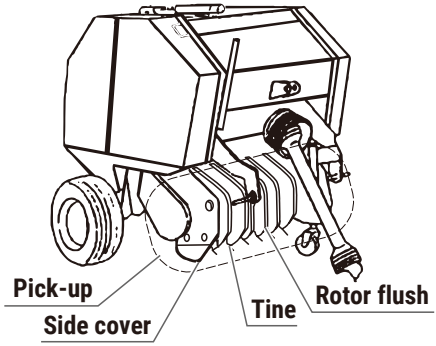
Shear bolt

shear bolt is sheared when overload affect to the machine for preventing from the damaged of the machine.



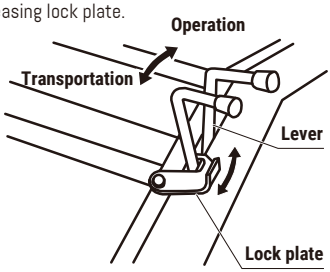
Pick up assay

Pick-up assay is operated to pick-up baling Material from the ground.



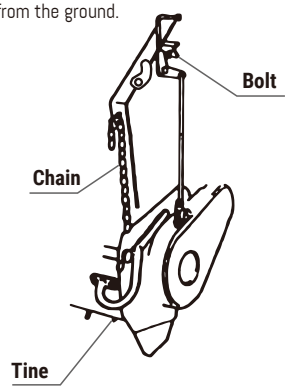
Lever and lock plate

pick-up assay is lifted and is hold by lock plate for transportation of the machine. Pick-up is lowered by releasing lock plate.



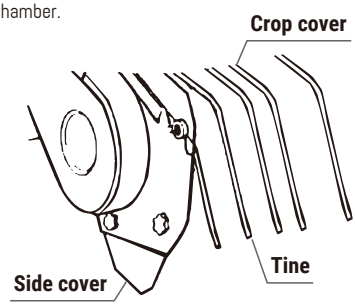
Chain and bolt(lower limit)

The chain and bolt are used to adjust the height of the pickup from the ground.



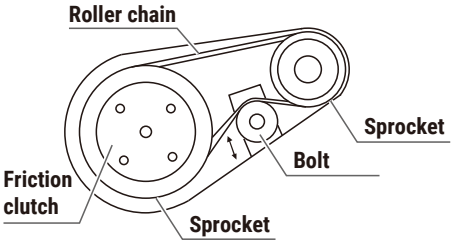
Crop cover, Cover shield and side cover

Crop cover helps to convey hay or straw smoothly to the chamber.



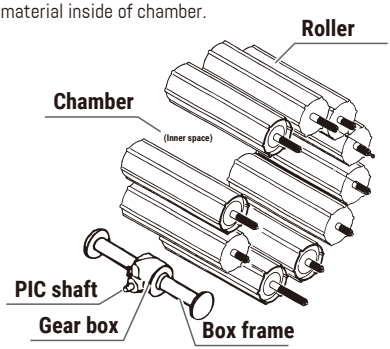
Roller chain and sprocker

Roller chain transfer the power to driver pick-up. Friction clutch slips when over load affects to pick-up for preventing from damaged of pick-up



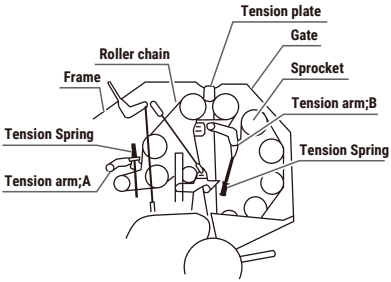
Chamber and roll

Chamber is formed by rolls. rolls rotate themselves and rotate baling material for making cylindrical material inside of chamber.



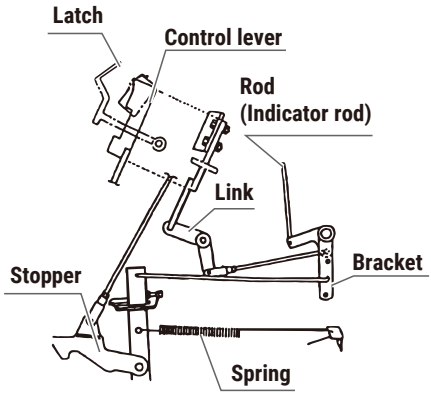
Spring (tension spring)

Spring gives proper tension to roller chain.



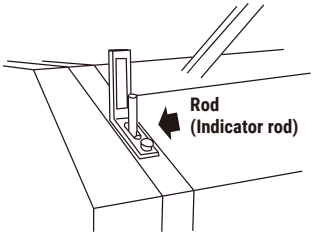
Rod and bracket

Bale density can be adjusted by changing the rod position into hole.



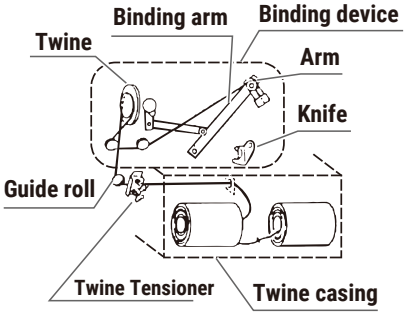
Rod (Indicator rod)

Rod shows to the operator the progress of making bale.



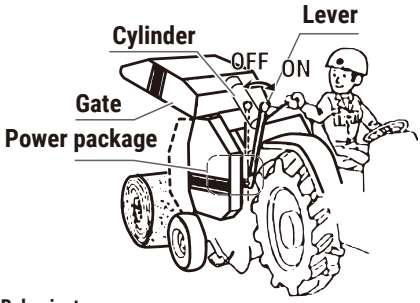
Binding device

Binding device winds twine on a finished bale.



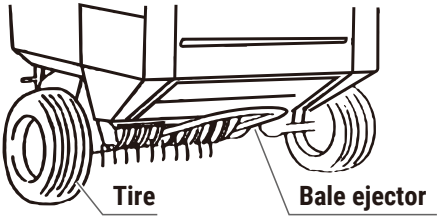
Hydraulic power package and lever

Hydraulic power package actuate hydraulic cylinder to open and to close gate for bale ejaculation.



Bale ejector

The bale ejector rolls the finished bale far enough from the machine to allow gate close.



APPLICABLE TRACTOR SIZE

This machine is designed to perform by attaching to suitable size of the tractor.

If this machine is attached to unsuitable size of tractor, it will have a possibility of giving bad affection to durability or to operation.

Application tractor HP
HB3120 From 15 HP to 50 HP

Never attach the machine smaller tractor than 15HP(HB3120). for the small tractors under 25 hp tractor shall have front ballast, otherwise it may cause dump because the baler weight is more than 881.8 lb.

It will be a cause of serious accident lack of weight balance.

If the machine is attached to bigger tractor than 50HP, it will have a possibility to give damage to the machine.

ASSEMBLE

1. Package opening

Open the package and unite the parts from iron crate.

2.Details of attached parts

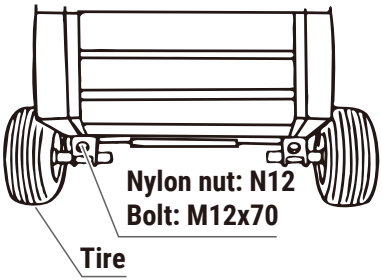
Make sure if all parts delivered in accordance with packing list.

3. Process of assembling

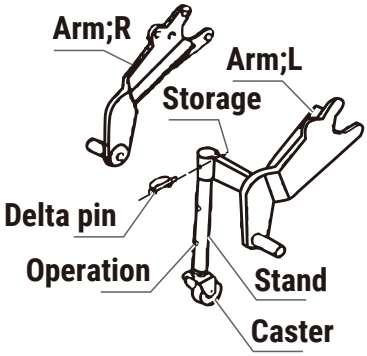
Refer to the mark numbers on nuts and bolts necessary for assembling in the packing list.

(1) Attach the tires on the machine and fix them by nylon nuts and bolts.

Adjust the tire tread not to trace to the tractor wheel tracks.

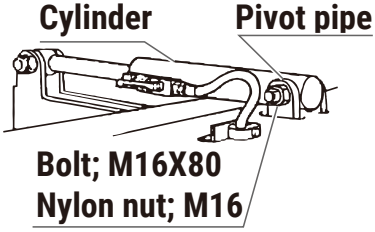


(2) Attach stand to arm;L



(3) Extend the rod of hydraulic cylinder and align the hole of barrel and the hole of pivot pipe.

Then apply bolt.



(4) Refer to parts list to apply other parts to the machine

4.Take off the tire

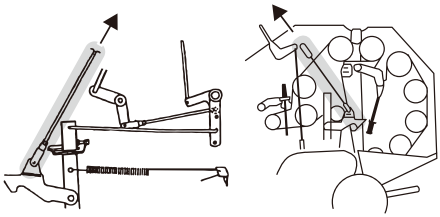
There are 2 ways to get off the tires from the baler.

1. Attach the baler to the tractor, connect the wires, then press the switch button to open the tailgate of the baler, the tires will roll out off the baler.

*If the tires weren't roll out, switch the stop valve, and make sure the tailgate won't fall down, then take off the tires.

2. This way need 3 persons, 2 person standby the left and right side of the baler, pull up the rod(as in the photo), another person stand at the tailgate side and lift the tailgate, the tires will roll off the baler.

If the tires weren't roll out, switch the stop valve, and make sure the tailgate won't fall down, then take off the tires.



ATTACHING TO A TRACTOR

Bystanders must keep safely distance when the machine is attached to the tractor or detached from the tractor.

Attach the machine to the tractor or detach the machine from the tractor on flat and solid ground.

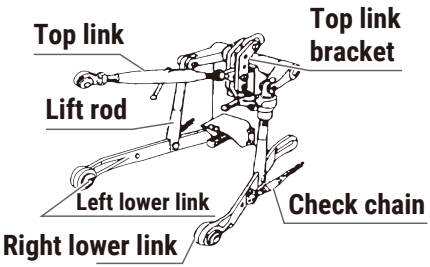
If the machine is attached to a light weight tractor, it has a possibility of getting unstable steering.

Attach the front weight on the tractor .

1. Preparation for attachment

This machine should be attached to the standard 3P tractor.

If the machine can not be lifted up high enough, the pin of lift rod should be inserted into front side of hole of lower link.



2. Attaching to a standard 3P in acordance with following procedure.

(1) Start engine of the tradtor and drive a tractor to backward until tips of lower link will be aligned.

Stop engine and apply parking brake.

(2) Insert left side of lower link pin into the hole of right lower link pint.

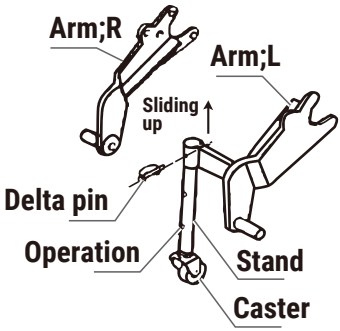
Insert right side of lower link by same procedure above

(3) Turn adjusting screw to get the same height of left and right lower links from the ground.

(4) If the width of lower link is small, adjust the link of left side (look from backward) internal

(5) Lift the 3P machine by 3P connection to let the 3P frame upright rise choose the position of main link pin then connect and fix.

(6) Start engine of the tractor and operate the oil pressure handle to the machine then stop the engine.



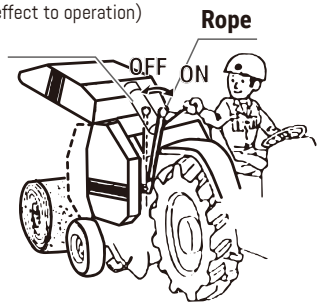
(7) Align the center of PIC shart and PTO shaft by check chains and then tighten check chains to protect the machine swing,

3. Attachment of power package operation rope

Caution in operation

Connect operation rope to the tractor not to touch with universal joint and to have enough slackness not to stretch in turning.

The breaking end of rope is fixed inside of driver's cab(no effect to operation)



4. Attachment of buzzer

Caution in operation

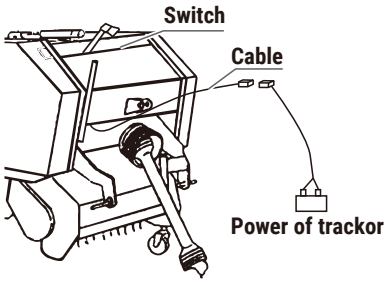
Adjust the length of electric cable to get enough slackness and not to stretch in turning.

Tie the surplus of electric cable with a string to the tractor.

Turn off the switch when the machine is not used.

(1) Attach the buzzer at suitable position for the operation.

(2) Connect with accessorial electric cable to power of tractor(12V).



5. Method of twine threading

Stop the tractor engine when twine is treaded.

Caution in operation

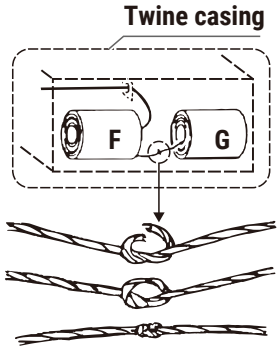
Use only original twine.

TG0800 (Jute 8500 feet)

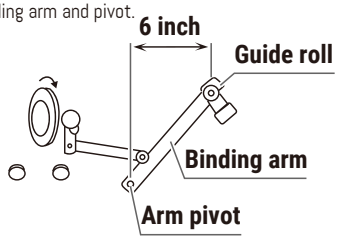
TP0800 (Polypropylene 1100 feet)

(1) Contain two twine spools in the twine casing.

(2) Connect the both ends of F and G together,and make sure the knot as small as possible.

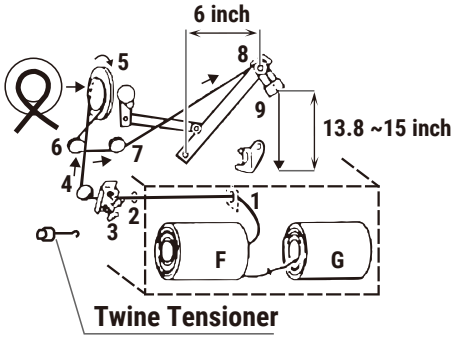


(3) Turn twine pulley to the direction of arrow until binding arm move from outside to inside and then stop turning at horizontal distance 6 inch between tip of binding arm and pivot.



(4) Thread twine tip order from 1 to 9.

Use attached twine threaser places where it is difficult threas twine. Cut the end of twine by the length from 13.8 inch to 15 inch and hang it from binding arm tip.



ATTCHMENT OF UNIVERSAL JOINT

Danger

Never use universal joint with damaged safety cover or without safety cover.

Inspect it if damage is found out on universal joint.

Stop the tractor engine and disengage PTO clutch when universal joint is attached.

Fix chains of safety cover to the tractor and stationery part of the machine not to rotate safety cover.

Caution

If overlap length between inner and outer tube of universal joint is less than 4 inch in extended position, it will be a cause of universal joint breakage.

If the space between inner and outer tube is less than 1 inch in retracted positon, it will be a cause of damage.

By pushing to each other when the machine is lifted.

Please use it with the proper overlap of the universal joint.

Caution in operation

If universal joint makes noise when the machine is lifted up by 3P,control the lower linkage of 3P.

1. Universal joint length check

(1) Pull out other tube of universal joint from inner tube of universal joint.

(2) Lift up the machine and stop the lifting at the closet distance PTO shaft and PIC shaft.

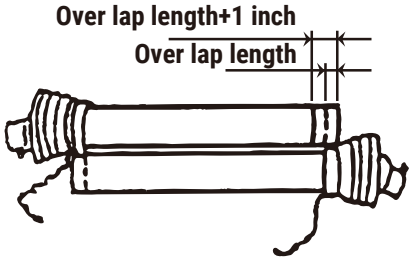
(3) Push cramp pin of yoke and insert the yoke into PTO shaft and push on until cramp pin comes out by spring force.

Insert the other yoke into PIC shaft same procedure as mentioned above.

(4) Put one universal joint on to one another universal joint.

Mark lapping end position of outer safety cover and inner safety cover and mark at further 1 inch inside from lapping position.

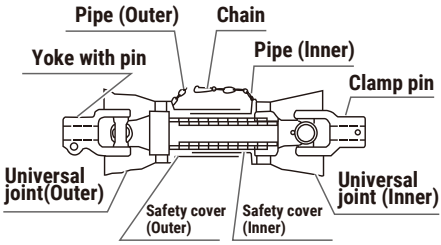
Cut off safety cover at further 1 inch position.



(5) Lift the machine and stop lifting at the most separted position between PTO shaft and PIC shaft.

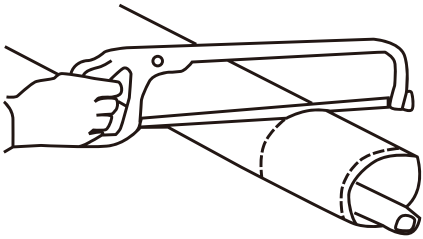
(6) Put one safety cover on to one another cover.

If lapping lengthis less than 4 inch, replace it to longer universal joint.

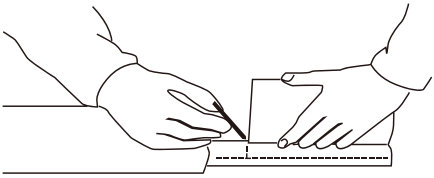


2. Method of cutting

(1) Cut off excess length of inner and outer safety cover.

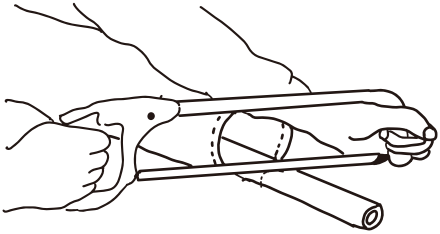


(2) Mark on inner and outer pipe the same length of cut off safety cover from the end of inner and outer tube.



(3) Before cutting off, put rag into between safety cover and pipe not to come into sawdust.

Cut off excess length of tube by metal saw.



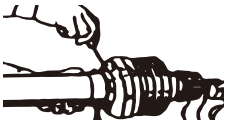
(4) File cut ends and clean the surface.

Apply grease on tube and insert inner tube into outer tube.

3. Method of outer safety cover removal

(1) Disassemble procedure of cover

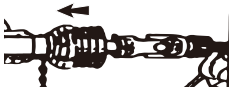
1.Take out fix screw



2.Revolve the cover to the position of release.



3.Pull out safety cover from tube.



4.Take out the slide loop.



(2) Assemble procedure of cover

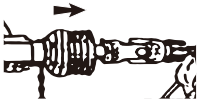
1.Apply oil to slide loop channel and tube inside.



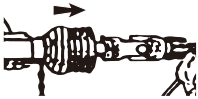
2.Open the cut mouth of slide loop and imbed it to the channel of tube.



3.Fit the safety cover.



4.Screw the cover tightly.



5.Fix the position with fix screw.



4 . Connection of universal joint

(1) Connection to the machine

Push cramp pin of yoke and insert yoke into PIC shaft and push on until cramp pin comes out by spring force.

(2) Connection to the tractor

Push cramp pin of yoke and insert the yoke into PTO shaft and push on until cramp pin comes out by spring force.

Caution

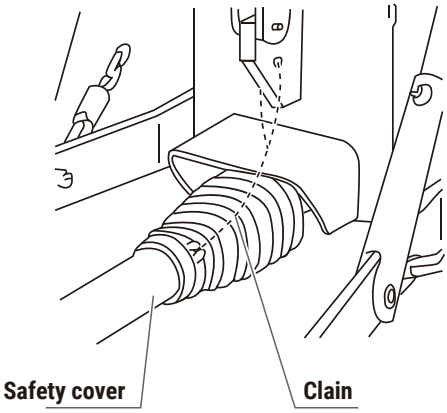
After connection of universal joint, make sure that cramp pins of PTO side and PIC side stay firmly in grooves of PTO shaft and PIC shaft.

If the pins do not stay in grooves firmly,it will be a cause of serious accident.

(3) Fix of safety cover chain

Fix safety cover chain on stationary part of tractor to prevent from rotation of safety cover.

Slacken off chain not to stretch it in the up and down movement of tractor 3P.



INSPECTION BEFORE OPERATION

Following should be done before operation to stand long life the machine

INSPECTION BEFORE OPERATION

1.Inspection of the tractor parts

Inspect the tractor parts according to the tractor user manual of the tractor.

2. Inspection of connecting parts

(1)Inspection of 3P connecting parts

1)Make sure that locking pin is inserted into the hole of low link pin.

2)Make sure that locking pin is inserted into a hole of top link pin.

3)Make sure that check chains of the tractor are stretched firmly.

4) If any problem is found in connection,remedy the problem according to the instruction "Attachment to tractor".

(2) Inspection of universal joint

1)Make sure that cramp pins stay in the groove of PTO shaft and PIC shaft.

2)Make sure that chain of safety cover has excess slackness.

3) Check the damage on safety cover of universal joint.

4)If any problem is found on universal joint,remedy the problem according to the instruction "Attachment of universal joint".

3 Inspection of the machine

(1)Check looseness of nuts and bolts.

Tighten loosen nuts and bolts firmly.

(2)Check if the shear bolt is sheared or not.

If it is sheared replace to new one referring sufficient.To the parts list.

Beforehand,prepare for replacement shear bolts.

(3) Check if roller chain is properly stretched.

Adjust it in accordance with the instruction "21 pages Adjustment of roller chain stretch".

(4)Check the length of pick up tension if the length is improper,adjust the length in accordance with the instruction of "21 pages Pick-up V-belt tension".

(5) Check whether the tension spring size is correct.

If the length is improper,adjust it in accordance with the instruction "22 pages Adjustment of twine tensioner".

(6)Check the sharpness of binding knife to cut twine.

If it has a problem,solve the it in accordance with the instruction "22 pages Adjustment of binding knife".

(7)Check if twine is enough, twine is threaded properly and binding arm is in proper position.

If any problem is found,solve it in accordance with the instruction "8 pages Method of twine treading".

(8)Check damage of tine and rotor flush.

If it is damaged, replace it to new one by referring to parts list.

(9)Check stuck hay or straw in the machine. Remove stuck crop from the machine.

(10) Check application of oil and grease. If it is not applied properly, lubricate in accordance with the instruction "14 pages Lubrication spots table".

(11)Check it tire air pressure is sufficient. If it is insufficient, apply air until the pressure becomes 195kPa(2.0Kg/ ㎡)

INSPECTION IN TRACTOR ENGINE RUNNING

1.Inspection of the tractor hydraulic

Lift up the machine by controlling lever of lift up and down for hydraulic control..

If the machine will not come down in lifting up position, hydraulic system has no trouble. if hydraulic system has any trouble, contact with tractor dealer for solving problem.

2. Inspection of machine hydraulic system

(1) Inspection of machine hydraulic system fot gate opening and closing.

Warning

Bystanders must be away from the machine when gate is opened.

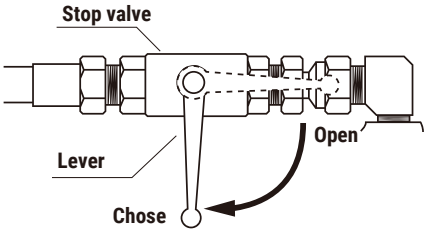
Lock gate by the stop valve when the machine is checked in the gate opening situation.

Caution

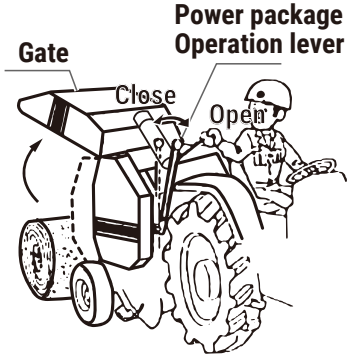
If the hydraulic hose is damaged or hydraulic fitting is loosen,it will cause of injuring by leaking high pressured hydraulic oil or suddenly dropping gate of the machine.

Replace damaged hydraulic hose or fittings and tighten loosen fittings.

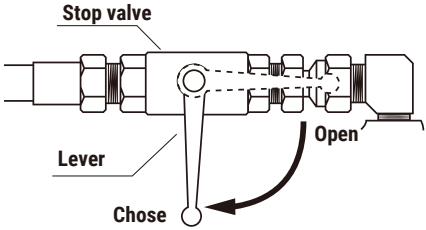
1) Turn lever of stop valve for gate opening and closing to "Opening"position.



2) Start the tractor engine and engage PTO to rotate PTO shaft and then open gate by operating lever of power package.

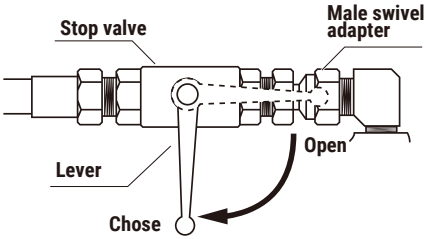


3) Turn lever of stop valve to "close"while pulling the lever of the power package at full opened gate position.



4) If the gate does not come down, it has no trouble. If gate comes down, check oil leakage and repair or replace damaged part.

5) Close the gate by turning slowly lever of the stop valve to "Open" direction. If the air remains in the hose or cylinder, loosen male adapter and let the air out it. Tighten swivel adapter after releasing air.

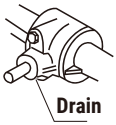


LUBRICATION SPOTS TABLE

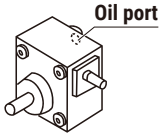
Apply fresh and clean oil and grease the machine.

Apply grease to a grease nipple until old grease come out.

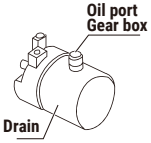
1) Gear box



2) Worm gearbox



3) Power package



4)Housing



5) Sprocket

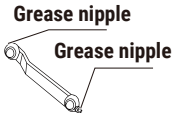


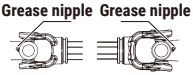
6)Arm support



7)Crank bar

8)Universal joint





9)Tension arm pivot

10)Link pivot



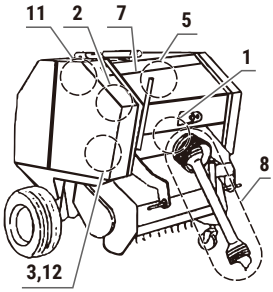


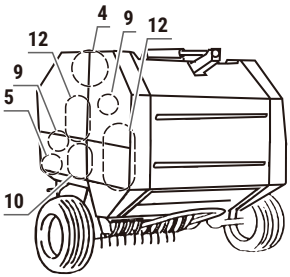
11)Gate pivot

12)Roler chain









No.	Lubrication points	Point	Kind of lubrication	Changing time	Q'ty	Remarks
1	Gearbox	1	Gear oil; SAE 90 API GL-5	After 100 hr or one seas	500g	Discharge gearbox,cleaning before oiling
2	Worm gearbox		Gear oil; SAE 90 API GL-5			
3	Power package	1	Gear oil; SAE 90 API GL-5	Every 100 hr	1.7L	Gearbox tank
4	Housing	2	Grease ; Number 3	After operation	Proper Q'ty	Grease nipple
5	Sprocket	1	Grease ; Number 3	After operation	Proper Q'ty	Grease nipple
6	Arm support	1	Grease ; Number 3	After operation	Proper Q'ty	Grease nipple
7	Crank bar	2	Grease ; Number 3	After operation	Proper Q'ty	Grease nipple
8	Universal joint	-	Grease ; Number 3	After operation	Proper Q'ty	Grease nipple
9	Tension arm pivot	2	Oiling	After operation	Proper Q'ty	Grease nipple
10	Link pivot	4	Oiling	After operation	Proper Q'ty	
11	Gate pivot	2	Oiling	After operation	Proper Q'ty	
12	Roller chain	4	Grease application	After operation	Proper Q'ty	

OPERATION METHOD

PURPOSE OF THIS MACHINE

1. This machine is produced for baling grass, rice straw and straw. Never use except this purpose.

(1) Bale for the hay which is less than 20% of moisture content.

(2) Bale the grass for making wrapping silage which is between 50% and 60% of moisture content.

2. Do not operate the machine after stopping rain in muddy field. Operate the machine in well dried field.

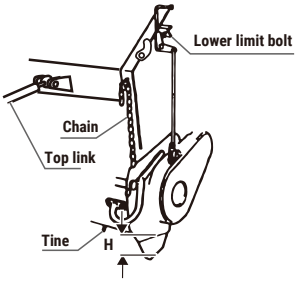
ADJUSTMENT FOR OPERATION

1. Adjustment of the pick-up tine height from the ground

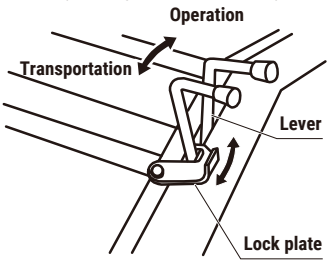
(1) Adjust pick-up tine height from the ground by limit chain and lower bolt.

Fine adjustment is done by top link pin of a tractor.

Baling material	H
Cut straw	0 inch
Long straw or hay	0.78 inch



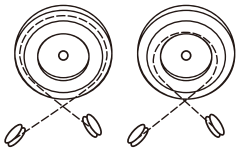
(2) Select operation position and transport position by moving the lever and lock plate.



2. Adjustment of twine winding number

Adjust the twine winding number according to baling condition and handling condition of bale.

Winding number	Crop	Handling	Twine pulley
10	Cut straw Dried straw ↓	Many ↓	Big dia. Pulley
8	↑ Hay Long straw	↑ Few	Small dia. pulley



10 winding
(Cut straw)
Marry handing

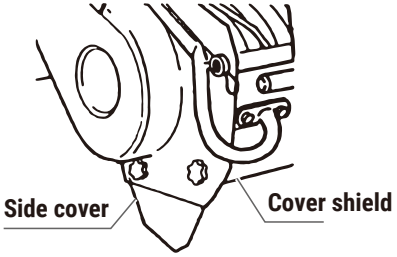
8 winding
(Long straw or hay)
few handing

The winding number should be changed according to thickness of twine.

If the twine is thicker, the winding number must be more. Above table is the standard.

3. Adjustment of Cover shield and Side cover

Crop	Cover shield/ side cover
Cut straw	Attachment
Hay, Long straw	Removal



4. Adjustment of the bale density

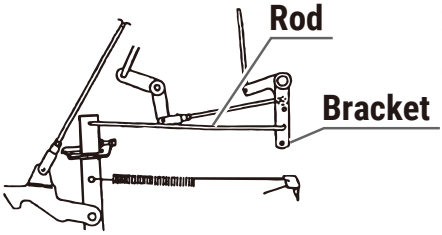
Caution

High density of bale requires high tractor PTO horse power. Adjust bale density according to the tractor size, the field condition and the baling material.

(1) Adjustment of the rod

When the rod is inserted into higher position of bracket hole, lower density of bales are made.

When the rod is inserted into lower position of bracket hole, higher density of bales are made.



OPERATION METHOD IN FIELD

1.Method of bale making

Make bale of the width from 27.56 inch to 31.5 inch and the height from 11.8 inch to 15.75 inch as Uniformly as possible.

The bales which are made for efficiency and smooth operation are recommended.



Order of making windrows



Finishing

(2) Adjustment by traveling speed

Lower traveling speed make higher density of bale.

Adjust the traveling speed according to condition of the operation.

Adjust the bale density smaller when the chains become hot.

Hay	Long rice straw (straw)		Cut straw
Make hay/grass in a line as Below	Straw chop off By 3/4 rows rice combine harvester	Operation of straws by 2 rows rice combine harvester or in bundle	Direct straw pick up is Possible
		2 rows direct drop / Operation by bundle	
2.76-3.15 inch, 1.18-1.57 inch	Pickup the straws on the ground directly	2.76-3.15 inch, 1.18-1.57 inch	It will be more efficient to make straws in a line. 2.76-3.15 inch, 1.18-1.57 inch

1. Field opertion

Warning

Bystanders must be away from the machine when pick-up is running. Stop the tractor engine when taking away

Stuck baling material from the pick-up. Never touch rotating rollers. Stop the engine of the tractor when taking away stuck grass between rollers.

(1) Put on the switch of the buzzer and PTO and drive the tractor forward.

Adjust PTO speed depending on baling material condition and the moisture content.

Baling material condition, Moisture content	PTO speed
Standard	540 rmp
Dried, short	350-450 rpm
Moist, stuck pick-up	540-600 rpm

Normal operation speed is 3-5 km/hr.

Adjust the operation speed depending on the field condition.

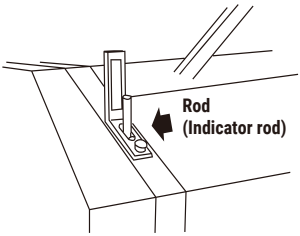
Caution in operation

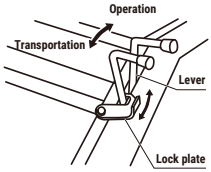
Do not stop PTO while twine is binding round on a bale

(2) Quantity of the baling material inside of the chamber can know from the indicator.

The indicator rod rise up when a bale coming to complete.

And make the machine into transportation position.





(3) When a bale reaches to complete, buzzer sounds and twine binds on a bale automatically.

Caution in operation

If the twine binding will not start, forward about 1m.

(4) When twine binding is finished, twine is cut and binding stops.

Press the button to release the bale.



Warning

Bystanders must be away from the machine when the gate is opened.

Do not eject a bale at inclined field. Eject a bale always level field.

(5) Release the remote control button to close gate and then start the operation.

TRANSPORTATION

1. Stop PTO of the tractor
2. Pull down the lever and lock it by lock plate.
3. Switch off the buzzer.
4. Lift up the machine by operating 3P lifting lever.
5. Lock 3P of the tractor not to come down the machine in the transportation.

OUT OF SEASON FOR STORAGE

Maintain the machine for keeping long life.

> **Caution**
>
> **Never try to remove blocked material when the machine is running. Disengage clutch of PTO drive, stop tractor engine and make sure all moveable parts stop.**

MAINTENANCE AFTER OPERATION

1.Remove baling material form pick-up in the field.

2. Remove piled dust from the binding unit.

3. Remove baling material stuck material on the rolls.

4. Remove dust from driving device in the side of the machine.

5. Replace damaged or worm parts to new ones.

6. Inspect driving and connection parts in accordance with inspection spots table.

7. Lubricate in accordance with lubrication spots table.

8. Apply grease on PTO shaft, PIC shaft, power joint and other parts which are not painted to prevent from the rust.

9. When machine and tractor separate, support rod should be set down.

10. After machine and tractor separate, universal joint should be detached.

11. Disconnect the bale counter and battery, turn off the bale counter after working.

DETACHING FROM TRACTOR

1. Slid down support rod and insert pin into the highest position of a hole.

2. Lower hydraulic control lever of a tractor until tires of the machine contact with the ground.

3. Stop the tractor engine and apply parking brake.

4. Detach power joint from the tractor PTO shaft.

5. Detach right side of lower link, left side of lower link and top link.

STORAGE IN OUT OF SEASON

1. Clean every parts of the machine.

2. Inspect moving parts and connecting parts in accordance with inspection and maintaince points table.

If any damaged or worn parts are found, they must be replaced with new ones.

3. Apply grease or oil in accordance with lubrication points table.

Apply oil to rotating, pivoting parts and sliding parts such as clump pin of power joint.

Apply grease on PTO shaft, PIC shaft and spine holes of power joint yoke.

4. Paint or apply oil on damaged surface of parts to prevent from the rust.

5. Store the machine in well ventilating indoor.

6. If there is no choice but to keep the machine in out door, cove the machine with a plastic sheet.

7. Take off the cell battery in the bale counter.

INSPECTION AND MAINTENANCE

Inspection and maintenance should be done regularly to obtain good condition.

Inspect and maintain each pads In accordance with inspection and maintenance table to prevent from accident by poor maintenance.

Since tines, shear bolts, knives and twine are consuming pads, replace worn parts with new ones or replenish with new ones.

Warning

Stop the tractor engine and disengage PTO when adjustment of twine binding device is done.

Lock stop valve for fixing gate when inspection or adjustment is done at opening gate.

Caution

Lock the hydraulic circuit of tractor when the machine is lifted up for maintenance or for inspection prevent from machine's failing down.

Inspection or maintenance should be done on solid ground or conerete. Never inspect or maintain on slant. uneven, or soft ground.

Stop the tractor engine and make sure all machine parts stop when jnspection or

Hours	Items for checking	Remedy
After initial 1 hour operation	Looseness of all nuts and bolts Slackness of roller chains	Tightening Adjustment in accordance with "21 pages Tension adjustment of roller chain"
Before operation After operation (or before operation)	Cleaning up Wear of pick up tines Wear of binding knife Shear of shear bolt Twine consumption Running out of battery cell for bale counter Tires air pressure Looseness and loss of nuts,bolts and pins Abnormal noise or vibration in driving Breakage of power safety cover of roller chain cover Lubrication to rotating and moving parts Adjustment of each parts	Replacement Replacement Replacement／Replenishment Replenishment Replacement (1.5v - AA5 cell battery) 1 95kPa(2． 0kg／cm2) Tightening and replenishment Remedy in accordance with trouble shooting table 24 pages Replacement Lubrication in accordance 14 pages Lubrication points table Adjustment in accordance 21 pages adjustment of each pads
Out of season	Broken parts Worn parts Cleaning up each parts Damage of painting Worn pivoting pads or pins	Repair Replacement with new one Painting or applying oil Replacement to new ones

ADJUSTMENT FOR EACH PARTS

1.Roller chain tension adjustment

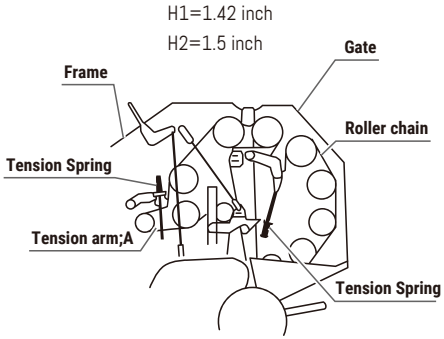
Roller chain is elongated by usage little by little. Adjust tension of roller chain for transmitting the power smoothly.

Since the roller chain is especially elongated by initial usage, adjust tension after initial usage.

(1)Adjustment of tension spring

Adjust tension of roller chain on the frame and on gate by adjusting the length of the tension springs.

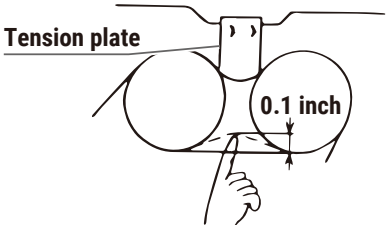
The length of spring is mentioned below.



(2)Adjustment of tension plate

Adjust tension of roller chain between frame and gate by tension plate.

Proper roller chain tension gives 0.1 inch deflection when roller chain is pushed by a finger.

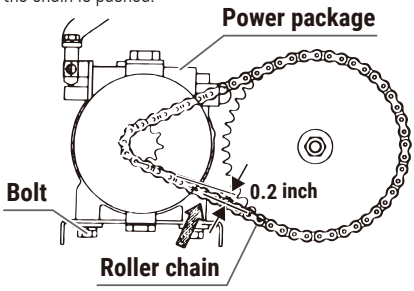


(3)Adjustment of power package

Tension for roller chain to drive the power package is adjusted by moving position of the power package.

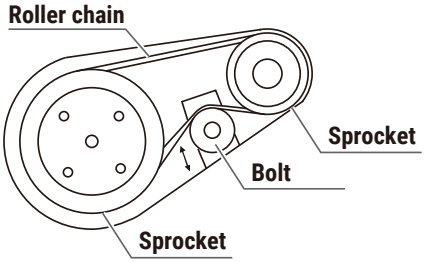
Push middle part of chain between both sprockets by finger.

Correct tension is approx. 0.2 inch of deflection when the chain is pushed.



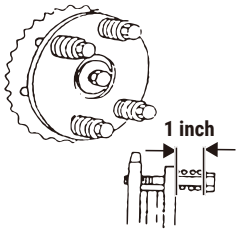
2.Adjustment of drive part for pickup assay

(1)Loose bolt, turn the tension wheel to adjust chain, after adjustment, fasten the bolt. The most suitable tension is 0.1 inch pressed down at the centre of the chain.



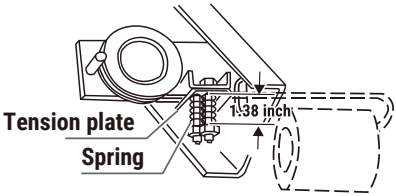
(2)Adjustment of sliding clutch

Springs(4)are adjusted to 1 inch.



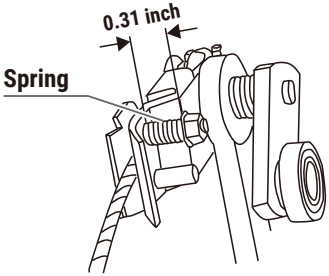
3. Adjustment of twine tension

Adjust spring length to 1.38 inch.



4. Adjustment of arm tension spring

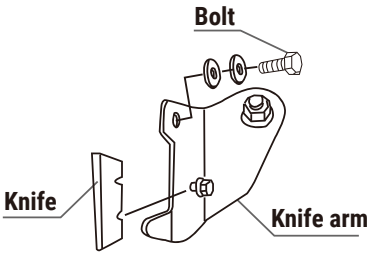
Adjust length of the spring at 0.31 inch



5. Adjustment of binding knife

Remove the knife and use the opposite side if the knife is dull.

Replace the knife to new one if reversed knife is dull.



Caution

Apply original replacement knife of the machine

6. Adjustment of the bale density detection link

(1) Adjust the clearance between stopper and collar on gate by bolt. L1=0.04-0.08 inch is proper.

(2) Remove the pin from the rod, pull down the rod, adjust the position of the fork hole and the hook hole by fork end.

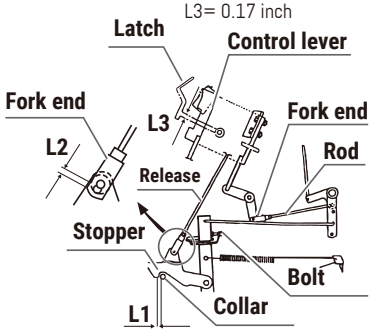
Adjust the dimension between lower side of fork end slot and the hole of stopper as mentioned bellow in above situation. L2=0.08 inch is proper.

(3) Adjust the dimension between latch and cutout of control bar as below. L3=0.3 inch is proper.

Adjust this dimension to L3=0.23 inch.

If bale weight is too heavy(More than 55.2 lb) because of too much moisture content.

L3= 0.17 inch

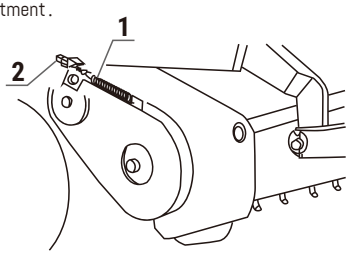


7. Adjustment of Plck-up suspension

Proper suspension springs length on both sides Of pickup assay is L=1.9 inch.

Adjust spring length according to field condition if the pick-up does not follow well the field unevenness.

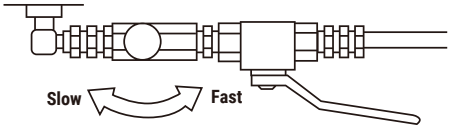
Both springs length should be the same after the adjustment.



8. Adjustment for gate closing speed

Adjust the rotating button on the control valve to adjust the gate closing speed.

Speed is decreased by turning it to right or is increased by turning it to left .



TROUBLE SHOOTING

Adjust the machine in accordance with trouble shooting table if it does not work well.

Warning

*** stop the tractor engine and disengage PTO when adjustment is done.**

*** lock gate by closing stop valve not to fall down when doing inspections or adjustments**

Caution

*** lock the hydraulic circuit of tractor when the machine is lifted up for maintenance or inspection to prevent from machine's falling down**

*** Inspection or maintenance should be done on solid ground or concrete. Never inspect or maintain on slant, uneven, or soft ground.**

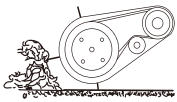
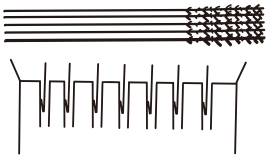
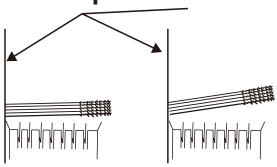
*** Stop the tractor engine, disengage PTO and make sure all moving parts stop when doing inspections or adjustments.**

Ask to the dealer by informing followings if the cause of trouble and trouble shooting is not clear.

TROUBLE SHOOTING TABLE

* PICK UP ASSAY

Fault	Possible cause	Remedy
* Abnormal noise is made	* Breakage of tine * Breakage of rotor flush * Winding of hay or twine * Breakage of leading track roller bearing	* Tine replacement * Rotor flush replacement * Remove of winding material * Replacement of cam roller bearing
* Material is not picked up cleanly	* Wrong pick-up setting * Too fast traveling speed * Breakage of tine	* Adjust the distance of the pickup assay and the ground * Reduction of traveling speed * Replace the tine *Shortening top link for obtaining forward declined machine position
*Baling material is clogged between pick-up and chamber.	* Too fast PTO rotation * Obstruction by side cover and cover shield * Too fast traveling speed * Too much declined pick-up	* Adjust the PTO speed * Take off the side cover and cover shield * Reduce tractor speed * Move up the pickup assay by lift and reset the position of chain
*Pick-up assay does not rotate	* Shear bolt broken * The chain loose or fall down * Obstacle of the side plate and plate cover	* Replace the shear bolt * Adjust the chain or replace it * Take off the side plate and plate cover

Fault	Possible cause	Remedy
* pick-up pushes long stem rice straw to forward 	*Match the width of the straws to the width of pickup assay. 	* Picking-up straws from right side of pick-up assay. 

* ROLLER

Fault	Possible cause	Remedy
* Roller makes abnormal noise	* There are straws or mud on roller or straws clogging * Insufficient lubrication * Insufficient roller chain tension * Dent in roller	* Remove the wrapping straws, mud or clogged materials * Lubricate the roller chain * Adjustment it * Replacement dent roller with new one
* Material is winding On roller	* Too fast PTO rotation * Material clogged in pick up assay * Dent in roller	* Adjustment of PTO rotation speed * Remedy in accordance with"pick-up" trouble shooting * Replacement dent roller with new one
*Heat generate in Roller chain	*Too high bale density *Insufficient lubrication to roller chain *Insufficient roller chain tension	*Adjustment the bale density *Application grease to roller chain *Adjust roller chain tension

* BUZZER

Fault	Possible cause	Remedy
* Buzzer does not sound	* Switch off * Didn't connect wire * Wrong cable connection * Too much distance between switch lever and binding arm	* Switch on * Check and connect with the tractor * Correction of cable connection * Replacing broken cable with new one * Adjustment of switch location

* BINDING

Fault	Possible cause	Remedy
*Binding does not work when bale is finished	* Binding rope is not set in correct initial position * Insufficient lubrication * Rope tension spring is wrong * Rope fall down from pulley * Twine is tangled or caught * Lower density in bale left side * Binding arm does not rise up * Twine tip does not come in rolling chamber	* Adjustment in according with 8 pages. * Lubricate it * Adjustment tension spring * Check and reset the ropes * remove tangle and catch of twine * Supply of larger quantity of straws to left side of the pickup assay * Lubrication and adjustment of falling speed by double nuts. * Adjust falling down speed of twine arm not to be ahead of twine falling * Remove obstacles and let rope tip into rolling chamber.
* Binding device work before reaching to setting density	* Binding is not set in correct initial position * Leading rope is too long because of dull knife	* Reset the binding arm. * Replacement of knife and adjustment of leading twine length in accordance with 8 pages.
* Twine comes off from bale * Twine is not cut smoothly	* Binding too less rope * Rope tension is too loose	* Adjust binding laps * Tighten nylon nuts for 1 circle or 2 circles

* GATE

Fault	Possible cause	Remedy
* Bale does not come out	* Density too high density * field ridges off wide * Declined field	* Adjust bale density * Adjust it * Ejection of a bale in even place
* Gate does not open	*Stop valve was closed * Leakage or breakage of hydraulic ropes * Locking hook position incorrect * Disengagement of PTO * Insufficient of power package oil	* Opening stop valve * Repair it and let air out before using * Adjust it * Rotate the PTO shaft and eject bale while PTO is running. * Add hydraulic oil in the power package.

* SHEAR BOLT

Fault	Possible cause	Remedy
* Shear bolt is cut	* Too high PTO speed * Clogging straws in rollers * Obstacles in pick-up assay *The width line of the straws too wide * Looseness of shear bolt	* Operation in normal PTO speed * Stop the machine, take out clogged straws. * Stop the machine, take out clogged straws. * Adjust it * Tight the shear bolt

* UNIVERSAL JOINT

Fault	Possible cause	Remedy
* Abnormal noise	* Insufficient Lubrication * Too much sharp angle of universal joint	* Application grease to sliding pipes, spiders and mounting part of safety cover * Adjustment of tractor top link length, lower link stabilizer and lower link upper limit.

* BALE DENSITY DETECTION LINK

Fault	Possible cause	Remedy
* Bale density is loose	* Exceeding bale density operation because of not sounding buzzer * Wrong dimension of bale density positions	* Remedy in accordance with "Buzzer" in trouble shooing * Adjust the bale density by proper positions.

If you do not see the cause of a trouble or how to repair it, notify the following items to the supplier of the machine.

1. The name of machine.
2. Model.
3. Serial number.
4. Details of trouble(explain fully).

PARTS LIST

HOW TO ORDER PARTS

1. When ordering a part, specify the following items.

A. Machine name.

B. Model name.

C. Part name (see parts list).

D. Part no (see parts list).

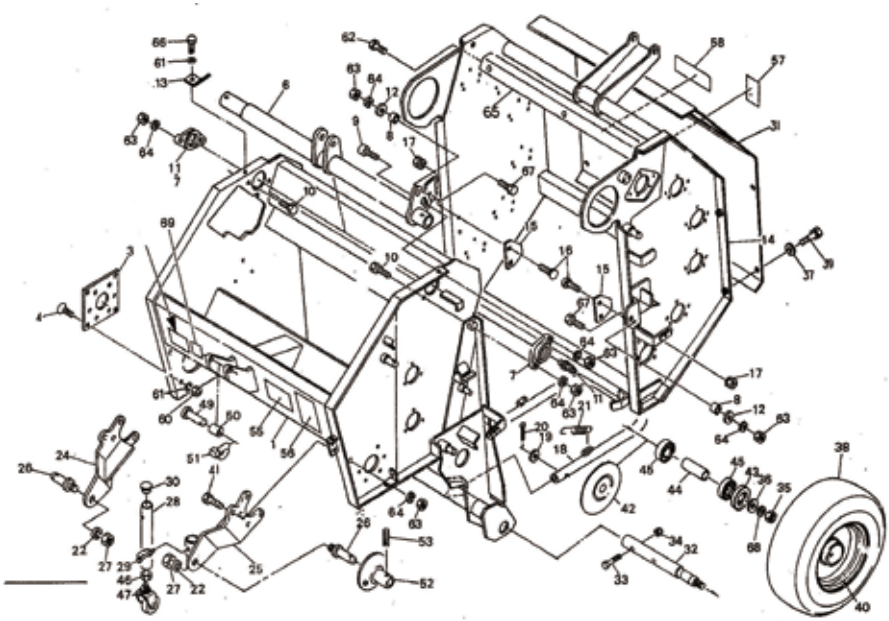
E. Quantity (see parts list).

SUPPLY TIME(PERIOD) OF SPARE PARTS

The spare parts for this machine will be supplied for nine years after manufacturer of this machine is stopped. It may take some time to deliver a special part, however, even in this period.

The spare parts will not be supplied after the above period as a rule， If you make a request for supply of a spare part after the above period，however．we can show you the delivery time and cost of that time．

PARTS DIAGRAM(Frame assy)



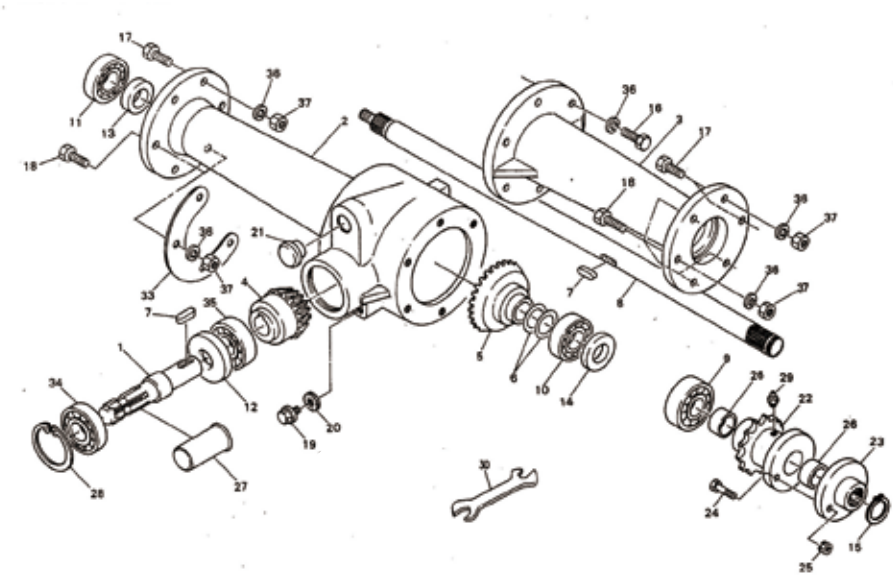
PARTS LIST(Frame assy)

No.	DRAWING NO.	DESCRIPTION	QTY
1	HB3210.1-01-00	HB3120 front frame CP	1
3	HB3210.1-02	Connecting plate	I
4	GB5786-86	Bolt MI0×25 (8.8)	4
6	HB3210.1-03-00	pivot pipe CP HB3120	1
7	HB3210.1-04	top cover	2
8	HB3210.1-05	sleeve	2
9	GB70.1-2000T	HEXAGON SOCKET HEAD SCREW	1
10	GB5786-86	Bolt M12×30 (8.8)	3
11	GB1152-79	grease nipple ONB6 M6×1	2
12	GB97.1-85	washer 12.5×3.2	2
13	HB3210.1-06	Hanging plate	I
14	HB3210.1-07-00	rear frame CP HB3120	I
15	HB3210.1-08	Steel plate	2
16		square neck bolt M8×15 (8.8)	4
17	GB6710-86	Nut M8 (8.8)	4
18	HB3210.1-09	ejector rod CP	I
19	GB97.1-85	Washer 10	I
20	GB91-87	Split pin 3.2×16	1
21	HB3210.1-10	extension spring A	2
22	GB93-87	spring washer 22	2
24	HB3210.1-11-00	Connectting arm CP: R	1
25	HB3210.1-12-00	Connecting arm CP: L	I
26	HB3210.1-13	Connection pin	2
27	GB6710-86	Hexagon nut M22XI.5(8.8)	2
28	HB3210.1-14-00	Supporting rod CP; 450A	1
29	HB4187-1989	bayonet pin 9	1
30	HB3210.1-21	cover	I
31	HB3210.1-15	HB3120 Rear cover	1
32	HB3210.1-16	wheel axis	2

No.	Drawing No.	DESCRIPTION	QTY
33	GB5786-86	Bolt M12×70 (8.8)	2
34	GB6710-86	Nylon locking nut M12	2
35	GB6710-86	HEXagon NUT M14	2
36	GB860-87	Washer 14	4
37	GB97.1-85	Flat washer 8	9
38	GB1192-82(400-12)	Tire 5.70/5.00-8	2
39	GB5786-86	Bolt M8×16 (8.8)	9
40	HB3210.1-17	hub	2
41	GB5786-86	Bolt M12×55 (8.8)	2
42		cover	2
43		cover	2
44		bush	2
45	GB297-84	Bearing 6205-2RS	4
46	GB6710-86	HEX NUT M20 (8.8)	2
47		caster； 100	1
49	HB3210.1-18	Topper Connecting pin	I
51	DIN11024-1973	battle pin； 9	1
55	HB3210.1-21	warning sticker	I
56	HB3210.1-22	warning sticker	I
57	HB3210.11-19	warning sticker	1
58	HB3210.1-23	Sticker: factory name	1
60	GB6710-86	hexagon nut MI0 (8.8)	4
61	GB93-87	spring washer 10	5
62	GB5786-86	Bolt M8×25 (8.8)	2
63	GB6710-86	hexagon nut M12	8
64	GB93-87	srping washer 12	8
65	HB3210.1-19-00	Bracket CP	I
66	GB5786-86	Hexagon bolt MI0×25 (8,8)	1
67	GB5786-86	Hexagon bolt M12×50 (8.8)	2
68	GB93-87	Spring Washer 14	2
69	HB3210.1-24	sticker: RPM	1

No.	Drawing No.	DESCRIPTION	QTY
	HB3210.1-20-00	cover shell bracket: CP	6
	GB/T12-1988	square neck bolt： M8×20 (8.8)	10
	GB6710-86	nut： M8 (8.8)	12
	GB93-87	spring washer: 8	12
	GB1192-82(400-12)	Inner tire； 16×6.50-8	2

PARTS DIAGRAM(Gearbox assy)

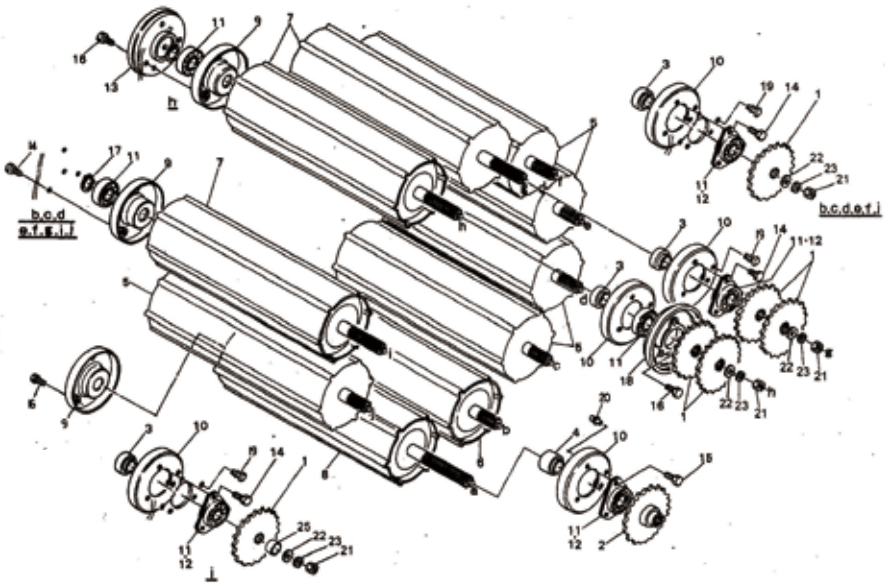


PARTS LIST(Gearbox assy)

No.	Drawing No.	DESCRIPTION	QTY
1	HB3210.2-01	input shaft	1
2	HB3210.2-02	gear box	1
3	HB3210.2-03	gear case	1
4	HB3210.2-04	bevel gear 12T	1
5	HB3210.2-05	bevel gear 22T	1
6	HB3210.2-10	shim	2
7	GB1096-79	Flat key 7×7×25	2
8	HB3210.2-06	shaft	1
9	GB297-84	Bearing 6305-2RS	1
10	GB297-84	Bearing 6305	1
11	GB297-84	Bearing 6304-2RS	1
12	JB2600-80	oil seal D40×62×10	1
13	JB2600-80	oil seal D25×45×7	1
14	JB2600-80	oil seal D25×52×8	1
15	GB894.1-86	shaft retaining ring 25	1
16	GB5786-86	Bolt M10X25 (8.8)	6
17	GB5786-86	Bolt Ml0×35 (8.8)	4
18	GB5786-86	Bolt Ml0×50 (8.8)	8
19		Screw plug： Ml0	1
20		Screw Plug washer： 10	1
21	HB3210.2-10	plug	1
22	HB3210.2-07	Sprocket CP;16T	1
23	HB3210.2-08	flange	1
24	GB5786-2000	shear bolt ； M6×30	11
25	GB6710-86	Nut M6	11
26		bush	2
27	HB3210.2-11	Shaft sleeve PIC; 35	1
28	GB893.1-86	Retaining washer 62	1
29	GB1152×79	Grease nipple ONA M6Xl	1

No.	Drawing No.	DESCRIPTION	QTY
33	HB3210.2-09	Steel plate；4.5	1
34	GB297-84	Bearing 6007-2RS	1
35	GB297-84	Bearing 6206	1
36	GB93-87	Spring washer 10	18
37	GB6710-86	nut MI0 (8.8)	12

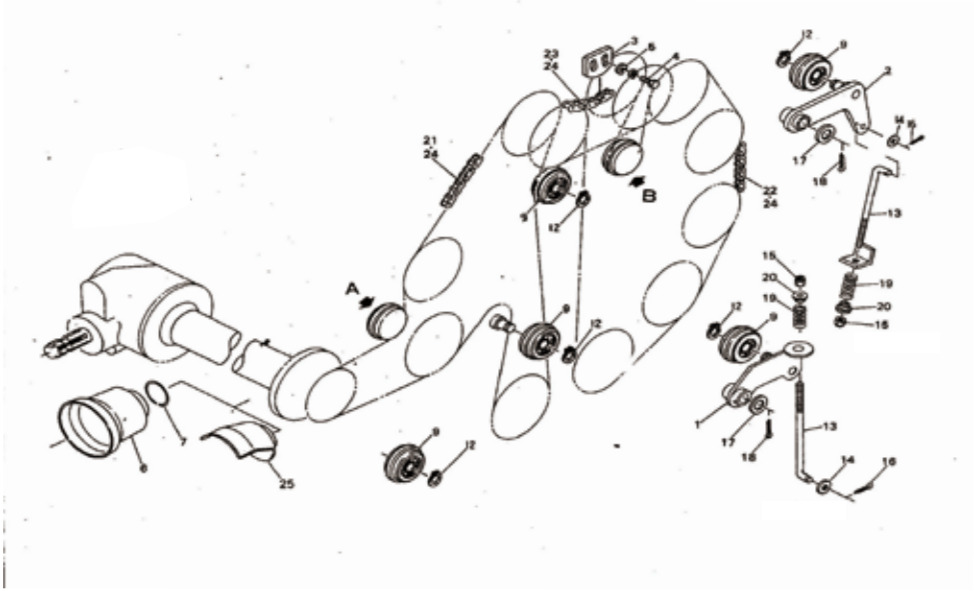
PARTS DIAGRAM(Roller assy)



PARTS LIST(Roller assy)

No.	Drawing No.	DESCRIPTION	QTY
1	HB3210.3-01	sprocket；22T	11
2	HB3210.3-02	sprocket；22T	1
3	HB3210.3-03	bush；A	9
4	HB3210.3-04	bush；B	1
5	HB3210.3-05-00	Roller CP;1	5
6	HB3210.3-06-00	Roller CP;2	1
7	HB3210.3-07-00	Roller CP;3	3
8	HB3210.3-08-00	Roller CP:4	1
9	HB3210.3-09-00	flange CP	10
10	HB3210.3-10-00	flange CP	10
11	GB7810-87	Spherical ball bearings CS205-2RS	20
12	GB/T 7813-1998	bearing seat	18
13	HB3210.3-11	cover plate	1
14	GB5786-86	Bolt M8×20 (8.8)	48
15	GB5786-86	boltM8×25 (8.8)	3
16	GB5786-86	boltM8×30 (8.8)	9
17	GB894.1-86	shaft retaining ring 25	10
18	HB3210.3-12	cover plate	1
19		rivet：6×6	18
20		rivet；6×10 rivet	2
21	GB6710-86	Nut M12	9
22	GB860-87	washer：Φ13×4.5	9
23	GB93-87	spring washer 12	9
25	HB3210.3-13	bush	1

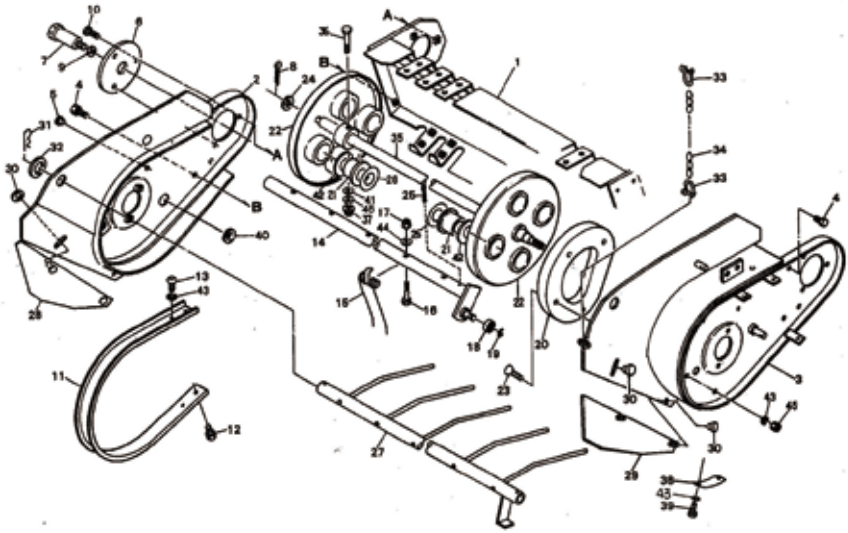
PARTS DIAGRAM(Chain transmission assy)



PARTS LIST(Chain transmission assy)

No.	Drawing No.	DESCRIPTION	QTY
1	HB3210.4-01-00	pulley bracket CP;A	1
2	HB3210.4-02-00	pulley bracketCP;B	1
3	HB3210.4-03	tension plate	1
4	GB5786-86	Spring washer, bolt M8×25 (8.8)	2
5	GB860-87	Washer 8	2
6		Shaft 650	1
7	HB3210.4-04	steel wire retaining ring： S	1
9		Pulley CP	6
12	HB3210.4-05	shaft retaining ring 17	5
13	HB3210.4-05	pull rod HB3120	2
14	GB97.1-85	flat washer 10	2
15	GB	nylon locking nut MI0	2
16	GB91-87	split pin 3.2×16	2
17	GB860-87	Washer 21×1.5	2
18	GB91-87	split pin 3.2×32	2
19	HB3210.4-06	spring	2
20	HB3210.4-07	spring seat	2
21	GB/T1243-2006	Chain 50SH-144-1 HB3120	1
22	GB/T1243-2006	Chain 50SH-126-1 HB3120	1
23	GB/T1243-2006	Chain 10A-42×l	1
24	GB/T1243-2006	chain joint 50SH	3

PARTS DIAGRAM(Picking-up assy)

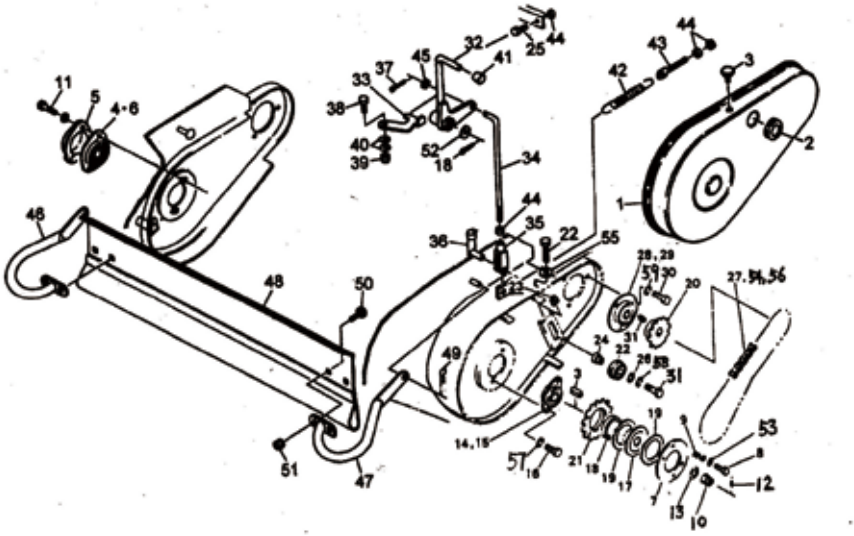


PARTS LIST(Picking-up assy)

No.	Drawing No.	DESCRIPTION	QTY
1	HB3210.5-01-00	picking-up Assy bracket CP	1
2	HB3210.5-02-00	picking-up Assy bracket CP;R	1
3	HB3210.5-03-00	picking-up Assy bracket CP;L	1
4	GB5786-86	bolt M8×20 (8.8)	5
5	HB3210.5-18	cover： 9	5
6	HB3210.5-04	Steel plate	1
7	HB3210.5-05	axis	1
8	GB91-87	Split pin 5×36	1
9	GB93-87	Spring washer 14	1
10	GB5786-86	Bolt M8×25 (8.8)	3
11	HB3210.5-06	Protecting spring teeth	11
12	GB5786-86	bolt M8×20 (8.8)	22
13	RBT08020	HEXAGON SOCKET flat HEAD SCREW	22
14	HB3210.5-07-00	Teeth rod CP	4
15	HB3210.5-08	spring	24
16	GB5786-86	bolt M8×55 (8.8)	24
17	GB/T3098.9-2002	Nylon locking nut M8	24
18	GB7810-87	Bearing 6201-2RS(35×12×10)	4
19	GB894.1-86	Shaft retaining ring 12	4
20	HB3210.5-09	Leading track	1
21	HB3210.5-10	nylon sleeve	8
22	HB3210.5-11-00	Racket CP	2
23	GB/T 70.3-2008	HEX SOCKET Countersunk head screw	4
24	HB3210.5-12	shim	2
25	GB91-87	split pin 5×56	8
26	GB860-87	Washer 35×1.2	12
27	HB3210.5-13	Spring teeth assy CP	1
28		Side cover shield (Optional)CP;R	1
29		Side cover shield (optional)CP;L	1

No.	Drawing No.	DESCRIPTION	QTY
30		Plum nut(optional) M8	4
31		B Pin 19×3	2
32	GB860-87	washer	3
33		D Shackle； 6-1/4	2
34		Rectangle welding chain 4×23P×32	1
35	HB3210.5-15	axis	1
36	GB5786-86	Bolt Ml0×70 (10.9)	2
37	GB/T3098.9-2002	Nylon locking nut Ml0	2
38	HB3210.5-16	steel plate	1
39	GB5786-86	Bolt M8×12 (8.8)	2
40	HB3210.5-17	cover	1
41	GB860-87	Washer 10	2
42	GB860-87	Washer 43×3.5	8
43	GB93-87	Spring washer 8	28
44	GB860-87	Washer 8	24
45	GB6710-86	Nut M8 (8.8)	4
46	GB93-87	spring washer 10	2

PARTS DIAGRAM(Picking-up sprocket Assy)

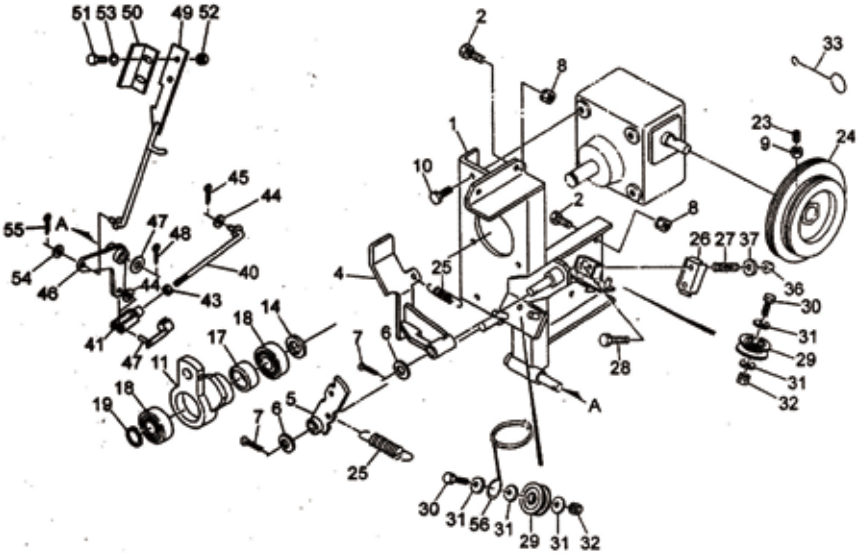


PARTS LIST(Picking-up sprocket Assy)

No.	Drawing No.	DESCRIPTION	QTY
1	HB3210.6-01-00	Sprocket cover CP	1
2	HB3210.6-02	Dust cover	1
3		Plum-shaped bolt M8×14	3
4	GB7810-87	bearing CS204-2RS	1
5	HB3210.6-18	Bearing cover	1
6		Bearing seat PFL204	1
7	HB3210.6-03	Tension disc	1
8	GB5786-86	Bolt Ml0×65 (8.8)	4
9	HB3210.6-04	spring	4
10	GB97.1-85	slotted nut M20×1.5 GB9457	1
11	GB5786-86	Bolt M8×25 (8.8)	2
12	GB91-87	Split pin 4×25	1
13	GB860-87	washer； 20	1
14	GB/T 7813-1998	Bearing seat PFL205	2
15	GB7810-87	Spherical ball bearings CS205-2RS	1
16	GB5786-86	Bolt M10X20 (8.8)	2
17	HB3210.6-05	Friction disc	1
18	HB3210.6-06	bush	1
19	HB3210.6-07	Friction washer	2
20	HB3210.6-08	sprocket； RS50×18T	1
21	HB3210.6-09	sprocket； RS50×32T	1
22	HB3210.4-04	Pulley CP	1
23	GB/T13680-1992	Square nut	1
24	HB3210.6-11	bush	1
25	GB5786-86	Bolt Ml0x40 (8.8)	1
26	GB860-87	washer； 12	1
27	GB/T1243-2006	chain10A-59×l	1
28	GB/T 7813-1998	Bearing seat PF206	2
29	GB7810-87	Bearing CS206-2RS	1

No.	Drawing No.	DESCRIPTION	QTY
30	GB5786-86	Bolt MI0×20 (8.8)	3
31	GB5786-86	Bolt M12×45 (8.8)	1
32	HB3210.6-12	Up-down Rod CP	1
33	HB3210.6-13	Brake plate	1
34	HB3210.6-14	Pull rod RXHB3120	1
35	HB3210.6-15	fork；10×40	1
36	GB882-86	pin；10×40	1
37	GB91-87	Split pin 3.2×16	1
38	GB5786-86	Bolt MI0×30(8.8)	1
39	GB/T3098.9-2002	Nylon locking nut MI0	1
40	JB/ZQ 4340-2006	Disc washer 10	2
41	HB3210.6-10	Handle sleeve；12	1
42	HB3210.6-17	Extension spring：H	2
43		Adjustable screw；MI0	2
44	GB6710-86	Nut MI0 (8.8)	6
45	GB97.1-85	Flat washer 10	1
46		Elbow bend (optional) CP;R	1
47		Elbow bend (optional) CP:L	1
48		Shield（optional）	1
49		9 Pin(optional) 8×1.6	2
50		Square neck boltM8×15 （optional）	4
51	GB6710-86	Nut(optional) M8	4
52	GB860-87	Washer 21×1.5	1
53	GB860-87	washer ； 10	4
54		Joint 10A	1
56		Coupling part 10A	1
57	GB93-87	Spring washer 10	2
58	GB93-87	Spring washer12	2
59	GB93-87	Spring washer 10	3

PARTS DIAGRAM(Twine binding bracket Assy)

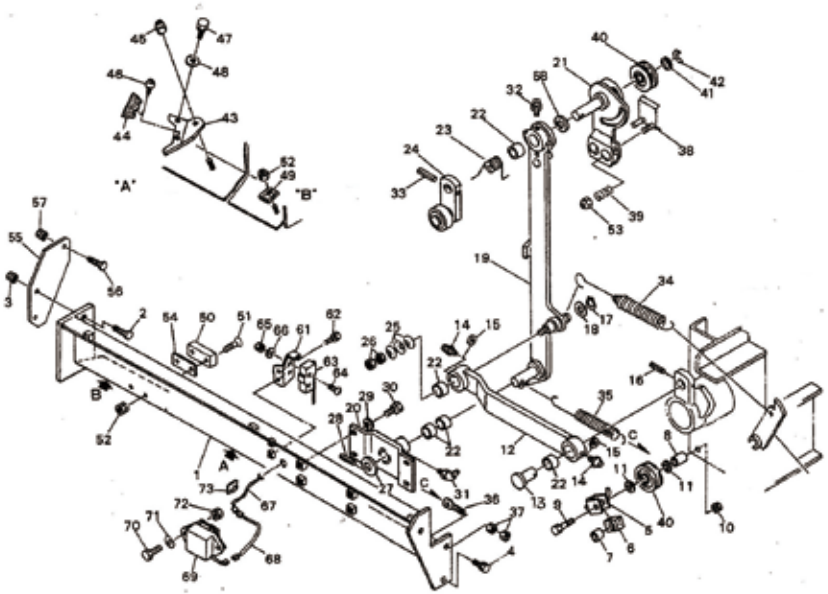


PARTS LIST(Twine binding bracket Assy)

No.	Drawing No.	DESCRIPTION	QTY
1	HB3210.7-01-00	Twine clip plate CP;1	1
2	GB5786-86	Bolt M8×20 (8.8)	6
4	HB3210.7-02-00	Pressure plate CP	1
5	HB3210.7-03	Tension plate CP	1
6	GB97.1-85	Washer 12	2
7	GB91-87	Split pin 3.2×16	2
8	GB6710-86	Nut M8	6
9	GB6710-86	Bolt M8×20	1
10	GB5786-86	cam	4
11	HB3210.7-04	Retaining ring 25	1
14	HB3210.7-05	Single-direction	1
17	GB/T290-98	Rolling bearing HK2520(25×32×20)	1
18	GB297-84	bearing 6005-2RS (25X47X12)	2
19	GB484.1-86	Shaft spring retaining ring 25	1
23	GB/T 80-2000	Hexagon socket set screw M8×20	1
24	HB3210.7-06	Twine pulley HB3120	1
25	HB3210.7-07	Pull spring	2
26	HB3210.7-08	slot plate	1
27	HB3210.7-09	compression spring	2
28	GB5786-86	boltM6×50	2
29	HB3210.7-10	pulleyCP	2
30	GB5786-86	boltM8×30 (8.8)	2
31	GB97.1-85	Flat washer 8	5
32	GB6710-86	nut M8	2
33	HB3210.7-11	Twine hook	1
36	GB/T3098.9-2002	Nylon locking nut M6	2
37	GB97.1-85	Flat washer 6	2
40	HB3210.7-12	Adjustable lever CP	1
41	HB3210.7-13	Fork 8×32	1

No.	Drawing No.	DESCRIPTION	QTY
42	HB3210.7-14	Pin 8×30	1
43	GB6710-86	nutM8	1
44	GB97.1-85	Washer 8	2
45	GB91-87	Split pin 3.2×16	1
46	HB3210.7-15	Fork rod CP	1
47	GB97.1-85	Flat washer 12	1
48	GB91-87	Split pin 3.2×16	1
49	HB3210.7-16	Spring rod CP	1
50	HB3210.7-17	pressure pad	1
51	GB5786-86	Bolt M6×20	2
52	GB6710-86	Nut M6	2
53	GB97.1-85	Flat washer 6	2
54	GB97.1-85	Flat washer 8	1
55	GB91-87	Split pin 3.2×16	1
56	HB3210.7-18	Twine ring	1

PARTS DIAGRAM(Twine binding support Assy)



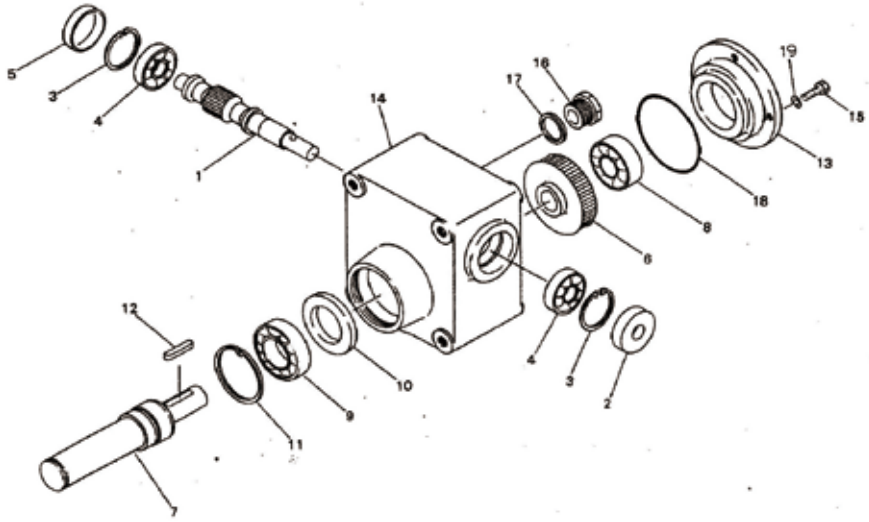
PARTS LIST(Twine binding support Assy)

No.	Drawing No.	DESCRIPTION	QTY
1	HB3210.8-01-00	Support rod CP;2	1
2	GB5786-86	Bolt M8×20 (8.8)	2
3	GB6710-86	Nut M8	2
4	GB5786-86	bolt M8×20 (8.8)	2
5	HB3210.8-02-00	Rubber racket CP	1
6	HB3210.8-03	rubber washer	1
7	HB3210.8-04	bush	1
8	HB3210.8-05	sleeve	1
9	GB5786-86	bolt M8×80 (8.8)	1
10	GB6710-86	nut M8 (8.8)	1
11	GB93-87	Spring washer 8	2
12	HB3210.8-06-00	Swing arm CP	1
13	GB119-86	Cylindrical pin	1
14	GB1152×79	Grease nipple AM6×1	2
15	GB97.1-85	Flat washer 6	2
16	GB879-86	Spring cylindrical pin 6×36	1
17	GB894.1-86	Shaft spring retaining ring 15	1
18	GB97.1-85	washer 17×1.5	1
19	HB3210.8-08-00	Support rod CP;1	1
20	HB3210.8-09-00	bracket	1
21	HB3210.8-10-00	Support rod	1
22	HB3210.8-11	Nylon sleeve	5
23	HB3210.8-12	Torsion spring	1
24	HB3210.8-13-00	Pulley bracket CP:3	1
25	JB/ZQ4340-2006	Spring disc washer	3
26	GB6710-86	nut M8 (8.8)	2
27	GB97.1-85	Flat washer 17×1.5	1
28	GB879-86	Spring cylindrical pin 5×32	1
29	GB97.1-85	Flat washer 8	4

No.	Drawing No.	DESCRIPTION	QTY
30	GB5786-86	bolt M8×20 (8.8)	4
31	GB1152×79	grease nipple ONA6 M6×1	1
32	GB1152×79	grease nipple ONA6 M6×1	1
33	GB879-86	Spring cylindrical pin 6×36	1
34	HB3210.8-15	Extension spring； H	1
35	HB3210.8-16	Extension spring； H	1
36	HB3210.8-07	screw： M8	1
37	GB6710-86	nut M8 (8.8)	2
38	HB3210.8-17-00	Slot pressure pad	1
39	HB3210.8-18	compression spring ； A	1
40	HB3210.7-10	pulleyCP	2
41	GB97.1-85	Flat washer 8	1
42		Opening retaining ring 5	1
43	HB3210.8-19-00	Knife bracket	1
44	HB3210.8-14	knife	1
45	GB/T3098.9-2002	Nylon locking nut M8	1
46	GB/T 5280-2002	Self-tapping screw M3×6	1
47	GB5786-86	bolt M8×20 (8.8)	1
48	GB97.1-85	Washer 8	1
49	HB3210.8-20	Rubber washer	1
50	HB3210.8-21	Nylon washer	1
51	GB 819-1985	Cross Countersunk head screw	2
52	GB/T3098.9-2002	Nylon locking nut M8	3
53	GB/T3098.9-2002	Nylon locking nut M6	1
54	HB3210.8-22	plate	1
55	HB3210.8-22	Plate HB3120	1
56	GB5786-86	bolt M8X16 (8.8) HB3120	1
57	GB6710-86	nut M8(8.8) HB3120	1
58	GB97.1-85	Flat washer 16	1

No.	Drawing No.	DESCRIPTION	QTY
61	HB3210.8-23	buzzer switch racket	1
62	GB5786-86	bolt M8×20 (8.8)	2
63		switch	1
64	GBT 818-2000	Cross crew M4×30	2
65	GB6710-86	nut M4 (8.8)	2
66	GB97.1-85	Flat washer: 4	2

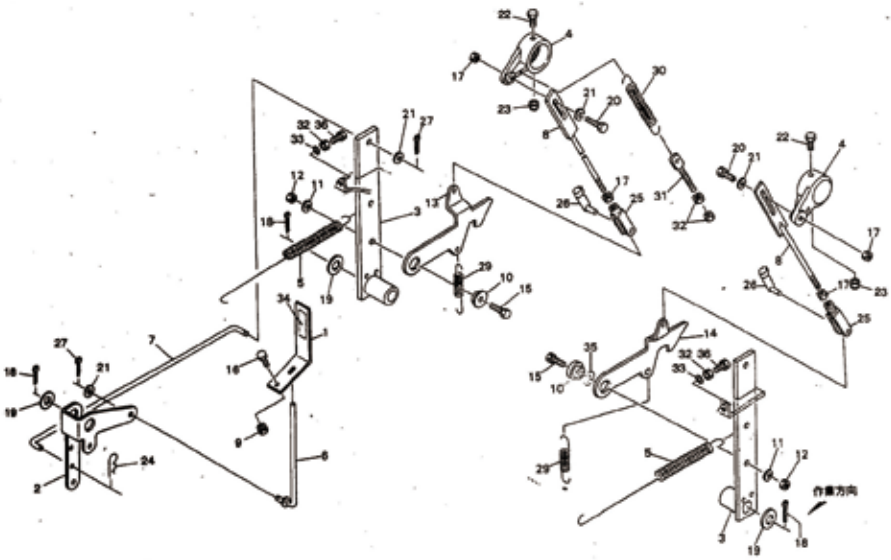
PARTS DIAGRAM(Reducer assy)



PARTS LIST(Reducer assy)

No.	Drawing No.	DESCRIPTION	QTY
1	HB3210.9-01	worm	1
2	GBT 9877-2008	Lip seal FB15×35×8	1
3	GB893.1-86	Holes Circlips 35	2
4	GB297-84	Bearing 6202	2
5	HB3210.9-02	Sealing cover KRCA3507	1
6	HB321009-03	Wormgear	1
7	HB3210.8-04	Worm-wheel shaft	1
8	GB297-84	Bearing 6203	1
9	GB297-84	Ball bearing 6005-2RS	1
10	D30507	Oil seal FB30×50×7	1
11	GB893.1-86	Retaining ring 47	1
12	GB1096-79	Flat key 5×5×25	1
13	HB3210.9-05	cover	1
14	HB3210.9-06	case	1
15	GB5786-86	Bolt M6×16 (8.8)	4
16	HB3210.9-07	Oil port bolt	1
17	HB3210.9-08	Rubber washer	1
18	GB3452.1-82	O-rubber seal G-60	1
19	GB93-87	Spring washer 6	4

PARTS DIAGRAM(Topper cover rod)

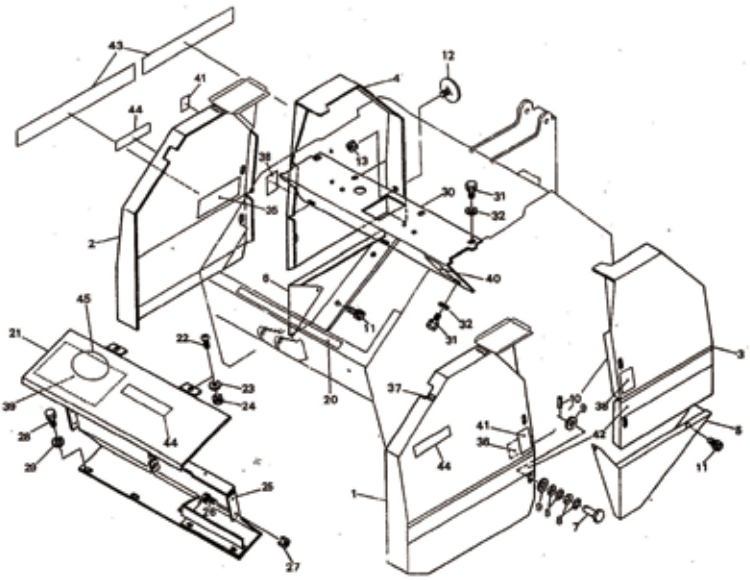


PARTS LIST(Topper cover rod)

No.	Drawing No.	DESCRIPTION	QTY
1	HB3210.10-01	Indicator board	1
2	HB3210.10-02	Fork plate	1
3	HB3210.10-03-00	Connecting plate	1
4	HB3210.10-04	Topper cover	5
5	HB3210.10-05	extension spring HB3120	5
6	HB3210.10-06-00	Indicator rod HB3120	1
7	HB3210.10-07	Pull rod HB3120	1
8	HB3210.10-08-00	Connecting rod HB3120	1
9	GB6710-86	nut M8	1
10	HB3210.10-09	Shaft sleeve	3
11	GB93-87	Spring washer 10	11
12	GB6710-86	nut 10	22
13	HB3210.10-10	hook ; R	22
14	HB3210.10-11	hook: L	4
15	GB5786-86	Bolt Ml0×35 (8.8)	24
16	GB5786-86	bolt Ml0×20 (8.8)	24
17	GB6710-86	nutM8 (8)	24
18	GB91-87	Split pin3.2×32	4
19	GB97.1-85	21×1.5 washer	4
20	GB5786-86	Bolt M8×25 (8.8)	1
21	GB97.1-85	washer 8	8
22	GB5786-86	bolt M8×75 (8.8)	2
23	GB/T3098.9-2002	Nylon locking nut M8	4
24		B-pin 8×1.6	2
25	HB3210.7-13	Connecting yoke; 8×32	8
26	HB3210.7-14	Connecting pin; 8×32	12
27	GB91-87	Split pin3.2×16	1
29	HB3210.10-12	Extension Spring; 2.3×1 8×6 8	1
30	HB3210.10-13	Extension Spring; H	1

No.	Drawing No.	DESCRIPTION	QTY
31	HB3210.10-14	Pull rod； Ml 0	4
32	GB6710-86	nut Ml0 (8)	2
33	GB93-87	washer 10	3
34		sticker	2
35	HB3210.10-15	Adjusting shimΦ10.5×0.27	1
36	GB5786-86	Bolt Ml0×35 (8.8)	1

PARTS DIAGRAM(Cover)

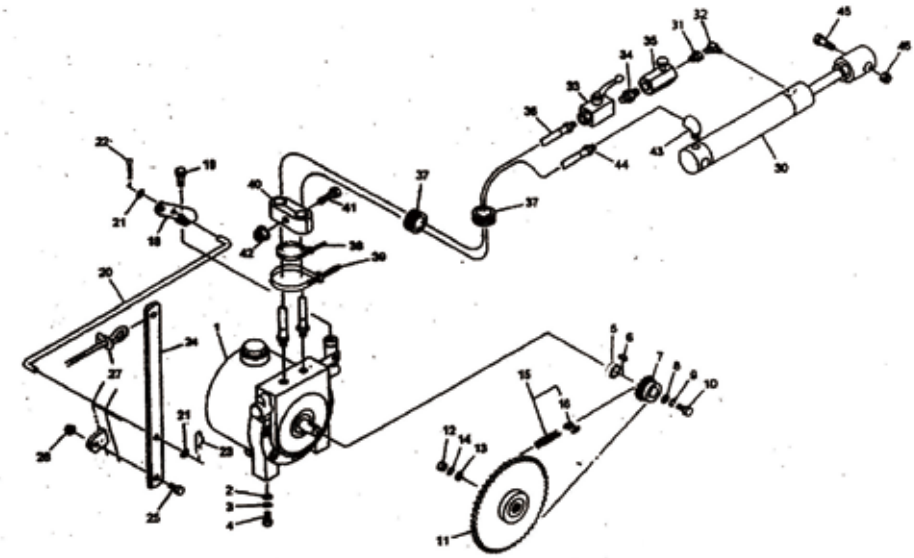


PARTS LIST(Cover)

No.	Drawing No.	DESCRIPTION	QTY
1	HB3210.11-01-00	Front cover housing CP;L HB3120	1
2	HB3210.11-02-00	Front cover housing CP;R HB3120	1
3	HB3210.11-03-00	rear cover housing CP;L HB3120	1
4	HB3210.11-04-00	rear cover housing CP;R HB3120	1
5	HB3210.11-05-00	Cover housing CP;L HB3120	1
6	HB3210.11-06-00	Cover housing CP; HB3120	1
7	HB3210.11-07	Star handle： 50	8
8	JB/ZQ4340-2006	Disc spring washer	32
9	GB97.1-85	Flat washer 8	16
10	GB879-86	Spring cylindrical pin 4×16	8
11	GB5786-86	Bolt M8×16 (8.8)	4
12	HB3210.11-08	reflector； R-80CI	2
13	GB6710-86	Nut M5	2
20	HB3210.11-09	magnet	1
21	HB3210.11-10-00	gate; CP HB3120	1
22	GBT 818-2000	cross head screw M6×12	2
23	GB97.1-85	Washer 6	2
24	GB6710-86	Nut M6	2
25	HB3210.11-11-00	Cover box CP HB3120	1
26	GB5786-86	bolt M8×20 (8.8)	4
27	GB6710-86	nut M8	4
28	GB5786-86	bolt M8×20 (8.8)	4
29	GB97.1-85	Flat washer 8	4
30	HB3210.11-12-00	Cover housing； CP HB3120	1
31	GB5786-86	bolt M8×20 (8.8)	8
32	GB97.1-85	Flat washer8	8
35	HB3210.11-13	sticker	1
36	HB3210.11-14	sticker	1
37	HB3210.11-15	sticker	1

No.	Drawing No.	DESCRIPTION	QTY
38	HB3210.11-16	Warning sticker	2
39	HB3210.11-17	sticker	1
40	HB3210.11-18	Warning sticker	1
41	HB3210.11-19	Warning sticker	2
42	HB3210.11-20	Warning sticker ； 850L HB3120	1
43	HB3210.11-21	Warning sticker ； 850R HB3120	1
44	HB3210.11-22	Name of manufacturer	3
45	HB3210.11-23	sticker	1
46	HB3210.11-24	sticker	1

PARTS DIAGRAM(Hydraulic pump assy)



PARTS LIST(Hydraulic pump assy)

REF	DESCRIPTION	DESCRIPTION	QTY
1	HB3210.12-04-00	Hydraulic pump station ； 95R	1
2	GB97.1-85	Washer 10	2
3	GB93-87	Spring wahser 10	2
4	GB5786-86	boltMl0×25 (8,8)	2
5	HB3210.12-01	Check sleeve	1
6	GB1096-79	Flat key5×5×20（B type）	1
7	HB3210.12-02	Small pulley 9T	1
8	GB97.1-85	Washer 6	1
9	GB93-87	Spring washer 6	1
10	GB5786-86	bolt M6×16 (8,8)	1
11	HB3210.12-03	Large pulley 43T	1
12	GB6710-86	nutM12 (8.8)	1
13	GB97.1-85	washer：13×4.5	1
14	GB93-87	Spring washer 12	1
15	GB/T1243-2006	chain08A-56×1	1
16	GB/T1243-2006	Chain joint 08A	1
18	HB3210.12-05	Conneting board	1
19	GB5786-86	Bolt M8×16 (8.8)	1
20	HB3210.12-06	Connecting rod	1
21	GB97.1-85	Washer 8	2
22	GB91-87	Split pin 3.2×16	1
23		B-pin 8×1.6	1
24	HB3210.12-07	plate	1
25	GB5786-86	bolt M8×25 (8.8)	1
26	GB/T3098.9-2002	Nylon locking nut M8	1
27	HB3210.12-08	Nylon rope 6×3500	1
30	HB3210.12-09-00	Cylinder CSH35×210×375	1
31		Conical female and male outside coupler Gl/4×Rl/4	1
32		90°conical male inside coupler Gl/4×Rl/4	1

REF	DESCRIPTION	DESCRIPTION	QTY
33	GB/T12223-2005	Control volve Rcl/4	1
34		male coupler R1/4	1
35	GB/T8100-1987	Single-direction throttle valve Rcl/4	1
36	GB/T1277-99	Rubber hose Gl/4×1000	2
37	HB3210.12-10	bush；Φ35	2
38		Plastic hoop 2.5×100	3
39		Plastic hoop 4.8×251	2
43		90°conical male inside coupler Gl/4×Rl/4	4
44		90°female coupler Gl/4	2
45	GB5786-86	bolt M16×80 (8.8)	2
46	GB/T3098.9-2002	Nylon locking nut M6	2

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