

Round Baler

**MODEL-TRB2250AT/AN
TCR2250AT/AN**

INSTRUCTION MANUAL

IHI Agri-Tech Corporation

S-260317A
2026-03-17

For safety operation

Warning for the personal safety

Safety labels with alert symbol are stuck on the machine.
Follow instruction of the safety labels for your safe operation.

Danger

Failure to follow instruction may be serious consequences resulting in bodily injury or death.

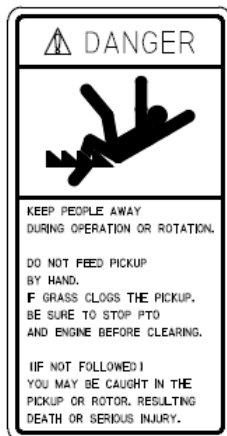
Warning

Failure to follow instruction may be a strong possibility of consequences resulting in bodily injury or death.

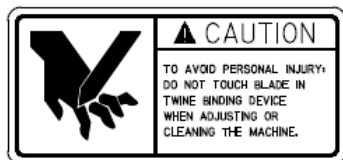
Caution

Failure to follow instruction may be consequences resulting in bodily injury.

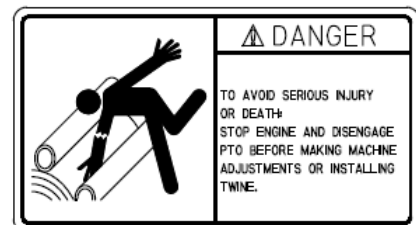
The location of safety labels



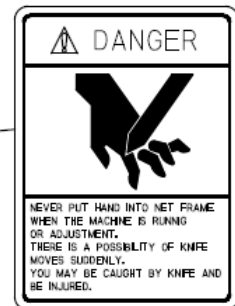
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Part No. 1511290000



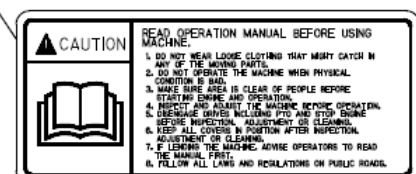
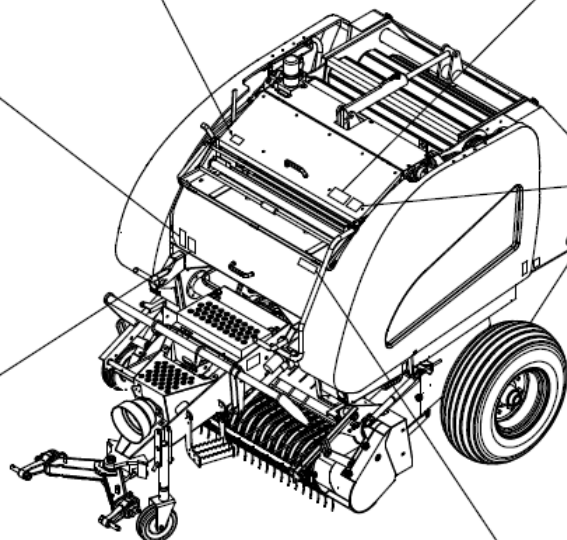
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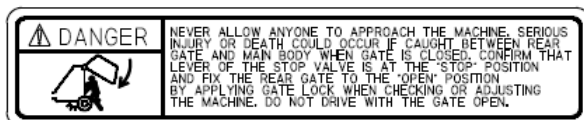
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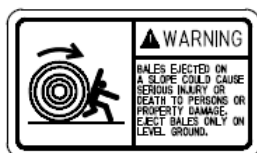
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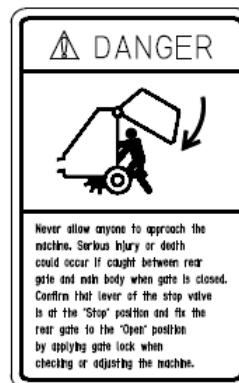
Part No. 1615030000



Part No. 1615020000



Part No. 1511230000



Part No. 1511740000



Part No. 1511180000

株式会社HIアグリテック Hi Agri-Tech Corporation	
型式	
MODEL	
部品番/部品名	REFERENCE NO./
製造番号	MFG. NO.
Please print or reference No. when you order spare parts. MADE IN JAPAN	



Part No. 1065600000

- In case of safety labels are damaged-

The safety labels are very important to ensure proper operation and safety.

If any safety labels are damaged or missing, replace immediately.

Parts number should be advised when you order the safety labels.

Safety precautions for operation

Neglecting the following precautions can cause a death or an injury.

Before starting work, read the operation manuals of the baler and tractor carefully to understand the correct operating method thoroughly.

Before operation

Keep the operation manual by the machine

▲CAUTION

- When you do not know something about operation of the machine, if the operation manual is not by the machine and you judge and act by yourself, an accident may occur and you may be injured. Accordingly, keep the operation manual by machine so that you can read it whenever you want to know something about the machine.

Read the operation manual before starting

▲CAUTION

- If you start work without understanding the all safety precautions and operating procedure written in the operation manual, an accident may occur. Accordingly, before starting work, fully understand the safety precautions and operating procedure written in the working labels stuck to the machine and in the operation manual.

Do not operate in the following cases

▲WARNING

- If you operate the machine when your physical condition is bad or before you get used to operation of the machine, an accident may occur. Do not operate the machine in the following cases.
- When you cannot concentrate on work because of fatigue, sickness, doping, etc.
- After you drink alcohol.
- When you are not used to operation of the machine.
- When you are pregnant.

Check your clothes for work

▲WARNING

- If you operate the machine in unsuitable clothes for work, the clothes may be wound in the machine, and that can cause a death or an injury. When operating the machine, put on the following clothes.
- Clothes, the sleeves and bottoms of which are not too loose or too long.
- Trousers and jacket which are not too loose.
- Helmet.
- Do not wear a towel around your head or neck or hang it on your belt.

When lending the machine to a person

▲WARNING

- If you lend your machine to a person who does not know the precautions and operating procedure written in the operation manual, he (she) may cause an accident. Accordingly, explain all operation method and order him (her) to read the operation manual before starting work.

Prohibition of modification of machine

▲CAUTION

- Modification of the machine or installation of an attachments or a part which we not recommend you can cause breakage of machine and an injury.
Do not modify the machine.
Use only the attachments that we recommend.
Use only replacement parts that we recommend.

Execution of check before starting work

▲WARNING

- If machine runs with its bearings broken, the bearing is getting hot and harvested materials or stacked crops catch fires and finally large fire may occurs.
Before starting work, check that there are no damages of bearings and remove any stacks of crops and dusts if there are.
- Before starting work, check the machine according to the operation manual.
Neglecting check before starting work can cause breakage of the machine and an injury.

When starting engine and moving machine

▲WARNING

- If you start the engine, standing by the tractor or on the step of the tractor, you cannot take proper actions in an emergency and you and persons around the machine may be injured.
Sit on the operator's seat and confirm the safety around the machine before starting the engine.
- If the engine is started with the main gear shift lever is not in the "N" (Neutral) position, the transmission is connected and the tractor moves abruptly and may cause an accident.
Accordingly, when starting the engine, set the main gear-shift lever in the "N" (Neutral) position.
- If the tractor is started sharply, its front wheels may rise and you may be thrown off and persons around the tractor may be injured.
Accordingly, confirm the safety around the tractor and start it slowly.
- If you start the engine indoor, it may a cause of gas-poisoning.
Wide open a door or a window for ventilation.
- If start the engine without disengaging PTO, it may cause of injury by sudden machine running.
Start the engine after disengaging PTO.

When attaching and detaching the machine

▲WARNING

- If you attach the machine to a tractor, persons around the machine may be injured.
Never stand by any one around the machine.

▲CAUTION

- If you attach the machine to a tractor on inclined, uneven or soft ground, a tractor may suddenly move and may cause of injury.
Always attach the machine to a tractor on solid ground.
- If you detach the machine from a tractor without putting the wheel chock between tire and ground, the machine may suddenly move and may cause of injury.
Whenever detach the machine from a tractor, stand the stand on the ground and apply the wheel chock to a tire.
- If you attach the machine to a tractor whose front wheels weight balance is light, it may cause of losing control and may cause of injury.
Attach front weight to a tractor to get stable weight balance.

When universal joint is used

▲DANGER

- If the universal joint is used in missing cover, you may be wound in it and be injured.
Never use the universal joint missing cover.
- If the universal joint is used in broken cover, you may be wound in it and be injured.
Replace broken cover immediately.
Check the cover if it has any damage before operation.
- Stop engine and disengage PTO when the universal joint is attached to a tractor and the machine.
- If the universal joint is used without attaching the cover chain, the cover may rotate and may cause of Injury.
Attach the cover chain to immovable part of a tractor and the machine.

▲CAUTION

- If the universal joint is rotated in less than 100mm lapping length at the most extracted position, the universal joint may be broken and may cause of injury.
If the clearance is less than 25mm at the most retracted position, the universal joint may push up.
It may cause of breakage of the universal joint and may cause of injury.
Use the universal joint under correct lapping length.
- If the clamp pin is not set in the groove of the shaft, the universal joint may come out and may cause of injury.
Make sure if the clamp pin is set in the groove of the shaft by pushing and pulling the yoke.
- If the universal joint is installed in the wrong direction, the joint may be damaged and cause injury.

When driving on public roads

▲DANGER

- When riding on public roads, be sure to follow all applicable laws and regulations and check your surroundings for safety.
Also, do not allow people to approach the tractor or equipment.
Failure to do so may result in injury or death to those around you.
- Do not engage the PTO when driving on public roads.
Failure to do so may result in injury or death to those around you.
- Be sure to lock and secure the covers and other parts securely.
If you do not follow these precautions, parts such as the cover may fall off while driving, causing injury to people nearby.

▲WARNING

- When driving on public roads, make sure that the equipment is securely attached to the tractor.
Failure to do so may result in the machine coming loose while travelling and hitting people nearby, resulting in death or serious injury.
- When driving on public roads, do not drive with tools, parts, net role, etc. loaded on the work machines.
Failure to do so may result in the load falling while driving, resulting in death or serious injury.
- When driving on public roads, always make sure, the vehicle is in mobile mode.
- The tractor and the working machine have different driving paths, so drive with caution.
Failure to do so may result in the risk of hitting people around you and causing death or serious injury.
- Remove the revolving light lights.

▲CAUTION

- The braking distance of the tractor may increase depending on the weight of the working machine. Be careful to brake early.
- It is against the law to leave grass, soil, etc. attached to the machine on the road in a dangerous state.
Clean and remove any attached matter before driving on public roads.
- Do not park the work machine alone on a public road.
- Abrupt steering, sudden braking, sudden shifting down, etc. may cause abnormal phenomena specific to trailers such as trailer swing, jack-knife, plow out phenomenon, and snaking.
Avoid sudden operations except in emergencies and drive safely.
- When driving on slippery wet or snowy roads, sudden engine braking can cause the jack-knife phenomenon. Avoid sudden engine braking.
- If you slip on a slippery road, trailer-specific abnormalities such as trailer swing, jack-knife, plow out phenomenon, and snake.
Therefore, avoid sudden braking and sudden steering.
- Do not travel long distances with the bale inside the machine (chamber).
- Do not drive with the gate open.
- Do not drive with net rolls loaded in the temporary net storage area.

When traveling

▲DANGER

- If the right and left brake pedals are not coupled, only one pedal may be footed on.
It may make sharp turn of a tractor and the machine and may cause of accident.
Couple right and left brake pedal except special operation done in the field.
- If you drive in an awkward position when crossing levees or putting horses in, the tractor may tip over or roll over, causing an unexpected accident.
Drive in a stable position. Failure to follow these instructions may result in death or serious injury.

▲WARNING

- Never ride together with other people on a tractor.
Riding together with other people may cause of accident.
- Do not stop suddenly or do not turn tightly.
- Tractor should be slow down on slopes, uneven ground and during tight turn.
- Always take enough distance from other people and obstruction during turn.
- Stay away a person from inner tire of tractor and the machine or keep enough distance between inner tire and obstruction when you make turning.
- If you drive the tractor on the shoulder of a road, the side of which is sloped or which have a side ditch, the tractor may tip over.
Do not drive on the shoulder.
- If you drive over a high obstacle, the tractor may tip over and you may be injured.
Use ramps to over such an obstacle.
- If a person rides the baler, he (she) may fall and may be injured.
If anything is put on the driven baler, it may fall to injure persons around the baler.
Do not allow a person or a thing on the baler.
- If you take your eyes off the road while driving the tractor, you may fail in avoiding an obstacle or a person to cause an accident.
When driving, pay attention sufficiently to around the machine, as well as the front of the machine.
- If you release the steering wheel of the tractor during travel, the tractor may run away.
Hold the steering wheel securely during travel.
- Drive carefully as the tractor and implement have different driving paths.
Failure to follow these rules may result in people in the vicinity being hit and causing death or serious injury.

▲CAUTION

- If the tractor is driven without turning off the power for the baler, persons around the baler may be wound in the rotary parts to injure them.
When driving the tractor, turn off the PTO.

During work

When working

▲DANGER

- When the bale is discharged on slope or uneven place, there is some possibility that you may be caught by bale and may be injured.
Discharge bales on even place.
- When you install or store twine or net to the machine, you may be injured with touching rotating part. Stop the PTO and engine.
- If a person touches the pickup while the baler is operating or turning, he (she) may be wound in and injured. Do not allow any person approaching the baler.
Do not feed by hand over the guard since it is dangerous.
If the pickup is stuffed with crops, stop the PTO and engine, then remove crops.
- If you touch roller during machine is running you may be injured.
Do not touch roller.
If crops are wound, stop the PTO and engine, then remove crops.
- If you allow any person approaching the baler when opening the gate, he (she) may be wound with caught in gate and wall or something.
Do not open gate carelessly.
- When the gate is opened and inspected adjusted, the gate may close unexpectedly, and you may be caught in it, resulting in death or serious injury.
Switch the stop valve to the "closed" side to secure the gate.
After that, install the gate lock.
When closing the gate, if there are people inside, they may be caught in the gate and cause death or serious injury.
Keep people away from you.
- When closing the gate, if there are people inside, they may be caught in the gate and cause death or serious injury.
Keep people away from you.

▲WARNING

- When working, if you bring people close to you, they may get caught in the machine and get injured. Keep people away from you.
- If the PTO speed exceeds the specified speed of the baler, the baler may be broken and persons around it may be injured.
Observe the specified revolving speed.
- If you put a person on a work machine, they may fall and be injured.
Also, if you work with an object on it, it may fall and injure the people around you.
Do not place any people or objects on top of the work machine.
- If you drive down a slope, the tractor may run away.
Drive slowly on the slope.
If the gear is shifted on a downhill road, the tractor may run away. Select a lower gear before the downhill road and drive down slowly.
- If you take your eyes off the road while driving the tractor, you may fail in avoiding an obstacle or a person to cause an accident.
When driving, pay attention sufficiently to around the machine, as well as the front of the machine.
- If you release the steering wheel of the tractor during travel, the tractor may run away.
Hold the steering wheel securely during travel.

▲CAUTION

- If you touch the universal joint while the baler is operating or turning, you may be caught in it and injured.
Do not put your hand or foot in the operation area.
- If you open the cover while the baler is operating or turning, you may be wound in the rotary parts and injured.
Do not open the cover.
- If you put your hand in through the open part of the cover, you may get caught in the rotating part and get injured.
Do not put your hands in it.
- If you adjust the baler or remove foreign matter without turning off the PTO and the engine, another person may drive it by mistake to cause an accident.
Before touching the baler, turn off the PTO and stop the engine and check that the rotary parts and movable parts are stopped.
- Baling hay with a moisture content that is greater than 20% could result in carbonization of the dry hay or could result in spontaneous combustion.
Be sure that the hay has sufficiently dried before baling.
- If smoke is discovered in the barn, stop hay removal and immediately contact the fire department and follow their instructions.

When leaving the tractor

▲WARNING

- If the tractor is left parked on a slope or an uneven ground, it may run away to cause an accident.
Park the tractor on a level and hard place and stop the engine, then apply the parking brake to Prevent the tractor from running away.

When exhausting bales

▲DANGER

- If you works inside of chamber without closing stop-valve, gate may close abruptly and you may be injured or dead.
Hold the gate with closing the stop valve surely, and put in gate lock.
- When you finish exhausting bales and then open stop valve, the gate strikes a nearby person, and he (she) may be injured.
Do not allow any person approaching the baler then.
- When you exhaust bales inside of chamber with working rollers, you may be injured or dead.
Before working inside of chamber, turn off the PTO and engine.

After finishing work

When cleaning the machine body

▲CAUTION

- If you remove foreign matter from the rotary parts or movable parts without turning off power, you may be wound in the machine and injured.
Before touching the baler, turn off the PTO and stop the engine and check that the rotary parts and movable parts are stopped
- If you remove foreign matter from nearby knives in the cutting device, you may be wounded knives.
Be careful of knives.
- If you adjust and clean the twine binding, you may be wounded by knives.
Be careful of knives.

Execution of check after finishing work

▲CAUTION

- If you neglect the check after finishing work, the machine may be left adjusted improperly or broken and you may have a trouble or may be injured when you operate the machine next time.
After finishing work, check the machine according to the operation manual.
- If you lift machine by lower link and then adjust it,
it may lower abruptly to injure you.
Before adjusting the machine, lock oil-hydraulic circuit of lower link of tractor.

When conditioning, inspecting, and maintaining

▲DANGER

- If you put your hand into net frame when the machine is running, knife may move abruptly and your hand may be wound in it.
Do not put hands into net frame.
- When you open gate, and then adjust and inspect without closing stop-valve, gate may close abruptly and you may be injured or dead. Hold the gate with closing the stop valve surely, and put in gate lock.
- When you close gate, the gate strikes a nearby person, and he (she) may be injured.
Do not allow any person approaching the baler then.
- When you adjust the binding device, you may be injured by rotating parts.
Stop PTO and engine before adjustment.
- Before using the machine, be sure to thoroughly remove any crop debris from around the drive parts, and check the bearings for damage.
If this precaution is not taken, damaged bearings may overheat and ignite any remaining any crop debris, posing a risk of fire.
- Before using the machine, be sure to lubricate all drive and moving parts, such as chains and gears.
If this precaution is not taken, it may cause premature wear or damage to the components, posing a risk of fire.

▲WARNING

- When you notice strange noise or abnormal heating, stop working immediately and resolve the cause of the noise and heating.
- If the wiring is damaged, it may catch fire or cause smoke. Inspect and replace if there is any damage.

▲CAUTION

- Leaving a machine trouble as it is can cause breakage of the machine and injury.
Repair it according to the operation manual.
- If you lift machine by lower link and then adjust and inspect it,
it may lower abruptly to injure you.
Before adjusting the baler, you lock oil-hydraulic circuit of lower link of tractor.
- If the tractor is conditioned, inspected, or maintained on a slope or an uneven ground, it may
move abruptly to cause an accident.
Park the tractor on a level and hard place.
- If you work on the baler without turning off the PTO and the engine, another person may
drive it by mistake to cause an accident.
Before touching the baler, turn off the PTO and stop the engine and check that the rotary parts and
movable parts are stopped.
- If you enter or put your foot under the raised baler, the baler may lower abruptly to injure you.
When entering under the baler, prevent it from lowering with a stand, etc.
- If you start work without installing the covers removed for conditioning, inspection, or maintenance,
you may be wound in the rotary parts or movable parts and injured.
Install the all removed covers again.
- If you adjust and clean the twine binding, you may be wounded by knives.
Be careful of knives.
- If the hydraulic fittings or hoses are loose or damaged, you may be injured by the
high-pressure oil that pops out or the sudden descent of the work machine.
Repair or replace parts.
When removing fittings and hoses, remove the pressure in the hydraulic circuit before doing so.
- When disconnecting the battery cord from the battery, press and hold the remove it from the
(-) side, and when installing, install it from the (+) side.
If it is reversed, if the tool comes into contact with the tractor during work, sparks will be generated,
and a fire accident may occur.

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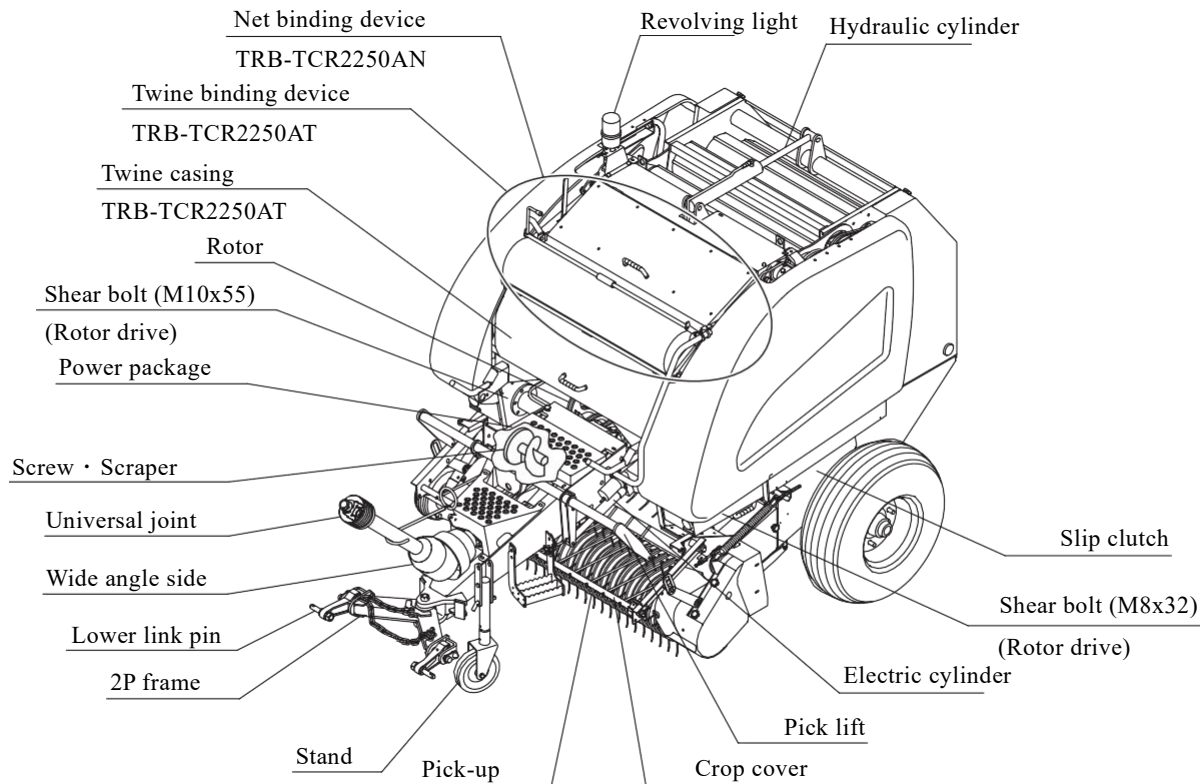
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1 Attaching to the Tractor

Perform attachment correctly and safely.

1. Components and their function



(1) 2P frame

This is used to connect a tractor with the roll baler.

(2) Pick-up

The pick-up device picks up crops.

(3) Electric cylinder / Pick lift

The motor is used to up or lower the pick-up device.

(4) Crop cover

The crop cover helps in making sure the crops are supplied smoothly to the rotor.

(5) Screw and scraper

The screw moves inward the portion of picked up crops that is protruding from the rotor width.

(6) Slip clutch

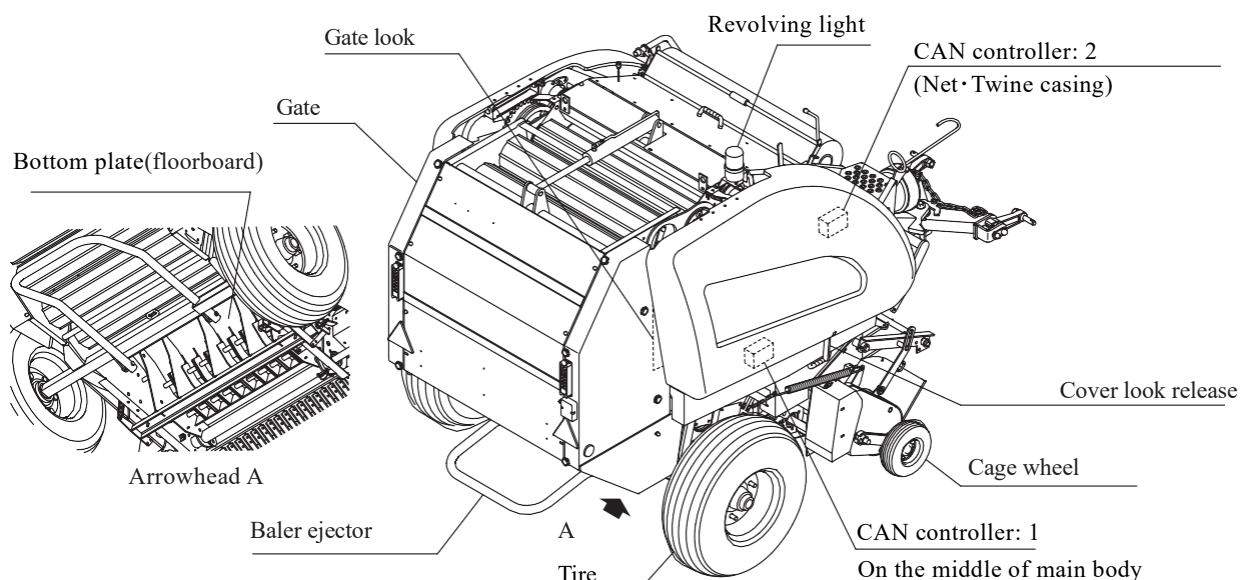
The slip clutch is used to cut power transmission when pick-up and screw overload occurs, to keep damage to the pick-up and screw unit to a minimum.

(7) Shear bolt

The shear bolt is sheared to cut power transmission from the tractor and medium-sized roll baler when overload occurs in order to keep damage to the machinery at a minimum.

(8) Power package

The power package generates hydraulic pressure to operates the cylinders.



(9) Bale ejector

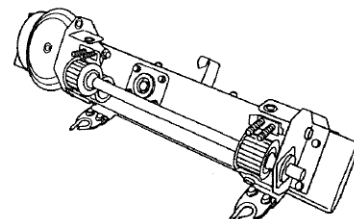
The bale ejector rolls the bale toward the rear at discharge to supports the gate to open and close smoothly.

(10) Gauge wheel

The gauge wheel is provided to adjust the height of pickup with respect to the ground.

(11) Twine binding device (TRB·TCR2250AT)

The twine binding device winds twine around the completely formed bale. For the number of winding turns, 12, 16 or 20 can be selected.

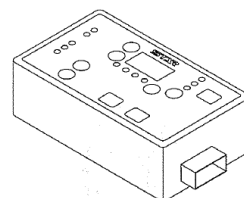


(12) Control box

The control box notifies the starting of twine or net binding operation by sounding the built-in buzzer.

It is used to open or close the gate, adjust the position of pick-up device and notice the Bottom plate goes down.

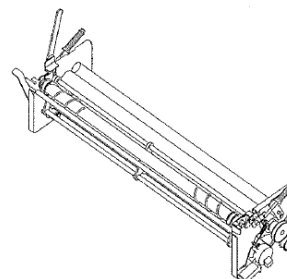
The working mode of the twine or net binding device can be changed between “FULL-AUTO” mode “AUTO” mode and “MANUAL” mode from this box.



(13) Net binding device (TRB·TCR2250AN)

This device winds net around the completely formed bale.

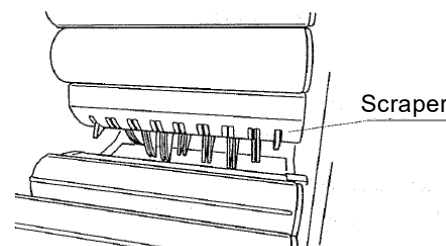
For the number of winding turns, 2 or 2.5 or 3 can be selected.



(14) Rotor and scraper

The rotor pushes crops against the cutting knives to cut it into pieces while sending the cut pieces to the chamber.

The scraper supports the operation of smoothly sending crops to the chamber.



(15) CAN controller

The CAN controller is used to control the electric actuators like electric motors and electric cylinders.

(16) Bottom plate(floorboard)

The Bottom plate goes down automatically when a large amount of material or foreign materials come into chamber then eliminate the load for drive line.

In case the Bottom plate goes down, the buzzer in an control box sounds.

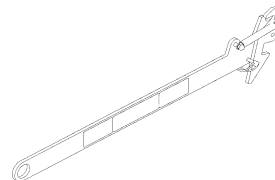
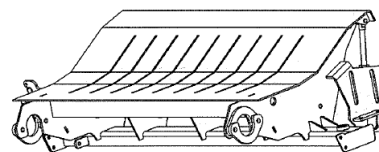
(17) Cover lock release lever

The cover lock release lever is used to open / close the cover of main body.

In case the cover is closed, check that the lever is surely locked.

(18) Gate lock

The gate lock is used to inspect / adjust with gate is open.



2. Applicable tractor size

This machine is designed to be used by attaching it to a suitable sized tractor.

Attaching it to an unsuitable tractor could have adverse effects on the durability of the machine.

The suitable tractor horse power for this machine is as follows:

M o d e l	Applicable tractor HP
TRB2250AT 2250AN	26~51.5kW (35~70PS)
TCR2250AT 2250AN	29.5~59kW (40~80PS)

If a tractor that is smaller than the applicable tractor size is used with this machine, there may not be enough power for the load.

On the other hand, if a tractor that is larger than the applicable tractor size is used, there will be too much power for the load and could cause damage to the equipment.

3. Assembly parts

(1) Unpacking

Unfasten the parts that are fastened to the main body.

(2) List of assembly parts

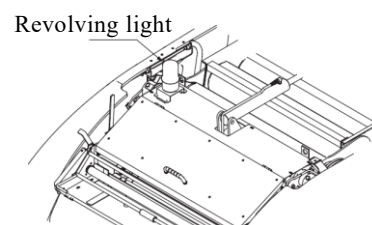
Make sure all of the required parts that are listed on the packing list have been included in the package.

(3) Assembly

For details regarding which bolts and nuts to use to assemble which parts, see the symbols indicated on the packing list.

Please install the revolving light in the position shown below.

The direction of the revolving light should be attached to the pedestal with the legs facing back and forth.



4. Attaching to the tractor

(1) Connection to the lower link

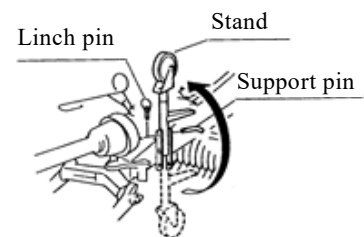
▲WARNING

If there are bystanders between the tractor and the machine when moving the tractor to attach or detach it, there is a possibility could be injured.
Do not let anyone go between the tractor and the machine.

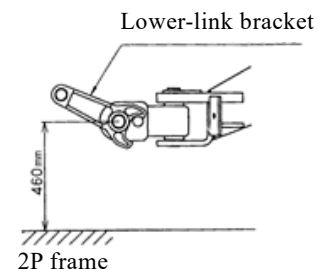
▲CAUTION

Attaching or detaching the machine to the tractor on an inclined surface or on soft, unstable ground could result in unforeseeable accidents due to unexpected movements of the tractor.
Be sure to perform attachment or detachment on level, solid ground.

- ① Start up the tractor engine and move the tractor backward until end of the tractor's lower link lines up with the left and right lower link pins on the machine, then stop the tractor.
Stop the engine and apply the parking brake.
- ② Connect the left lower link, and to prevent the connection from coming unfastened, insert the locking pin into the lower link pin.
Next, connect the right lower link in the same way.
- ③ With the adjustment screw located on the right side of the tractor, adjust the left and right lower link so that they are the same height.
- ④ Start up the tractor engine and operate the hydraulic lever for raising and lowering the tractor's lower link and lift the machine a little, then stop the engine.
- ⑤ With the center of the machine located nearly in the center of the tractor, set the check chain to prevent the machine from moving horizontally.
- ⑥ Pull up the stand and fasten it by the support pin and linchpin.



- ⑦ Adjust the tractor's lower link so the machine is level.
The standard height that the pin in the lower-link bracket should be above the ground is 460 mm.



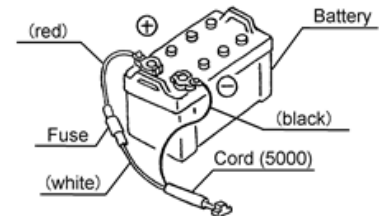
- ⑧ Turn the steering wheel of the tractor all the way and slowly go forward.
Make sure the tractor and machine do not come in contact with each other.
If any Part of the tractor and machine touch, narrow the tread of the rear tractor wheels or be careful not to turn the steering wheel all the way when turning.

(2) Installation of the control box

Precaution

Leave just enough slack in the connection cord so it does not come in contact with the tires.
Fasten any extra slack with a cord on the tractor side.
When the control box is not in use, turn the power OFF.
Place the control box in a place where it will not get by rain.

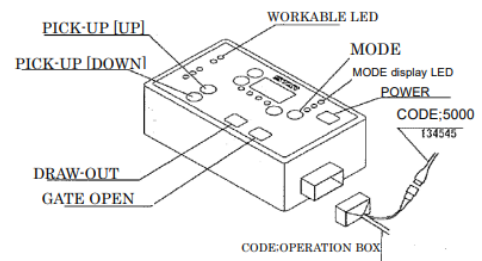
- ① Connect cord; 5000 to the tractor battery.
The black cord is the (-) side, and the red cord is the (+) side.
This product is designed for 12V DC.



CAUTION

When removing the battery cords from the battery, remove the cord from the (-) side first, and when connecting the electric cord, connect the cord to the (+) first.
Connecting the cords in the opposite order could result in sparks due to the tools coming in contact with the tractor, and could cause fire.

- a. Remove the (-) battery cord from the battery.
 - b. Connect the (+) cord of cord: 5000 (red terminal) to the terminal for the (+) battery cord, then attach the terminal for the (+) battery cord.
 - c. Place the (-) cord of cord: 5000 (black terminal) on the terminal for the (-) battery cord, then attach the terminal for the (-) battery cord, then attach the terminal for the (-) battery cord.
 - d. Fasten cord so that it will not be in the way when operating the tractor and performing work.
- ② Install the control box in a place where it can be used easily and where its magnetic section will be touching a flat surface.
 - ③ Connect the control box to cord: 5000.



- ④ Connect the control box to cord; control box.
- ⑤ Turn the power on, and check that either of LED for “FULL-AUTO”,
- ⑥ “AUTO” mode and “MANUAL” mode light up.
If the lamp does not light up, check the following items:
 - Whether or not the fuse (30 A) for the cord; 5000 was blown.
 - Whether or not the cord is connected wrongly in polarity to the battery

Precaution

To connect between the control box and the battery, be sure to use genuine cord (i.e. cord; 5000).
Do not connect to the original battery cord of tractor.

(3) Threading the twine (TRB•TCR2250AT)

▲WARNING

When storing or threading the twine, there is a possibility of getting entangled and becoming injured if you come in contact with the rollers.

Turn OFF the PTO and stop the engine before storing or threading twine.

Precaution

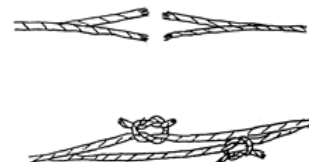
Only use the following equivalent to the genuine twine: **TP 12000**.

If other twine is used, there might occur defective drawing out or cutting.

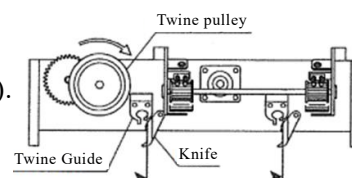
- ① Store the twine on four spools inside the twine casing.

- ② Connect the end and beginning of two adjacent twine spools.

To connect the twine, split both ends of the twine in half, then tie the respective ends so they are separated a little, and tighten the knots.

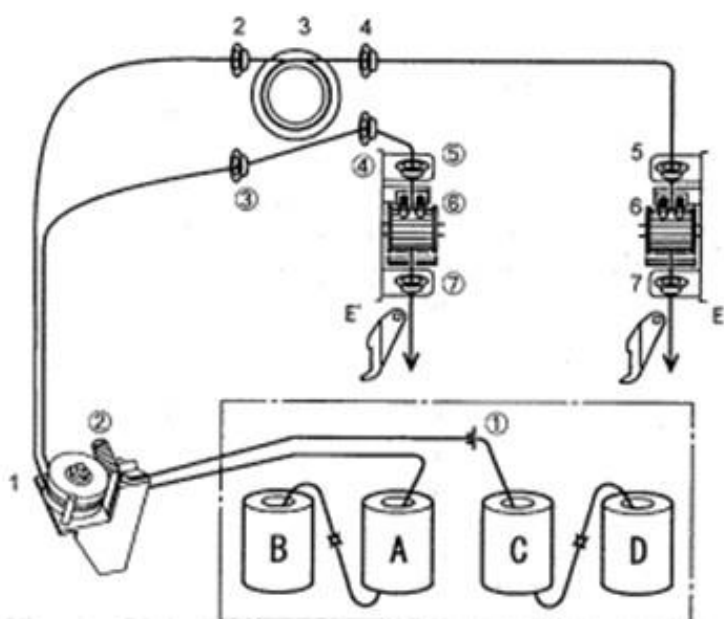


- ③ Rotate the twine pulley in the direction of the arrow (clockwise) to move the twine guide rightwards (if the twine guide moves leftwards, continue to rotate the twine pulley till the twine guide moves rightwards). When the twine guide passed the knife, stop it at the point shown as under figure.



This becomes the starting point for the twine guide.

- ④ Let the starting end of twine A through parts “1” to “7” in this order, and let the starting end of twine C through parts “①” to “⑦” in this order.
- ⑤ Cut the starting end of twines A and C with the binding knives E and E', and hold the both end of twines by knife plate.



(4) Installation of net roll (TRB•TCR2250AN)

▲DANGER

There is a danger that you be caught in a rotary or movable part to be injured if you come in contact with it when installing the net roll or letting the net through specified parts. Be sure to turn OFF the PTO and stop the engine before you start this operation.

Precaution

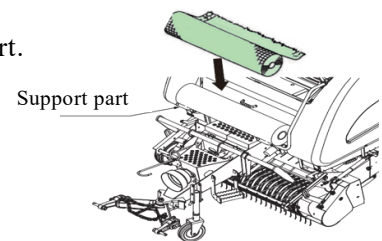
Use the following equivalent to the genuine net roll: **NET 1020.**

Using other net roll might cause troubles, such as impossibility of mounting, defective cutting and entanglement, resulting in failure in the worst.

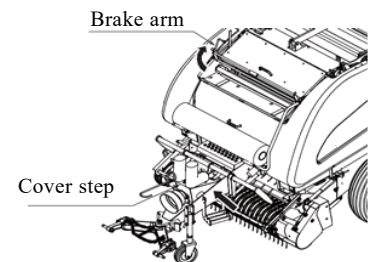
Clean net casing before putting the net roll on the net casing.

If the net roll is set with the dust, ash, waste on the surface of the net roll, these materials interfere the revolution of the net roll then cause the trouble of net drawing and the tears of the net roll.

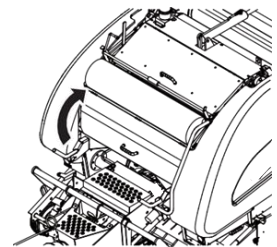
- ① Peel off the outer packaging of the net roll, adjust the winding direction to the figure below, and temporarily place it on the support part.



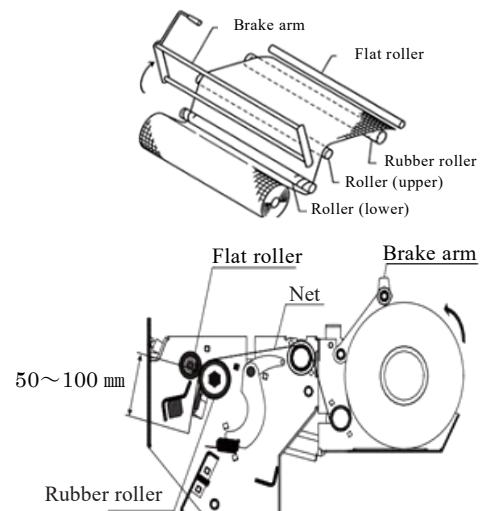
- ② Cover as shown in the figure below;
Climb up the step and raise the brake arm.



- ③ Lift the net roll and place it on the net casing.



- ④ Wake up the brake arm.
The winding direction of the net roll is the direction shown in the figure below, and the bottom and top of the two rollers are passed through and bundled between the rubber rollers and the flat rollers.
Push the brake arm back toward you to hold the net roll.
At this time, the net is roller (top) (bottom) and put out 50mm~100mm on the net end side.



▲CAUTION

- Do not put hand into the brake arm within turning radius it may lower abruptly to injure you.

Precaution

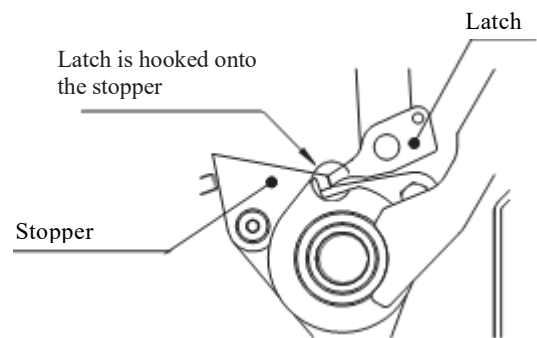
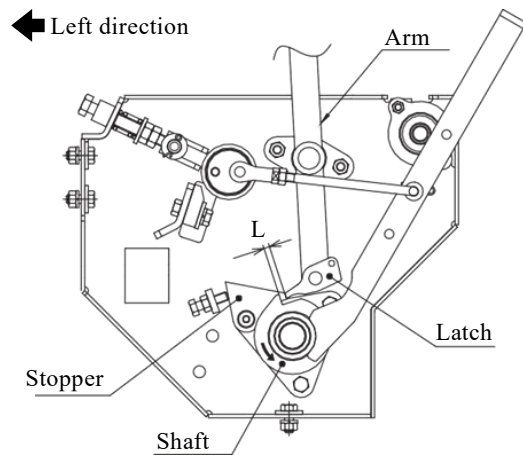
Wipe grease off from net-rubber roller when grease attaches on the roller.

Otherwise it may cause the trouble of net drawing.

Static electricity may be generated on the net.

When installing a new net roll, sprinkle the rubber roller with an anti-static spray, baby powder, etc.

- ⑤ Push the arm to the left with your hand and rotate the shaft in the direction of the arrow, so that the L dimension (the gap between the shaft protrusion and the latch) is within 5mm. Also, make sure that the latch is on the stopper to prevent the knife from being activated unexpectedly.



5. Attachment of the universal joint

▲DANGER

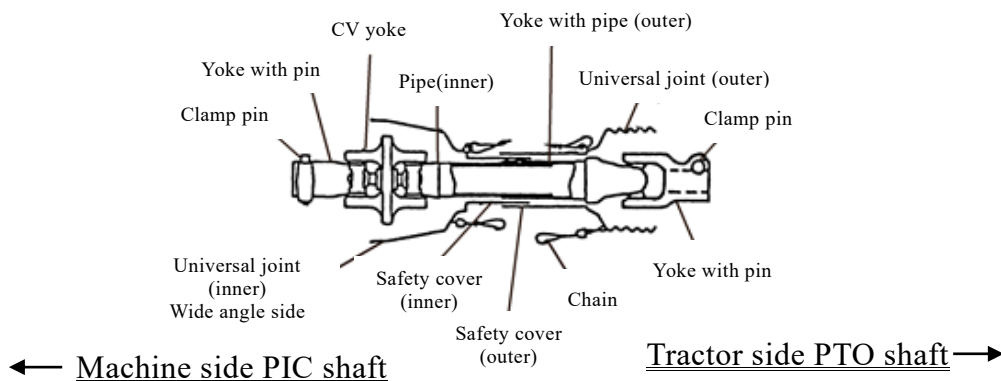
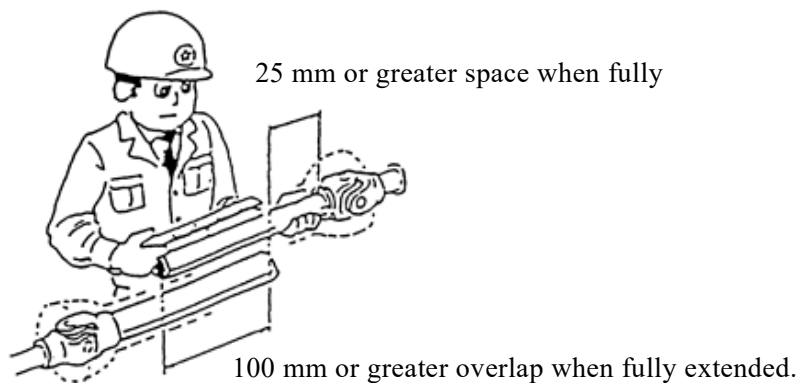
- If an universal joint having no covers is used, you may be wound in it and injured. Do not use such an universal joint.
- If an universal joint having a broken cover is used, you may be wound in it and injured. Replace the broken cover immediately. Before using the universal joint, check its cover for damage.
- When you install the universal joint to a tractor or the machine or remove it, a person may touch the tractor or the baler to start the universal joint by mistake and you may be injured. Before working on the universal joint, turn off the PTO and stop the engine.
- If the universal joint is used without installing the cover chain, the cover may turn and you may be wound in it and injured. Connect the chains on the tractor side and baler side to positions where they will not turn.

CAUTION

- If the lapping distance at the most extracted position is less than 100mm, the universal joint may be broken and may injure you when it is revolved.
If the lapping distance at the most retracted position is less than 25mm, the universal joint may push up.
If this occurs, the joint may be broken and you may be injured. Set the lapping distance properly.

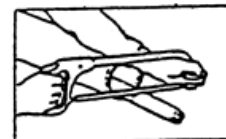
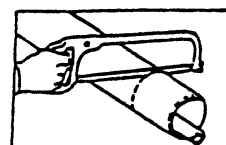
(1) Checking the length

- ① For the universal joint alone, mark the end position of the safety cover (outer) when it is at its most retracted length on the safety cover (inner).
- ② Pull the inner universal joint out from the outer universal joint.
- ③ Raise and lower the lower link until the PTO shaft and PIC shaft is as close as possible, then stop the lower link.
- ④ Press in the clamp pins on the yoke and connect the PTO and PIC shafts, and insert the yoke until the clamp pins return to their original positions.
- ⑤ When lining up the safety covers, if the space between the marking on the inner safety cover and the end of the outer safety cover is less than 25 mm, then cut the cover according to the cutting procedure to keep the space at 25 mm.
- ⑥ Raise or lower the lower link to separate PTO and PIC shafts as far as possible, then stop the lower link.
- ⑦ When lining up the safety covers, if the overlap of the pipes are less than 100 mm, then contact the sales dealer and exchange the universal joint for a longer one.



(2) Cutting method

- ① Cut both the inner and outer safety covers the amount that they are too long.
- ② Mark from the end of the pipe the length of the cut piece.
- ③ Cut both the inner and outer pipes with a hacksaw or cutter.
When cutting the pipes, place a rag inside them to prevent cutting material from getting inside.
- ④ Smooth the cut ends with a file and clean the pipe surface, then apply grease and insert the inner pipe into the outer pipe.



(3) Installing / removing the safety cover

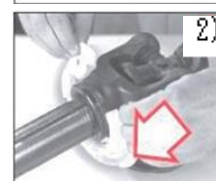
① Safety cover removal procedure

- 1) Remove the cross-head screw.
- 2) Remove the base cone and shield tube.
- 3) Remove the outer cone and bearing ring.



② Safety cover installation procedure

- 1) Coat grease on the groove of yoke as well as on the pipe (inner).
- 2) Attach the bearing ring to the groove with the reference pins pointing at the drive tube.
- 3) Install the outer cone and insert the reference pin of the bearing ring into the hole of the cone.
- 4) Attach the base cone to the tube, and insert the reference pin and the grease nipple of the bearing ring into the hole of the cone.



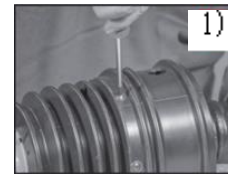
5) Tighten the Phillips- head screws.

The use of an Electric screwdriver is not recommended.



③ How to remove the safety cover (wide angle side)

1) Remove the Phillips-head screw on the CV cone.



2) Remove the plastic screws on the base cone.



3) Remove the base cone and seed tube.



4) Remove the CV cone.



5) Remove the retaining spring of the bearing ring.

At this time, one side should not be removed from the hole of the bearing ring.



6) Unfold the bearing ring and remove it from the groove.



7) Apply grease to the bearing groove in the inner yoke and install the bearing ring into the groove with the reference pin facing the drive tube.



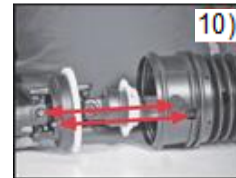
8) Grease the bearing groove of the CV yoke, turn the reference pin inward, and install the bearing ring in the groove.



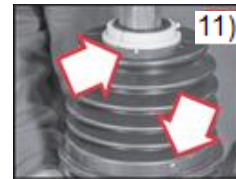
9) Install the retaining spring.



10) Align the hole in the cover with the reference pin of the bearing ring, and align the hole in the bottom with the reference pin of the small bearing ring and insert the cover. At this time, align the grease nipple with the hole in the cover.



11) Make sure that the reference pins on the cover and bearing rings are aligned with the holes, and that the reference pins are inserted properly. Tighten the Phillips-head screw that secures the cover. Do not use an electric screwdriver.



12) Attach the base cone to the tube and insert the reference pin and the insert the reference pin and the into the hole of the cone.



13) Tighten the Phillips-head screw. Do not use an electric screwdriver.

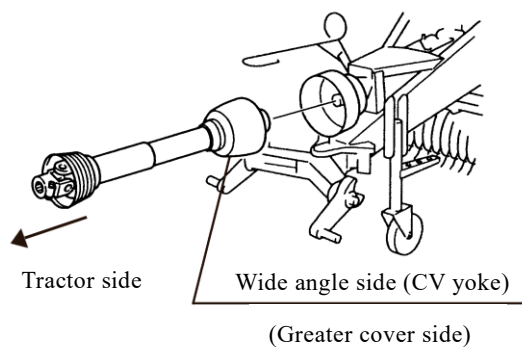


(4) Connecting the universal joint

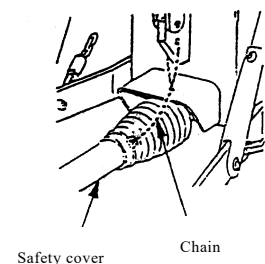
- ① While pushing in the clamp pin of the yoke with pin, connect the wide angle side yoke with the PIC shaft of work equipment while the other side yoke with the PTO shaft of tractor, and push the yokes in till their clamp pins come out again.

CAUTION

- When connecting the universal joint, if the clamp pins are not inside the grooves in the shafts, the universal joint will come apart during use and could cause injury. Make sure the pins are in the grooves by pulling out on the connection. If the universal joint is assembled oppositely in direction, the joint might be damaged to cause injury.
- When the universal joint is connected in wrong direction, the joint might break and could cause injury.



- ② Attach the chain to the safety cover to prevent the cover from turning. Give enough slack in the chain so that it can respond to motion of the 3-point link. However, make sure there is not so much slack that it catches on other parts.



2 Inspection before starting operation

Inspection should be performed before operation in order to assure long life of the machine.

1. Inspection before operation

(1) Inspecting the tractor

Inspect the tractor as described in the operation manual for the tractor.

(2) Inspecting the connections

- ① Inspecting the connection between the lower link and 2P frame
 - a. Has the locking pin been inserted into the hole for the lower link pin?
 - b. Are the check chains stretched properly?
 - c. If any problems are found handle them as described in section 1-4-1, Connection to the lower link'
- ② Inspecting the universal joint
 - a. Are the clamp pins, that hold the universal joint together, inserted in the grooves of the shafts?
 - b. Is there too much slack in the chains attached to the joint covers? Is there enough slack?
 - c. Are either of the joint covers damaged? If there is any damage, immediately replace the cover.
 - d. If any problems are found, handle them as described in section 1-5, 'Attachment of the Universal Joint'.
- ③ Inspecting the electrical device
 - a. Are all electrical device connected to the tractor properly?
 - b. Is there too much slack in the wiring? Is there enough slack?

(3) Inspecting the baler body

- ① Are any of the installation bolts loose?
- ② Are any of the shear bolts cut?
If any of the shear bolts are cut, replace them according to the parts list.
- ③ Isn't the cutting knife worn out or damaged?
If any wear or damage is found, polish or replace the part as described in Section 3-2-6-2 "Removing the cutting knives."
- ④ Is the tension of the roller chain proper?
If it is not proper, adjust it as described in section 5-3-1" Adjusting the tension of the roller chain".
- ⑤ Is the spring to the pick-up slip clutch set to the proper dimension?
If it isn't, adjust it as described in section 5-3-2 "Adjusting the slip clutch".
- ⑥ Is the spring to the twine tensioner adjusted to the proper dimension?
If it isn't, adjust it as described in section 5-3-10 "Adjusting the twine tension", and section 5-3-11 "Adjusting the arm tension spring".
- ⑦ Does the binding knife cut the twine well?
If it doesn't, replace it with a new knife according to the parts list.
- ⑧ Is there enough twine? Is the twine threaded properly?
Is the twine guide in the correct position?
If there are any problems, handle them as described in section 1-4-3 'Threading the twine'.
- ⑨ Is there spare net?
- ⑩ Are the tine or rotor flush damaged?
If so, replace them with parts according to the parts list.
- ⑪ Are any of the parts clogged with crops? If so remove the crops.
- ⑫ Is there enough oil in the reserve oil tank of the lubrication device?
If there is not enough oil, add oil as described in section 2-3 "List of places requiring lubrication".

⑬ Are all parts lubricated or greased properly?

If not, lubricate them or apply grease as described in section 2-3 “List of places requiring lubrication”.

⑭ Is there enough air in the tires?

	Tire size	Air pressure
Tire	12.5L-15-8PR	280kPa (2.8kg/cm ²)
Gauge wheel	11x4.00-5-4PR	320kPa (3.2kg/cm ²)

▲WARNING

- Observe proper the air pressure in the tires.
Especially, pay attention to too much air pressure.
Otherwise, the tires will burst, and being injury or death

⑮ Idling 5 min. before working.

If there is an abnormal sound, resolve the trouble referring “6-1 Troubleshooting table”.

Also, stop PTO and check that there are abnormal heating in the gearbox, roller chains and bearings.

⑯ Is the tightening torque of the wheel nut sufficient?

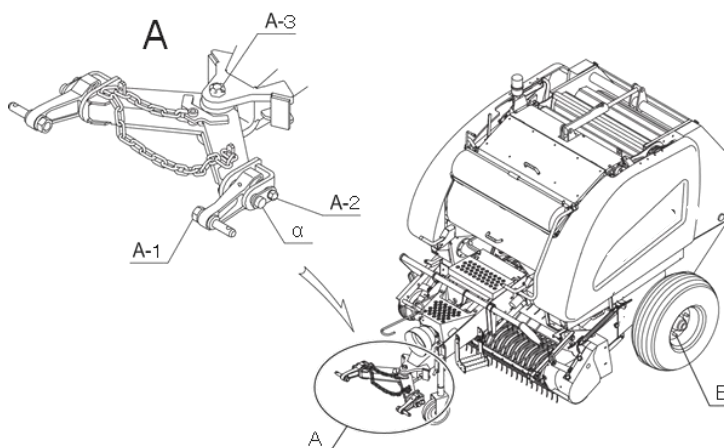
Tighten the wheel nuts with a torque of 300~330N•m(3060~3370kgf•m).

(4) Important inspect list

▲WARNING

- Before starting operation, the important inspect point is that you are sure to inspect bolts every day.
If you find out loosing point, tighten the bolt and nut based on list.
If you neglect the inspection, you may have a trouble or may be injured when you operate the machine.

Before starting operation, inspect bolts as the below diagram and table every day



Part		Important inspect list	Bolt size	Width across flat[mm]	The number	Tightening torque[N・m]	Notes
A	A-1	Lower link pin	M22×1.5	32	2	195～245	Retighten
	A-2	Lower link pivot	M14	22	2	114～154	Retighten
	A-3	2P frame pivot	M24	36	1	-	*1
B		Wheel nut	M18×1.5	24	12	300～330	Retighten

*1 If this part is loosed, tighten the bolt as α can be moved by 5-8kg, and then tighten the bolt while you adjust the position of slot to put split pin in.

Then, don't reuse split pin, and exchange new split pin.

2. Inspecting the engine at start up

(1) Inspecting the tractor's hydraulic system

Operate the hydraulic lever which raises and lowers the tractor's lower link and raise the lower link.

There is no problem if the machine does not drop when it is lifted.

If there is something wrong with the hydraulic system, contact the tractor sales representative or dealer.

(2) Inspecting the hydraulic system for opening / closing the gate

▲ DANGER

- When the gate is opened and inspected or adjusted, the gate may close unexpectedly, and you may be caught in it, resulting in death or serious injury.
Switch the stop valve to the "Close" side to secure the gate securely.
After that, install the gate lock.
- Never allow anyone to approach the machine.
Serious injury or death could occur if caught between rear gate and main body when gate is closed.

▲ WARNING

- If you allow any person approaching the baler when opening the gate, he (she) may be wound with caught in gate and wall or something.
Do not open gate carelessly.

▲ CAUTION

If the hydraulic coupler or hoses are loose, there is possibility of high-pressure leakage or the machine could drop suddenly causing injury.

Repair or replace any faulty parts.

Be sure to remove the hydraulic pressure before disconnecting the joints and hoses.

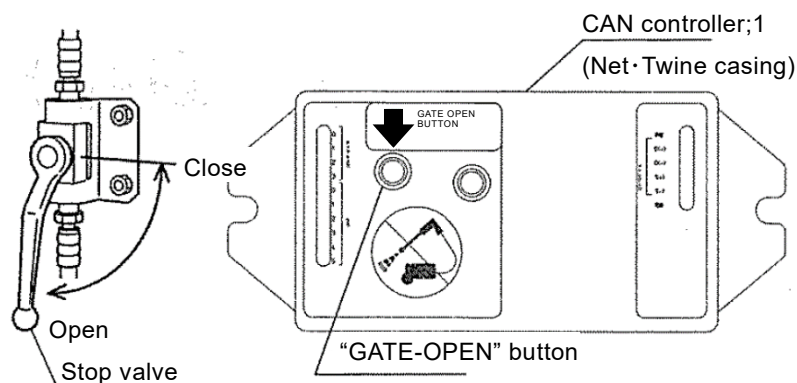
Precaution

- If you work under 0 degree and below, you are sure to run idling over 5 minutes.
If you work with lower oil-temperature, you can cause breakage of power package

- ① Turn on control box.
- ② Switch the stop valve for opening / closing the gate to the 'Open' side (as shown in the figure).
- ③ Start up the tractor engine and press "GATE-OPEN " button on CAN controller ; 1 while turning PTO.
- ④ When the gate opens fully, change the stop valve to "Close" side while pushing "GATE OPEN"
- ⑤ If the gate does not drop then there is no problem.

Slowly switch the stop valve to the 'Open' side to close the gate.

If the gate drops, search for the oil leak and repair or replace any faulty parts.



(3) Inspecting the lubrication device

WARNING

- When opening the gate, if there is anyone behind the machine, there is a possibility of being trapped between the gate and the wall and being injured.
Do not let anyone near the machine when opening the gate.
Check the area behind the machine before opening the gate.

- ① Make sure that the oil tank is filled with oil.
- ② While turning PTO, operate “GATE OPEN” button on the control box to open and close the gate several times.
- ③ Stop tractor engine, check that proper amount of oil is supplied by each brush.

If oiling amount is not proper, adjust as described in Section 5-3-19 “Adjusting the lubrication device.”

The oil to supply is gear oil; VG220, and the capacity of oil tank is 1.5 liter.

Precaution

- The upper limit and the lower limit indicated on the reserve tank is not for this round baler.
- The oil level of the reserve oil tank should always be kept at least 4 cm.
- If each brushes for the lubrication for roller chains cannot apply the oil to the chains, the chains may sound strange noise or being abnormally heated.
Fill the oil to reserve tank and adjust the quantity of the oil from each brushes by adjusting distributor.

(4) Inspection the electric cables

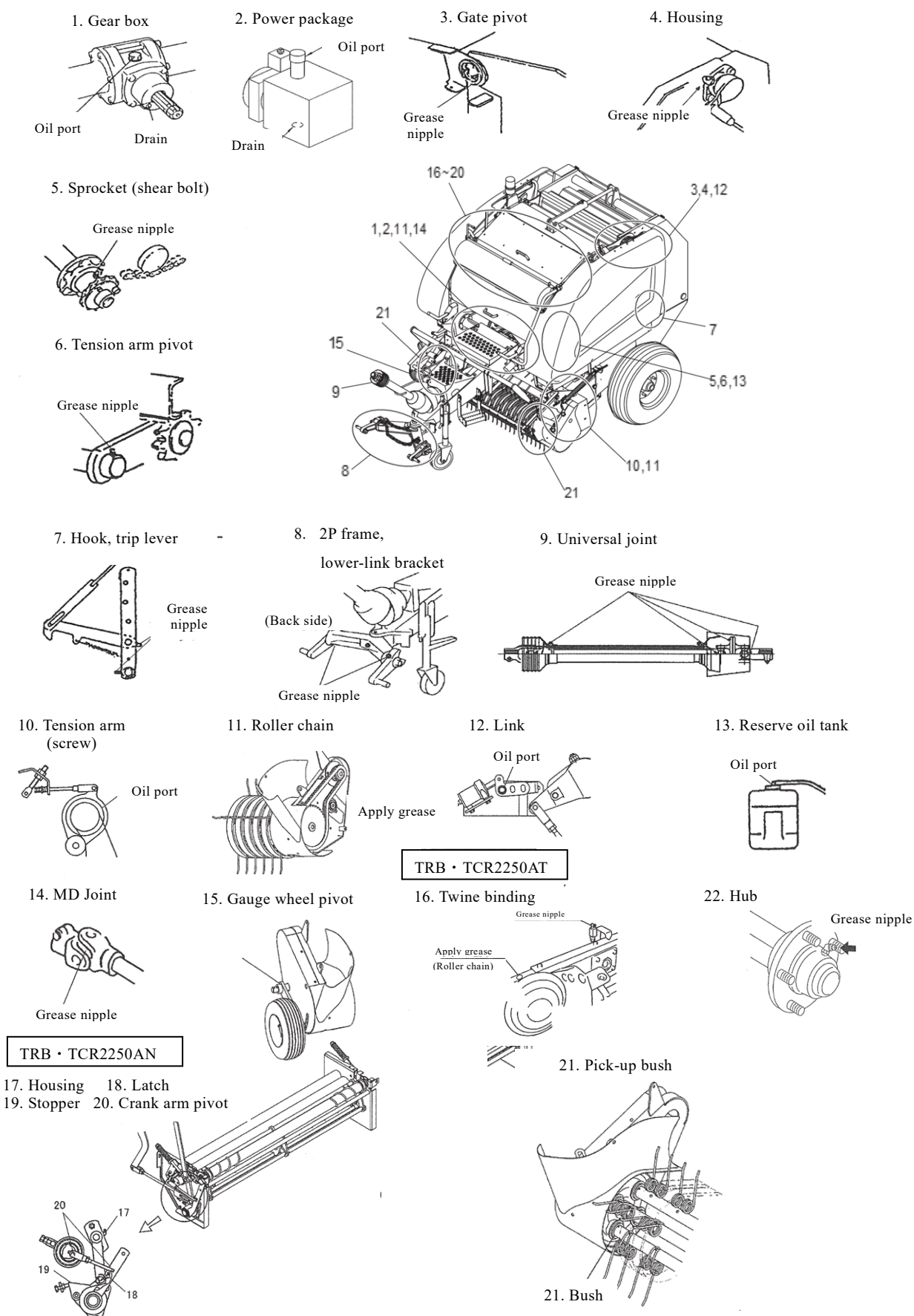
WARNING

- If there is/are disconnection or breakage of electric wire, it may cause an electrical fire.

Check all electric cables and confirm that there is no damage and disconnection on the cables.

3. List of places requiring lubrication

- Use clean oil for lubrication.
- When supplying grease, the proper amount to supply is the amount of old grease removed until new grease begins to come out.



No.	Lubrication point	Point	Kind of lubrication	Change period	Q'ty	Remarks
①	Gear box	1	Concentrated grease 4; No.0	100 hours or 1 season	500g	
②	Power package	1	Gear oil; VG46	50hours	*1 2.2little	TRB • TCR2250AT/AN
③	Gate pivot	4	Concentrated grease 4; No.2	After use	Properly	Grease nipple TRB • TCR2250AT/AN
④	Housing	2	Concentrated grease 4; No.2	After use	Properly	Grease nipple TRB • TCR2250AT/AN
⑤	Sprocket	2	Concentrated grease 4; No.2	After use	Properly	Grease nipple TRB • TCR2250AT/AN
⑥	Tension arm pivot	5	Concentrated grease 4; No.2	After use	Properly	Grease nipple TRB • TCR2250AT/AN
⑦	Hook, Trip lever	4	Concentrated grease 4; No.2	After use	Properly	Grease nipple TRB • TCR2250AT/AN
⑧	2P frame, Lower-link bracket	3	Concentrated grease 4; No.2	After use	Properly	Grease nipple TRB • TCR2250AT/AN
⑨	Universal joint	-	Concentrated grease 4; No.2	After use	Properly	Grease nipple TRB • TCR2250AT/AN
⑩	Tension arm(screw)	2	Oiling	After use	Properly	
⑪	Roller chain	1	Concentrated grease 4; No.2 Apply grease	After use	Properly	Except the place of Concentrated grease, Oil cannot be allowed.
⑫	Link	1	Oiling	After use	Properly	
⑬	Reserve oil tank	1	Gear oil; VG220	Fill after each use	1.5little Max	The MAX line displayed on the TANK it not for this machine
⑭	MD joint	1	Concentrated grease 4; No.2	After use	Properly	Grease nipple
⑮	Gauge wheel pivot	1	Concentrated grease 4; No.2	After use	Properly	Grease nipple
⑯	Twine binding	1	Concentrated grease 4; No.2 Apply grease	After use	Properly	Grease nipple TRB • TCR2250AT
⑰	Housing	2	Concentrated grease 4; No.2 Apply grease	After use	Properly	Grease nipple TRB • TCR2250AN
⑱	Latch	1	Concentrated grease 4; No.2 Apply grease	After use	Properly	Grease nipple TRB • TCR2250AN
⑲	Stopper	1	Concentrated grease 4; No.2 Apply grease	After use	Properly	TRB • TCR2250AN
⑳	Crank arm pivot	2	Oiling	After use	Properly	TRB • TCR2250AN
㉑	Pick-up bush	12	Spray grease	After use	Properly	TRB • TCR2250AT/AN
㉒	Hub	2	Concentrated grease 4, No.2	Every 2,000 km or every 3 years	Properly	Grease nipple TRB • TCR2250AT/AN

*1 The “Q’ty” value for “No. ② is the appropriate quantity in the tank.

If the hydraulic hose or cylinder has been empty, add oil until the oil level in the tank reaches between the scale of oil gauge.

3 Method of operation

1. Purpose of this machine

- (1) This machine is designed for baling hay, rice straw, wheat straw and sugarcane leaf.
It should not be used for other purposes.
 - ① Baling of dry hay should be performed when the moisture content of the hay is 20% or less.
 - ② Baling hay for wrap silage should be performed when the moisture content of the hay is between about 50% and 60%.
- (2) Baling should not be performed immediately after a rain, or when the field is muddy and wet.
Wait until the field is dry before operating the machine.

CAUTION

- Baling hay with a moisture content that is greater than 20% could result in carbonization of the dry hay or could result in spontaneous combustion.
Be sure that the hay has sufficiently dried before baling.
- If smoke is discovered in the barn, stop hay removal and immediately contact the fire department and follow their instructions.

Precaution

- If due to adverse weather conditions it is not possible for the hay to sufficiently dry, operate the machine only after the moisture content has dropped below 25% , and adhere to the following:
 - a. Temporarily place the bales outside the barn to let heat and moisture be emitted.
 - b. The temporarily placed bales should be stacked vertically on top of a base and should be left uncovered unless it rains.
 - c. Periodically measure the temperature inside the bales.
If the temperature rises about 50 to 60°C, immediately open the bale and let it dry.
 - d. When storing the hay, make sure there is not heat generation inside the bale, or make sure that the temperature has dropped below 30°C.
- When stacking the bales in the barn, stack them vertically three bales high or less.
- The baled hay weighs several hundred kg so when moving, stacking or supplying bales be careful to avoid accidents due to falling bales, etc.
- While the bales of hay are stored, there is a possibility of carbonization due to water leakage.
Inspect the barn roof beforehand and make any necessary repairs.
- Take notice of any silage odor or burned smell while the bales of hay are stored.
If anything strange is noticed immediately remove the bales from the barn and measure the temperature.
Separate the bales into those that are normal and those that are hot.

2. Adjustment for operation

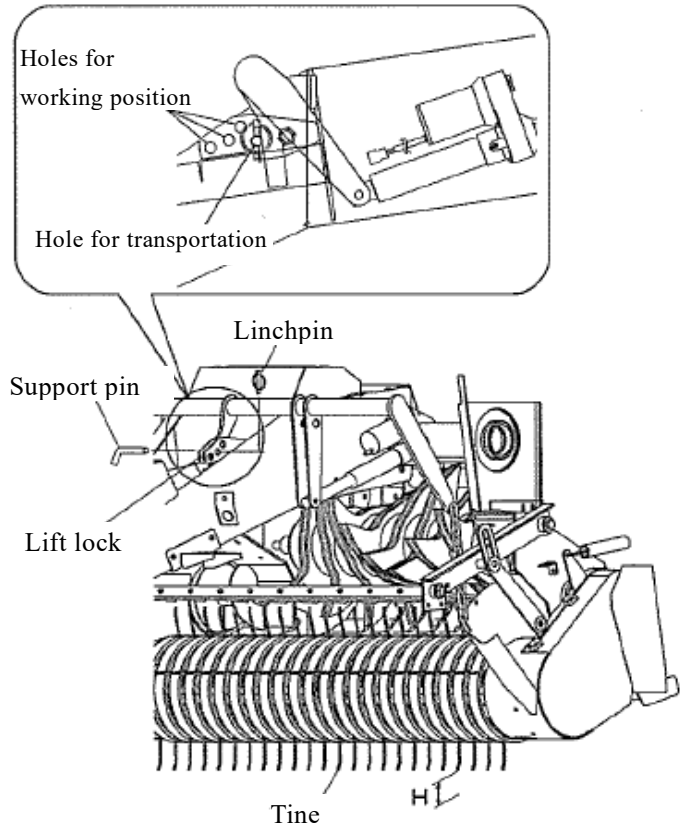
(1) Adjusting the height above the ground of the pick-up tine

- ① The height H of the pick-up tine above the ground should be adjusted with the machine level.
The height depends on the installation position of the support pin.

Baling material	H
Cut straw and cut leaf	0 mm
Long straw, hay and long leaf	20mm

Precaution

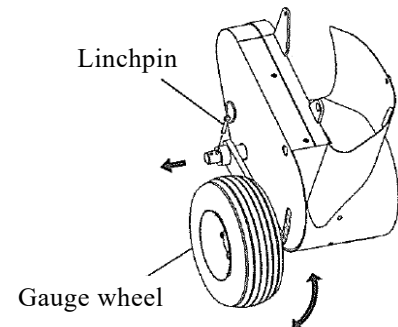
- Setting the tine ground clearance too low when working in hard or uneven fields, or in areas with stones or other foreign objects, may cause damage. In such conditions, be sure to adjust the tine ground clearance to a higher setting.



- ② With the linchpin removed, pull the gauge wheel toward you to change the positioning of hole and thus adjust the height above the ground.

Precaution

- If the machine works on condition that the gauge wheel keeps touching on the ground, you can cause breakage of machine. Adjust the gauge wheel properly.



- ③ Switching between the pick-up traveling state and operation state is done by control box.

Pick-up state	
Traveling	Raise pick-up device up fully by “UP” button. Then insert support pin to the top hole and lower the pick-up by “DOWN” button. Then lower the pick lift device so that it contacts with support pin.
Operation	Insert support pin to working position. Then lower the pick lift device so that it contacts with support pin.

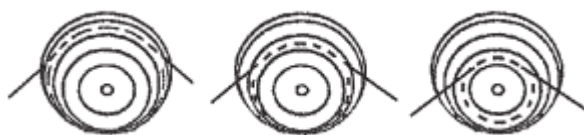
Precaution

- Fine adjustment of the tine height above the ground should be performed to correspond to the condition of the field by raising or lowering the tractor’s lower link with the hydraulic lever.
- There may be caused damage of electrical cylinder during traveling or operation unless lift lever touch with support pin. Use support pin properly to be not loaded to electric cylinder during traveling or operation.

(2) Adjusting the number of twine windings (TRB•TCR2250AT)

The number of windings around the bale is adjusted according to the baling material or considering with the handling after baling.

Baling material	Handling	Twine pulley	No of windings
Cut straw Dry straw Cut leaf ↕	Many ↕	Large-diameter	20
		Medium-diameter	16
Hay Long straw Long leaf	Few	Small-diameter	12



20 windings

16 windings

12 windings

Cut straw, dry straw, cut leaf <---> Hay, long straw, long leaf

Many handling <---> Few handling

The number of windings changes a little depending on the thickness of the twine.

The number of windings increases as the twine becomes thicker.

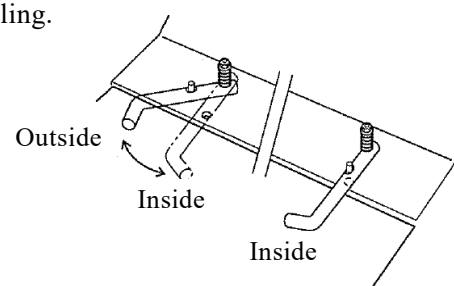
The number of windings in the table is given as a reference.

(3) Adjusting the twine guide (TRB•TCR2250AT)

The twine guide positions the both ends of twine.

The mounting position needs to be adjusted according to material of baling.

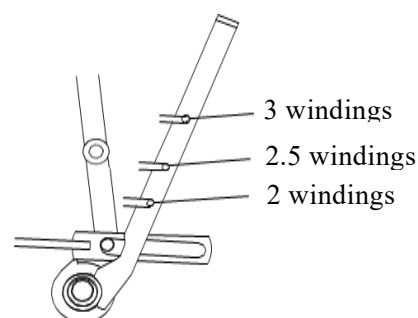
Baling material	Position of the hole for twine guide on the left	Position of the hole for twine guide on the right
Standard	Outside	Inside
Wheat straw, Cut straw Cut leaf	Inside	Inside



(4) Adjusting the number of net winding turns (TRB•TCR2250AN)

How many turns to wind the net around the bale requires being adjusted according to the object of baling or the number of handling operations necessary in after-work.

Baling material	Handling	Position of mounting hole of crank arm	No of windings
Cut straw Dry straw Cut leaf ↕	Many ↕	Top	3
		Middle	2.5
Hay Long straw Long leaf	Few	Bottom	2



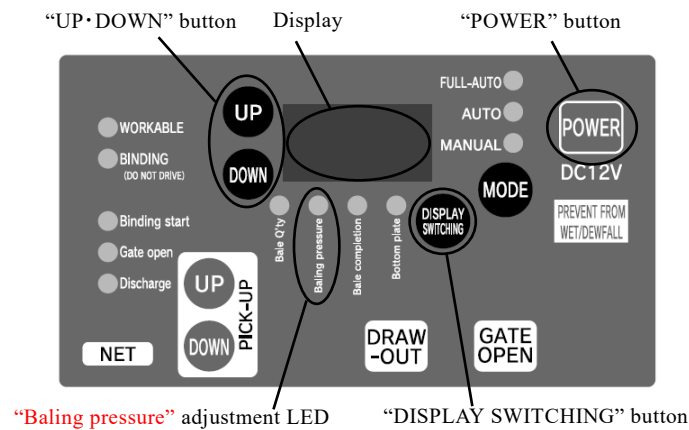
(5) Adjusting the baling density

Precaution

- If the bale density is too high, the required PTO horsepower will be very high.
Adjust the bale density so that it matches with the tractor used, the field conditions or the purpose.
- If the roller chain becomes too hot, lower the bale density.

① Adjustment by control box

The bale density can be adjusted 5 degrees by the operation of control box.



- a. Push “DISPLAY SWITCHING” button several times until “Baling pressure” adjustment LED turns on (green).
- b. Push “UP” or “DOWN” button to change the value on Display.
The number is from 1 to 5 then the more the number increase, the higher the density of bale become (the heavier the weight of bale become).
This value is memorized by pushing “POWER” button until the power is off.

Precaution

When the power for control box is supplied by the cable equipped with tractor, the value is not memorized if the power is off by tractor’s key operation.
Use genuine cord “cord; 5000” and memorize the value by turning off the control box by pushing “POWER” button.

② Adjustment by operating speed

When the operating speed is lowered, the bale density increases.
Adjust the operating speed according to the operating conditions.

(6) Adjusting the cutting knives (TCR2250AT, TCR2250AN)

① Adjustment according to the material of baling

By removing the knives, you can adjust the work equipment (cutting/non-cutting mode and/or cutting length).

Precaution

When baling crops that is dried to a large extent or is short in length while cutting it with the knives, the bale may not rotate.
In such case, operate with every other knife removed.

② Removing the cutting knives

▲DANGER

- When the gate is opened and inspected or adjusted, the gate may close unexpectedly, and you may be caught in it, resulting in death or serious injury.
Switch the stop valve to the "Close" side to secure the gate securely.
After that, install the gate lock.
- Never allow anyone to approach the machine.
Serious injury or death could occur if caught between rear gate and main body when gate is closed.

▲WARNING

When opening the gate, if there is anyone behind the machine, there is a danger of being trapped between the gate and the wall to be injured.

Do not allow anyone to near the machine when opening the gate.

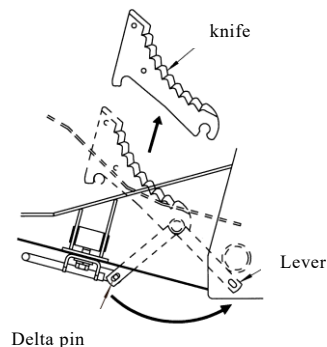
Sufficiently check the condition behind the machine before opening the gate.

- 1) Open the gate fully, and change the stop valve over to "Close", and then attach the gate lock.
[Refer to (5-2 Adjusting Gate lock)]
- 2) With the delta pin removed, turn the lever in the direction of the arrow to remove the knife.

Precaution

If the knife is hard to remove, slightly changing the lever position may facilitate the removal.

Remove the crops caught between the knife and the mounting groove because it often causes the difficulty of removing the knife.



Precaution

When operating with cutting knives removed, crops, etc. may be caught in the cutting knife mounting groove.

Remove the crops, etc. that is caught in the mounting groove before mounting the cutting knives.

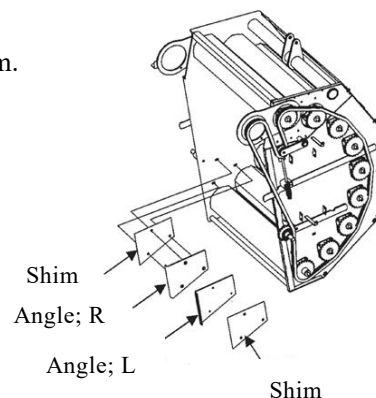
If dummy knives (as optional) are attached instead of standard knives, crops cannot be caught in the groove.

(7) Adjustment when the bale is not discharged

Depending on the packing pressure and moisture content of the bale, it may be difficult for the bale to be ejected.

At that time, the angle attached to the left and right of the gate CP; It can be improved by adjusting the shims of L and R.

- ① If the bale remains on the gate side and does not eject, remove the shim.
- ② When the bale remains on the front side and does not drain, attach the shim.

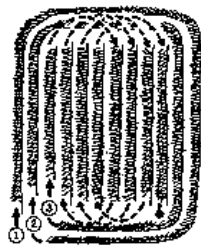


3. Operation

(1) Making windrows

In order to use this machine efficiently, the windrow should be made with a uniform width of 80 to 100 cm and height of 30 to 40 cm.

Also, make windrows that will make it possible for the machine to perform work inside the field smoothly and efficiently.



Order of work



Completed work

Precaution

Bale density becomes low if the machine is used at high speed for a large windrow.

This might cause troubles, such as clogging and the breakage of shear bolt.

For efficient operation without such trouble, it is recommended to make windrows of appropriate size.

Hay and long leaf	Long rice (wheat) straw		Cutting rice (wheat) straw and cutting leaf
Make windrows.	① Cut 3 or 4 rows using a rice combine harvester.	② Drop 2 rows with a rice combine harvester. Make windrows	It is possible to pick up as is, however...
		Directly drop 2 rows. Dropper operation	
	It is best to pick up as is.		More efficient work is possible if windrows are made.

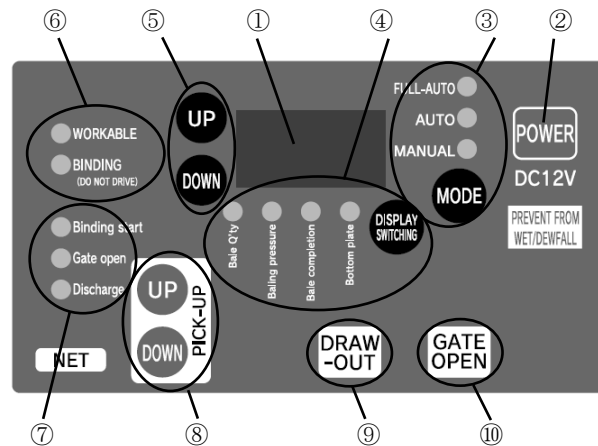
(2) How to operate the control box

Precaution

- Turn off the power of control box when you don't use the machine.
- If the control box is fixed incompletely, the box can be dropped by the vibration of tractor.
Fix the box firmly.
- Don't push buttons at the same time during working.
- The control box is not water proof. Getting wet is strictly prohibited.

Control box is located in the cabin of tractor and used for adjusting bale density, increasing / decreasing (or reset) of bale number, switching display, switching working mode, up / down of pick-up, opening / closing gate and drawing out, net / twine by pushing related button.

Also, buzzer sounds to let operator notice when the bale is full or Bottom plate is lowered because of excess crop or foreign materials.



① Display

3 digit of number can be displayed.

By pushing “DISPLAY SWITCHING” button, the number in the display can be changed as under.

• Bale number

The number of the bales can be counted from 0 to 999. If the number exceed 999, it return to 0.

The number is add one when bale is discharged after winded by net / twine.

* When selecting the number of bales, press and hold to increase or decrease continuously, and press decrement for more than 5 seconds to reset to 0.

• Adjustment of bale density

Bale density can be adjusted by 5 degrees (1 to 5). Refer to section “3-2-5-1 Adjustment by control box ” to adjust the density.

• Bale full sensor (indicator)

It can be used as the indicator of the bale pressing procedure.

Also it can be used for checking the state of sensor in case of maintenance.

The number starts from 0 and the bale is full if the number exceeds 100.

When the bale is full, the LED for bale full sensor flushes.

During the work, you can set the display to show this number and use as the indicator.

• Bottom plate sensor

It shows the degree of Bottom plate when the crop or foreign materials come in and the plate is lowered.

Also it can be used for checking the state of sensor in case of maintenance.

When this number is increased 6 or more, the LED for Bottom plate sensor flushes.

② “POWER” button

This button is used for turn on / off the control box.

The number of the bales and the setting of sensors are memorized when the power is off by pushing “POWER” button.

③ “Mode switch” button and current working mode

This button is used for changing the working mode “FULL-AUTO”, “AUTO” and “MANUAL”.

The selected mode can be checked in the LED.

④ “DISPLAY SWITCHING” button

By pushing “DISPLAY SWITCHING” button, the number in the display can be changed as “Bale Q’ty”, “Adjustment of bale density”, “Bale full sensor” and “Bottom plate sensor”.

The selected display can be checked in the LED.

⑤ “UP” “DOWN” set button

When the display is “Bale Q’ty”, “Adjustment of bale density”, the value shown in the display can be changed by pushing “UP” or “DOWN “ button.

When the display is “Bale Q’ty”, the value increases continuously by keep pushing “UP”, and the value resets as 0 by keep pushing “DOWN”.

⑥ Working status LED

They show the status of “WORKABLE” or “BINDING (DO NOT DRIVE)”.

If the binding system, gate and bale ejector are not in correct position, “WORKABLE” LED is not turned on.

⑦ Checking LED

These LED turn on according to the status of sensors.

In case of net binding, “Binding start” LED lights when the net is cut (sensor off), meanwhile in case of twine binding, “Binding start” LED lights when the cursor of twine moves to left and right (sensor off).

“Gate open” LED lights when the gate is opened and sensor is activated (sensor on).

“Discharge” LED lights when bale ejector goes down (sensor off).

⑧ Pick-up “UP”·”DOWN” button

By pushing the button, pick-up can be raise or lowered.

⑨ “DRAW-OUT” button

By pushing the button, net or twine can be drawn manually.

⑩ “GATE OPEN” button

By pushing the button, the gate opens.

⑪ Buzzer

Buzzer sounds continuously when the bale forming is finished.

Buzzer sounds intermittently when excess crop or foreign materials comes into chamber and

Bottom plate is going down.

Precaution

- The number of the bales and the setting of sensors are memorized when the power is off by pushing “POWER” button. Turn off the control box when you finish working and setting the value.

Table of the error code shown in the display

Disp.	Contents of error
0	Communication error between control box and CAN controller ;1 (located in the middle main body)
1	Communication error between control box and CAN controller;2 (located at net / twine casing)
2	Communication error between control box and CAN controller ;1 and 2
10	Bale ejection error
11	Working error of binding
91-93	The setting value error of control box

(3) Actual operation

⚠DANGER

- Touching or coming in contact with the pick-up, auger or rotor during operation or while it is rotating could result in becoming entangled in the pick-up and being injured.
It is dangerous to stick your hands into the pick-up.
If the pick-up becomes clogged with grass or the like, be sure to turn OFF the PTO and engine before removing the crops.

▲WARNING

- Touching or coming in contact with the rollers during operation or while they are rotating could result in becoming entangled in the rollers and being injured.
Do not touch the rollers.
Do not let anyone near the rollers.
If grass gets entangled in the rollers, be sure to stop the PTO and engine before removing it.
- When opening the gate, if there is anyone behind the machine, there is a danger of being trapped between the gate and the wall to be injured.
Do not allow anyone to near the machine when opening the gate.
Sufficiently check the condition behind the machine before opening the gate.
- When the bale is discharged on slope or uneven place, there is some possibility that you may be caught by bale and may be injured.
Discharge bales on even place.
- When you notice strange noise or abnormal heating, stop working immediately and resolve the cause of the noise and heating.

Precaution

- Change the rpm of the PTO to correspond with the moisture content and condition of the baling material.

Moisture content and condition of the baling material	PTO rpm
Standard	540 rpm
Dried, short, clogged to rotor scraper part	350 – 450 rpm
High moisture content and gets clogged in the pick-up.	540 – 600 rpm

- When forming bales, do not stop the PTO.
- The operation speed is 4 to 10 km / hr. Perform operation at a speed that is suitable to the field conditions and size of the windrows.
- Do not turn the PTO reversely using a "reverse rotation PTO" or "by moving backward with grand PTO". The work equipment might be damaged.
- Be sure to check that either of LED "FULL-AUTO" mode, "AUTO" mode or "MANUAL" mode on the control box lights before starting operation.
- If either of LED "FULL-AUTO" mode, "AUTO" mode or "MANUAL" mode on the control box does not light (power off), share bolt may be cut or the parts for the detection of bale density may be broken.
- If you back the machine on condition that 2P frame keeps touching the stopper, you can cause breakage of machine.
If 2P frame touches the stopper, make a progress at once, and regain the balance, and then back.

① Procedure of the working

Table 1

Process 1	Start up engine
↓	
Process 2	a. Turn on the power of control box. b. Choose working mode. c. Set (lower) the pick-up position.
↓	
Process 3	Start PTO
↓	
Process 4	Start running to pick up crops.
↓	
Process 5	d. Bale density reaches to set density and then baling process is complete. e. Twine / net is winded.
↓	
Process 6	f. Winding process is complete. g. Gate is opened and bale is discharged h. Gate is closed

Process 4 – 6 is kept continue.

<Process 1>

Start up engine of the tractor.

<Process 2>

a. Turn on the power of the control box.

Precaution

Shear bolt may be broken or bearings may be broken if the operation is started without turning on the power of control box.

b. Select working mode.

Usually “FULL-AUTO” mode is selected after turning on the control box.

Working mode can be selected from one of “FULL-AUTO”, “AUTO” or “MANUAL” by pushing “MODE” button.

<FULL-AUTO mode>

Winding the net/ or twine is done automatically by program.

Bale is discharged automatically by program.

<Auto mode>

Winding the net/ or twine is done automatically by program.

Bale is not discharged automatically.

Bale is discharged by operating the control box.

<Manual mode>

Winding the net/ or twine is not performed automatically. Winding the net/ or twine is performed by operating the control box.

Bale is not discharged automatically. Bale is discharged by operating the control box.

Precaution

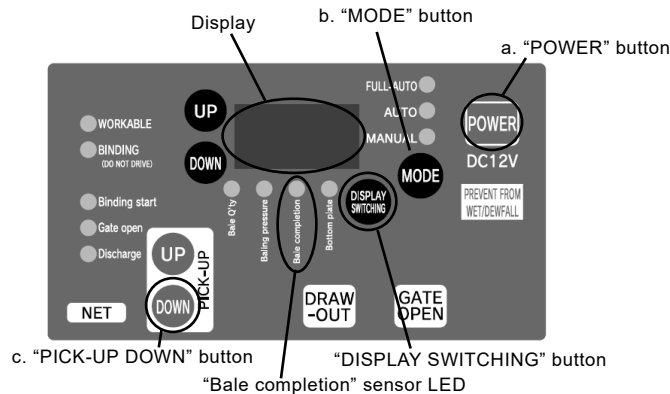
Select “AUTO” mode or “MANUAL” mode at slope or you choose the place for the bale to be discharged.

c. Lower the pick-up position.

Set the height of pick-up above ground by pressing “DOWN” button of control box.

<Process 3>

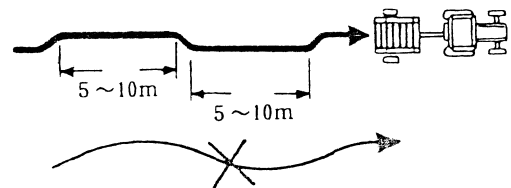
Turn on the tractor PTO.



<Process 4>

To form good shaped bales, perform operation at a speed that will allow for the crops to uniformly enter the chamber.

If the width of the windrows is narrow, good shape bales can be formed by performing work as shown in the right figure.



The state of compression of bale can be checked by setting the display as “**Bale completion**” sensor LED.

The value on the display starts to be increased when some portion of crop enters chamber.

Once the value exceeds 100, the chamber is full and buzzer starts to sound.

This machine has the “Bottom plate auto recovery system” for the reduction of the breakage of shear bolt by entering excess amount of crops or foreign materials around intake rotor.

If the overload which is occurred by excess or foreign materials, Bottom plate goes down (open) automatically and return after the overload disappear.

In case the plate is open, sensor detects the angle of the plate and the buzzer sounds intermittently.

When you hear the intermittent buzzer, you should slower running speed or stop running until buzzer stops.

Precaution

Thanks to the “Bottom plate auto recovery system” the breakage of shear bolt may be reduced.

However, by continuing running during buzzer sounds or depending on the quantity of crop, size of foreign material, shear bolt may be cut.

Don't do excess work for smooth working.

Check shear bolts before working.

You can continue working if the sensor of Bottom plate is broken.

However, unexpected trouble could be happened because the overload is not detected by the sensor.

If Bottom plate LED flushes when the control box turns on, repair and adjust the sensor as soon as possible.

<Process 5>

Twine/ net winding operation automatically starts when the buzzer sounds continuously.

In case of “MANUAL” mode is selected, press “DRAW-OUT” button of control box and start winding operation.

Precaution

If the machine has net binding system, stop running immediately once the buzzer sounds continuously.

Otherwise, the crops are caught between the layers of net and the net may come loose.

If the twine is not wound properly, check the following:

- Does the control box turn on?
- Is the twine tangled or stuck?
- Has the twine come out of the guide roll or guide pulley?
- Is the twine tension to high?

<Process 6>

After twine/ or net winding is completed.

-FULL-AUTO mode-

Gate opens automatically. The gate closes after bale is discharged automatically.

-Auto mode-

Open the gate by pressing “GATE OPEN” button to discharge bale.

2 different motions can be selected by depending on way of pressing the “GATE OPEN” button.

Motion: A / Press “GATE OPEN” button and release it within 1 second.

Gate opens fully automatically.

And then it closes automatically after bale is discharged

Motion: B / Press “GATE OPEN” button 1sec or more.

Gate opens while “GATE OPEN” button is pressed.

Release “GATE OPEN” button when bale is discharged to close gate.

Precaution

- In case the motion ;B is selected, there may be possibility that gate closes in the middle of procedure and bale cannot be discharged completely if “GATE OPEN” button is not pressed during process. Do not release “GATE OPEN” button until bale is discharged completely.

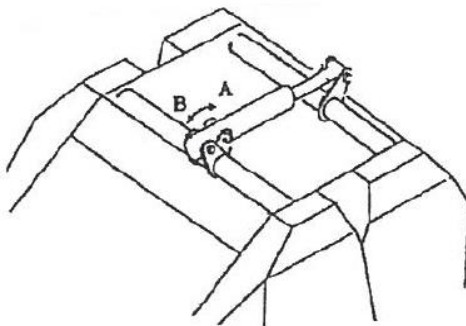
-Manual mode-

Press “GATE OPEN” button until bale is discharged surely, and then release it to close the gate.

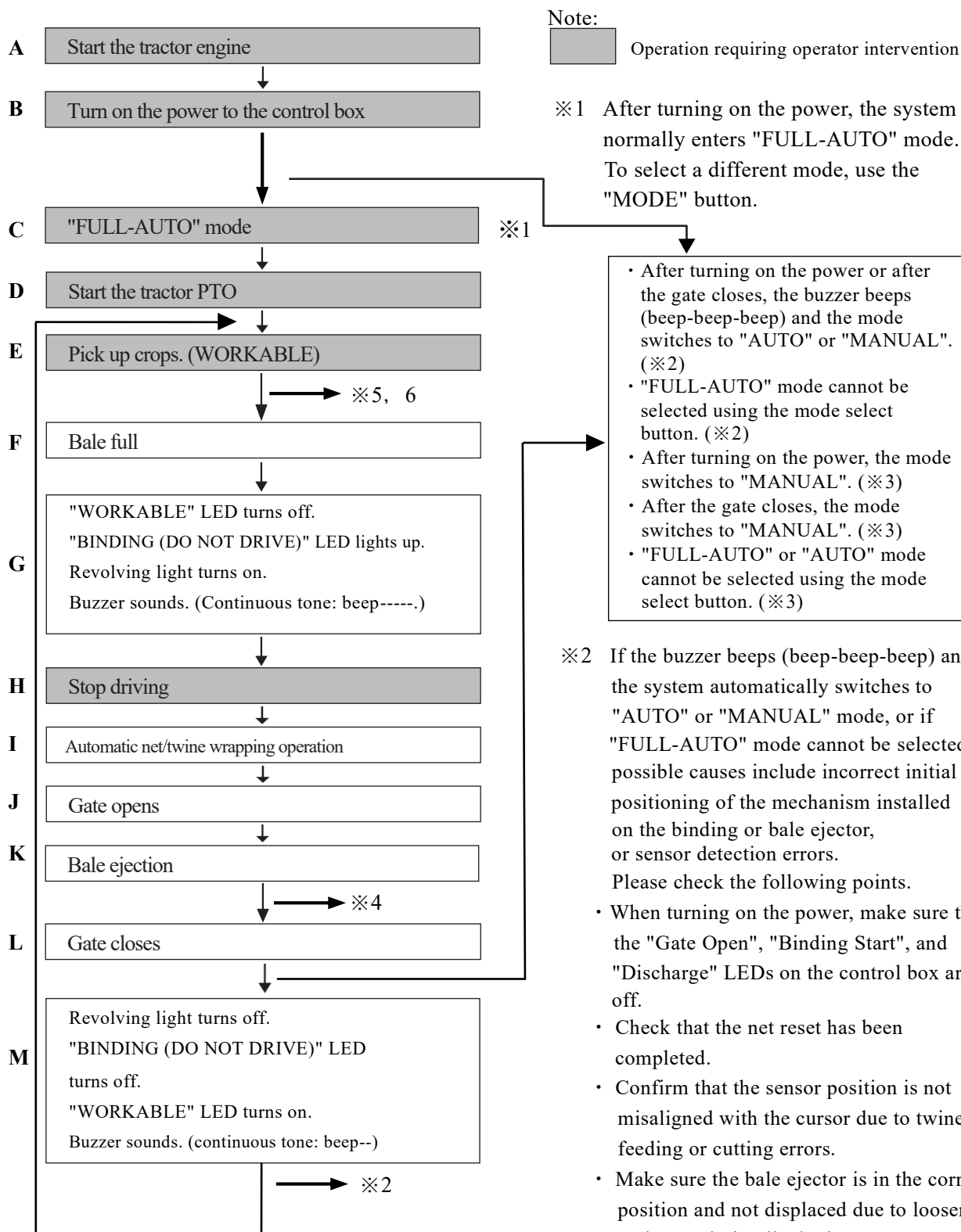
Precaution

- There is a possibility that gate closes in the middle of procedure and bale cannot be discharged completely if “GATE OPEN” button is not pressed during process. Do not release “GATE OPEN” button until bale is discharged completely.

When the gate closes, check that pivot pipe stops the location of B.



② Procedure : "FULL-AUTO" mode



When checking the above points, always stop the PTO and engine, and ensure safety around the machine before performing any inspection or adjustment.

For sensor adjustments, refer to "5-3-21 Adjusting the ejector sensor."

If the system does not switch to "FULL-AUTO" mode even after adjustment, possible causes include sensor failure or disconnected wiring.

Please replace the relevant parts.

This function is designed for safety and sensor checks.

If you must continue operation due to unavoidable circumstances, please use the "AUTO" or "MANUAL" mode.

- ※3 If the system automatically switches to "MANUAL" mode, or if "FULL-AUTO" or "AUTO" mode cannot be selected, possible causes include incorrect initial positioning of the mechanism or detection errors in the bale full sensor.
- Please check the following points.

- Make sure that the power is not being turned ON or OFF while the bale is in the full state (the bale is in the full condition).
- Check that the mounting bolts of the bale full sensor (angle sensor) are not loose and the sensor is not out of its correct position.
- Confirm that the spring on the lever of the bale full sensor has not come off.

When checking the above points, always stop the PTO and engine, and ensure safety around the machine before proceeding.

If the bale is full, wrap it with net or twine and then eject it.

For sensor adjustments, refer to "5-3-23

Adjusting the Bottom plate sensor and the bale density detection sensor" and the parts list.

If the system does not switch to "FULL-AUTO" or "AUTO" mode even after adjustment, possible causes include sensor failure or disconnected wiring.

Please replace the relevant.

- ※4 If the indicator displays the number "10" flashing and the buzzer sounds (intermittent long beep: beep---, beep---, beep, ...), and the gate closes automatically, this indicates a bale ejection failure.
- Press "GATE OPEN" button on the side of the machine to open the gate, close the stop valve to make sure the gate does not close, and then turn off the tractor PTO, engine, and the power to the control box.
- After that, remove the bale from inside the roll baler.
- After ejecting the bale, open the stop valve, close the gate, and resume operation.

- ※5 If a large quantity of crops or foreign objects enters the Bottom plate area and causes it to lower, the control box buzzer will sound (intermittent short beeps: beep-beep-beep).
- In this case, reduce your operating speed or stop the pickup operation and wait until stop the buzzer sounding.
- If the buzzer sounds frequently, reduce your travel speed and adjust the operation to prevent large amounts of crop from entering the area.

- ※6 If the indicator displays the number "11" flashing and the buzzer sounds (intermittent long beep: beep---, beep---, beep, ...), this indicates a binding operation error.
- Turn off the tractor PTO, engine, and the power to the control box.
- Then, set up the binding device and resume operation.

 DANGER

- If you attempt to remove the bale from the chamber by hand without closing the stop valve, the gate may close and cause death or serious injury.
Always switch the stop valve to the "Close" position before starting, then attach the gate lock.
- If you open the stop valve after manually removing the bale while someone is under the gate or near the chamber, they may be caught by the descending gate and suffer death or serious injury.
Make sure the area is safe, including yourself, before opening the stop valve.
- If the rollers are operating while removing the bale by hand, you may be caught in the rollers and suffer death or serious injury.
Turn off the PTO and engine before starting.

Precaution

When "FULL-AUTO" mode is selected, the bale will be ejected regardless of the presence of bales, windrows, or field edges near the machine.

If you want to eject the bale manually, switch to "AUTO" or "MANUAL" mode and perform the ejection.

Be sure to switch from "FULL-AUTO" to "AUTO" or "MANUAL" mode before the binding device starts operating.

- A.** Start the tractor engine.
- B.** Turn on the power to the control box.
- C.** Select the mode using the "MODE" button.

- D.** Start the tractor PTO.
The PTO rotation speed varies depending on the type and condition of the material to be baled.
- E.** Collect the crops according to "3-2-1 Adjusting the height above the ground of the pick-up tine."
- F, G, H.** When baling is complete, a buzzer will sound to indicate that the tractor should stop (continuous beep: beep-----).
"WORKABLE" LED will turn off, and "BINDING (DO NOT DRIVE)" LED and the revolving light will turn on.
Do not drive until step "M" is completed.

Precaution

Do not stop the PTO rotating.

If the bale stops rotating, improper wrapping of the net or twine may occur.

- I.** The binding device will operate automatically and wrap the net or twine. When wrapping is completed, the net or twine will be cut and the binding device will stop.
- J, K.** After the binding device stops, the gate opens automatically and ejects the bale.
- L.** The ejected bale is sent backward by the bale ejector.
At this time, the sensor installed on the bale ejector is activated, and the gate closes automatically.
- M.** "BINDING (DO NOT DRIVE)" LED and the revolving light turn off, "WORKABLE" LED turns on, indicating that baling work can be performed.
It is now safe to drive.

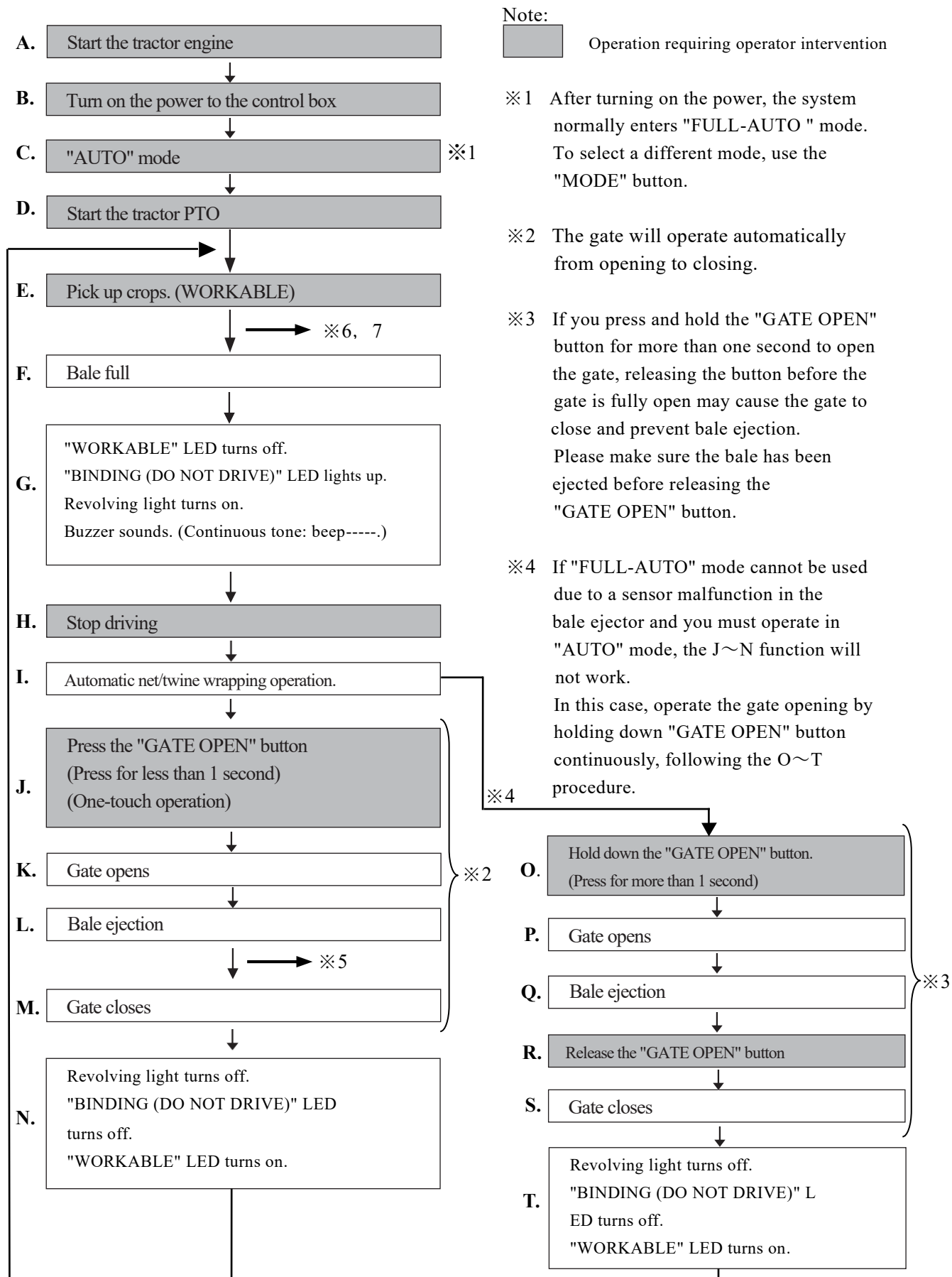
Precaution

Do not use the "FULL-AUTO" mode on slopes.

The discharged bale may roll away, causing injury or accidents.

Please operate in "AUTO" or "MANUAL" mode when working on slopes.

③ Procedure : "AUTO" mode



- ※5 If the indicator displays the number "10" flashing and the buzzer sounds (intermittent long beep: beep---, beep---, beep, ...), and the gate closes automatically, this indicates a bale ejection failure. Press "GATE OPEN" button on the side of the machine to open the gate, close the stop valve to make sure the gate does not close, and then turn off the tractor PTO, engine, and the power to the control box. After that, remove the bale from inside the roll baler. After ejecting the bale, open the stop valve, close the gate, and resume operation.
- ※6 If a large quantity of crops or foreign objects enters the Bottom plate area and causes it to lower, the control box buzzer will sound (intermittent short beeps: beep-beep-beep). In this case, reduce your operating speed or stop the pickup operation and wait until stop the buzzer sounding. If the buzzer sounds frequently, reduce your travel speed and adjust the operation to prevent large amounts of crop from entering the area.
- ※7 If the indicator displays the number "11" flashing and the buzzer sounds (intermittent long beep: beep---, beep---, beep, ...), this indicates a binding operation error. Turn off the tractor PTO, engine, and the power to the control box. Then, set up the binding device and resume operation.

DANGER

- If you attempt to remove the bale from the chamber by hand without closing the stop valve, the gate may close and cause death or serious injury. Always switch the stop valve to the "Close" position before starting, then attach the gate lock.
- If you open the stop valve after manually removing the bale while someone is under the gate or near the chamber, they may be caught by the descending gate and suffer death or serious injury. Make sure the area is safe, including yourself, before opening the stop valve.
- If the rollers are operating while removing the bale by hand, you may be caught in the rollers and suffer death or serious injury. Turn off the PTO and engine before starting.

Precaution

When "AUTO" mode is selected, bale ejection is performed by pressing the "GATE OPRN" button.

Ejection will not occur automatically. The operating procedure will vary depending on how the "GATE OPEN" button is pressed.

Please use the method that best suits your working style.

If you are using "AUTO" mode due to a sensor malfunction, make sure that the net cutting knife of the net binding device is in the reset position before starting operation.

- A.** Start the tractor engine.
- B.** Turn on the power to the control box.
- C.** Set the mode to "AUTO" using the "MODE" button.
- D.** Start the tractor PTO.
The PTO rotation speed varies depending on the type and condition of the material to be baled.
- E.** Collect the crops according to "3-2-1 Adjusting the height above the ground of the pick-up tine."
- F•G•H.** When baling is complete, a buzzer will sound to indicate that the tractor should stop (continuous beep: beep-----).
"WORKABLE" LED will turn off, and "BINDING (DO NOT DRIVE)" LED and the revolving light will turn on.
Do not drive until the wrapping operation "N" is finished.
- O • P.** After the binding device stops, keep pressing "GATE OPEN" button to open the gate and eject the bale.
- Q.** The ejected bale will be moved to the rear by the bale ejector.
- R • S.** When you release the "GATE OPEN" button, the gate will close.
- T.** "BINDING (DO NOT DRIVE)" LED and the revolving light turn off, and "WORKABLE" LED turns on, indicating that baling work can be performed.
It is now safe to drive.

Precaution

Do not stop the PTO rotating.
If the bale stops rotating, improper wrapping of the net or twine may occur.

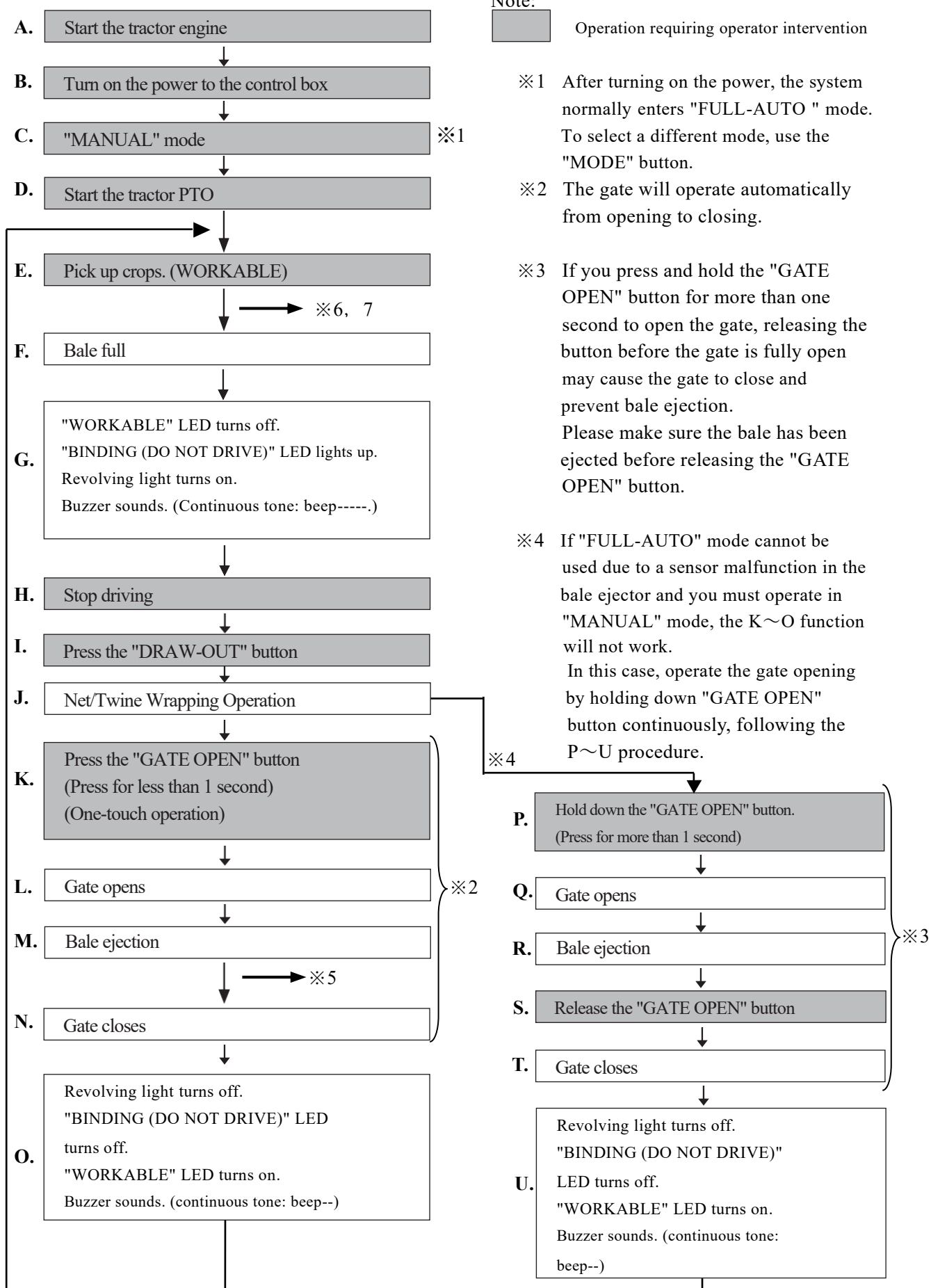
- I.** The binding device will operate automatically and wrap the net or twine.
When wrapping is completed, the net or twine will be cut and the binding device will stop.
- J • K.** After the binding device stops, open the gate using the "GATE OPEN" button to eject the bale.

Precaution

The procedure will vary depending on how long you press "GATE OPEN" button.

- L • M.** The ejected bale is sent backward by the bale ejector.
At this time, the sensor installed on the bale ejector is activated, and the gate closes automatically.
- N.** "BINDING (DO NOT DRIVE)" LED and the revolving light turn off, and "WORKABLE" LED turns on, indicating that baling work can be performed.
It is now safe to drive.

④ Procedure : "MANUAL" mode



- ※5 If the indicator displays the number "10" flashing and the buzzer sounds (intermittent long beep: beep---, beep---, beep, ...), and the gate closes automatically, this indicates a bale ejection failure. Press "GATE OPEN" button on the side of the machine to open the gate, close the stop valve to make sure the gate does not close, and then turn off the tractor PTO, engine, and the power to the control box. After that, remove the bale from inside the roll baler. After ejecting the bale, open the stop valve, close the gate, and resume operation.
- ※6 If a large quantity of crops or foreign objects enters the Bottom plate area and causes it to lower, the control box buzzer will sound (intermittent short beeps: beep-beep-beep). In this case, reduce your operating speed or stop the pickup operation and wait until stop the buzzer sounding. If the buzzer sounds frequently, reduce your travel speed and adjust the operation to prevent large amounts of crop from entering the area.
- ※7 If the indicator displays the number "11" flashing and the buzzer sounds (intermittent long beep: beep---, beep---, beep, ...), this indicates a binding operation error. Turn off the tractor PTO, engine, and the power to the control box. Then, set up the binding device and resume operation.

DANGER

- If you attempt to remove the bale from the chamber by hand without closing the stop valve, the gate may close and cause death or serious injury. Always switch the stop valve to the "Close" position before starting, then attach the gate lock.
- If you open the stop valve after manually removing the bale while someone is under the gate or near the chamber, they may be caught by the descending gate and suffer death or serious injury. Make sure the area is safe, including yourself, before opening the stop valve.
- If the rollers are operating while removing the bale by hand, you may be caught in the rollers and suffer death or serious injury. Turn off the PTO and engine before starting.

Precaution

When "MANUAL" mode is selected, the binding device is operated by pressing the "DRAW-OUT" button on the control box.

Feeding will not occur automatically.

To eject the bale, press the "GATE OPEN" button; ejection will not occur automatically.

The operation procedure will change depending on how you press the "GATE OPEN" button.

Please use the method that best fits your working style.

If you are using "MANUAL" mode due to a sensor malfunction, confirm that the net cutting knife of the net binding device is in the reset position before performing the forced feed operation.

- A.** Start the tractor engine.
- B.** Turn on the power to the control box.
- C.** Set the mode to "MANUAL" using the "MODE" button.
- D.** Start the tractor PTO.
The PTO rotation speed varies depending on the type and condition of the material to be baled.
- E.** Collect the crops according to "3-2-1 Adjusting the height above the ground of the pick-up tine."
- F•G•H.** When baling is complete, a buzzer will sound to indicate that the tractor should stop (continuous beep: beep-----).
"WORKABLE" LED will turn off, and "BINDING (DO NOT DRIVE)" LED and the revolving light will turn on.
Do not move the tractor until operation "O" or "U" is finished.

Precaution

Do not stop the PTO rotating.
If the bale stops rotating, improper wrapping of the net or twine may occur.

- I • J.** Press the "DRAW-OUT" button to operate the binding device and wrap the net or twine. When wrapping is complete, the net or twine will be cut and the binding device will stop.
- K • L.** After the binding device stops, open the gate using the "GATE OPEN" button to eject the bale.

Precaution

The procedure will vary depending on how long you press "GATE OPEN" button.

- M • N.** The ejected bale is sent backward by the bale ejector.
At this time, the sensor installed on the bale ejector is activated, and the gate closes automatically.
- O.** "BINDING (DO NOT DRIVE)" LED and the revolving light turn off, and "WORKABLE" LED turns on, indicating that baling work can be performed.
It is now safe to drive.

- P • Q.** After the binding device stops, keep pressing "GATE OPEN" button to open the gate and eject the bale.
- R.** The ejected bale will be moved to the rear by the bale ejector.
- S • T.** When you release the "GATE OPEN" button, the gate will close.
- U.** "BINDING (DO NOT DRIVE)" LED and the revolving light turn off, and "WORKABLE" LED turns on, indicating that baling work can be performed.
It is now safe to drive.

4. Transportation

⚠ DANGER

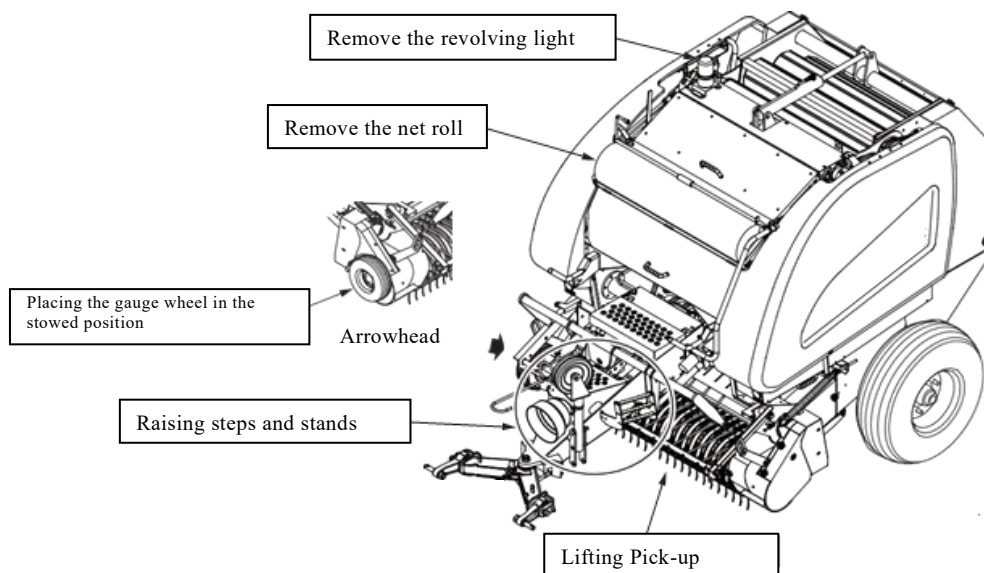
- When driving on public roads, please comply with laws and regulations related to public road driving, and be sure to check the safety of your surroundings.
Also, do not allow people to come close to the tractor and work equipment.
Failure to do so will involve those around you, resulting in death or serious injury.
- Do not include PTO when driving on public roads.
Failure to do so will involve those around you, resulting in death or serious injury.

⚠ WARNING

- When driving on public roads, be sure to use the mode of transportation.

1. Forms of movement

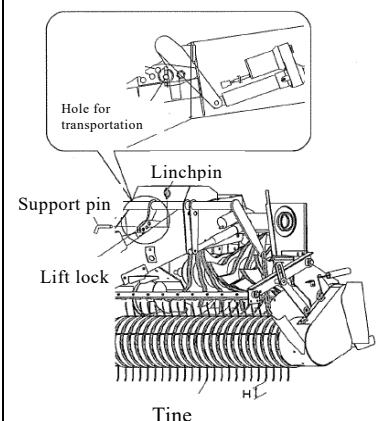
When driving on public roads, be sure to use the form of movement.



- (1) Turn OFF the PTO.
- (2) Raise pick-up device upward fully by pushing "UP" button of the control box.
Then insert support pin to the hole for transportation.
Then push "DOWN" button of the control box so that lift lever touches with support pin.

Precaution

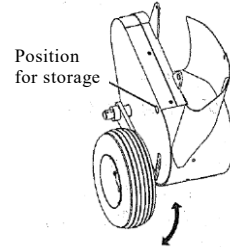
Electric cylinders are equipped with a torque limiter (a protection mechanism) that operates at the end of each stroke, both at full extension and full retraction.
When the torque limiter is activated, you will hear a "clicking" sound.
If the torque limiter continues to operate, it may cause the rod's feed screw to become jammed, causing the rod to stop moving.
If you hear the "clicking" sound, immediately release your finger from the button.
If the electric cylinder stops moving at the stroke end, first remove the electric cylinder.
Then, if the rod is fully extended, turn the rod to the left; if it is fully retracted, turn the rod to the right to release the jam.



- (3) Install the gauge wheel in the stowed position.
- (4) Operate the hydraulic lever for raising and lowering the tractor's lower link, lift the lower link until it is in the highest position it can go so the universal joint does not come out.
Also lift the lower link to the upper limit position where the 2P frame and the universal joint do not come in contact with each other.

Precaution

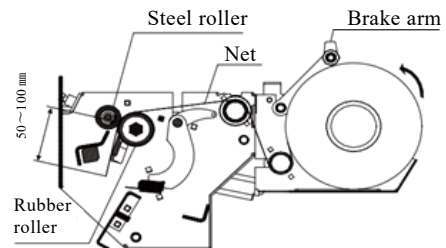
Crop cover may be damaged by it is contacted with drawbar when gauge wheel contacts to ground accidentally at transportation. Set the gauge wheel to proper position at the transportation so that pick-up does not come in contact with ground.



CAUTION

If the lower link is lifted excessively, the universal joint comes in contact with the 2P frame to be damaged, which might cause injury.
Be sure to check and keep the upper limit.

- (5) Check if the steps and stands are in a moving form.
If not, please use a moving form.
- (6) When operating with TRB•TCR2250AN after traveling a long distance, make sure that net is protruding by 50 to 100 mm from the steel and rubber rollers.
If not, release the brake arm to loosen the net once, rotate the steel roller by hand to make the net protrude by 50 to 100 mm.
After this adjustment, set brake arm again.



CAUTION

When rotating the steel and rubber rollers by hand, there is a danger that your finger be caught between them.
Be careful when making this operation.

- (7) Do not travel with the bale in chamber.

Precaution

If the machine is transported with the bale in chamber, the bale moves in the chamber by centrifugal force or vibration of running.
Unavoidably the machine has to be moved with the bale in chamber, close the stop valve; 1/4 not to move the gate.
However, any damage, breakage of the machine or the accident should be under operator's responsibility.

- (8) Remove the revolving light.
Store the removed revolving light in a place where it cannot be seen from the outside.

4 After Work is complete

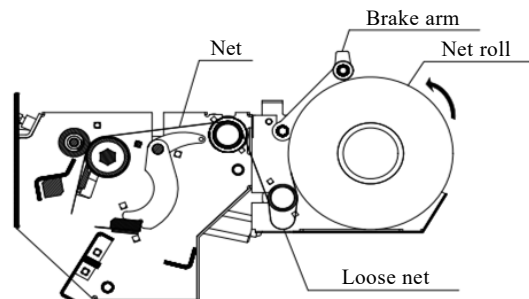
Be sure to perform maintenance and cleaning after work is completed in order to ensure long life of the machine.

▲CAUTION

Attempting to remove matter that has adhered to the rotating and moving parts without turning OFF the power could result in the operator being entangled in the machine and being injured. Turn OFF the PTO and engine and make sure the rotating and moving parts have stopped before performing maintenance and cleaning.

1.Maintance after work

- (1) Turn the power of the control box OFF and disconnect the cord; 5000.
- (2) Remove any crops or other matter that has adhered to the pick-up and cutting device at a field.
- (3) Remove any matter that has built up on the twine or net binding device.
- (4) Remove any crops or other matter that has adhered to the rollers.
- (5) Remove any matter that has build up on the drive sections on both sides.
- (6) Replace any damaged or worn out parts.
- (7) Inspect the drive sections and connections according to “5-1 Inspection List”.
- (8) Check the items listed in "5-4” List of major consumables".
- (9) Lubricate and supply oil to all areas according to “2-3 List of places requiring lubrication.
- (10) Apply grease to uncoated and exposed areas such as the PTO shaft, PIC shaft, and universal joint splines, to prevent rusting.
- (11) When detaching the machine from the tractor, set up the stand beforehand.



- (12) When operating with TRB·TCR2250AN, remove the net roll from the work equipment or release the brake arm and rotate the net roll in the direction of the arrow to make it loose.
- (13) Store control box inside of warehouse.

Precaution

When cleaning the car wash, be careful not to get water on the binding device, electrical components, and connectors.

2. Disconnecting the tractor

▲CAUTION

- When disconnecting the machine from the tractor, if it is done on a slope, uneven or soft ground, the tractor may start moving unexpectedly and cause an unexpected accident.
Please do it on a flat and hard ground.
- When disconnecting the work machine from the tractor, if you do not stop the wheels, the work machine may run out of control and cause an unexpected accident.
When disconnecting, be sure to ground the stand and fasten the wheels of the work machines.

- (1) Stop the tractor and apply the parking brake.
- (2) Fasten the wheels of the machine.
- (3) Disconnect the wiring cords.
- (4) Disconnect the joint from the PTO axis.
- (5) Lower the stand of the work machine and lower the 2P hitch to the stand touches the ground.
- (6) Remove the lynch pin that is plugged into the lower link pin and pull out the lower link from the lower link pin.
- (7) Start the tractor's engine and let it move forward gently.
- (8) Keep the lynchpin that has been removed.

3. Long-term storage

- (1) Clean all the parts of the machine.
- (2) Inspect the drive sections and connections according to the inspection list.
Replace any damaged or worn out parts.
- (3) Lubricate and supply oil to all areas according to list of places requiring lubrication.
Also, oil all moving parts including rotating parts, pivots, and the clamp pins to the universal joint, and apply grease to the PTO shaft, PIC shaft, and universal joint splines.
- (4) Paint or apply oil to any painted surfaces that are scratched to prevent rusting.
- (5) Store the machine indoors in a well ventilated location.
- (6) If the machine must be stored outside, cover it with a waterproof sheet.
- (7) For TRB·TCR2250AN, remove the net roll from the machine and store the machine in a well ventilated indoor place.
- (8) If the machine is stored with tractor, disconnect the cord; 5000 from control box to avoid battery exhaustion.
- (9) Store control box inside of warehouse.

5 Inspection and Maintenance

Inspection and maintenance should be performed periodically in order to keep the machine in good working condition.

In order to prevent unforeseeable accidents due to machine failure, inspect each part according to the "5-1 Inspection List", "5-4 List of major consumables", so the machine can be confidently used in good working order.

Tine, shear bolts, knife, twine and net are consumable parts.

Replace them when they are worn, damaged or used up.

DANGER

- When the gate is opened and inspected or adjusted, the gate may close unexpectedly, and you may be caught in it, resulting in death or serious injury. Switch the stop valve to the "closed" side to secure the gate securely. After that, install the gate lock.
- Never allow anyone to approach the machine.
Serious injury or death could occur if caught between rear gate and main body when gate is closed.
- Touching or coming in contact with the roller when adjusting the twine binding device could result in becoming entangled and injured.
Turn OFF the PTO and engine before adjustment.
- If you put your hand inside the net frame while driving or adjusting, the knife may move and cause injury.
Never put your hands inside the net frame.

WARNING

- When opening the gate for inspection and adjustment, remove the shear bolt so that the rollers and rotors do not rotate.

CAUTION

- When the machine is raised with the lower link to perform inspection or adjustment, there is a possibility that a third party could unknowingly lower the machine, causing injury.
Lock the hydraulic circuit to the tractor's lower link.
- If inspection is performed on a inclined surface, rough surface or soft and unstable surface, the tractor or machine could unexpectedly move causing unforeseeable accidents.
Perform inspection and adjustment on a hard, level surface.
- If inspection work or adjustment is performed with the PTO and engine running, there is a possibility that a third party could unknowingly operate the machine, causing unforeseeable accidents.
Turn OFF the PTO and engine and make sure all rotating and moving parts have stopped before performing the work.
- If you adjust and clean the twine binding, you may be wounded by knives.
Be careful of knives.

1. Inspection list

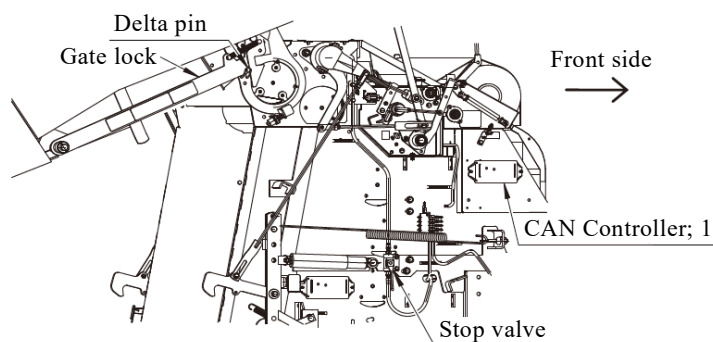
Time	Check Items	Remedy
One hour after initial use	Loose nuts and bolts Slack roller chain and tension spring	Tighten Adjust
Before operation After operation	Cleanliness of the machine Broken pick-up tines. Worn binding knife. Worn or damaged cutting knife. Broken shear bolts. Twine consumption (TRB/TCR2250AT) Net roll consumption (TRB/TCR2250AN) Consumption of oil in lubrication device. Air pressure in the tires for drive. Air pressure in the tires for gauge wheel. Loose or missing nuts, bolts and pins. Strange noise or vibration in drive-line. Damaged universal joint, cover, chain. Lubrication of rotating and moving parts. (Adjustment of all parts.) Strange noise or heating after idling.	Replace Replace Polish, replace Replace, replenish Replenish Replenish Fill reserve oil tank (VG220) 280 kPa, 2.8kgf/cm ² 320 kPa, 3.2kgf/cm ² Tighten or replenish. Treat according to section "6-1 Troubleshooting table". Replace. Adjust according to section "5-3 Adjustment of each part". Treat according to section "6-1 Troubleshooting table".
The start of season	Adjustment of knife arm set.	Adjust according to section "5-3-14 Setting and adjusting the knife arm".
At the end of the season	Damaged or broken parts. Worn parts such as tine. Cleanliness of parts. Scratched or damaged paint. Worn pivot points and pins.	Repair. Replace early with new parts. Paint or apply oil. Replace with new parts.

2. Adjusting Gate lock

⚠ DANGER

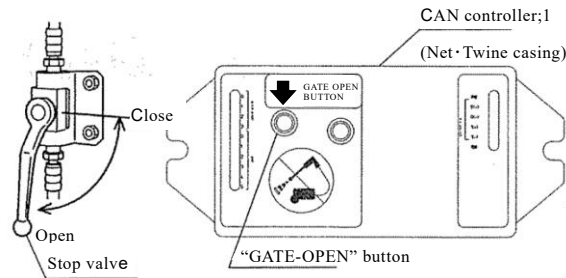
- When the gate is opened and inspected or adjusted, the gate may close unexpectedly, and you may be caught in it, resulting in death or serious injury.
Switch the stop valve to the "Close" side to secure the gate securely. After that, install the gate lock.
- Never allow anyone to approach the machine.
Serious injury or death could occur if caught between rear gate and main body when gate is closed.

Use the gate lock as the below method.

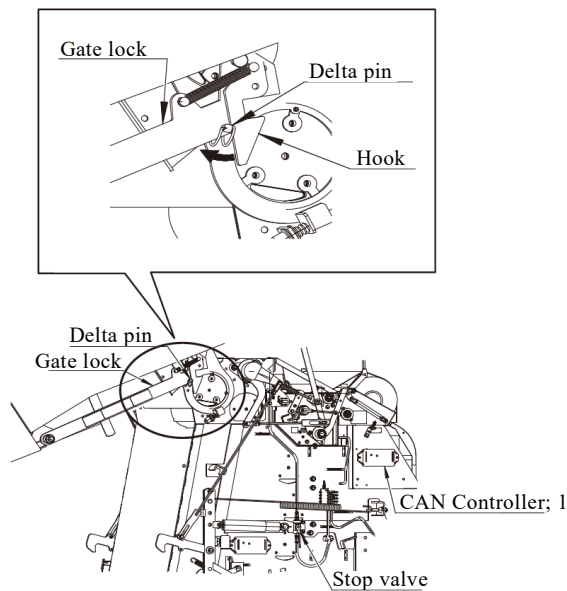


The right side of the machine

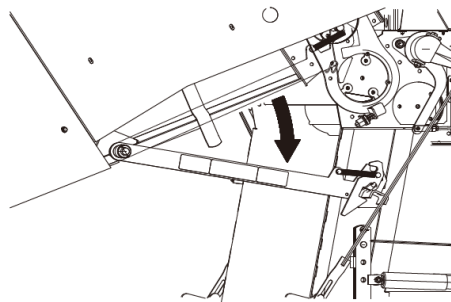
- (1) Turn on the control box.
- (2) Switch the stop valve to the “Open”.
- (3) Start up the engine and PTO. Turn on “GATE OPEN” button of CAN controller; 1 with PTO rotating.
- (4) After the gate rises, keep pushing “GATE OPEN” button and switch the stop valve to the “Close”.
Then, release the “GATE OPEN” button.



- (5) Stop PTO, and check that the rotating and working position stop.
- (6) Remove the delta pin, and move the hook as the arrow direction, and release the gate lock.



- (7) Rotate the gate lock and fix the gate lock as the below. Insert the delta pin into the initial position.



Precaution

- Don't drive the machine with gate lock fixed.

- (8) After inspection and adjustment, store the gate lock as reverse procedure.
After that, check that there are nobody insides, and switch the stop valve to “Open”.

3. Adjustment of each part

(1) Adjusting the tension of the roller chain

The roller chain elongates a little through use.

To ensure smooth power transmission, adjust the tension of the roller chain properly.

Initial elongation occurs when the machine is first used, so be sure to adjust the tension after use.

① Roller, rotor and screw drive unit

Adjust the tension of the roller chain by adjusting the length of the springs with the nuts and bolts.

The lengths of the nuts and bolts are as follows:

A = 65mm

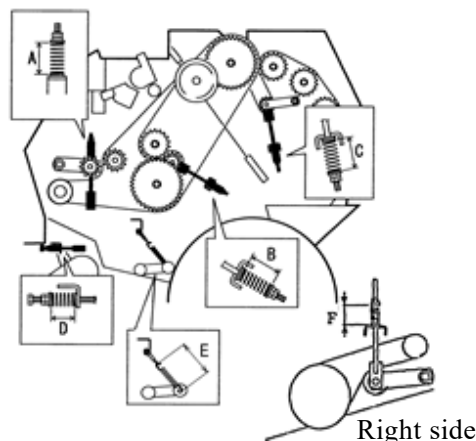
B = 65mm

C = 65mm

D = 25mm (right and left)

E = 180mm

F = 65mm



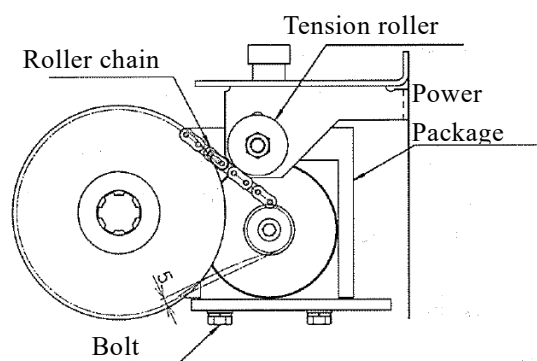
② Power package

The tension of the roller chain that drives the power package is adjusted by sliding the power package or by tension roller.

The tension should be adjusted so that the roller chain has about 5mm play when pressed in the center with your finger.

If the tension is too high, roller chain may break too early or power package breaks.

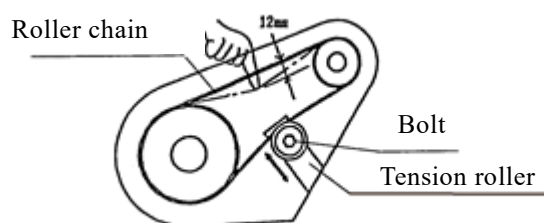
Adjust the tension properly.



③ Pick-up drive unit

Loosen the bolt, move the chain roller, adjust the tension of the roller chain, then tighten the bolt.

The tension should be adjusted so that the roller chain has about 12 mm play when pressed in the center with your finger.

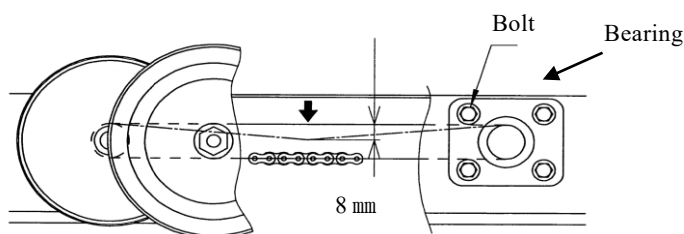


④ Twine binding drive

Loosen the bolts and move the bearing to adjust the tension of the roller chain.

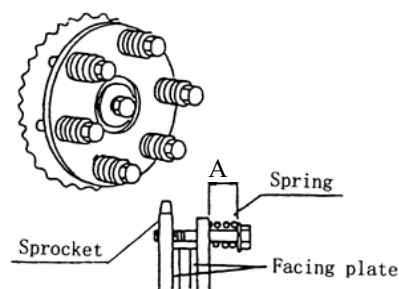
After that, retighten the bolts.

The appropriate strength tension is to press the center of the roller chain at 5 kg and the amount of play is 8 mm.



(2) Adjusting the slip clutch

Adjust spring length "A" (6 pieces) to 26mm.



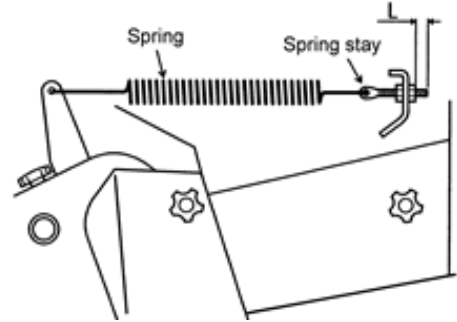
Precaution

- Be sure to adjust the spring length to the value given above.
Improper adjustment might cause damage of the machine.
- Absolutely DO NOT apply oil to the facing plate.
- When adjusting the springs, check the facing plate for wear.
If the facing plate is extremely worn, replace it with a new one according to the parts list.

(3) Adjusting the pick-up suspension

Adjust the pick-up suspension by adjusting the length L of the spring stay screw.

Working condition	L
Crops are not picked up evenly because pick-up swings up and down unstably.	70mm
Standard	75 mm
Poor follow of the ground surface, and pick up a lot of dirt and mud.	80 – 90 mm



Precaution

Adjust both the left and right spring stay evenly.

(4) Replacing the shear bolts

Each of the roller driving system and the rotor driving system is equipped with a safety device.

① Shear bolt of the roller driving system

A shear bolt is used in the left front side cover of the machine.

If an overload is applied, it breaks to stop all the parts.

In such case, replace the shear bolt (M8x32) after removing the cause.

Precaution

- Be sure to use genuine shear bolt(M8x32).
- If the shear bolt often breaks, lower the set value of baling pressure or decrease the operating speed.

② Shear bolt of the rotor driving system

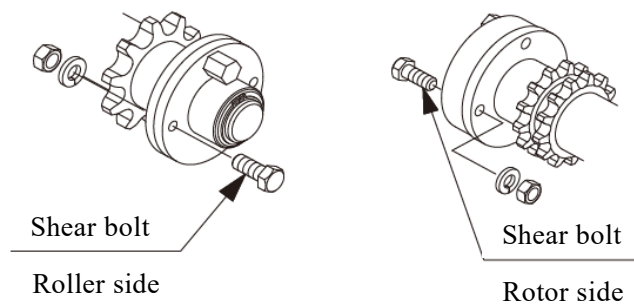
A shear bolt is used in the right front side cover of the machine.

If an overload is applied, it breaks and the rotor stops rotating.

In such case, replace the shear bolt (M10x55) after removing the cause.

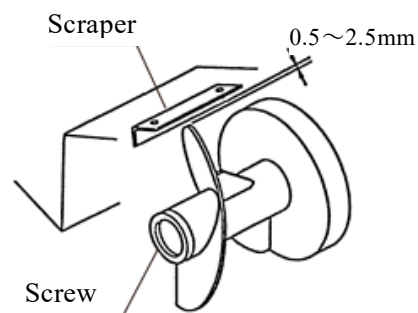
Precaution

- Be sure to use genuine shear bolt (M10x55).
- If the shear bolt often breaks, make windrows smaller or lower the operating speed.



(5) Adjusting the clearance between screw and scraper

Adjust the clearance between screw and scraper to 0.5 to 2.5 mm.

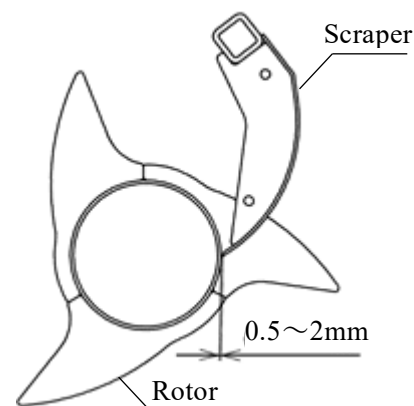


(6) Adjusting the clearance between rotor and scraper

Adjust the clearance between rotor and scraper to 0.5 to 2 mm.

- ① Scrapers L and R (on both ends)

Adjust with the bolt



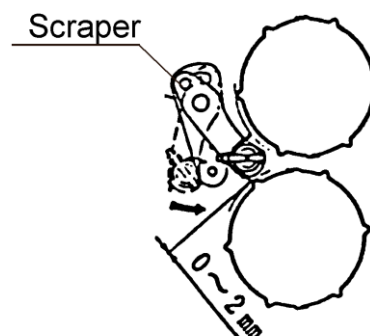
(7) Adjusting the scraper (TRB·TCR2250AT)

- ① When grass gets entangled in the rollers, the scraper operates and moves away from the rollers.

After the entangled grass is removed, open the cover inside the twine casing (view window) and push the scraper back to the roller side.

- ② The clearance between the scraper and rollers is 0 to 2 mm.

If the clearance is too large, loosen the scraper's installation bolts and adjust it.



Precaution

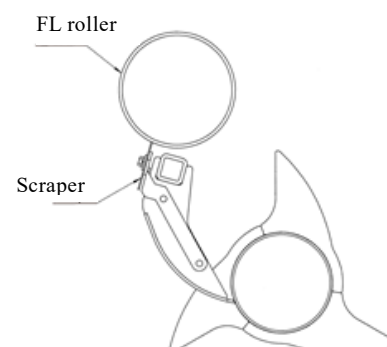
If the scraper is used when it is separated from the rollers, the twine may come out from between rollers.

As a result, the trouble may occur such as the twine only being wound around one place of the bale.

(8) Adjusting FL roller and scraper (TRB·TCR2250AT)

Adjust such that the FL roller comes in contact with the scraper.

If there is any gap between them, adjust with the scraper mounting bolt.

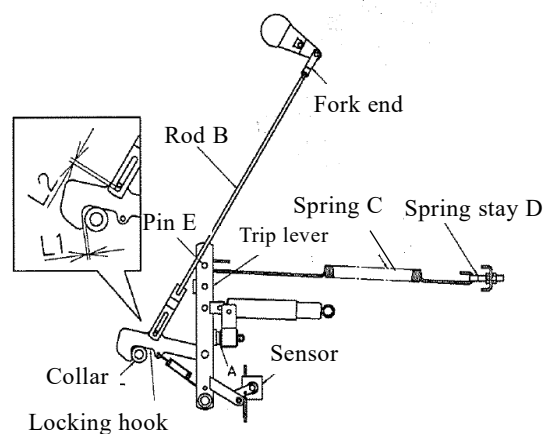


For the mounting position on the rotor scraper,
see the right figure.



(9) Adjusting the bale density detection link

- ① Adjust the space between the locking hook and the gate collar with shim A.
L1 = 2 mm is proper.
- ② Adjust the space between the long hole of rod B and the bolt with the fork end of rod B.
L2 = 7 mm is proper.
- ③ Adjust the length of the spring stay D so that it can be removed by hand even when pin E of spring C is placed in the trip lever hole.

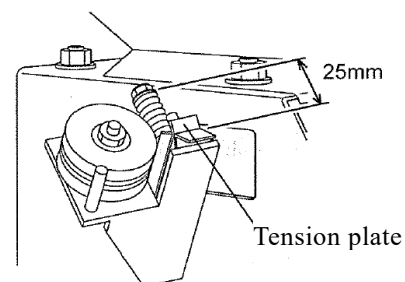


Precaution

Do not tighten spring C too tightly.
There is a possibility that the locking hook cannot be connected to the collar.

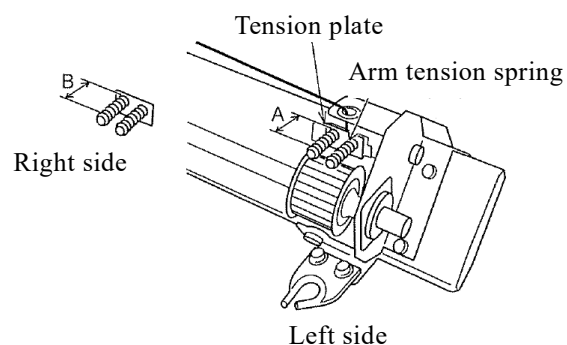
(10) Adjusting the twine tension (TRB・TCR2250AT)

Adjust the length of the spring to 25 mm.
If tension plate is worn and the pressure cannot be applied to twine, replace the plate.



(11) Adjusting the arm tension spring (TRB・TCR2250AT)

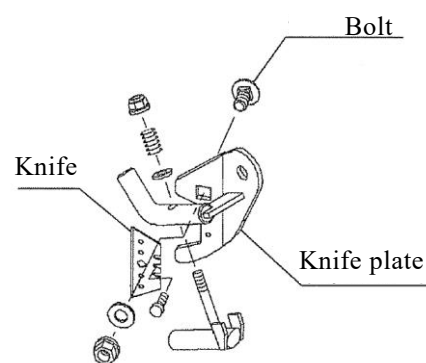
Adjust the length "A" of left side spring to 37 mm, the length "B" of right side spring to 32 mm.



(12) Adjusting the binding knife (TRB・TCR2250AT)

When the knife blade becomes dull, turn it over.

When the other side also becomes dull, replace it with a new one.

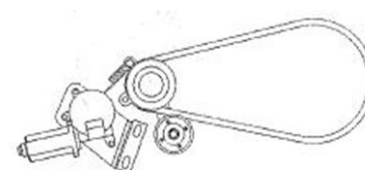


Precaution

Only use a genuine knife.

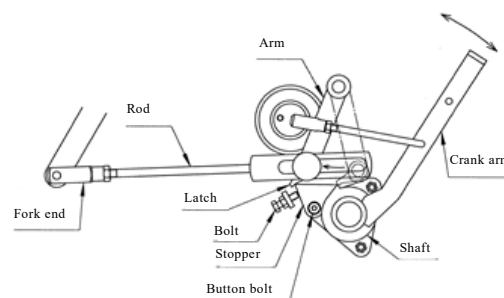
(13) Adjusting the stopper and the tension of V belt

- ① If the V belt drags other part, adjust the belt stopper such that it comes in slight contact with the V belt.
Belt stopper is provided at one location for TRB・TCR2250AN and provided at two locations for TRB・TCR2250AT.
- ② If the V belt for the tension clutch which draws out twine or net slips, adjust the tension of the V belt.

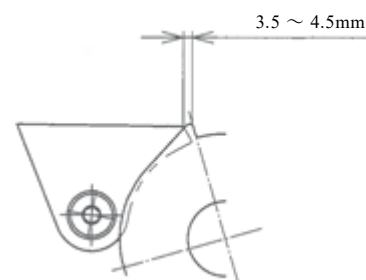


(14) Setting and adjusting the knife arm (TRB・TCR2250AN)

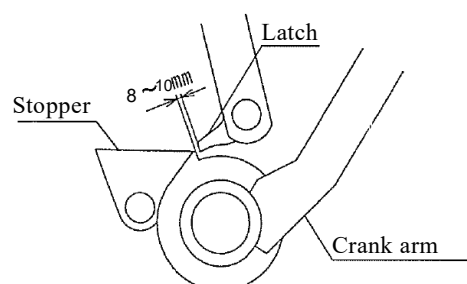
- ① Slightly loosen the button bolt and temporarily position the stopper such that the latch provided at the arm tip engages with the stopper.



- ② Moving the crank arm leftward and rightward to rotate the shaft, position the stopper by adjusting several times with the bolts such that the stopper disengages from the latch. When the latch is released, the distance between the shaft protrusion and the stopper tip should be 3.5 ~ 4.5mm.

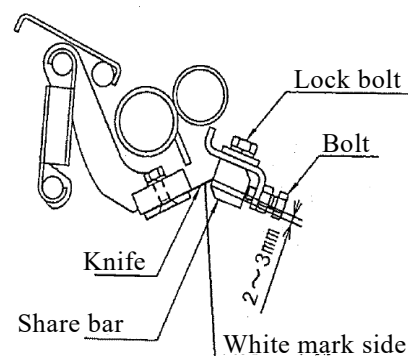


- ③ Open and close the gate, make sure that the stopper catches the latch.
- ④ If not, adjust the length of the rod with the fork end.
- ⑤ When opening the gate, adjust the space between the stopper and the latch to 8 to 10mm with the length of the rod.

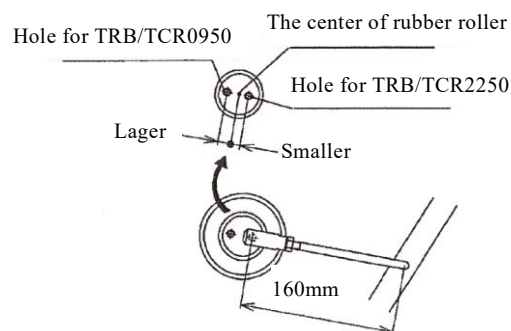


(15) Adjusting the knife and the shear bar (TRB·TCR2250AN)

With the lock bolt loosened by approximately 1/2 turn, adjust by the bolt such that there is no clearance between the knife and the shear bar.
(Adjust that the edge of knife is located 2 – 3mm far from the chamfering side of share bar.)
The shear bar may be reversed.

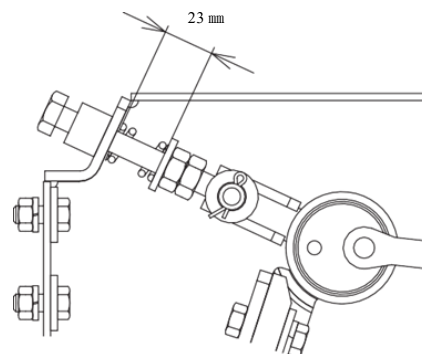


(16) Rod length and the position of mounting hole



(17) Adjusting the net holding force

The length of spring is 23 mm as standard.
Adjust the length of the spring so that the net can be held firmly and run out smoothly.
The net holding force reduces when the spring is expanded and increases when contracted.
If the net cannot slide out on the rollers, increase the net holding force, and if it wraps around the rubber rollers, loosen the net holding force.

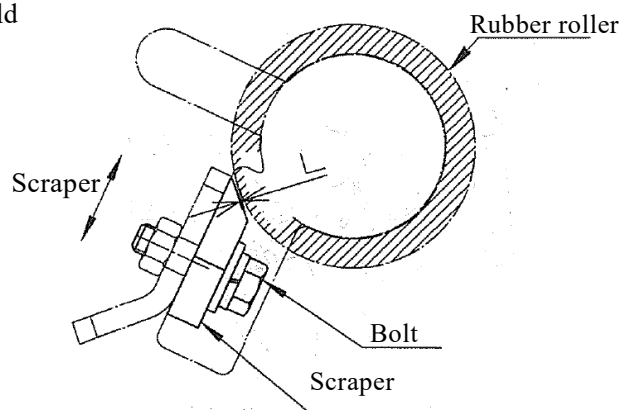


Precaution

If the spring is too strong, it may cause the net to fail.
Adjust the springs in case of malfunction procedures.

(18) Adjusting the net scraper

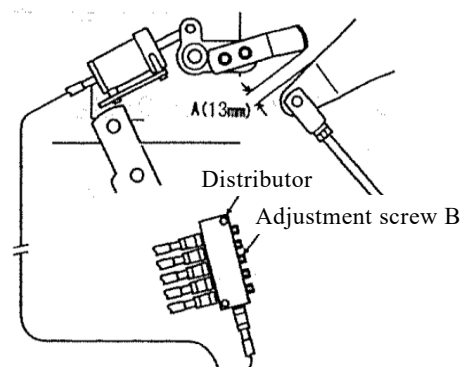
The clearance L between rubber roller and scraper should be adjusted between 0.5 and 0.8mm.
To adjust the position of the scraper, loosen the bolts of the scraper and set the position as proper position, after that, fasten the bolt again.



(19) Adjusting the lubrication device

The lubrication device for this machine is automatically supplies lubrication oil to the gate whenever it opens and closes.

- ① Adjust the space A (between the lever and the bracket) to 13 mm when it is lifted the amount of the hole gutter.
- ② Move the lever by hand and adjust the amount of oil from each brush with the adjustment screw B on the distributor.
- ③ The distributor is provided on the right and left sides when viewed from the rear of the machine.
Both of them need to be adjusted.



Precaution

The distributor is made of aluminum so the screw area may break if the lock nut is tightened too tightly.
Do not tighten the lock nut too tightly.

- ④ If the oil on the roller chain tends to dry, decrease the A dimension.

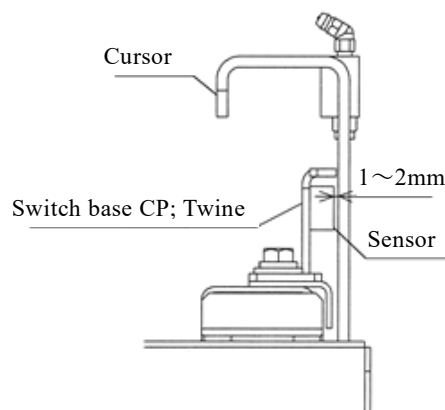
Precaution

The upper limit for filling oil in the reserve oil tank is not related to this machine.
When filling the tank, fill it all the way to the top (max 1.5 liter).

(20) Adjusting the binding sensor

- ① Twine binding (TRB·TCR2250AT)

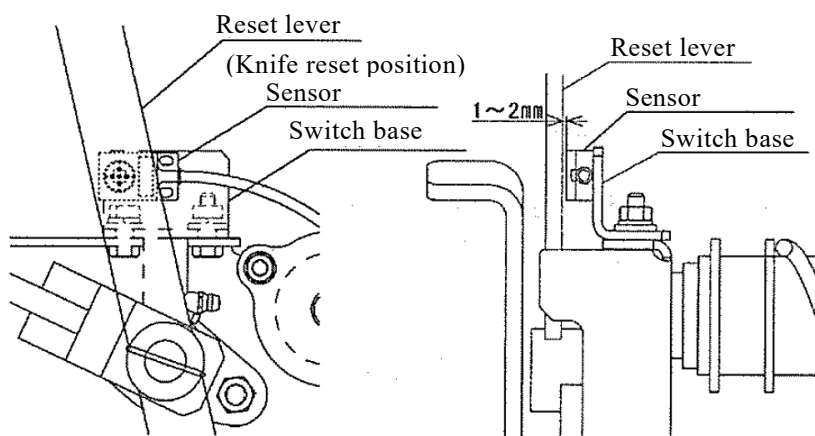
Adjust position of switch base CP; TWINE so that clearance between sensor for twine binding unit and cursor plate to 1-2 mm and parallel.
Also adjust it in perpendicular direction so that it overlaps.



- ② Net binding (TRB·TCR2250AN)

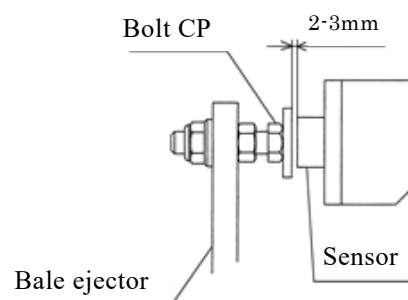
Adjust position of switch base CP so that clearance between sensor for net binding unit and reset lever to 1-2 mm and parallel.

This adjustment should be performed when knife is placed to the position described in illustration.



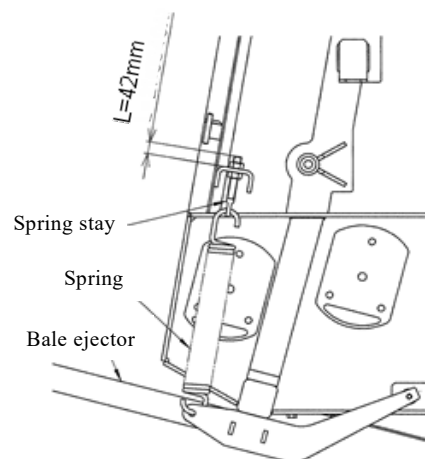
(21) Adjusting the ejector sensor

Adjust space between bolt CP for bale ejector and sensor to 2-3 mm by bolt CP.



(22) Adjusting the tension for bale ejector

The tension of the bale ejector is adjusted by spring stay.
Adjust dimension L properly.



(23) Adjusting the Bottom plate sensor and the bale density detection sensor

If you adjust Bottom plate sensor or bale density detection sensor, or you exchange the control box, you need to initialize the control box.

According to the below procedure, record the initial position of the Bottom plate sensor(the position of closing) and the bale density detection sensor(both the position of closing gate and bale-full).

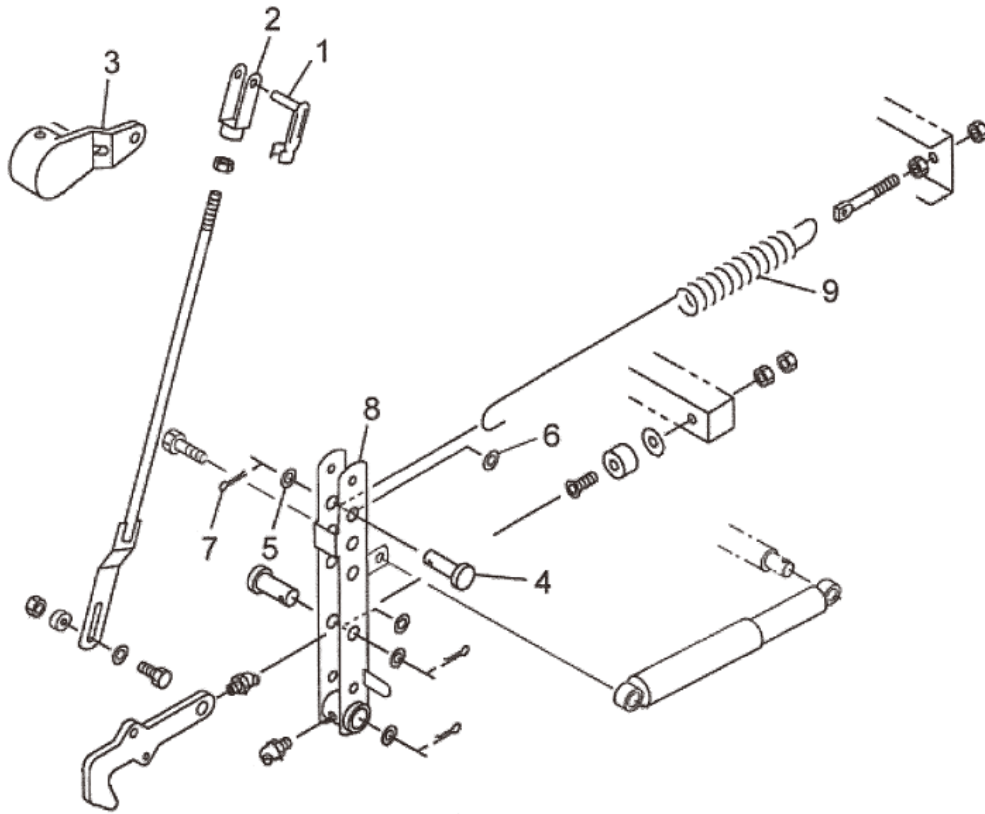
Precaution

- If you adjust either sensor, be sure to adjust both the position of Bottom plate sensor and the bale density detection sensor, and then initialize the density detection sensor.
When you initialize the density detection sensor, both the initial position of Bottom plate sensor and bale density detection sensor are recorded at the same time.

[1] Preparation

Turn off the engine.

- ① Close both the gate and Bottom plate(Gate is hanged by the hook)
- ② Open the front cover in right side, remove the cover of upper gate side.
- ③ Remove the spare parts for locking hook.
 - Remove Pin;10x40(Parts list No.1), and separate folk end(No.2) and Bracket(No.3).
 - Remove No.4-7, and separate trip-lever(No.8) and spring(No.9).

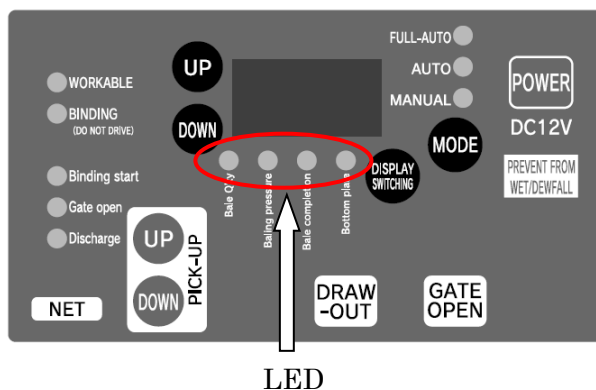


Locking hook on the Right side of this machine

[2] The initialization of the Control box

- ① Push on “POWER” button while “MODE” and “GATE OPEN” button are pressed.
 - ② When the control box gets powered on, release “POWER” button.
 - ③ When the buzzer sounds BEEP BEEP, release all of buttons.
 - ④ After the control box starts, bale density detection sensor is displayed in display of numerical value.
- *Every time you press on “DISPLAY SWITCHING” in this condition, lighting LED is changed, the numerical value is displayed.

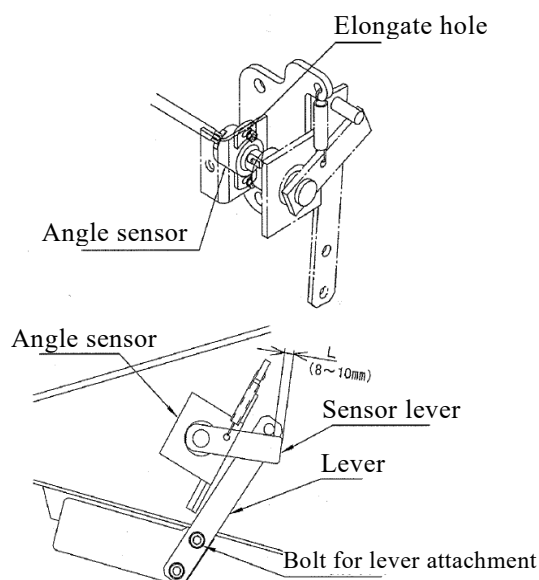
Lighting LED	Display of numerical value
Bale Q'ty	The value of bale density detection sensor of “the position of closing gate”
Baling pressure	The value of Bottom plate sensor
Bale Q'ty and Baling pressure (both lighting)	The value of bale density detection sensor of “the position of “bale-full”
Bale completion (flashing)	Density detection sensor
Bottom plate (flashing)	Bottom plate sensor



[3] Adjusting the Bottom plate sensor

- ① Fix the angle sensor for the Bottom plate at the center of elongate holes.
- ② Attach the lever so as to the length L (mentioned in the picture as under) is between 8mm and 10mm.
- ③ As needed, press on “DISPLAY SWITCHING” button, and light “Bottom plate” LED. And then check the numerical value is 5 or more.

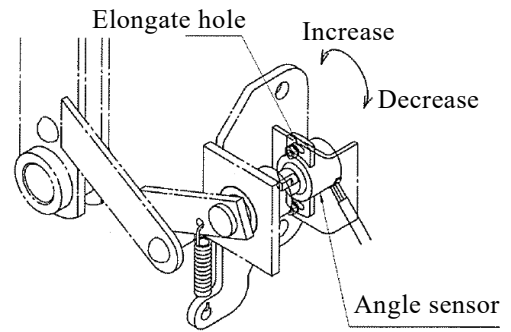
In case the value is out of that range, adjust the value by moving angle sensor within the elongate holes, or loosen bolt for lever attachment and adjust the position of lever to set the value in the range.



[4] Adjusting the bale density detection sensor

- ① Fix the angle sensor for the detection of bale density at the center of elongate holes.
- ② As needed, press on “DISPLAY SWITCHING” button, and light “Bale completion” LED. And then check the numerical value is between 5 and 300.

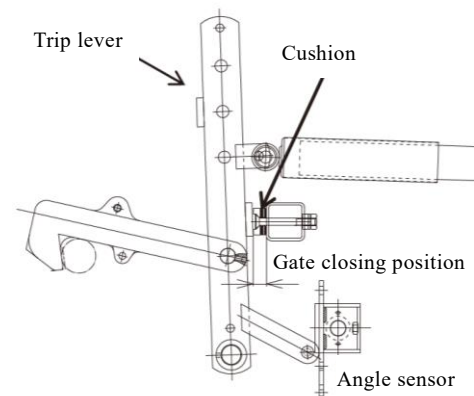
In case the value is not between them, adjust the value by moving angle sensor within the elongate holes.



[5] Setting the position of gate closing for the bale density detection sensor

When you finish adjusting the Bottom plate sensor and the bale density detection sensor, set the position of gate closing for the bale density detection sensor.

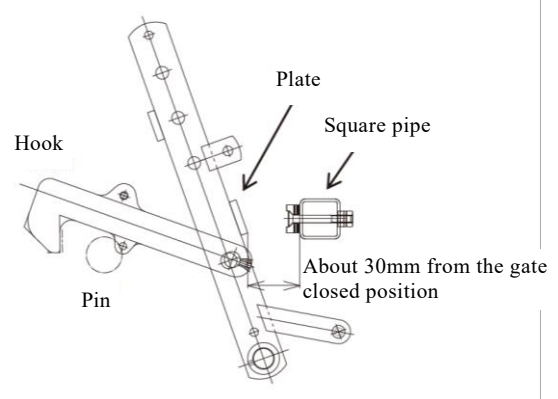
- ① Push “MODE” button until buzzer sounds (approximately 3 sec.).
 - * In case the value of the Bottom plate sensor and the bale density detection sensor are out of that range, Buzzer sounds intermittently while the button is pressed.
In that case, adjust the fitting for each sensors to set the value in the range.
 - *the numerical value is not still recorded in this condition.
You need to set the position of bale full for the bale density detection sensor



[6] Setting the position of bale full for the bale density detection sensor

Light “Bale completion” LED, and then set the position of bale full for the bale density detection sensor while you check the numerical value of sensor.

- ① Pull the trip lever, and adjust 45mm (about 30mm from the position of Gate closing) in the measure of the illustration (between the corner of the plate of trip lever and the plane of corner pipe in frame side)
- ② Check the numerical value in the range.
The range of the value of the bale density detection sensor differs depending on [5] Setting the position of gate closing for the bale density detection sensor.
In case the value is out of that range, do [4] Adjusting the bale density detection sensor again, and adjust the value as little as possible, and then do [5] Setting the position of gate closing for the bale density detection sensor again.



Recorded value of gate closed position	The position of bale full for the bale density detection sensor
7	207 ~ 654
8 ~ 301	208 ~ 756 ※During this time, the range changes according to the "recorded value of gate closing"
302	502 ~ 757

*The position of closing is set +2 automatically when you set the control box.

- ① Push "GATE OPEN" button until buzzer sounds (approximately 3 sec.) When the buzzer beeps, release your hand from the button.
- ② Push the "POWER", and turn off the control box (Unless you do that, this setting is not recorded).

Precaution

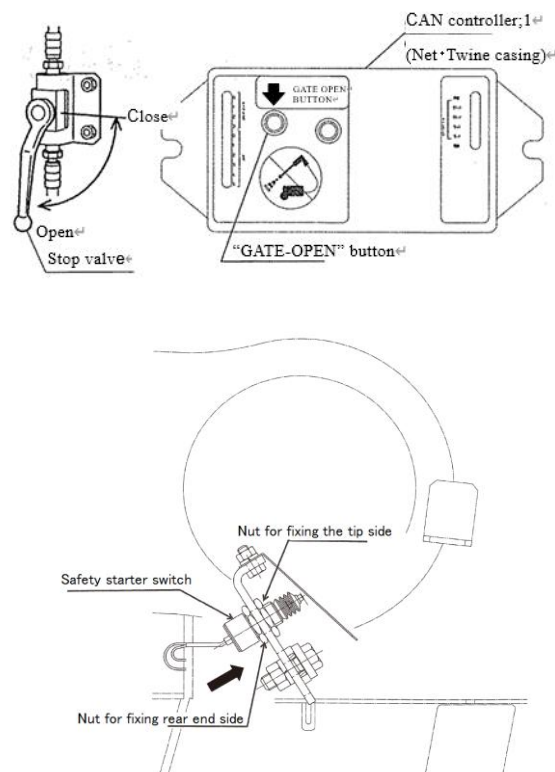
- * In case the value of the Bottom plate sensor and the bale density detection sensor are out of that range, Buzzer sounds intermittently while the button is pressed.
In that case, adjust the fitting for each sensors to set the value in the range.
- * Be sure to both set the position of gate closing and bale full.
If you set the position of gate closing and don't set the position of bale full, error 93 occurs when you turn on "POWER" as usual.
- * When you set the position of gate closing and bale full, the position of Bottom plate is set by each operation.

[7] The method of checking adjustment

- ① Turn on "POWER" of the control box.
- ② Set Baling pressure to "3"(3-2-5 Adjusting the baling density 3-3-2 How to operate the control box)
- ③ Be displayed "Bale completion" in the display(Switch on "DISPLAY SWITCHING", and light "Bale completion" LED, 3-3-2 How to operate the control box)
- ④ Pull the trip lever to the position of bale full(45mm from corner pipe) as well as [6] Setting the position of bale full for the bale density detection sensor.
If the buzzer sounds in this condition when bale is full, or the value of the display is around 100, this is correctly adjusted.

(24) Adjusting the gate open sensor

- ① Rotate PTO
- ② Push “GATE OPEN” button in net/twine casing place in right side of machine until the gate opens fully.
- ③ Switch the stop valve to closing while pushing “GATE OPEN”, and then release the button.
- ④ Stop the PTO and install the gate lock.
- ⑤ Loose nut of safety starter switch for fixed front tip. And then fix nut of safety starter switch for fixed back tip until “GATE OPEN” LED lights in condition that gate opens fully. Switch the stop valve to open, and close the gate.
- ⑥ After that, push on “GATE OPEN” of control box, and open and close the gate. Check that “GATE OPEN” LED lights when gate opens fully.



Precaution

- * If the sensor is attached too forward, the sensor might be broken. Attach the sensors as the proper measure.

4. List of major consumables

Classification	No.	Part No.	Part Description	Q'ty	Remarks
Wear parts (Frequently or periodically replaced)	1	NET1020	Net; 2000M	1	Net
	2	TP12000	PP Twine; 12000 feet	2/ box	Twine
	3	0469070000	Shear Bolt; M8 x 32	1	Roller
	4	0440284000	Shear Bolt; M10 x 55	1	Rotor
	5	VLA040	V Belt LA-40 Orange	1	Binding
	6	0852241006	Tine	48	Pick up
	7	1337850006	Knife; L	9	Cutting
	8	1326572004	Knife	1	Net cutting
	9	1326540004	Shear Bar	1	Net cutting
	10	1020460000	Knife	2	Twine cutting
	11	0432480010	Facing plate	2	Auger (Clutch)
	12	0003820000	Tire; 12.5L-15-8PR	2	Tire

Classification	No.	Part No.	Part Description	Q'ty	Remarks
Replacement Parts (wear-dependent)	1	141150000M	Shaft CP	1	2P Frame
	2	J30306	Taper roller bearing 30306	2	
	3	1301931004	Lower link bracket	2	
	4	157935000M	Pin CP	2	
	5	LA40048	Roller chain 40x48L	1	Power Package
	6	1558870000	Power package	1	
	7	122615000M	Sprocket; 40x9T	1	
	8	1338281004	Sprocket; 40X42T	1	
	9	1251020000	Roller	1	
	10	LA50065	Roller chain 50x65L	1	Pick up
	11	LA50111	Roller chain 50x111L	1	
	12	085222100M	Rotor flush	23	
	13	1050254004	Tine bar CP	4	
	14	0640350000	Nylon bush	12	
	15	1552970004	Pickup frame CP	1	
	16	BSPZ08020	Spring bolt M8x20	92	
	17	BSZ08055	Bolt M8x55	48	
	18	NNF08	Flange nylon nut M8	48	
	19	044097200M	Washer; 8	48	
	20	JSBX0126LLU	Unit bearing	4	
	21	1032960004	Tine plate CP	2	
	22	1301860004	Tine plate CP; L	1	
	23	1032990002	Washer 43x3.2	12	
	24	065487000M	Shim; 35x1.2	-	
	25	JCS204LLU	Unit bearing CS204LLU	1	
	26	JCS206LLU	Unit bearing CS206LLU	3	
	27	130445100M	Sprocket; 50-38T	1	
	28	081108100M	Sprocket; 14T	1	
	29	LA50047	Roller chain 50x47L	2	Auger
	30	1306081004	Sprocket CP; 50-38T	1	
	31	1304580004	Sprocket; 50-17T	1	
	32	JCS207LLU	Unit bearing CS207LLU	1	
	33	JCS206LLU	Unit bearing CS206LLU	2	
	34	1050371004	Sprocket; 20T	2	
	35	1050420004	Sprocket; 15T	2	
	36	J6307LLU	Ball bearing 6307LLU	4	
	37	LAW60066	Roller chain 60-2x66L	1	Rotor
	38	JCS309LLU	Unit bearing CS309LLU	2	
	39	1394280004	Sprocket CP; 60-2x13T	1	
	40	1306050004	Sprocket CP; 60-2x30T	1	

Classification	No.	Part No.	Part Description	Q'ty	Remarks
Replacement Parts (wear-dependent)	41	1558860000	Roller chain 60Hx178L	1	Roller
	42	LA60214	Roller chain 60x214L	1	
	43	LA80125	Roller chain 80x125L	1	
	44	1435860004	Sprocket; 80-10T	1	
	45	1302730004	Sprocket; 60-23T	16	
	46	1304590004	Sprocket	2	
	47	1301831004	Housing; L	1	
	48	1301841004	Housing; R	1	
	49	JCS307LLU	Unit bearing CS307LLU	16	
	50	JCS207LLU	Unit bearing CS207LLU	16	
	51	0858591000	Cushion	2	Indicator
	52	0993650000	Piston oil pump	1	Lubrication
	53	1003751000	Flow divider valve;5	2	
	54	0993870000	Brush	7	
	55	1420920000	Brush	1	Net binding
	56	JHFL2530	One-way clutch	1	
	57	JHF2520	One-way clutch	1	Twine binding
	58	1326430000	Roller chain with side roller; 40x73L	1	
	59	134367300M	Twine guide CP	2	
	60	141980000M	Roller CP	1	
	61	141982000M	Roller	2	
	62	079495000M	Tension plate	2	Twine casing
	63	131346000M	Tension plate	2	
Hydraulic and electrical replacement parts	1	1471312006	Cylinder; CSH50x300x465	1	Hydraulic parts
	2	1553110000	Fitting shutoff	1	
	3	1660780000	Control box CP; Twine	1	Electric parts
	4	1345450000	Cord; 5000	1	
	5	1464640000	Cord; Control box	1	
	6	1468083000	CAN controller;426	2	
	7	1464650000	Seal plate	2	
	8	1464630000	BUS-line cord; 1000	1	
	9	1558540000	Cord; CAN controller 1	1	
	10	1558550000	Cord; CAN controller 2	1	
	11	1414770000	Corrugate tube; 150	2	
	12	0823530000	Electrical cylinder	1	
	13	1436141000	Proximity Sensor	2	
	14	1347020100	Angle sensor; 60°	2	
	15	8042390000	Safety starter switch	1	
	16	FU30	Fuse; 30A	1	

6 Troubleshooting

If the machine does not operate properly, check it according to the troubleshooting table.

▲DANGER

- When the gate is opened and inspected or adjusted, the gate may close unexpectedly, and you may be caught in it, resulting in death or serious injury.
Switch the stop valve to the "Close" side to secure the gate securely.
After that, install the gate lock.
- When closing the gate, if there are people inside, they may be caught in the gate and cause death or serious injury.
Keep people away from you.
- When adjusting the Twine winding device, the rollers are if you touch it, you may get caught and get injured.
Turn off the PTO and the engine before proceeding.
- If you put your hand inside the net frame while driving or adjusting, the knife may move and cause injury.
Never put your hands inside the net frame.

▲CAUTION

- When the machine is raised with the lower link to perform inspection or adjustment, there is a possibility that a third party could unknowingly lower the machine, causing injury.
Lock the hydraulic circuit to the tractor's lower link.
- If inspection is performed on a inclined, rough, soft or unstable place, the tractor or machine could unexpectedly move causing unforeseeable accidents.
Perform inspection and adjustment on a hard, level place.
- If inspection or adjustment is performed with the PTO and engine running, there is a possibility that a third party could unknowingly operate the machine, causing unforeseeable accidents.
Turn OFF the PTO and engine and make sure all rotating and moving parts have stopped before performing the work.

1. Troubleshooting table

	Problem	Cause	Remedy
Bearing	● Strange noise	● Broken bearings	● Replace the bearing.
	● Abnormal heating	● Crops are entangled in the rotating parts.	● Remove any entangled material.
2P frame	● Strange noise	● Crops are entangled in the rotating parts.	● Remove any entangled material.
	● Movement of moving parts is not smooth.	● Insufficient grease ● Loose installation bolts	● Apply grease. ● Adjust and tighten.

	Problem	Cause	Remedy
Pick-up	● Strange noise	● Broken tine ● Damaged rotor flush ● Entangles crops or twine ● Damaged cam-roller bearing ● Insufficient roller-chain lubrication ● Insufficient roller-chain tension ● Worn facing plate of the slip clutch	● Replace the tine. ● Replace the rotor flush. ● Remove any entangled material. ● Replace with a new part. ● Apply grease. ● Adjust the tension as described inspection 5-3-1-3, "Pick-up drive unit". ● Replace with a new part.
	● Material is not picked up cleanly.	● The position of the machine is not proper. ● The speed is too fast. ● Broken tine. ● Improperly adjusted pick-up suspension.	● Adjust as described in 3-2-1, "Adjusting the height above the ground of the pick-up tine". ● Decrease the speed. ● Replace the tine. ● Adjust as described in section 5-3-3, "Adjusting the pick-up suspension".
	● Clogged with crops	● The PTO rpm is too slow. ● Slip clutch is working ● The speed is too fast. ● The windrows are too large.	● Adjust the PTO rpm as described in section 3-3-3, "Actual operation". ● Adjust as described in section 5-3-2, "Adjusting the slip clutch". ● Decrease the speed. ● Make the windrows as described in section 3-3-1, "Making windrows".
Rotor	● Strange noise	● Cutting knife is damaged ● Improper adjustment of the rotor scraper. ● Insufficient roller-chain lubrication. ● Insufficient roller-chain tension. ● There is material entangled in or clogging the rotor.	● Replace with a new part as described in section 3-2-6-2, "Removing the cutting knives". ● Adjust as described in section 5-3-6, "Adjusting the clearance between rotor and scraper". ● Oil or fill the lubrication device with oil and adjust the distributor. ● Adjust the tension as described in section 5-3-1-1, "Roller, rotor and screw drive unit" ● Remove any entangled or clogged material.
	● Material is winding or clogging on rotor.	● The PTO rpm is improper. ● The speed is too fast. ● The windrows are too large. ● Improper adjustment of the rotor scraper. ● The shear bolt is broken.	● Adjust the PTO rpm as described in section 3-3-3, "Actual operation". ● Decrease the speed. ● Make the windrows as described in section 3-3-1, "Making windrows". ● Adjust as described in section 5-3-6, "Adjusting the clearance between rotor and scraper". ● Replace the shear bolt M10x55.
Screw	● Strange noise	● Insufficient roller-chain lubrication. ● Insufficient roller-chain tension. ● Improper adjustment of the screw scraper. ● There is material entangle in or clogging the screw.	● Apply grease. ● Adjust the tension as described in section 5-3-1-1, "Roller, rotor and screw drive unit". ● Adjust as described in section 5-3-5, "Adjusting the clearance between screw and scraper". ● Remove any entangle or clogged material.

	Problem	Cause	Remedy
Screw	● Material is winding or clogging on screw.	● The speed is too fast. ● The windrows are too large. ● Improper adjustment of the screw scraper. ● The slip clutch is working.	● Decrease the speed. ● Make the windrows as described in section 3-3-1, "Making windrows". ● Adjust as described in section 5-3-5, "Adjusting the clearance between screw and scraper". ● Adjust as described in section 5-3-2, "Adjusting the slip clutch".
Rollers	● Strange noise	● There is material entangled in or clogging the rollers or there is mud on them. ● Insufficient roller-chain lubrication. ● Insufficient roller-chain tension. ● The rollers are dented.	● Remove any entangled or clogged material, and remove any mud. ● Oil or fill the lubrication device with oil and adjust the distributor. ● Adjust the tension as described in section 5-3-1-1, "Roller, rotor and screw Drive Unit". ● Replace the rollers.
	● Material is winding on roller	● The PTO rpm is too slow. ● The pickup, the cutting rotor, or the screw is clogged with crops. ● The rollers are dented.	● Adjust the PTO rpm as described in section 3-3-3, "Actual Operation". ● Adjust referring to the items for the clogging of the corresponding part ● Replace the rollers.
	● The bale does not turn in the chamber.	● The bale density is too high. ● The object of baling is too dry or short.	● Adjust as described in section 3-2-5, "Adjusting the baling density". ● Adjust as described in section 3-2-6, "Adjusting the cutting knives".
	● The roller chain becomes hot.	● The bale density is too high. ● Insufficient roller-chain lubrication. ● Insufficient roller-chain tension.	● Adjust as described in section 3-2-5, "Adjusting the binding density. ● Oil of fill the lubrication device with oil and adjust the distributor. Adjust as described in section 5-3-19, "Adjusting the lubrication device". ● Adjust the tension as described in section 5-3-1-1, "Roller, rotor and screw drive unit".
Locking hook	● The locking hook becomes unfastened during operation.	● The hydraulic pressure for opening / closing the gate did not return completely. ● The locking hook is not adjusted properly.	● Operate as described in section 3-3-3, "Actual operation". ● Adjust as described in section 5-3-9, "Adjusting the bale density detection link".
	● Bale density is loose.	● Adjusted bale density is too low. ● There are not enough twine windings. ● The tractor speed is too fast.	● Adjust as described in section 3-2-5, "Adjusting the bale density". ● Adjust as described in section 3-2-2, "Adjusting the number of twine windings". ● Decrease the tractor speed.

	Problem	Cause	Remedy
Twine binding	● Binding does not operate even though the set bale density is achieved.	● The binding device is not at the prescribed initial state. ● Improper adjustment of the twine tension spring ● Twine has come out of the twine pulley. ● The twine is tangled or caught.	● Adjust as described in section 1-4-3, "Threading the twine". ● Adjust as described in section 5-3-10, "Adjusting the twine tension" and section 5-3-11, "Adjusting the arm tension spring". ● Adjust as described in section 1-4-3, "Threading the twine". ● Fix any entanglements in the twine, and free any twine that is caught.
	● Binding begins before achieving the set bale density.	● The binding device is not at the prescribed initial state. ● The knife does not cut well and the suspended twine is too long. ● The rubber roller is dragged by the V belt.	● Adjust as described in section 1-4-3, "Threading the twine". ● Replace the knife and adjust the suspended twine length as described in section 1-4-3, "Threading the twine". ● Adjust as described in section 5-3-13, "Adjusting the stopper and the tension of V belt".
	● Twine comes off of the bale.	● There are not enough twine windings. ● Both ends of the twine are near the end of the bale.	● Adjust as described in section 3-2-2, "Adjusting the number of twine windings". ● Adjust as described in section 3-2-3, "Adjusting the twine guide".
	● Poor cutting of twine.	● The knife does not cut well.	● Replace the knife.
	● Twine winding on rotor or pick-up	● Twine scraper is opened. ● Clearance between scraper and roller is too wide. ● Scraper AS is not installed.	● Close it properly. ● Adjust as described in section 5-3-7, "Adjusting the scraper". ● Adjust as described in section 5-3-8, "Adjusting FL roller and scraper".
	● Grass clogs to scraper	● Moisture of material is too high	● Remove scraper and work.
Gate open / close	● Bales are not ejected.	● The bale density is too high. ● The windrow width is too large. ● Angle; L, R shim adjustment Failure ● Tried to eject the bale on a steep slope.	● Adjust as described in section 3-2-5, "Adjusting the baling density". ● Make the windrows as described in section 3-3-1, "Making windrows". ● Adjust by referring to "3-2-7 Adjustment when the bale is not discharged" ● Eject bales on a level place.

	Problem	Cause	Remedy
Gate open / close	● The gate does not open.	● The stop valve is closed. ● The hydraulic line is damaged or leaks. ● Breakage of the binding sensor. ● Improper adjustment of the locking hook. ● The PTO is stopped when ejecting the bale. ● Insufficient oil in the power package. ● There is no power on the control box. ● The cord is not connected properly.	● Open the stop valve. ● Handle as described in section 2-2-2, "Inspecting the hydraulic system for opening / closing the gate". ● Adjust as described in section 5-3-20 "Adjusting the binding sensor". ● Adjust as described in section 5-3-9 "Adjusting the bale density detection link". ● Eject when the PTO is rotating. ● Supply oil according to section 2-3, "List of places requiring lubrication". ● Adjust PTO speed referring to Section 3-3-3 "Actual operation". ● Check the wiring referring to Section 1-4-2 "Installation of the control box".
	● Faulty operation (The gate does not open. The buzzer does not sound. Etc.)	● The power is OFF. ● Improper cord wiring ● Cord breakage, disconnection ● Improperly adjusted switch. ● The tractor battery is dead. ● Control box is broken.	● Turn on the power of control box. ● Check the wiring. ● Replace the cord. ● Adjust the switch. ● Charge or replace the tractor battery. ● Replace the control box. ● Store it in place out of wind and rain.
Control box	● The value "10" flushes in Display. (Buzzer sounds)	● Defective of baler discharge.	● With confirming the safely, remove the bale from chamber as described in the section "3-3-3 Actual operation".
	● The value "11" flushes in Display. (Buzzer sounds)	● The rubber roller is dragged by the V belt. ● The brake arm is not pressing down the net roll. ● The binding device operates for some reason during working. ● Breakage of the binding sensor.	● Adjust as described in section 5-3-13, "Adjusting the stopper and the tension of V belt". ● Adjust as described in Section 3-3-3 "Actual operation". ● Set the binding device. ● Adjust as described in section 5-3-20 "Adjusting the binding sensor". ●
	● "FULL-AUTO" mode cannot be selected. ● Mode is changed from "FULL-AUTO" mode to "AUTO" or "MANUAL" mode. ● "WORKABLE" LED doesn't turn on.	● Defective of bale ejector sensor, binding sensor, Bottom plate sensor, bale full sensor or gate open sensor.	● Check and adjust the sensors referring to section "5-3-20 Adjusting the binding sensor", "5-3-23 Adjusting the Bottom plate sensor and the bale density detection sensor", "5-3-21 Adjusting the ejector sensor".

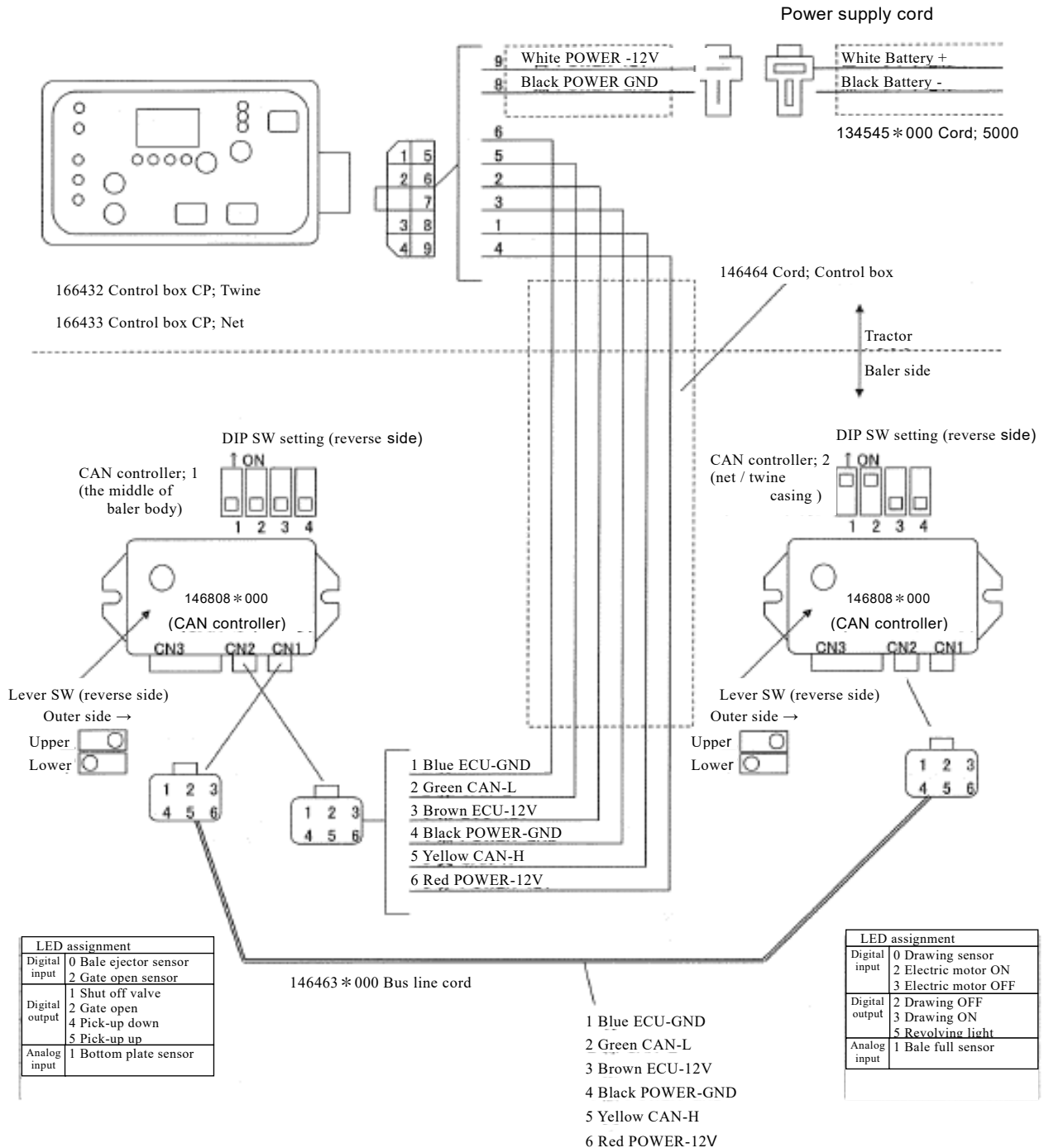
	Problem	Cause	Remedy
Control box	● In “FULL-AUTO” mode or when the bale is discharged with processing the button within 1sec, gate closes without any activation of bale ejector sensor.	● Defective of shut off valve. (Defective of the valve or of the electric lines)	● Check and replace of shut off valve, cord: CAN controller ;1, and control box;1 (at the middle of the machine body).
	● Buzzer sounds intermittently during work.	● Crop or foreign materials push the Bottom plate down. ● Breakage of Bottom plate sensor.	● Remove the crop or foreign materials. ● Replace the sensor and adjust the sensor referring to “5-3-23 Adjusting the Bottom plate sensor and the bale density detection sensor”.
	● Buzzer doesn’t sound when the chamber is full.	● The power is OFF. ● Improper cord wiring ● Cord breakage, disconnection. ● Breakage of bale density detection sensor.	● Turn on the power of control box. ● Check the wiring. ● Replace the cord. ● Replace the sensor and adjust the sensor referring to “5-3-23 Adjusting the Bottom plate sensor and the bale density detection sensor”
	● When the power of operation turns on, Bottom plate sensor LED flushes.	● Defective of Bottom plate sensor or electric lines (The position of the sensor is not proper, disconnection of electric line, breakage of the parts, etc.)	● Replace defective parts and adjust the sensor referring to “5-3-23 Adjusting the Bottom plate sensor and the bale density detection sensor”.
	● When the power of operation turns on, bale full sensor LED flushes.	● Defective of bale full sensor or electric lines (The position of the sensor is not proper, disconnection of electric line, breakage of the parts, etc.)	● Replace defective parts and adjust the sensor referring to “5-3-23 Adjusting the Bottom plate sensor and the bale density detection sensor”
	● “WORKABLE” LED and “BINDING (DO NOT DRIVE)” LED turn on one after the other, and the value “0” or “1” or “2” flushes in Display.	● Communication error between control box and CAN controller;1 or/and 2. • “0” flushes: communication error between control box and CAN controller;1 (at the middle of main body) • “1” flushes: communication error between control box and CAN controller;2 (at net/twine casing) • “2” flushes: communication error between control box, CAN controller;1 (at the middle of main body) and CAN controller;2 (at net/twine casing)	• Check and replace the control box and CAN controller; 1 • Check and replace the control box, Bus line cord and CAN controller; 2 • Check and replace the control box, CAN controller;1, CAN controller; 2 and Cord; control box.

	Problem	Cause	Remedy
Control box	● “WORKABLE” LED and “BINDING (DO NOT DRIVE)” LED turn on one after the other, and the value from “91” to “98” flashes in Display.	● The recorded value is not proper. (The control box was not initialized properly.) ● The initial setting value disappears for some reason.	● 91 (When the operate box is turned on) When you buy new control box, this is not initialized. If you turn off the control box at once, this is initialized. ● 92 (Improper the position between gate closing and Bottom plate) ● 93 (Improper the position of ball-full) Record the position of sensor as the below procedure. (5-3-23 Adjusting the Bottom plate sensor and the bale density detection sensor)
Shear bolts	● The shear bolts are cut	● High initial PTO speed ● The pick-up is clogged with crops. ● There are crops entangled in the rollers. ● Tractor speed is too fast. ● Windrows are too large. ● There is no power on the control box.	● Start at a slow PTO. ● Refer to the item related to pick-up. ● Refer to the item related to the rollers. Remove the entangled material. ● Decrease the tractor speed. ● Make the windrows as described in section 3-3-1, “Making windrows”. ● Operate referring to Section 3-3-3, “Actual operation”.
Universal joint	● Strange noise	● Insufficient lubrication. ● The joint angle is too sharp. ● The mounting direction of universal joint (tractor side and work equipment side) is reversed.	● Lubricate moving pipes (female, male), spider, and safety cover installation. ● Specify the upper position of the lower link. ● Check referring to Section 1-5-4 “Connecting the universal joint”.
Cutting knife	● Cutting knife cannot be removed.	● The lever is not changed over. ● Dust or the like is caught between the knife and the knife mounting groove.	● Refer to Section 3-2-6-2 “Removing the cutting knives”. ● Remove dust, etc.
Net binding device	● Net is entangled in the roller.	● The scraper is bent to widen the clearance with the rubber roller. ● The net was drawn out when the knife arm was not set at specified position.	● Straighten the bent scraper. TRB/TCR2250AN adjusts the scraper clearance. ● Fully open the gate and adjust such that the knife arm stops at specified position. Refer to 1-4-4 Installation of net roll”.
	● Net is not drawn out.	● Slip occurs between the pulley and the V belt. ● There is no power on the control box.	● Adjust as described in Section 5-3-13 “Adjusting the stopper and the tension of V belt”. ● Operate referring to Section 3-3-3 “Actual operation”.
	● Net is drawn out unexpectedly in the middle of operation.	● The rubber roller is dragged by the V belt. ● The brake arm is not pressing down the net roll.	● Adjust as described in Section 5-3-13 “Adjusting the stopper and the tension of V belt”. ● Adjust as described in Section 1-4-4 “Installation of net roll”.

	Problem	Cause	Remedy
Net binding device	● Net cannot be cut.	● The knife or the shear bar is worn or damaged. ● There is improper clearance between knife and the shear bar. ● The knife arm does not stop at specified position.	● Replace according to the parts list or reinstall reversely. ● Adjust as described in Section 5-3-15 “Adjusting the knife and the shear bar”. ● Adjust as described in Section 5-3-14 “Setting and adjusting the knife arm”.
	● Net winding position is shifted toward the center.	● The brake arm is not pressing down the net roll. ● Tractor PTO speed is too low.	● Take corrective action referring to Section 1-4-4 “Installation of net roll”. ● Adjust the PTO speed to 350 to 500 rpm.
	● Buzzer does not sound	● The power of the control box is set to OFF. ● The cord is not connected properly. ● Wire breakage occurred on the cord.	● Set the switch to ON. ● Connect the cord correctly. ● Replace the cord.
Other electrical component	● Malfunction	● The snapping of wire. ● The coat of the wire is broken.	● Replace the cord. ● Replace the cord.

7 Wiring diagram

Wiring between control box and CAN controller (CAN-Bus network)



CAN-Bus line description

Blue: ECU-GND Diverged at inside of control box from power supply cord (- side)

Green: CAN-L CAN connection signal

Brown: ECU-12V DC12V is supplied when control box is "ON"

Black: POWER-GND Connected directly to Battery - terminal

Yellow: CAN-H CAN connection signal

Red: POWER-12V Connected directly to Battery + terminal

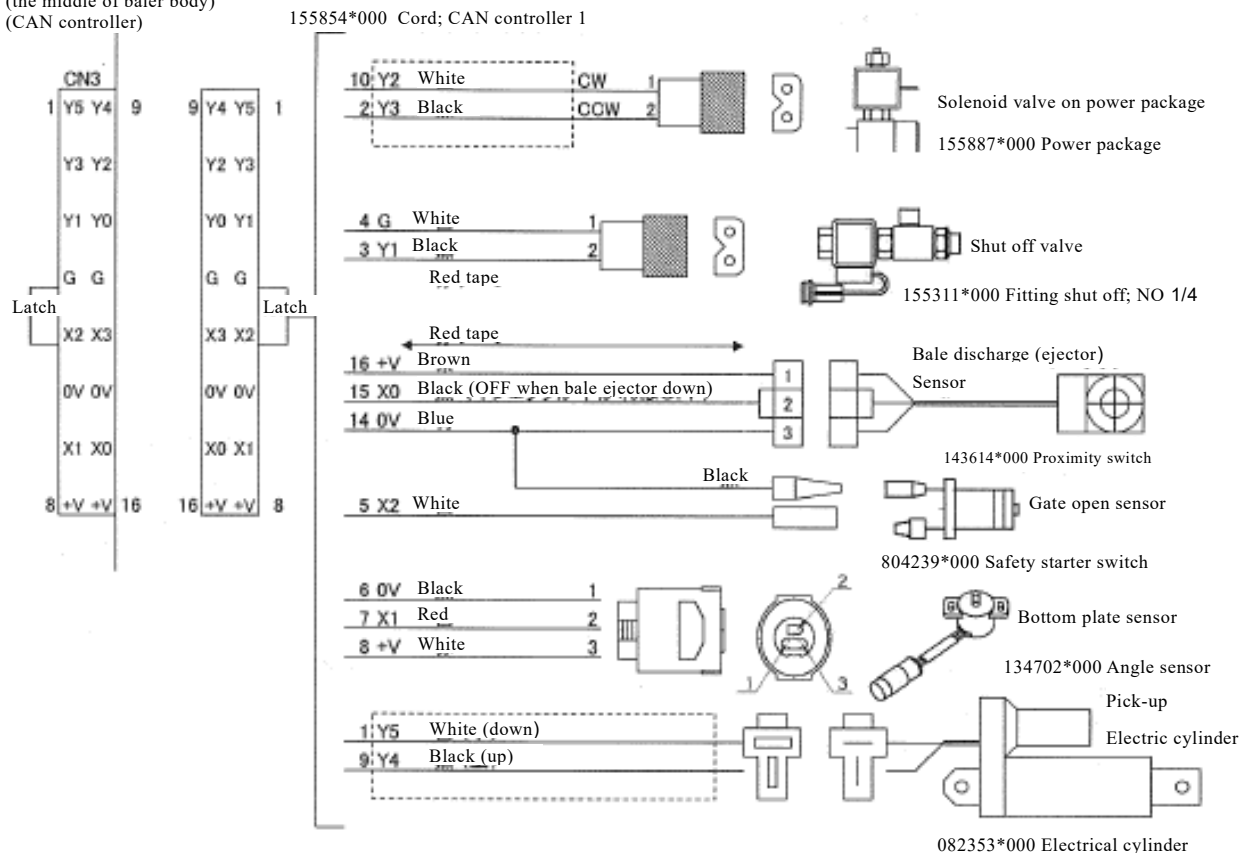
When you replace CAN controller, be sure to check the position of DIP SW and Lever SW.

The SWs in this figure are shown from reverse side.

Various harnesses and lamps can be ordered by the part number in the separate bill of materials.

Wiring between CAN controller and input / output devices

CAN controller; 1
(the middle of baler body)
(CAN controller)



CAN controller; 2
(net / twine casing)
(CAN controller)

