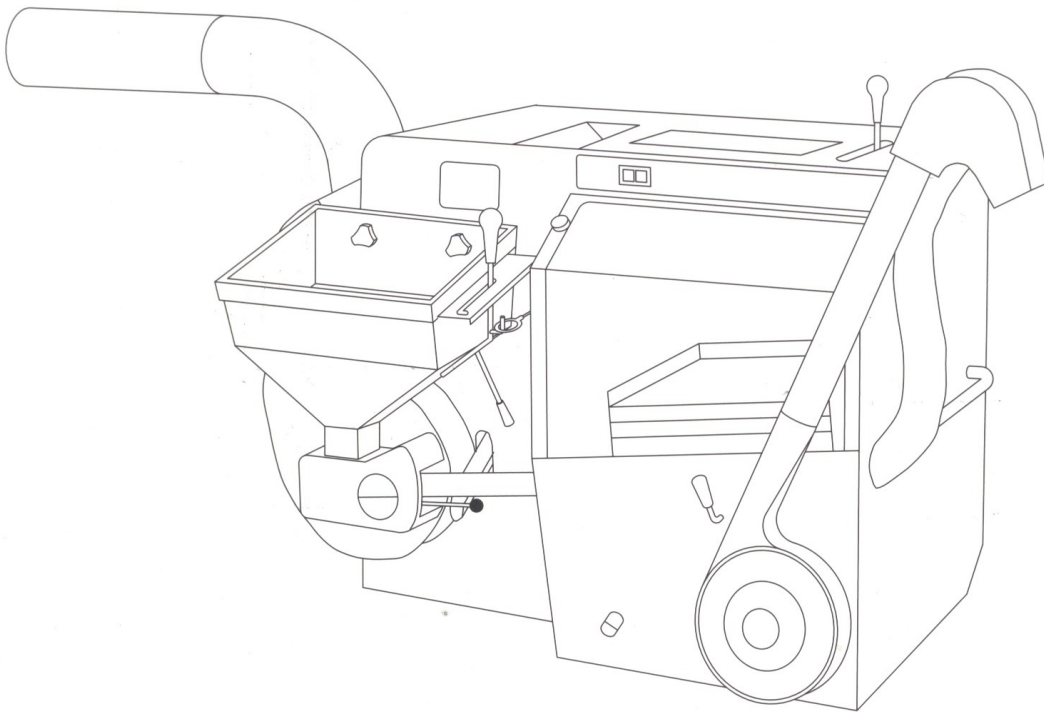


Brown Rice Mill

SY10A

Operational Manual



- Until you read and understand this instruction enough, don't regulate or check it out.
- Please, keep this instruction careful and lay it near this machine for regulate and check out cases.



이화산업사
LEEHWHA INDUSTRY CO.

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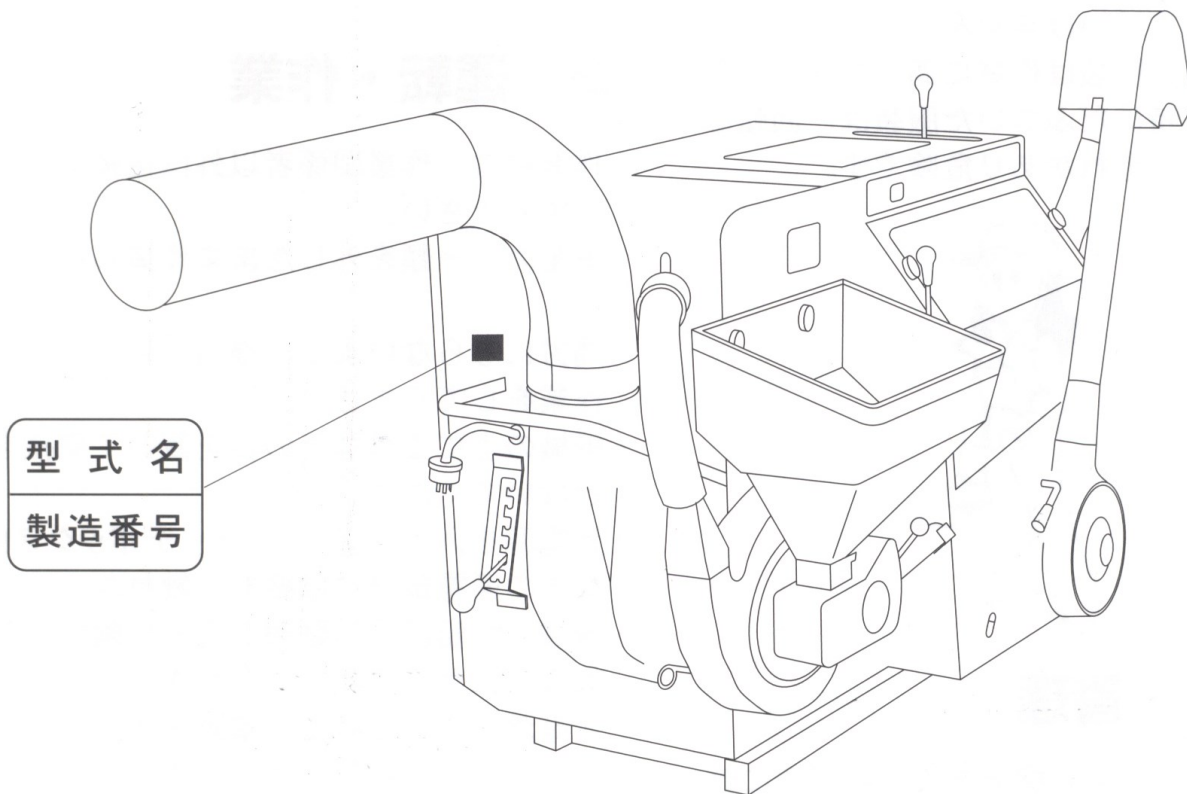
1. At first

Before we start it, thank you for purchase.

On this instrument, it tells about safety, right usage, repair and check for this machine.

So after read it all, use this machine's ability enough.

Again, read it once at one season and keep this instruction careful please.



if you need more informations about this instrument, then ask the store you bought this machine please.

<caution>

- Please follow this instrument when you do regulate or check the machine.
- About the accidents and damages because of misuse and unauthorized modification with non-follow the instrument, we have no liability on this. excuse please.

2. To be safe with farming works

△ For safe works, getting knowing it enough and using it right is important at most.
before the starting this works, decide the drive manager to regulate the machine.

1. conditions for drivers

- Drive it by a person well-informed for machines.
- Do not drive it by drinker, pregnant and immature or people can't drive it normally because of disease.
- tie the long hair, wear it suitable for work. especially loose clothes can be danger to reeled on rotating parts.



2. repair & management

- With check operation start, always keep the machine's conditions safe.
- Check and Maintenance must be set power switch [off], plug the power consent out and check the safe.
- This machine doesn't have abrasion protection in it. so if, the machine is stuck while it operates(drives), turn off the main-power.
- When you have a thunderbolt-problem, stop operating it, turn the power switches off and plug it out for protecting machine.
- Please stay the machine out of water. water can make short-circuit and also lead it damaged.
- the storage for keep this machine has to be dried, plat and also make it away from mouse.

3. Operation & work

- While operating or working, stay away the others except the people concerned. (participants)
- Do not work with safety covers off.
- For not overwork, work with taking a rest properly.
- Do not lay the tools on machine and work.
- after turn the main power on, never touch the parts like switch box.
- be aware of not touching dangerous parts like rotating part or operation(active) part.
- before you turn the main power on, check the switch is [off] or not.
- make it clear safe around and check it with voices.
- if you increase the gap between machines, make the power switch [off] and stop the motor.

4. and

if you lend it for(to) others, make them read this instrument well enough and work with right usage and safe points. lend the machine with this instrument.

3. About labels.

there is a 'caution mark labels' on machine explaining safe usage.

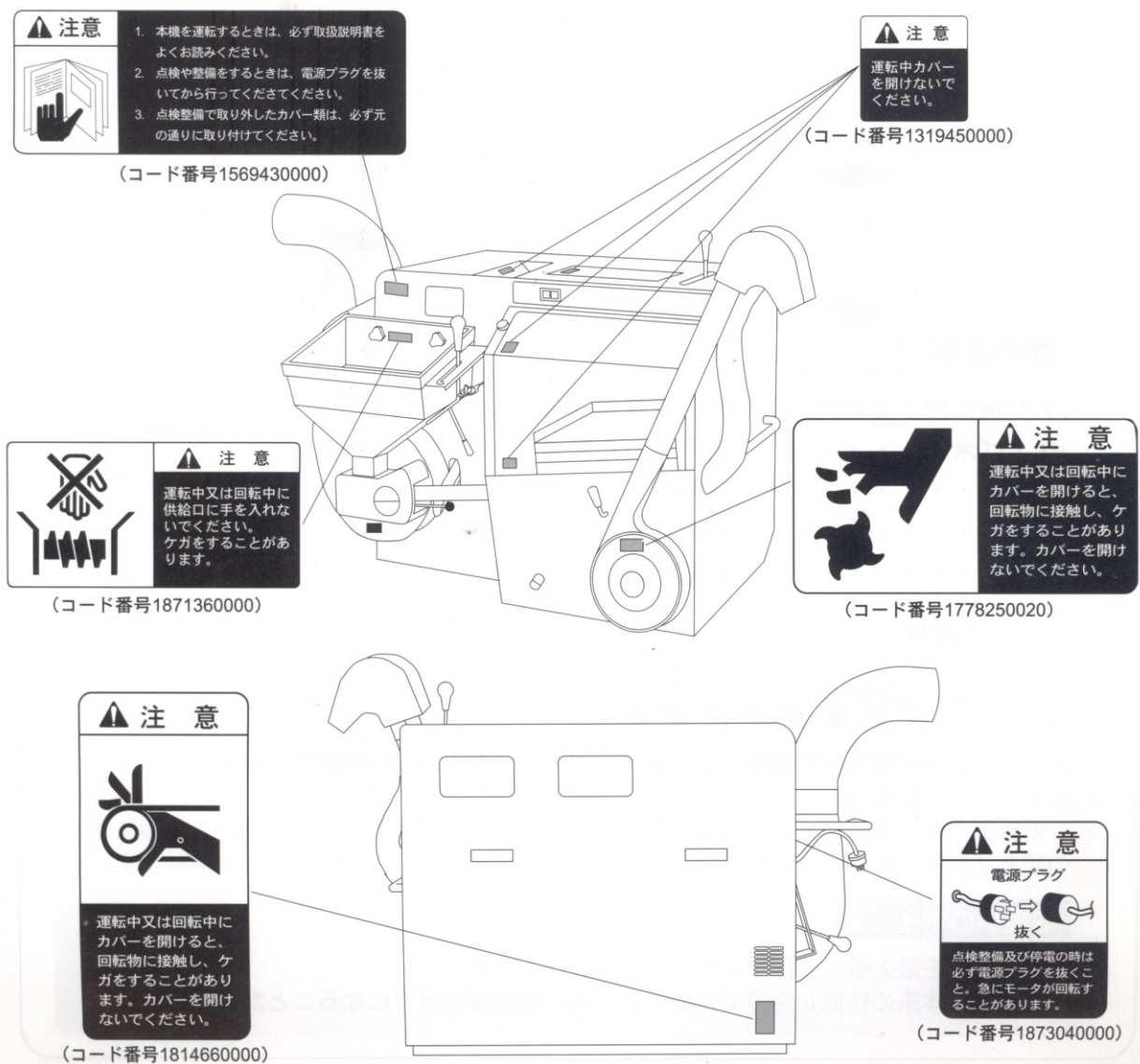
- Use it after you read these labels all.
- when the labels attached on the machine are damaged, gone, painted or can't readable, then attach new labels on it.
- if you change the parts are label-attached, please attach it new one.
- please order the labels on store you get the machine.

meaning of caution mark.

danger(위험): this mark-use means it has high possibility you can be dead or be serious injured if you don't follow this warning(sign).

caution(경고): this mark-use means it has high possibility you can be dead or be serious injured if you don't follow this warning(sign).

warn(주의): this mark-use means it has possibility you can be burn or be injured if you don't follow this warning(sign).



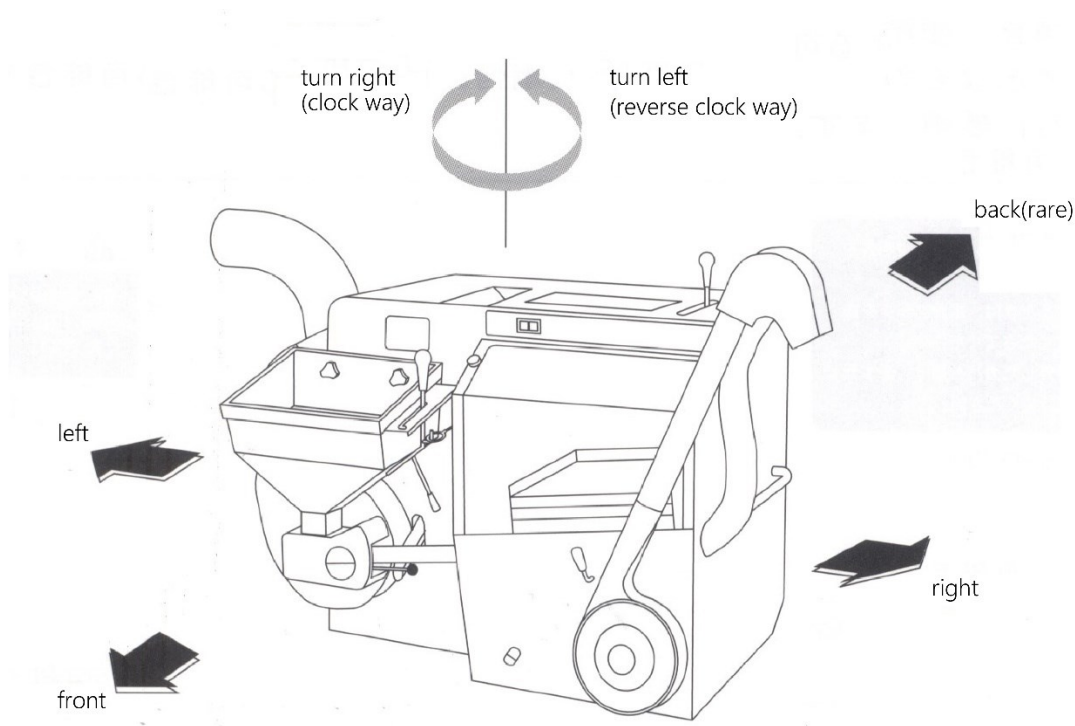
4. Before the use

Safe point

For safe work, understanding the usage of machine first and taking it right is most important. This instrument is explaining the safe point what it is trying to keep with '□' mark.

about [terms] and [marks].

the terms like [the front and the rear, left and right, turn to left, turn to right] are used on this instrument are fixed as follows. and also in this instrument using the mark for especially concerned.



Explain words

technical meanings about rice huller are as follows.

- ☐ complete (rice); selected whole(brown) rice
- ☐ Chaff; incomplete rice (plant)
- ☐ Mixed (rice); grains are mixed with incomplete rice (plant) & whole(brown) rice
- ☐ Removal rate; rates for rice peeled off

Explain marks

□ safe point

it explains about important safe precaution. if you don't keep it, it can be danger causes human-accident. please read it.

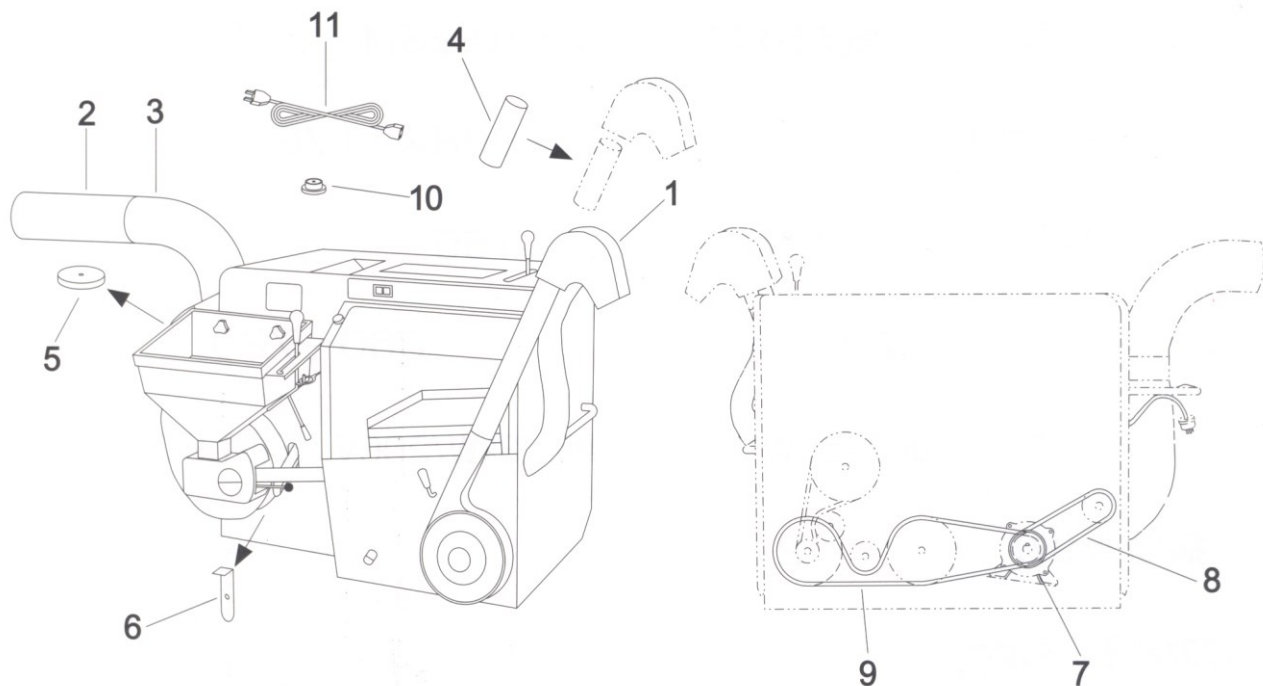
middle of these safe points, there are 'danger', 'caution', 'warning' mark-included. about each marks meaning, you can find and read it on 'about labels' section

Operate-manage point.

it explains for operating with best(maximum) condition-ability of this machine.

if you don't keep it then you can't operate it own standard ability or it could be the reason of broke.

5. About accessory parts



number	name	n	note
1	Exhausting dust device	1	
2	Exhausting dust tube	1	
3	Exhausting dust elbow	1	
4	Extension tube	1	
5	Protrusion hole cover	1	Use it for storage of 'pre-protection for mice'
6	Chaff hole cover	1	
7	Motor-pulley (50Hz/φ133, 60Hz/φ112)	1	(M)SY5 / (M)SY10 have different holes
8	Principal(key-role) belt (50Hz/A-32, 60Hz/A-31)	1	
9	thrower belt (50Hz/SA-76, 60Hz/ SA-75)	1	
10	Level	1	
11	Power cord	1	only use (M)SY5

Operate-manage point.

5 to 6 parts (red) are pre-protection for mice.
pull it out when you operate(drive) it.

6. Main specifics and sizes of machine

● Main specifics

form	SY5-SM	SY10A-2SM	SY10A-M
length*width*height(mm)	1394*898*1176		
weight(kg)	145	155	151
ability per hour(kg/h)	240~420	360~720	
motor-use	single-phase 750W/100V	single-phase 1.3KW/200V	three-phase 1.9KW/200V
shaking plate(each)	2	3	
dehulling- diameter * old-hand fan-external width(mm)	321*50		
rice return ability(m)	maximum 13 (horizon distance)		
principle revolution per minute (rpm)	2200	2350 (1950~2400)	

[cycle]

※efficiency is signed on exit-hole of complete (rice).

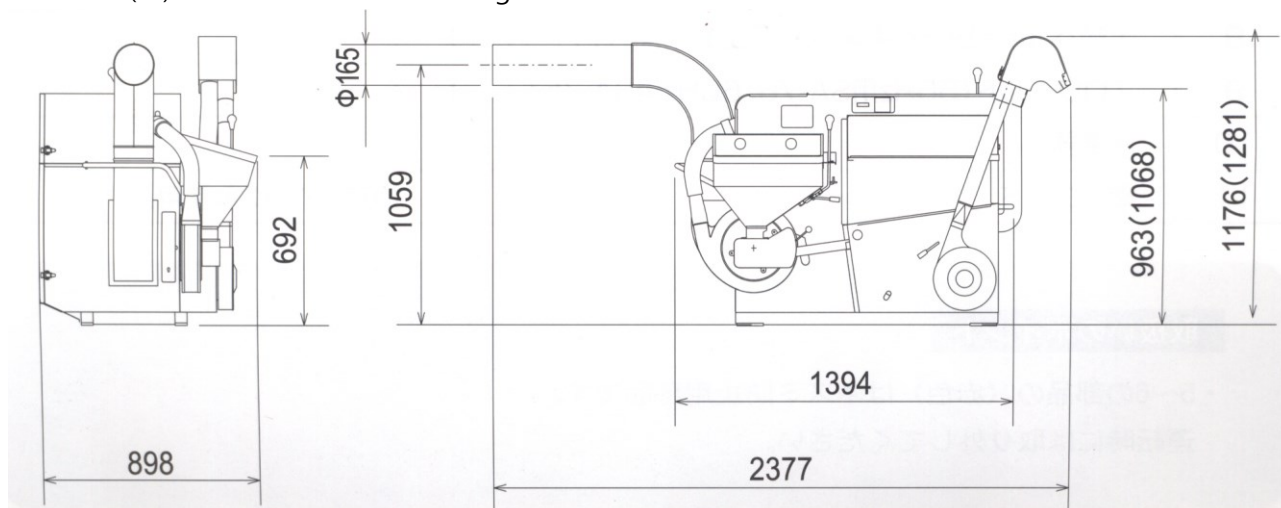
※when if rice-leftovers, grains with are much more or percentage of moisture content is more than it is, it reduces efficiency of the above statements.

※rice return ability is changed on condition it owned.

※own specification can be changed without notice.

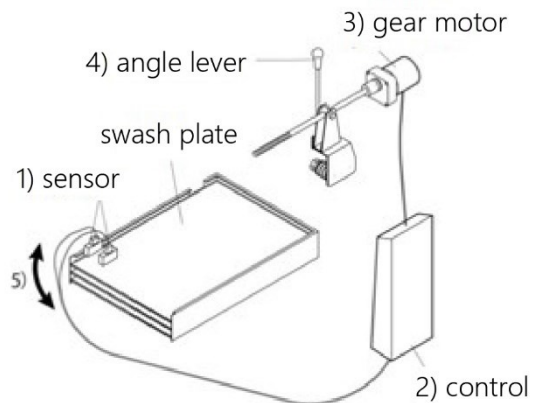
● sizes of machine

sizes in '()' are calculated in attaching with Extension tube.



7. fundamentals of each part

7.1 shaking plate's auto-angle regulate device.



- 1) Sensor detects of rices flews (waves).
- 2) Sensor sends a signal to regulate part.
- 3) Gear motor operates.
- 4) Angle-lever operates.
- 5) With interlocking angle-lever, shaking plate adjusts angle.

plate's status	angle is too urgent	steady state (normal)	angle is too gentle
sensor's status	<p>detects L.R</p>	<p>detects only R</p>	<p>detects none.</p>
regulate-way (method of fix)	<p>angle gets gentle</p>	<p>it keeps own state</p>	<p>angle gets urgent</p>

Operate-manage point.

When in these situation, shaking plate's auto-angle regulate device does not work.

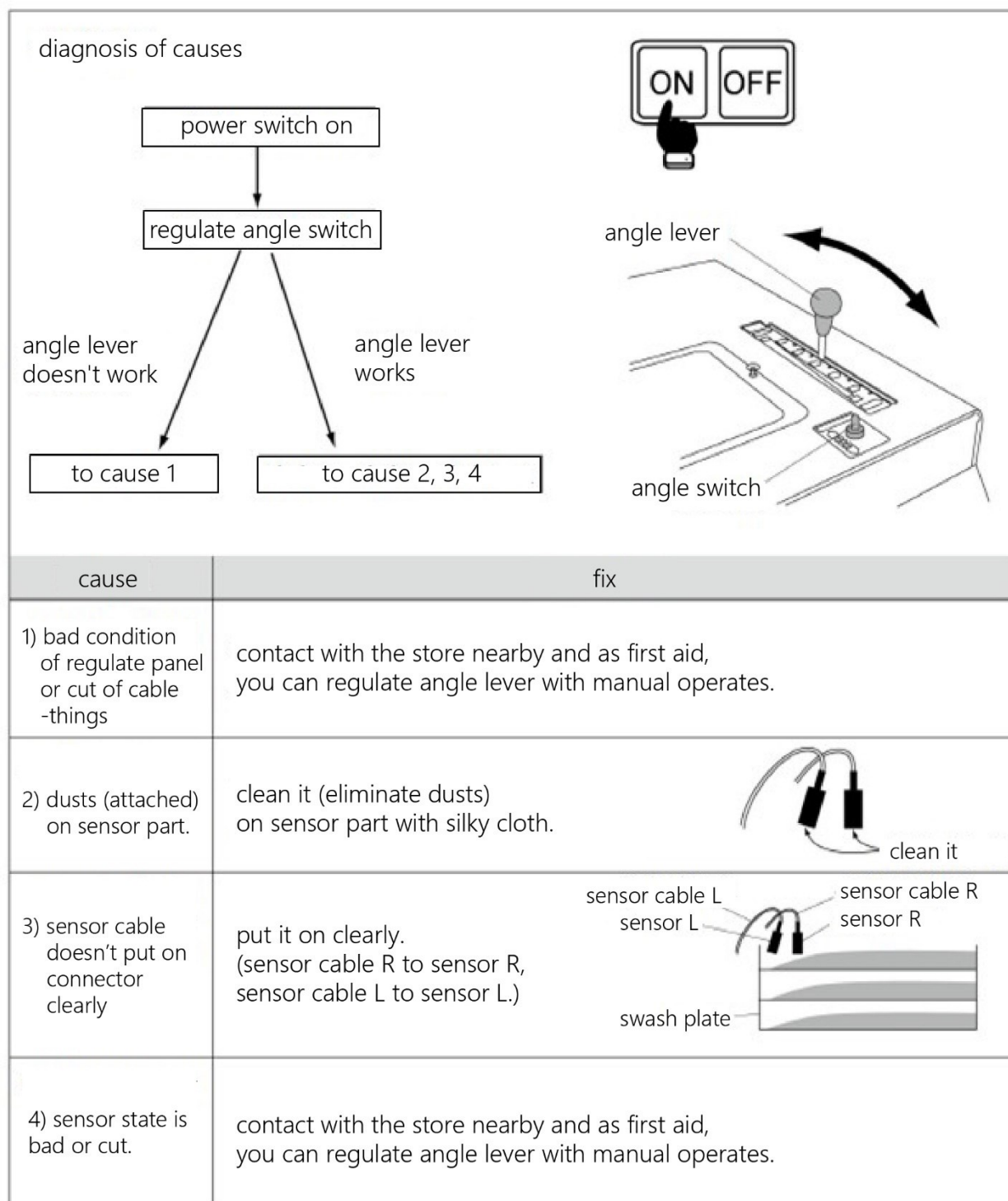
1 Power switch is off.

2 Shutter lever is closed.

3 Immediates in power switch is on.

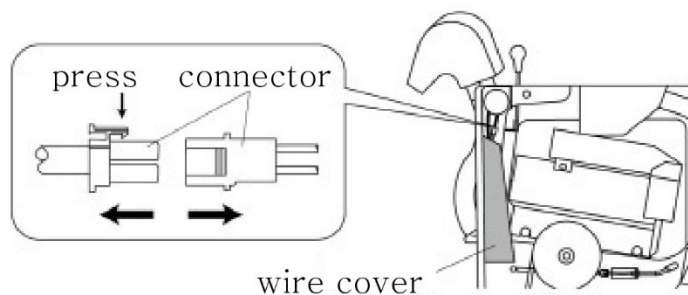
If shaking plate's auto-angle regulate device is damaged or broken, you can regulate the angle lever with manual operate.

※Fix; steps for faulty (poor condition) of shaking plate's auto-angle regulate device.



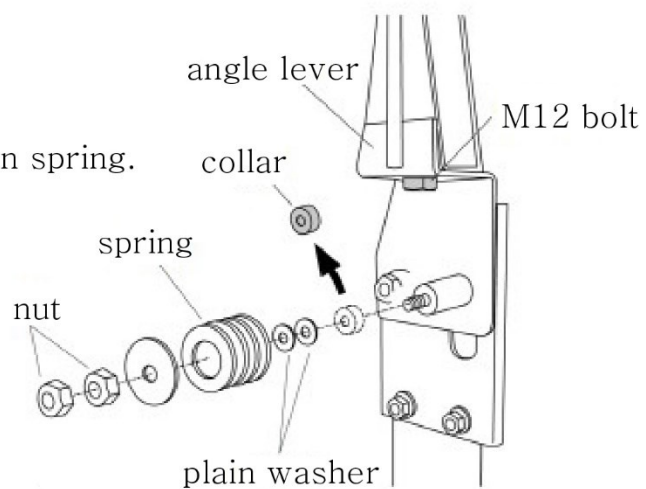
※Way of regulate the angle lever with manual operate.

- 1) Open the belt cover and separate the connector(white) above part of wiring cover.



- 2) Separate the bolt M12 under angle lever.

- 3) Separate 2 nut and separate collar in spring.



- 4) Combine(join) the 2 nuts in original state. don't get the collar lost and keep it.

Operate—manage point.

when after it is clarified non-suitable one and you turn it out to shaking plate's auto - angle regulate operate.

then, please follow the way,

[Way to turn it out for shaking plate's auto - angle regulate operate.]

※Way to turn it out for shaking plate's auto-angle regulate operate

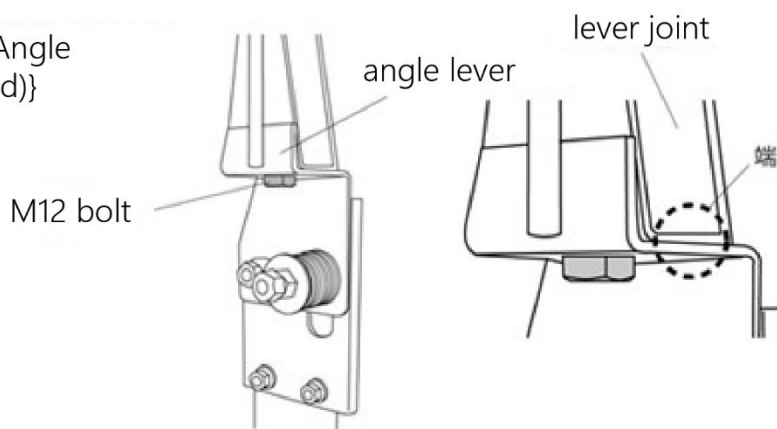
- 1) Turn the collar to original state.

Operate-manage point.

warning; If you activate auto-operate with no collar, it doesn't work as gear-motor gets in overload(stuck).

- 2) combine the bolt M12 until Angle lever and lever joint's {tip(end)} are reached.

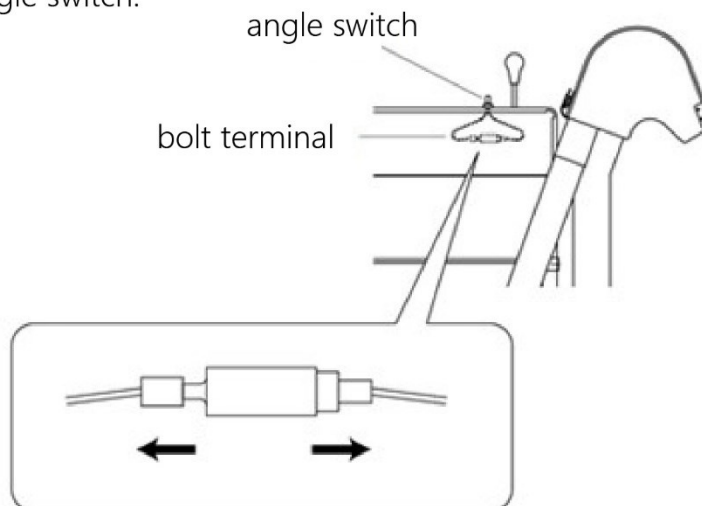
- 3) connect the connector.



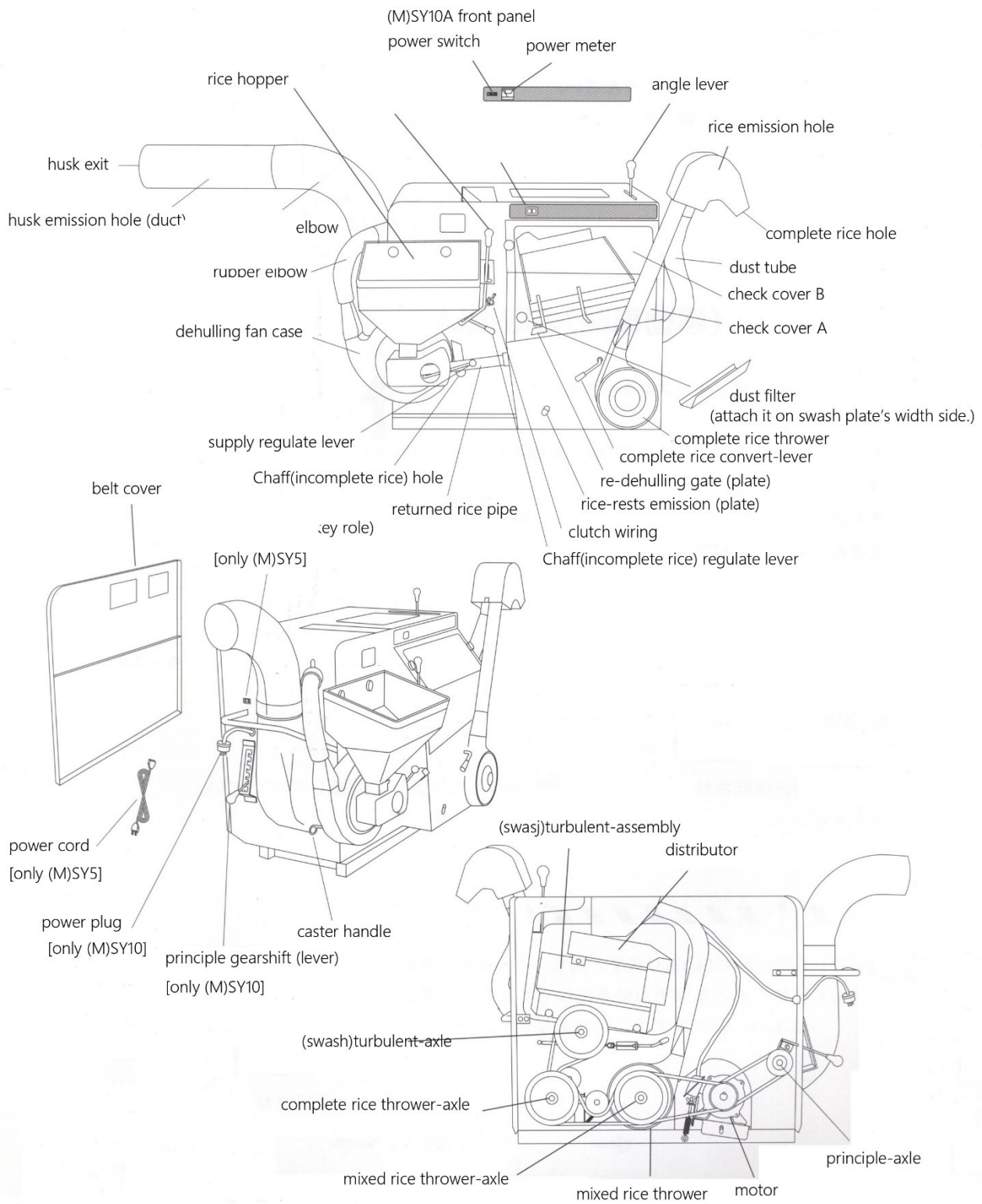
※Way to regulate the angle lever with angle switch.

release the shaking plate's auto-angle regulate operate and regulate the angle lever with angle switch.

- 1) separate the connect (red) under the angle switch.



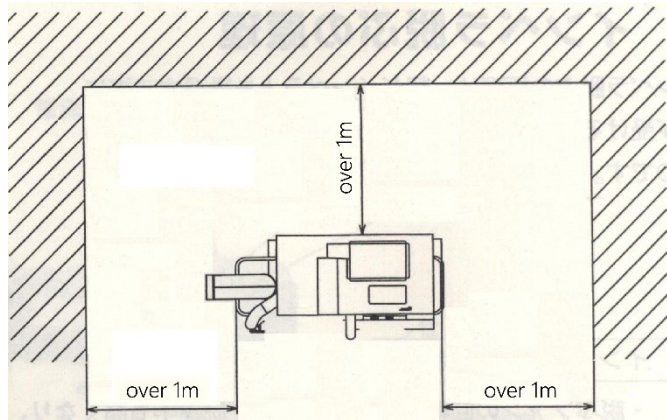
8. name on each part



9. Ready before the installation & use

1. space you need to secure (get)

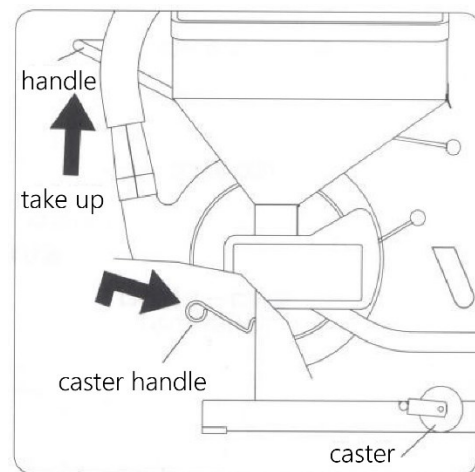
secure(make) a space(passage) around machine. it needs more than 1 meter.



2. managing caster (moving wheel)

Carry this with pulling caster out if you want to move it.

- ① store the caster's handle in it. and raise it then, the caster will come out.
- ② on opposite way, with pulling the caster out and raise the machine. then, the caster will be stored.



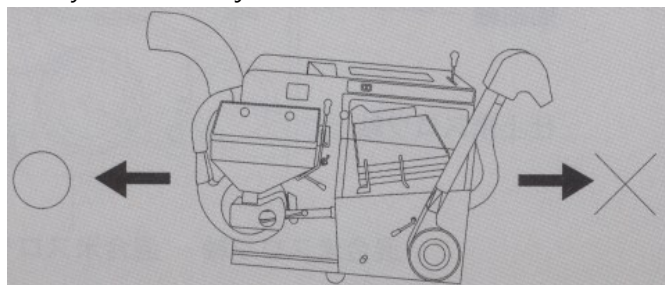
Operate-manage point.

please be careful for not pushing over it and beware of bumpy things.

□ Safe point

[warning] this machine's weight is about 150kg. notice it when you raise or move it and please carry it with more than 2 people.

[warning] please pull it forward for moving it. if you push it and move it and the wheels are locked, then you can be injured.

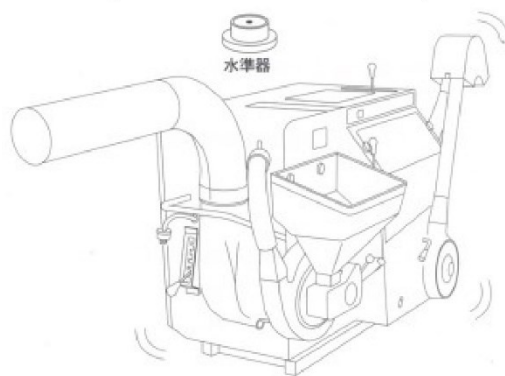


3. Installing machine (gear machine)

Use the level device to make it horizontal in stable place.

(shake it for check rattle)

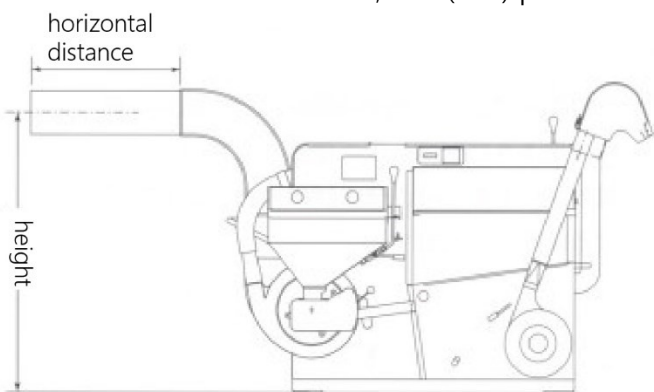
- check the machine does rattle(jitter) or not.
- if it does protect it by cardboard or plank.



4. attaching extension tube for exhausting dust

install(set) extension tube 13 meter for horizontal distance

※extension tube recommend; steel(iron) plate.



- If extension tube is vinyl(plastic) hose, install(set) it less than 9 meter for horizontal distance.
- If it is extended as vertical, see this chart. (right-side.)

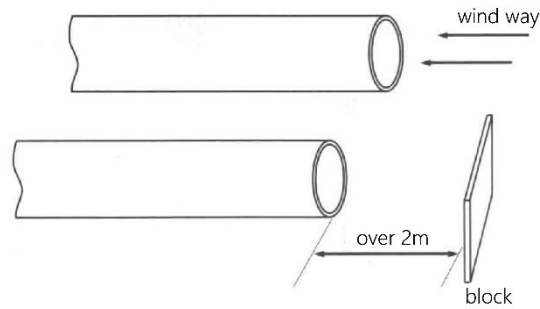
※'principle revolution per minute' is on standard state when it used steel tube.

height	horizontal distance	
	(M)SY5	(M)SY10
Extension limit	about 8m	about 13m
2.0m	about 5m	about 10m
3.0m	about 2m	about 7m

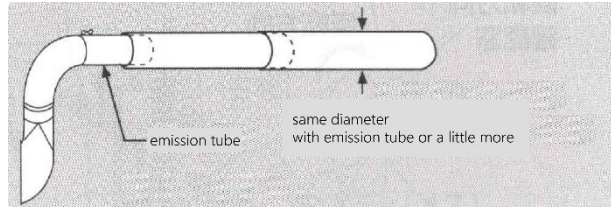
cautions

(1) Do not let mouth(fore-end) of extension tube look up or block things in front of it.

if something does blocking it in 2 meter, eliminate it.

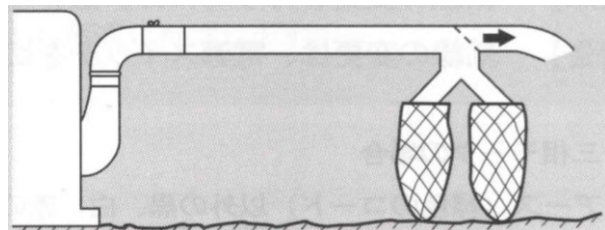


(2) diameter of extension tube (for exhausting dust) has to keep it as same diameter to a little bigger thing (like diameter of whole(brown) rice machine's exhausting tube exit). don't make it curved in a middle of.



(3) when you use rice-returning device, consider and make wind can get out(blow).

if winding out (wind blowing) is bad, that can be the reason of incomplete rice are many in complete rice.

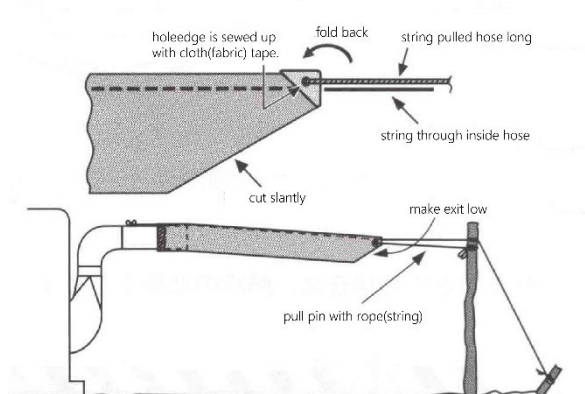


Same diameter ~ make it can be blow wind out a little.

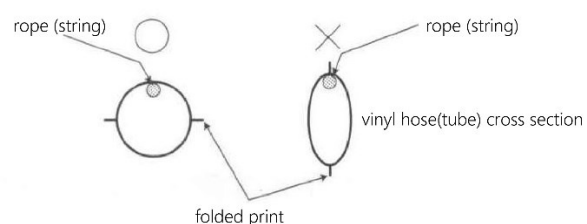
(4) when you use the vinyl(plastic) hose, take a rope through the hose and pull it for protection of hose-shaking(rattling) by cross-wind.

Operate-manage point.

if you get paper folded-mark (graduation)



(5) if you use long pipe or the vinyl(plastic) hose, prevent static(electricity) following as ground wiring at dust-exhausting tube.



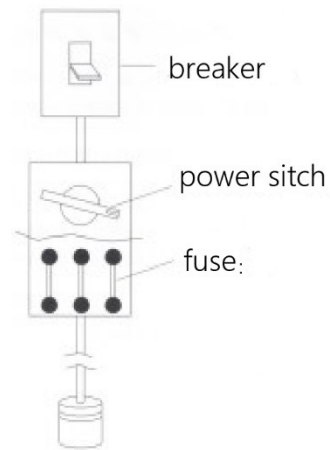
5. ready & check power unit

(1) ready power supply wiring

- power supply of machine has to set circuit breaker for preventing electric shock (accident).
- power cord has to be more than 2mm and less than 10m for preventing voltage dip (drop of electric pressure)

Operate-manage point.

if both side (inside or outside) get old, check it has those (abrasion or damage of insulator and insulate tape wrap) or not. also never wiring it tentacle(recklessly).



□ safe point

[caution] if it doesn't wiring like above explains, ask it store or electrical construction company.

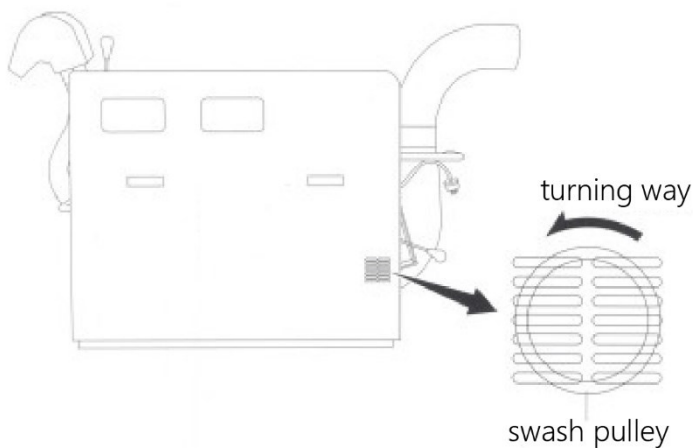
(6) check spin-direction

(1) there are long holes on belt cover of both side (right & left).

you can see the (insight principle) pulley in long hole.

please, operate(run) the machine and

check the (insight principle) pulley spins counterclockwise(left) or not.



(2) when it spins in opposite direction, change wiring.

□ safe point

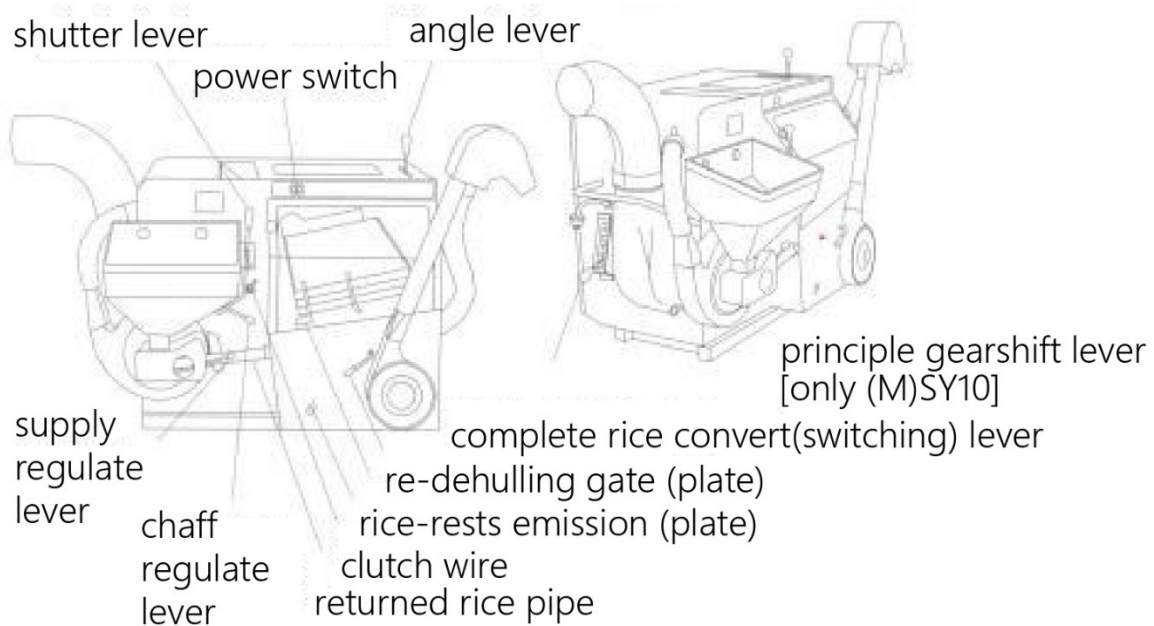
[caution] when you change wiring, ask it store or electrical construction company.

[warning] change wiring must be power switch off and power plugs out.

when it is single-phase motor

wire it, follow the sign of nameplate attached on motor.

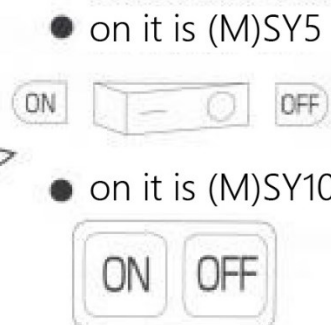
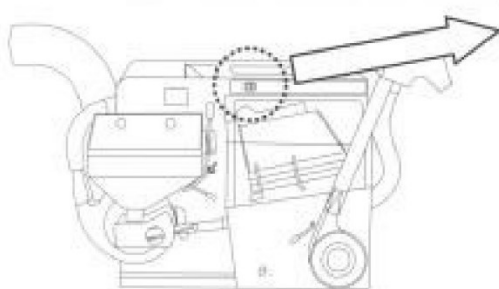
10. Operating points and movement on each part



1. power switch

it is a switch that operate and stop motor of this machine

press [ON] to operate
press [OFF] to stop



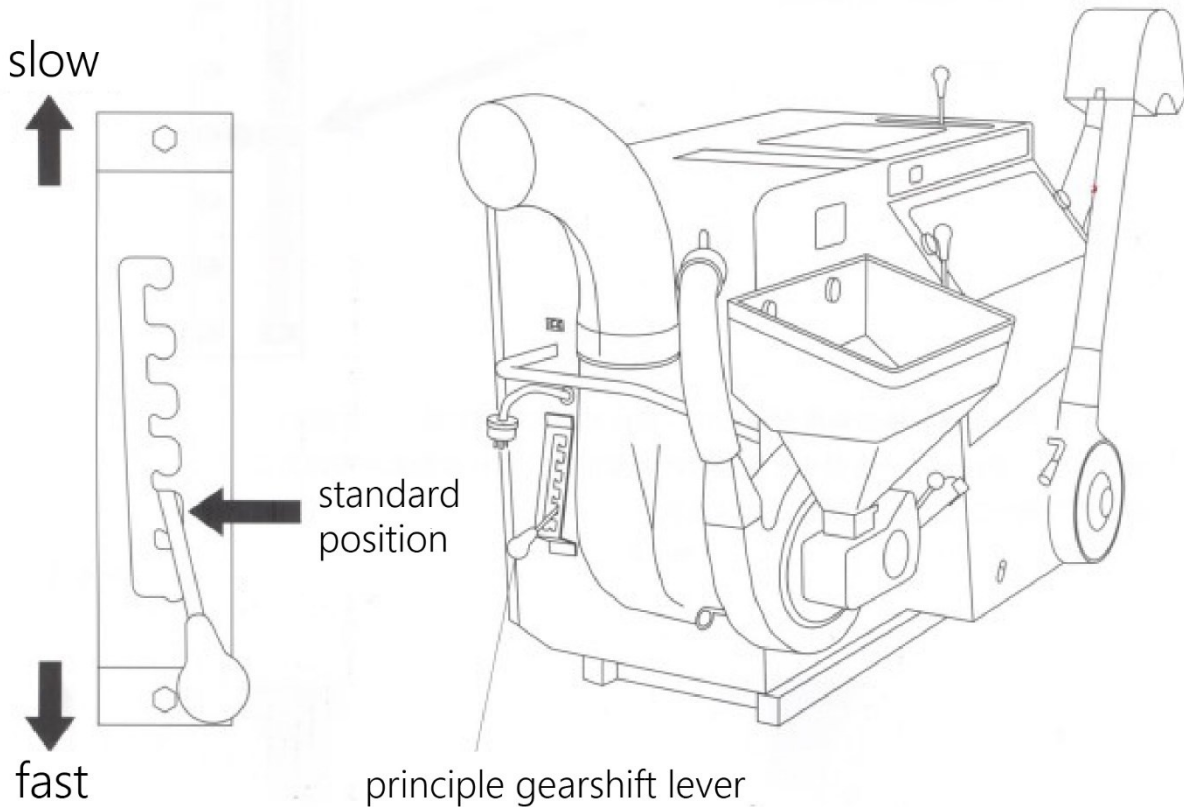
□ safe point

[caution] if it urgent, immediately press the [OFF].

2. regulate of principle rpm (revolution per minute) [only (M)SY10]

principle gearshift can regulate principle rpm.

○ on drive(operate) it, please set it on [standard].



○ when you lever up, revolution gets slow. and also, you lever down it gets fast.

○ when principle rpm gets fast, hulled ratio gets high then it has damaged a lot.

on reverse, when rpm gets slow, hulled ratio gets low so it has damaged less.

please regulate it appropriate for conditions of complete rice and shaking plate's sorting.

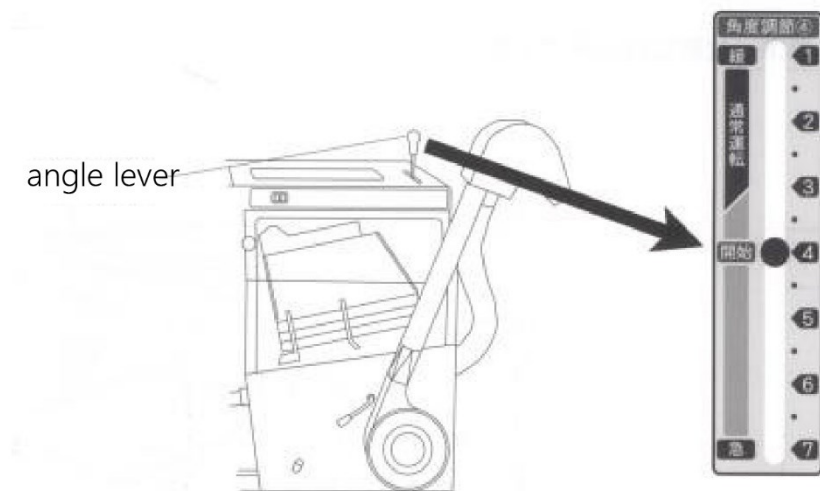
Operate-manage point.

- principle gearshift lever regulate would be in driving (machine).
- if you change the rpm, then dust emission (output) is also changed. so regulateling chaff has to go on at same time.
- even though you change the rpm, it doesn't work(effect) immediately. take a look for about 2 to 3 minutes.

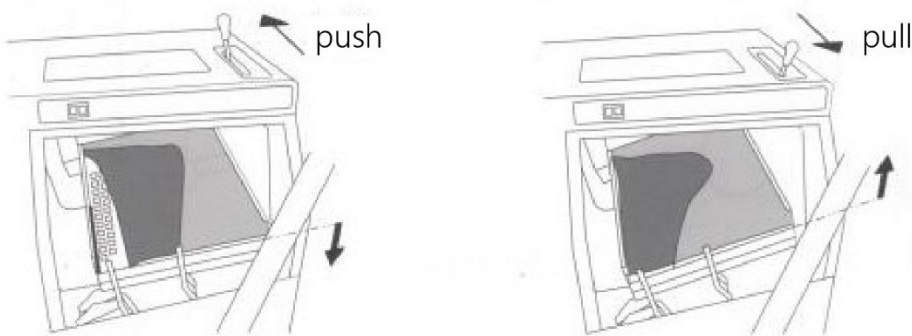
3. regulate of shaking plate angle

on changing shaking plate's angle with angle lever, it changes mixed rices flew and make it sorting in best condition.

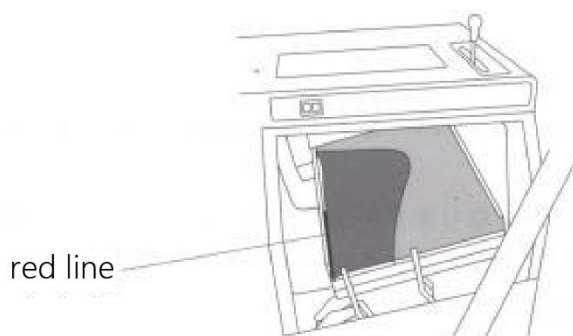
○ when you drive it, please set lever on start.



○ when you push the lever then shaking plate angle is going gentle and mixed rices are slant(sided) to right so left side gets empty. on opposite, when you pull the lever then shaking plate angle is going sloppy(urgent) so mixed rices are sided to left and left side gets filled.



○ regulate the angle lever to 'shaking plate left-side's red line' be shown.



Operate-manage point.

- for setting best condition; first, take lever to [1] and left side will be empty. then, pull the lever. it will be easy to tune(set).

- best angle lever set is changing and depends on rice supply(feed rate) and moisture.

after best set is decided, sometimes regulate the angle lever with checking shaking plate states.

4. regulate supply

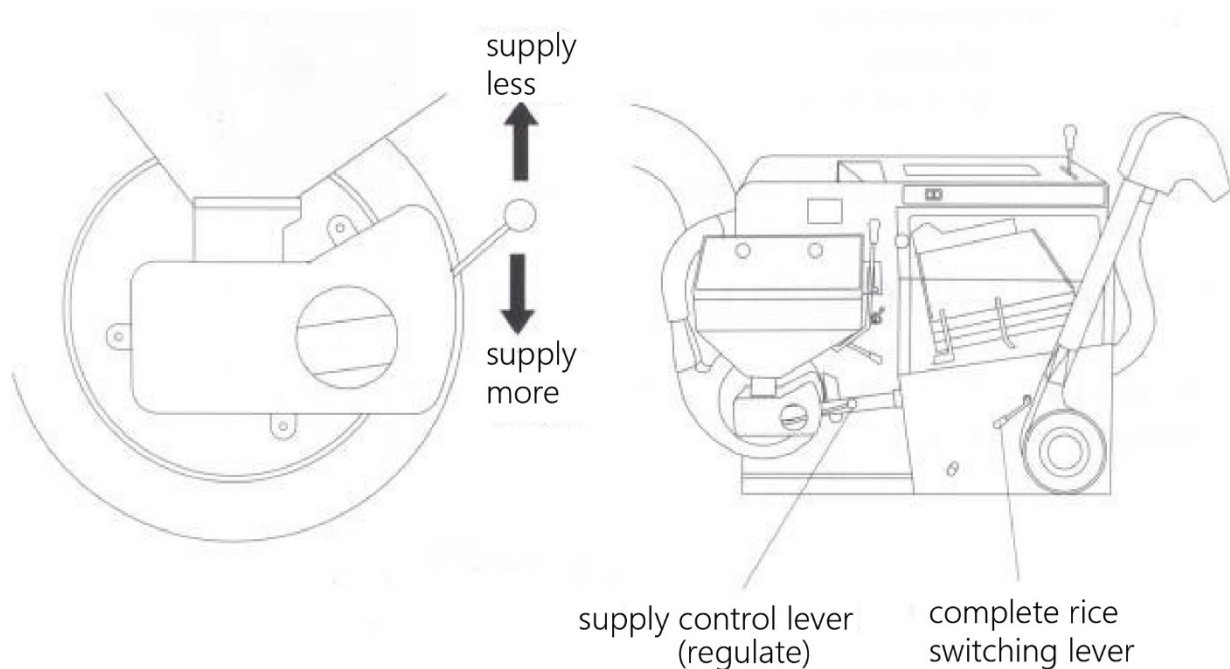
regulate rice supply with impeller-dehulling part and regulating supply lever.

○ when you drive it, set it on [start 1].

○ when you get regulating supply lever down then supply will go a lot, but when you take lever up then it will go less.

Operate-manage point.

if you change supply, shaking plate sorting condition will be changed so regulate the shaking plate angle.



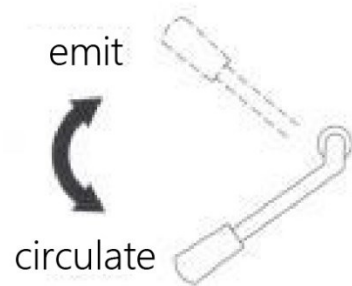
5. complete rice switching lever.

it is lever that [emit] or [circulate] on machine.

○ if you drive it, turn it [circulate].

○ [circulate] - when you want to remain rices in beginning of shaking plate drive or stopping rice supply and drive circulate.

[emit] - usually, middle of drive when you want to emit the complete rice or ending drive or emit completely.



Operate-manage point.

please set 'complete rice switching lever' one sided to [emit] or [circulate].

if it is on middle position, sorting condition is going unstable.

6. chaff regulate (regulating wind)

regulate wind with checking incomplete husks emitted from chaff and (amount) quantity of chaff.

[many]

● when you - wind power get strong

set lever to - (amount) quantity of chaff gets many.

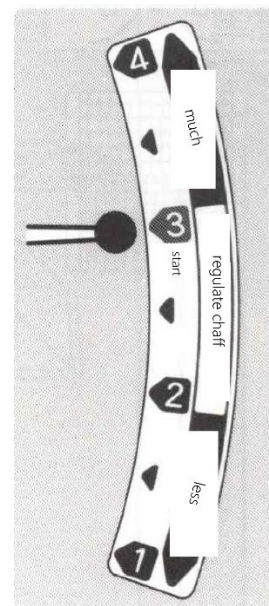
- whole(brown) rices are many mixed.

[less]

● when you - wind power get weak(light).

set lever to - whole(brown) rices are less mixed.

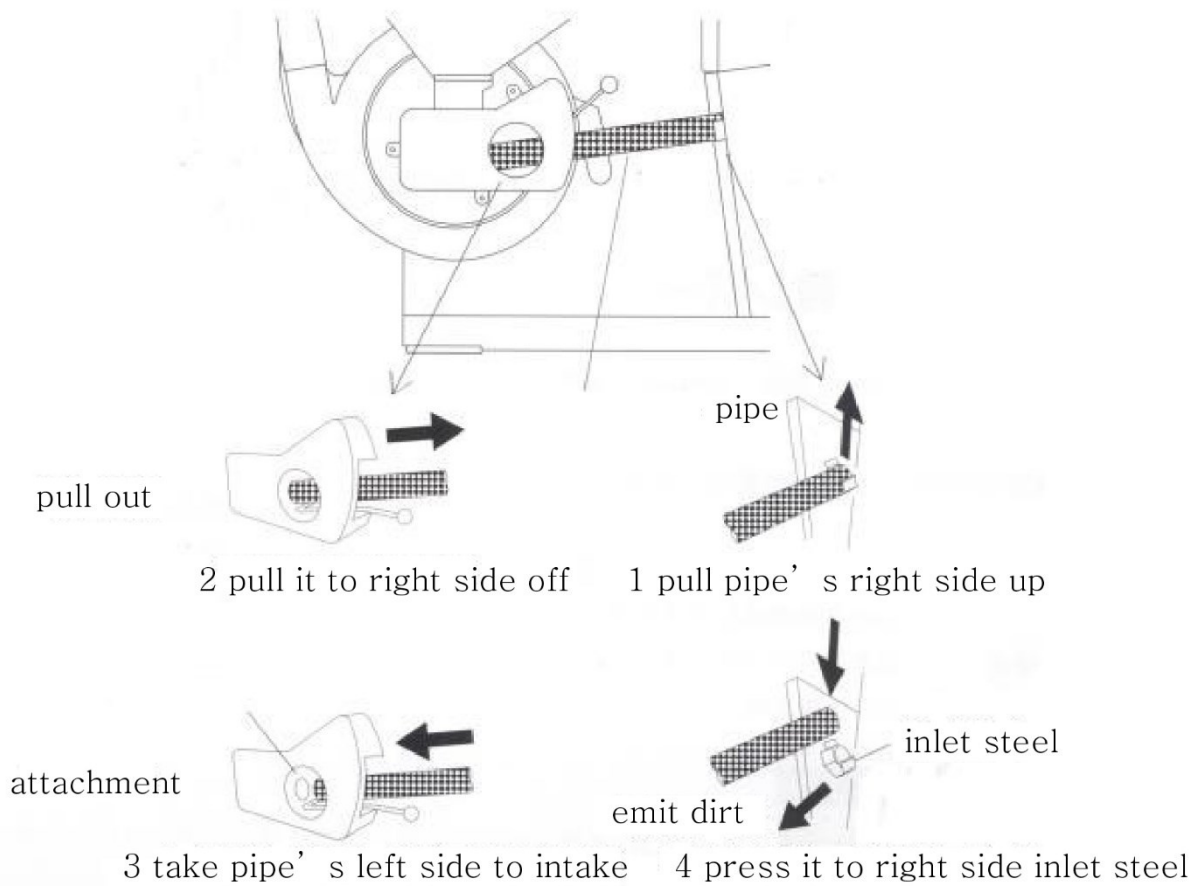
- easy to be mixed with.



◎ when drive starts, please set [lever position] to [1.5]

7. managing returned rice pipe

with pulling out returned rice pipe, it can emit dirts (that is circulating in) out of machine.

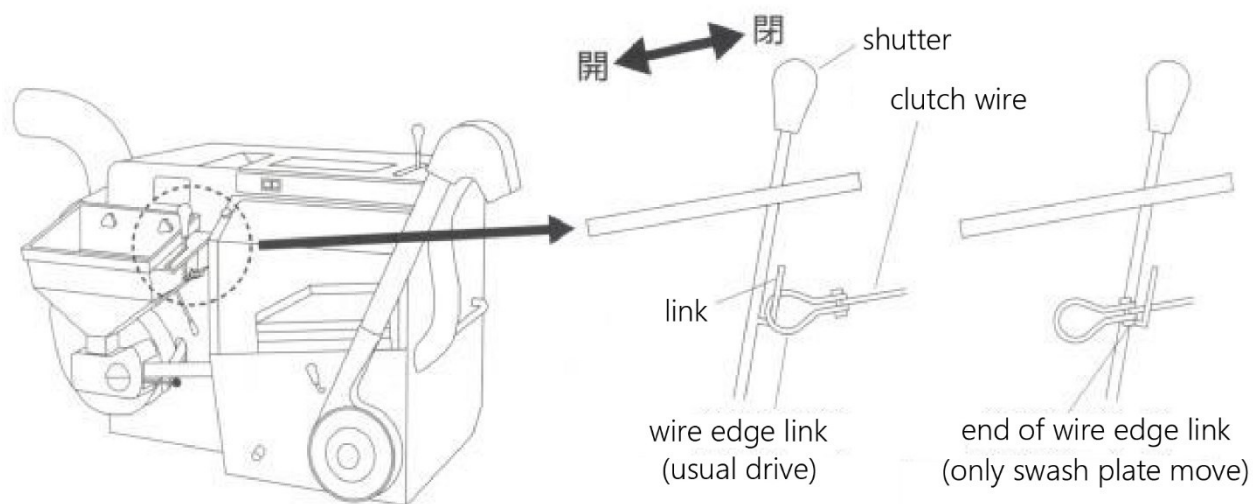


8. managing clutch wire

you can switch it on clutch wire's hanging way 'when you open hopper's shutter lever and make shaking plate move or (usual drive) shut the shutter lever and make only shaking plate move.

○ in usual drive, hang fore-end link-part to hook.

○ when you shut the 'shutter lever' and make only shaking plate move, hang the 'fore-end link part's end' to hook.

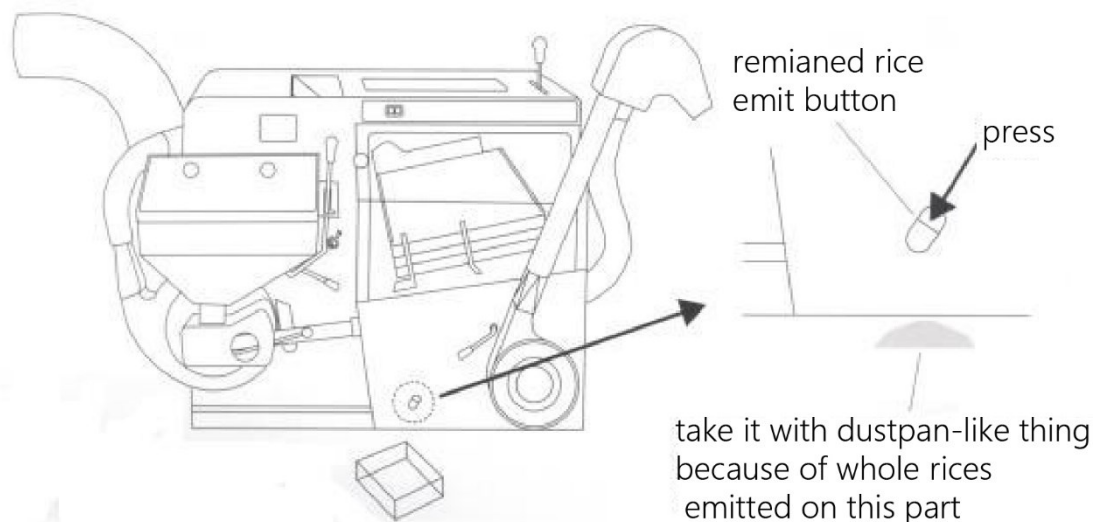


Operate-manage point.

- when you consider about clutch wire's hanging, make the shutter lever closed.
- when you get hopper pull out or affix(attach), hang the clutch wire to fixed position.

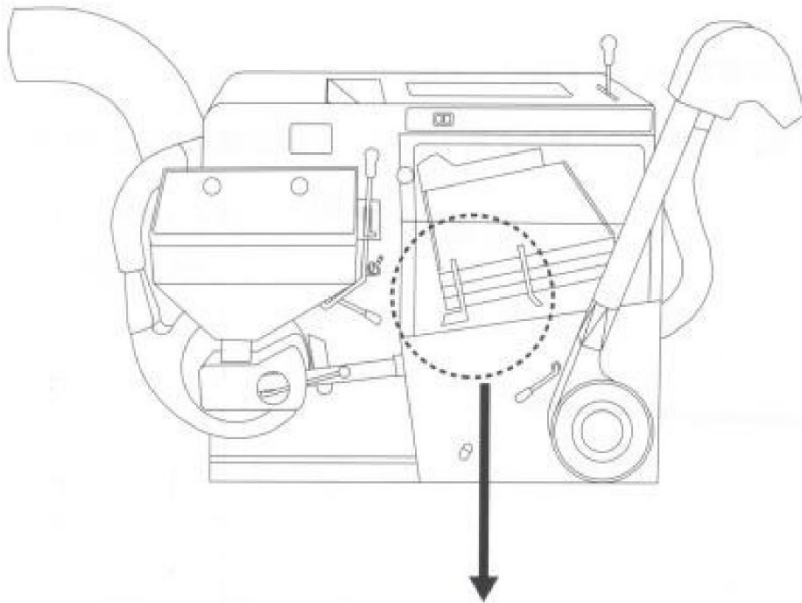
9. managing remained rice exhaust valve

after drive ends, exhaust rice-rests in spiral-container.



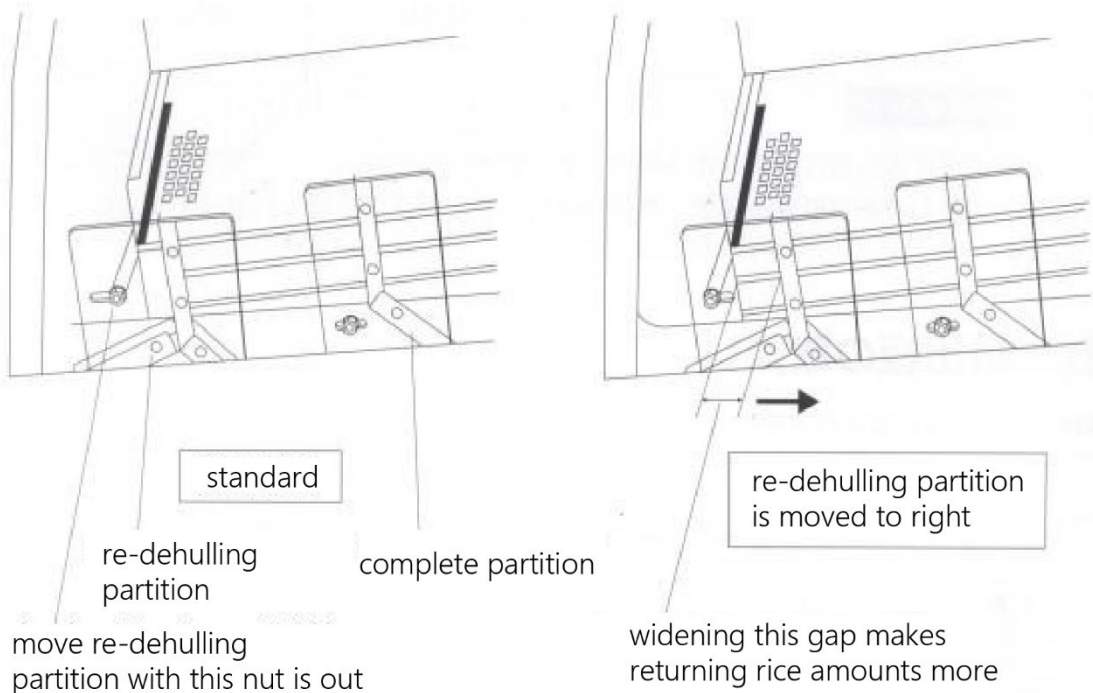
10. control of re-dehulling partition.

you can control amounts(quantities) of opposite-shaking plate's left-sided rice on returning to dehulling fan.
usually, take it close to most left-side. (returning quantity will be least)



transparent cover A, B are off

u



Operate-manage point.

please don't move complete rice's partition.

11. Operation

□ safe point

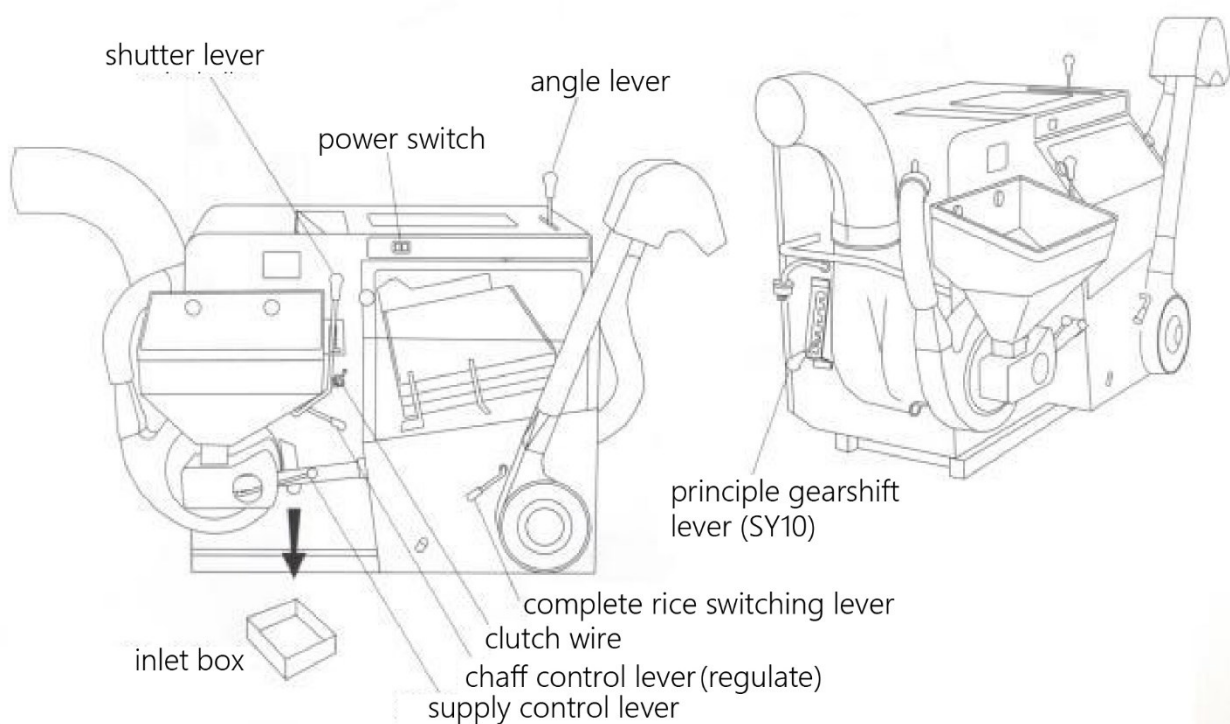
[caution] you must set(install) the machine plat(horizontal).

[caution] check kids and non-staffs are around the machine or not.

[caution] check all staffs get knowing how to stop the motor.

1.checks before work(drive).

- (1) power switch ----- [OFF]
- (2) shutter lever ----- [shut]
- (3) complete switching lever ----- [circulate]
- (4) angle lever ----- [start]
- (5) supply control lever ----- [start 1]
- (6) chaff control lever ----- [1.5]
- (7) principle gearshift ----- [standard] (only SY10)
- (8) place a taking-box to exit of chaff.



2. start drive

Operate-manage point.

- for preventing rices peeling off, please take whole(brown) rice work after a day from dry at least.
- check moisture of rice.
- please gather rice always in rice hopper.
- if there is no rice in hopper then shaking and sorting will be unstable.
- even after shaking plate angle set in proper position, check the state(condition) of shaking plate and control angle lever to proper position in times.

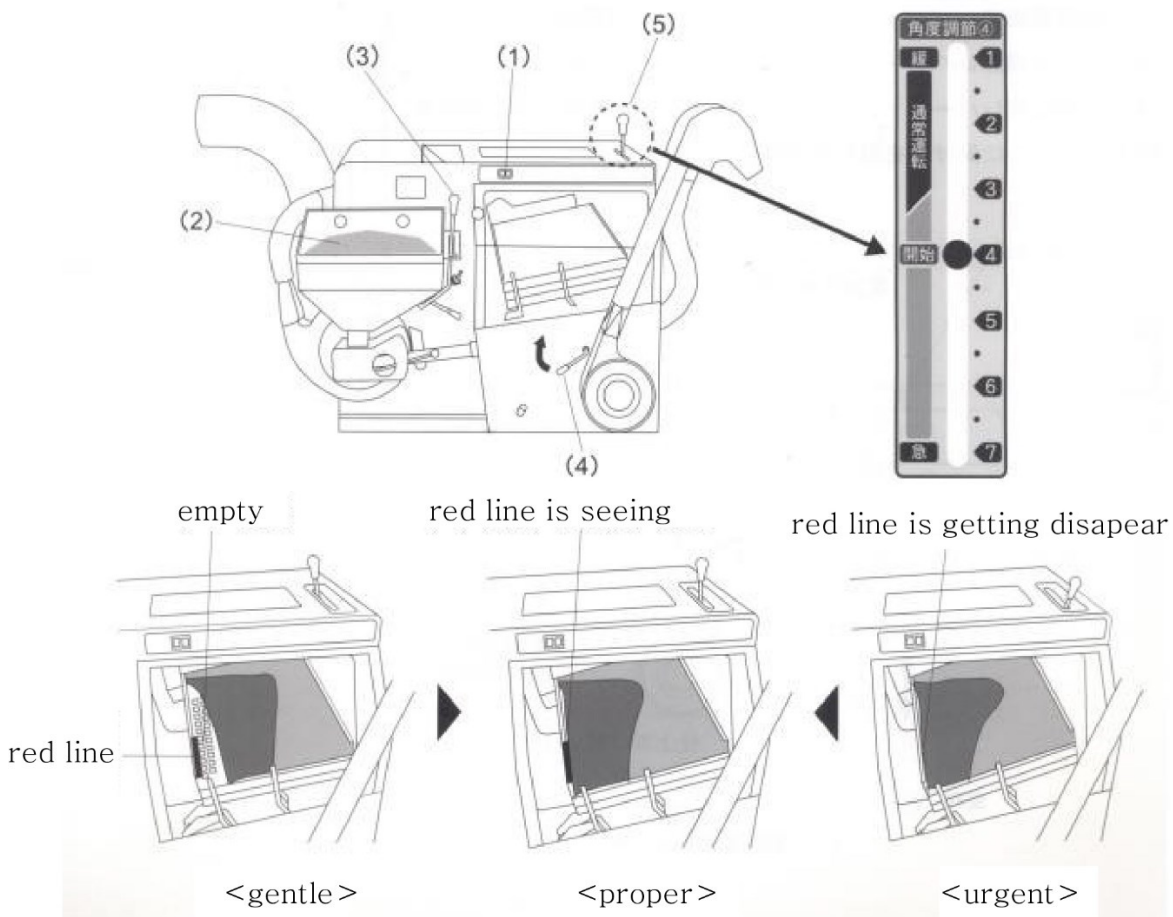
(1) power switch [ON].

(2) get rice to rice hopper.

(3) open the shutter lever.

(4) when mixed rice are full-filled in shaking plate, take complete rice switch lever to emit.

(5) move angle lever to [1]. if shaking plate's left side is going empty, pull the lever slowly and set it on proper position for preventing it.



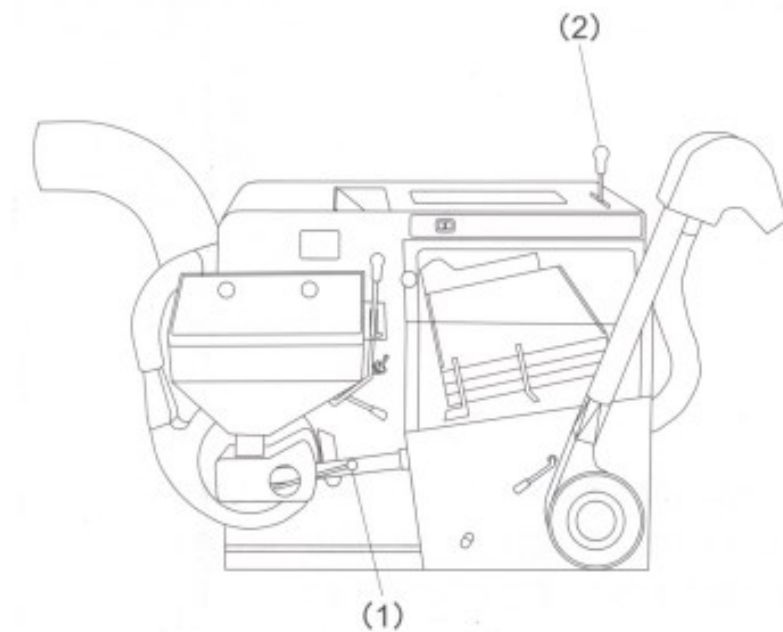
3. efficiency up & down

it is control way getting efficiency up because of early set supply control lever's position is [start 1].

(1) down supply control lever

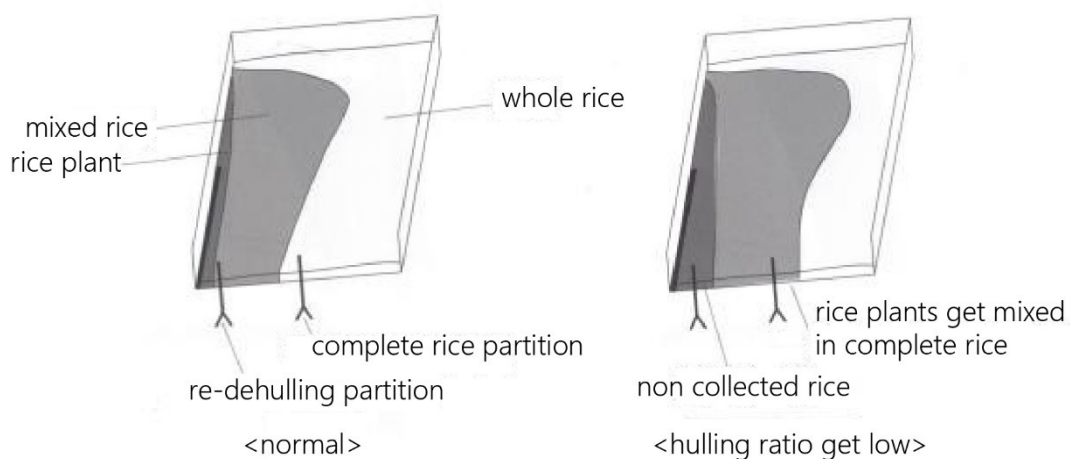
(2) move angle lever to [1] and make shaking plate's left side empty and pull the lever to set it on proper position.

when you down it also, supply control lever up and take a step (2).



Operate-manage point.

if you get efficiency up, hulled ratio will down rapidly on what kind rice is and there will be many rice can't get(return) it back from shaking plate's re-dehulling partition also rice could be mixed in complete rice. then drive with getting efficiency down or principle rpm fast.



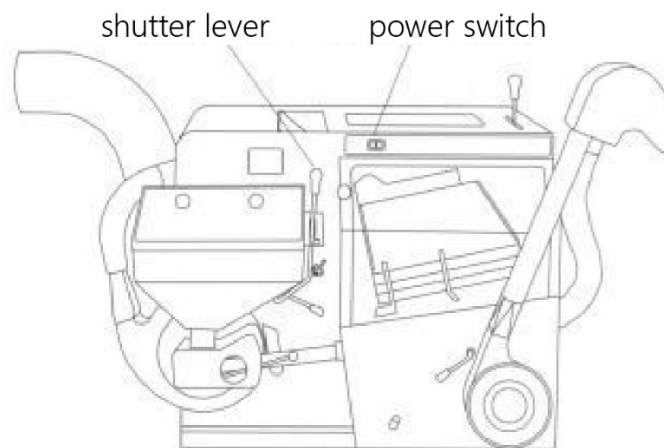
4. stopping operation and re-operate

stopping operation

- (1) close the shutter lever.
- (2) turn the power switch [OFF] after checking non-emission of whole(brown) rice..

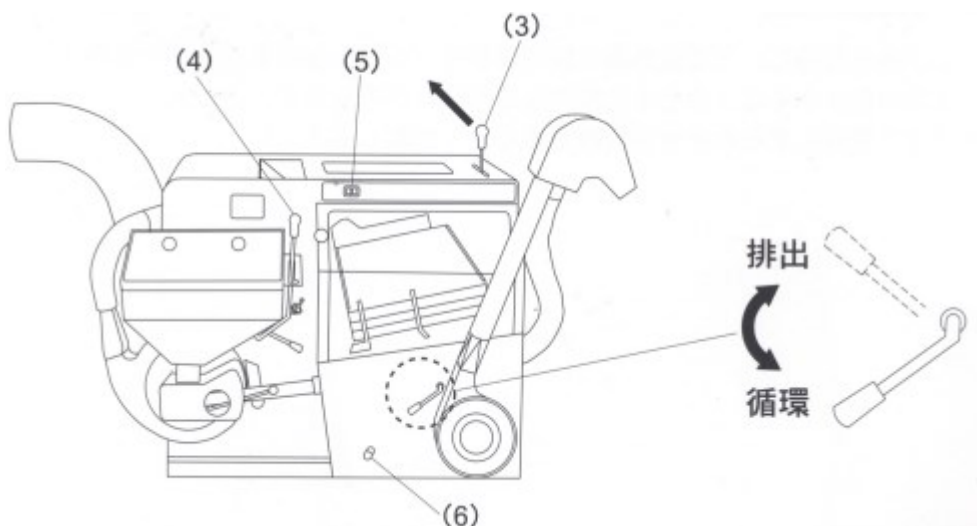
re-operate

- (1) turn the power switch [on].
- (2) open the shutter lever.



5. finishing(endwork).

- (1) when rice are gone(get empty of rice hopper), turn complete rice switching lever to [circulate].
- (2) when rice are getting less on swash plate, turn complete rice switching lever to [emit].
- (3) if you move the angle lever to [1], you can emit it faster and more(faster).
- (4) when whole(brown) rice - emission gets complete, close the shutter lever.
- (5) turn the power switch [OFF].
- (6) press the remained rice - emission button.

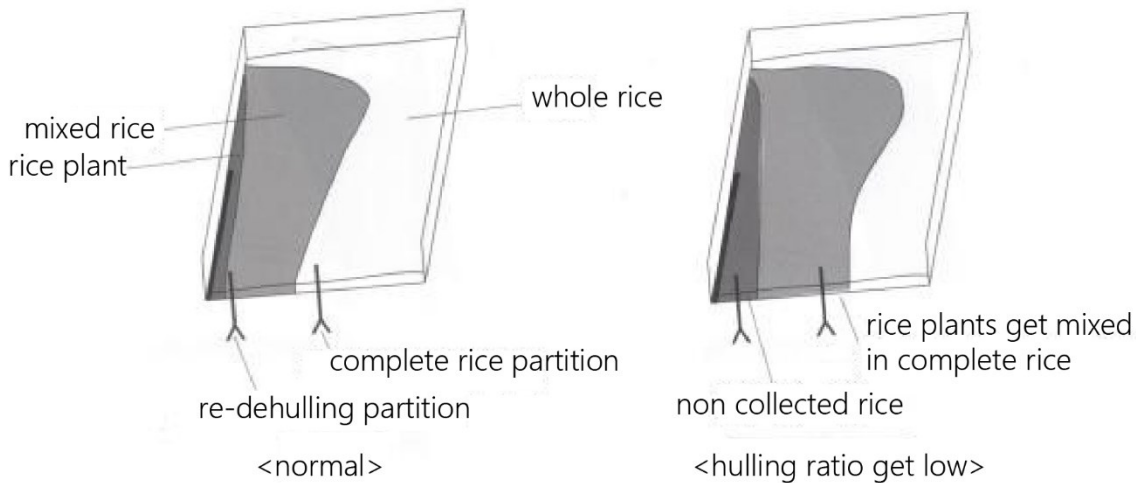


Operate-manage point.

- when you end(finish) the work, it can make injured rice because of rice circulation time is long. so prepare burlap bag separately to exit hole.

6. (fix note); actions for rice plants are mixed in complete rice because so many rice plants are on swash plate.

actions for when hulling ratio is continuing bad (statement), so it can't get(keep) good sorting condition.



(1) close the shutter lever.

(2) turn the complete switching lever to [circulate].

(3) take supply switching lever to top. (make it efficiency at least.)

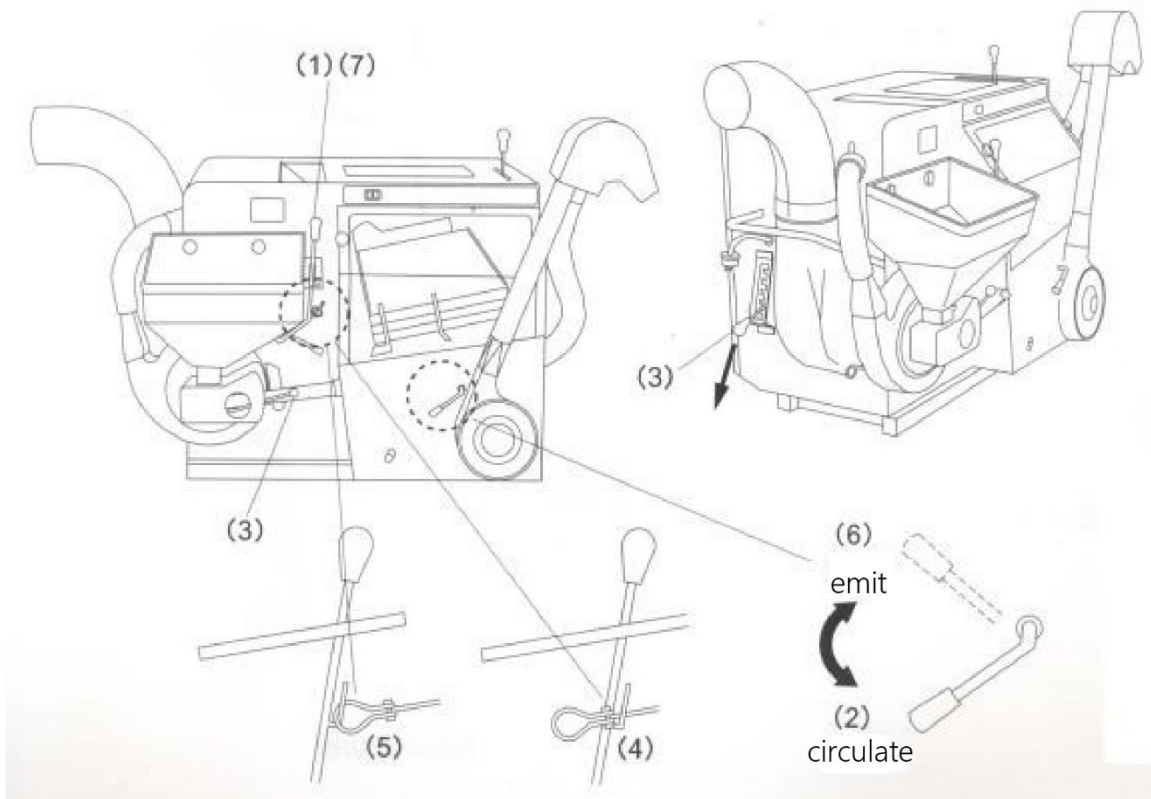
or take gear shift down. (get principle rpm up.)

(4) change clutch wire's hanging way. (move swash plate with shutter lever [close].)

(5) when rice on swash plate are getting less, turn clutch wire's hanging way to usual move state.

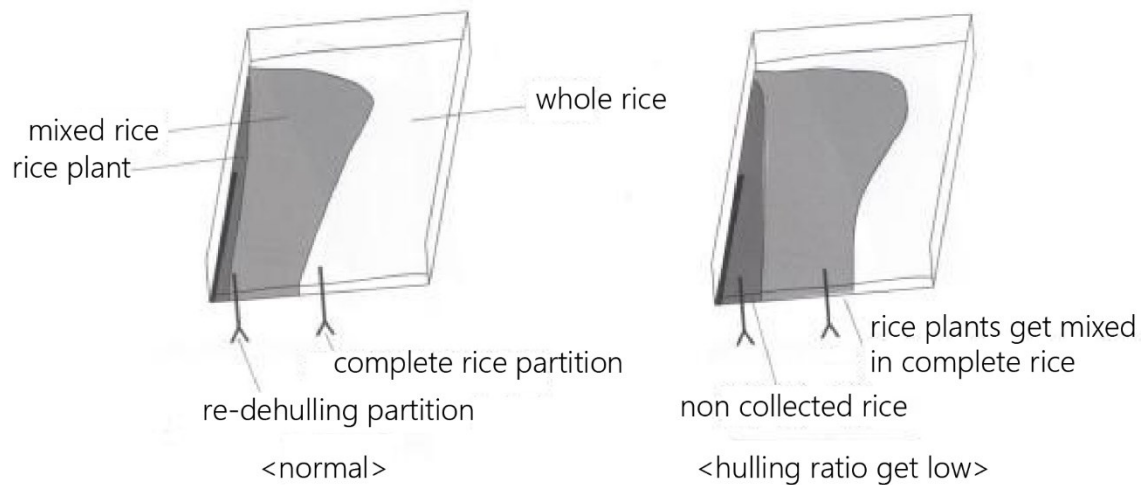
(6) make complete rice switching lever to [emit].

(7) close shutter lever and derive it usual on.



7. (actions for) operation way when you take principle rpm down

it's driveway when you get SY10's principle rpm slow, hulling ratio gets low and can't get it back from re-dehulling partition.



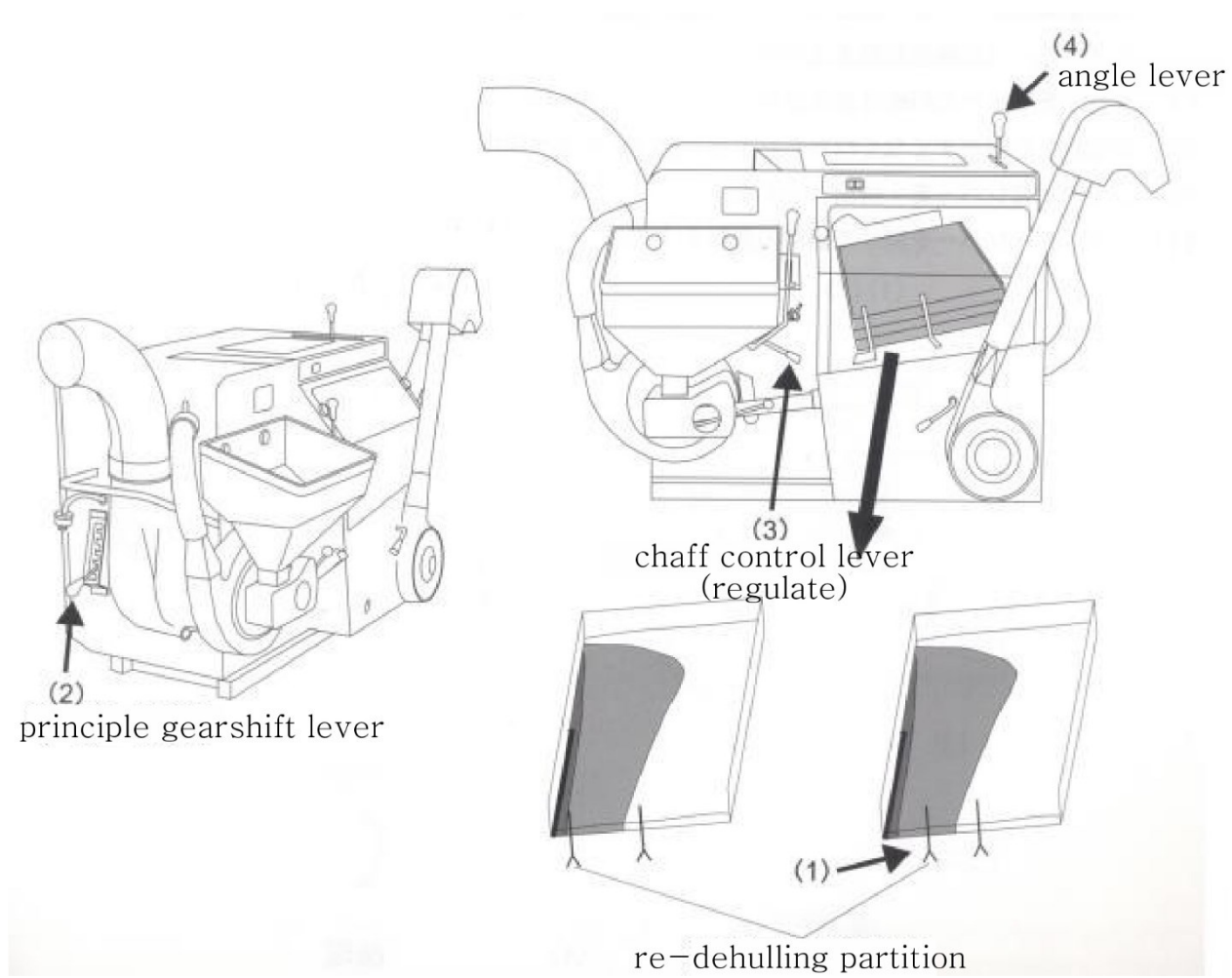
(1) move the re-dehulling partition to edge of right side. (increasing returned rice's amounts.)

(2) take principle gearshift lever to upside. (principle rpm get slow.)

(3) take chaff control lever to upside and get no more emit sorted rice (out).

(increase wind power of dust-emission.)

(4) take angle lever to best condition.



12. Storage

□ Safe point

[warning] before the work, you must power it off and plug out of.

1. cleaning each part.

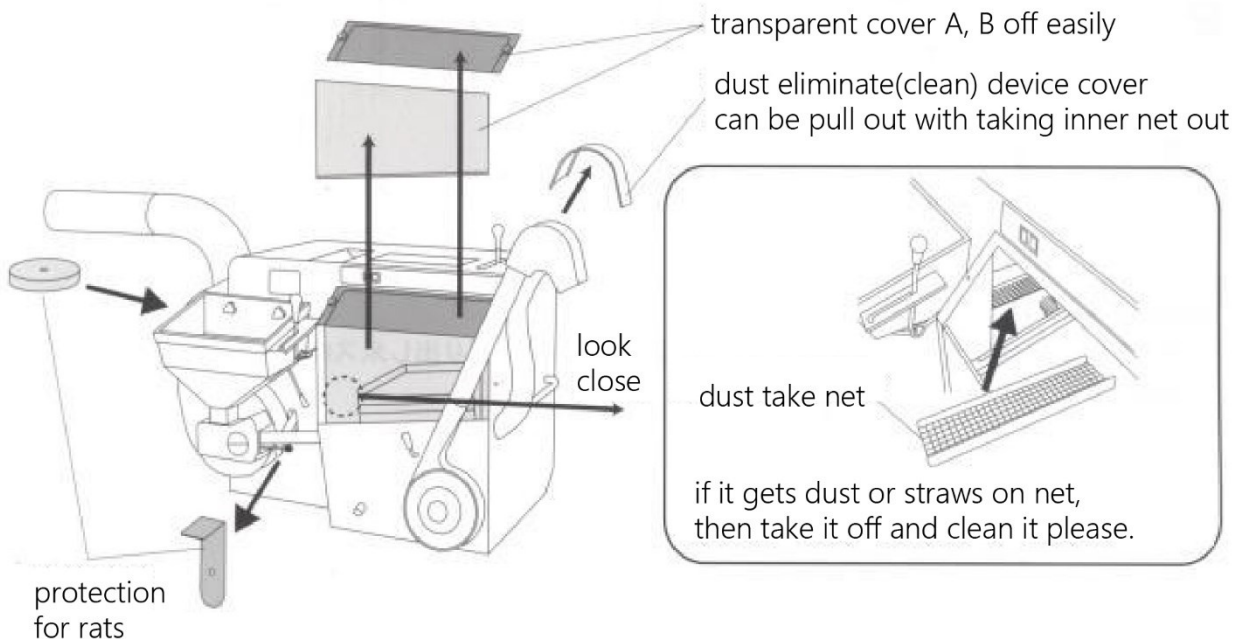
(1) take off transparent cover A, B and check inside that husks are in or not. If it is, take it off with dust cloth.

(2) with transparent cover off, if there are matters(dust) in net on swash plate's transverse, take it off from of and eliminate it.

(3) when you end work, press the remained rice emit button and pull it off.

2.Plans for preventing Rat-entering in

- Attach preventing plate for rats can't get in.
- This machine must keep in horizontally flat ground with wheels storage.



3.Check and keep for next seasons

- ① Check degree of friction for dehulling fan, lining
- ② Check belt is loose or isn't.
- ③ Check degree of thrower wing's abrasion.

Care of this machine needs no humid and no straight sun-light place. please Take cover on it and keep it.
And also, please Power it off and plug out of.

13. Reasons of troubles or breakdowns and fix

☐ Safe point

[Warning] when you check, repair, fix it, please pull power plug out of.

[Warning] after check, attach pulled out covers on original state.

1. even power switch [ON], motor doesn't work

cause 1

power doesn't on

handle 1

check fuses of power are cut or breaker is working on or not.

2. motor works without sounds.

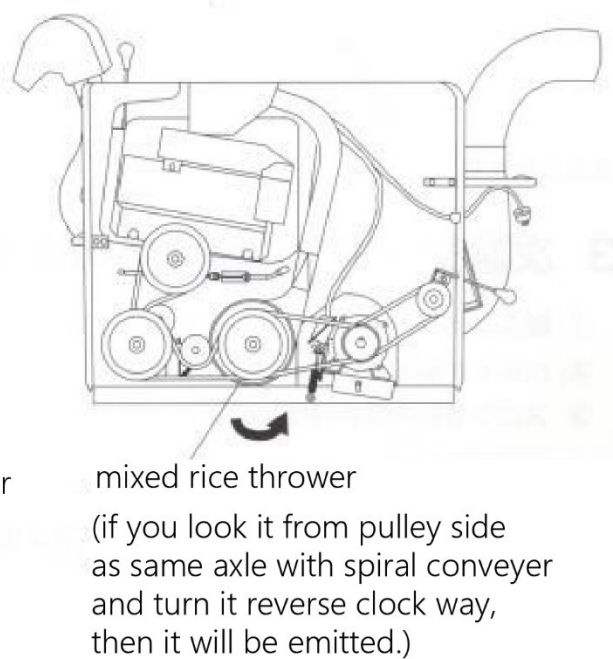
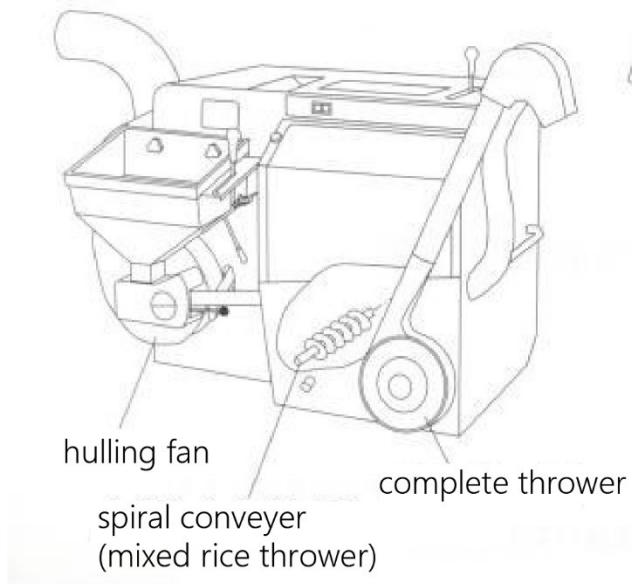
※ make power switch [OFF].

cause 1

machine inside is blocked.

handle 1

clean blocked parts (dehulling fan, complete rice thrower, mixed rice thrower, cracked rice thrower, spiral conveyer)



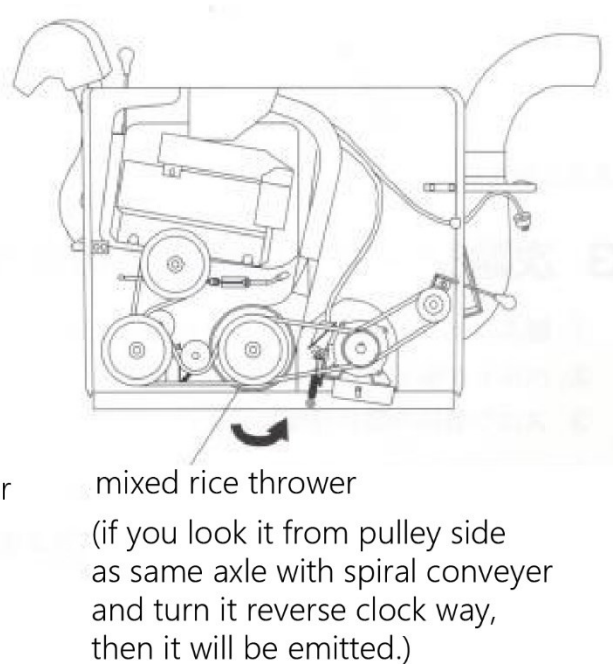
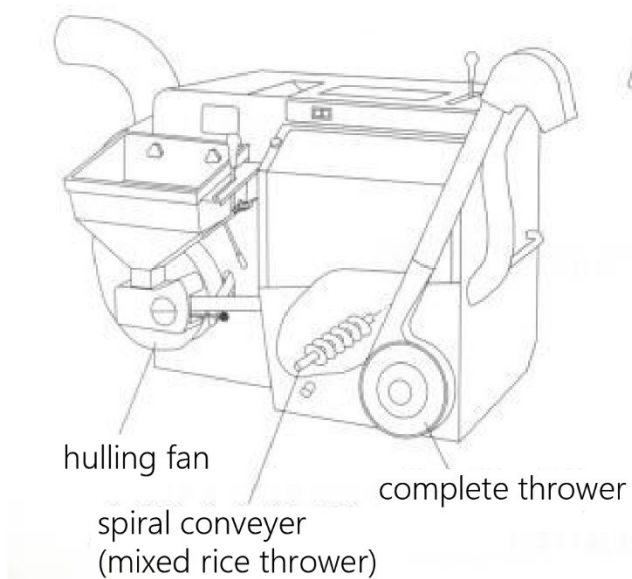
3.It stopped while it drives

cause 1

machine inside is blocked.

handle 1

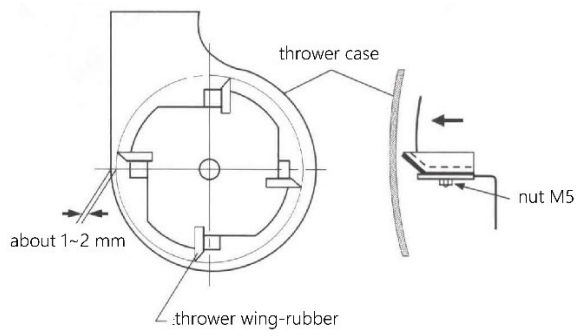
clean blocked parts (dehulling fan, complete rice thrower, mixed rice thrower, cracked rice thrower, spiral conveyor)



handle 2

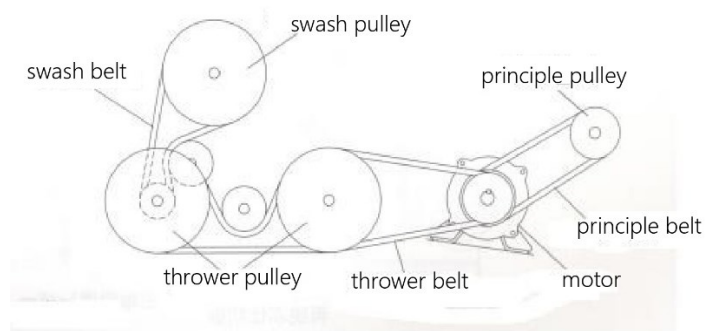
check distance(reach) between thrower case

and thrower wings rubber.



handle 3

check and fix each belt's tension



handle 4

check blocks on exit hole of complete rice.

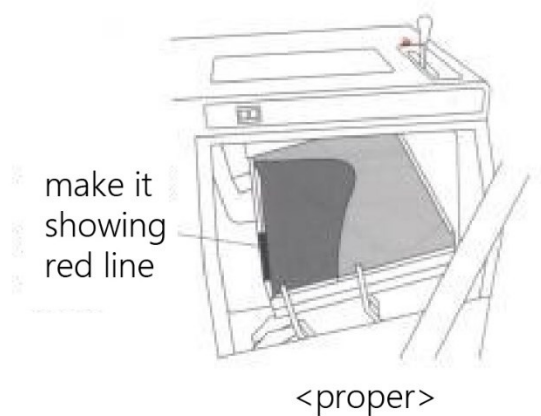
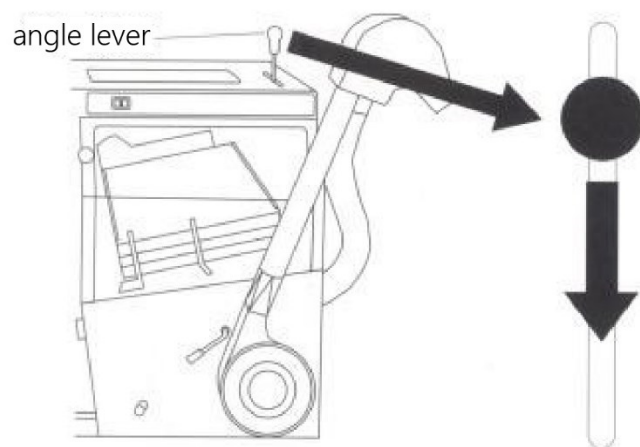
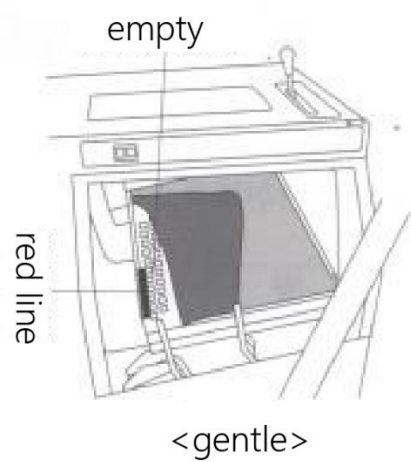
4. Rice plants get mixed in complete rice

cause 1

swash plate angle is gentle so left side is empty.

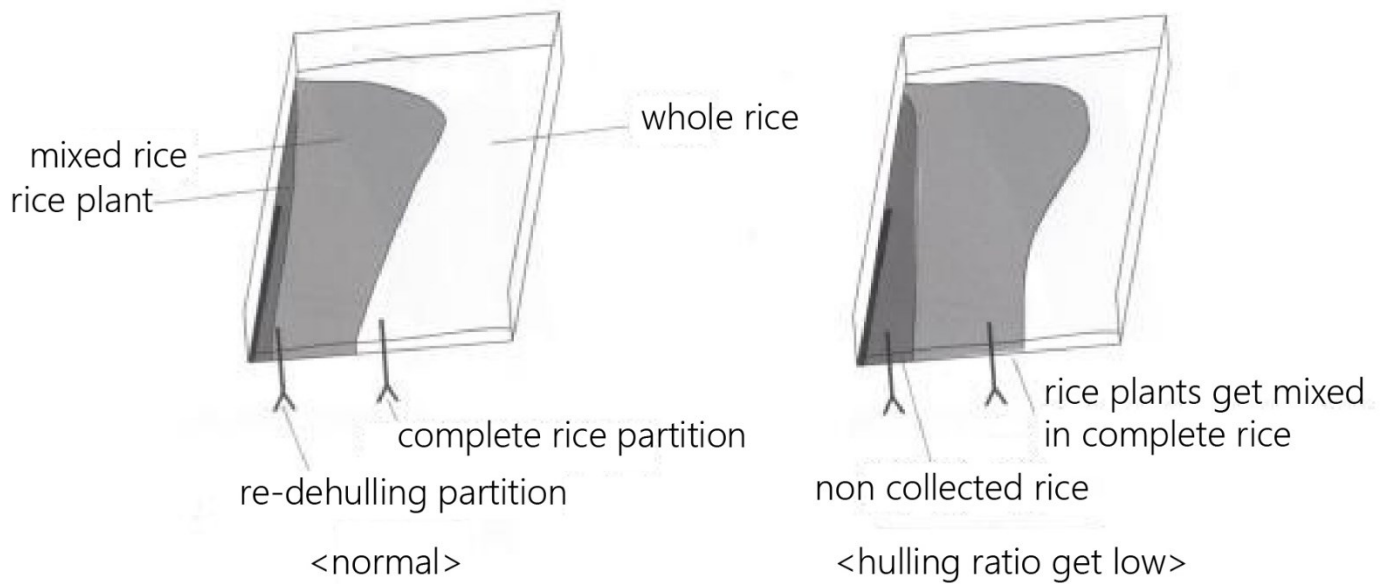
handle 1

Take Angle lever in proper state.



cause 2

hulling ratio is low. Rice plant is going over re-dehulling partition.

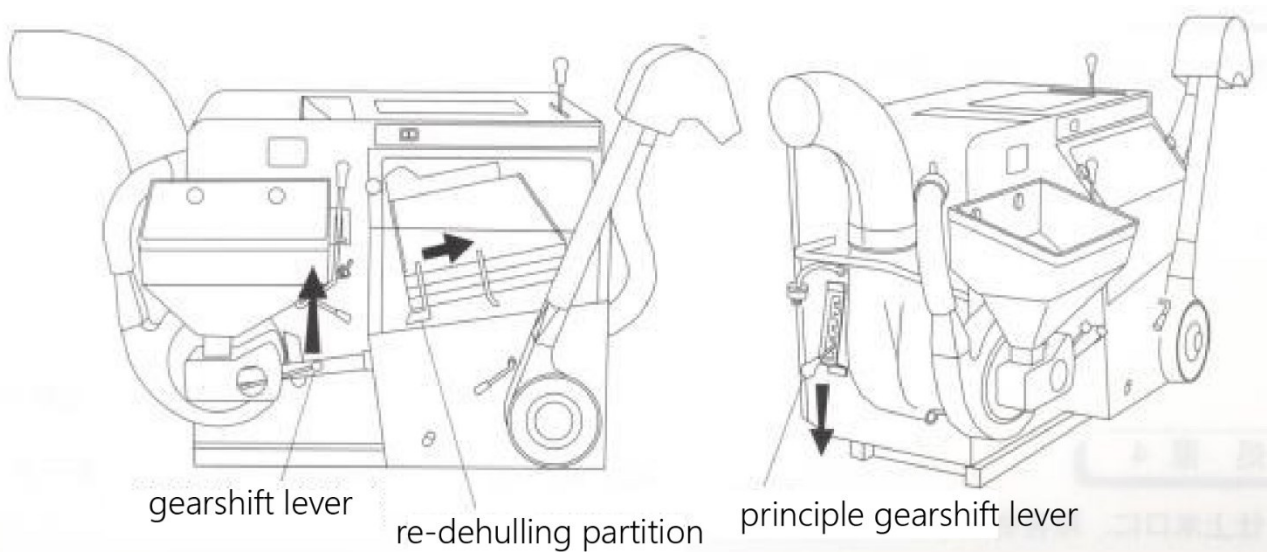


handle 2

take supply control lever up so make rice (plant) supply low

take principle gearshift down so make principle rpm fast.

Control Re-dehulling partition and make returning rice supply much.

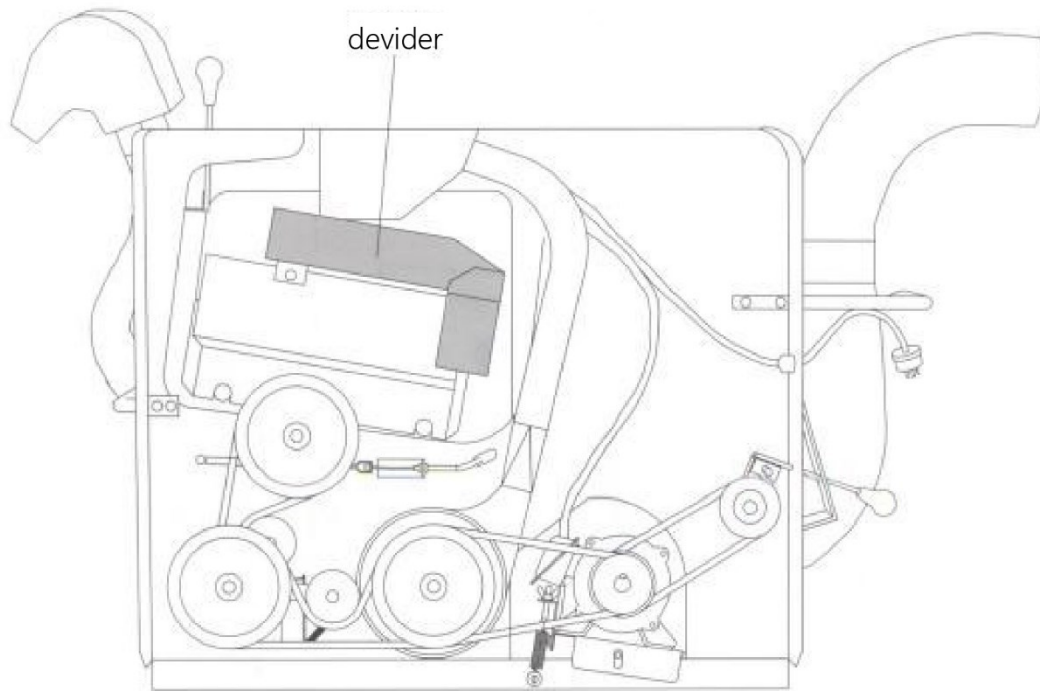


cause 3

blocks(dusts) are stocked in divider

handle 3

eliminate(clean) blocks. (dusts).



cause 4

moisture of rice is high(much)

handle 4

make rice-drying's condition good. (14%~16%)

5. Efficiency doesn't be up (high).

Cause 1

Installation of machine is bad

-not flat (horizontal).

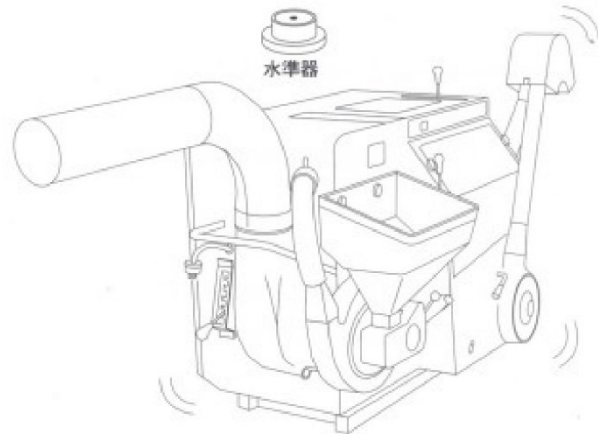
-there is rattle.

Handle 1

Handle 1

Take (install) it right.

(shake it for check rattle)

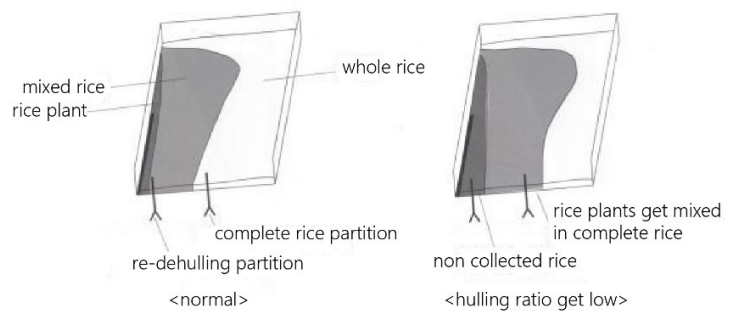


cause 2

hulling ratio is low. Rice plant is going over re-dehulling partition.

handle 2

take principle gearshift down so make principle rpm fast.



Cause 3

Swash plate angle is urgent

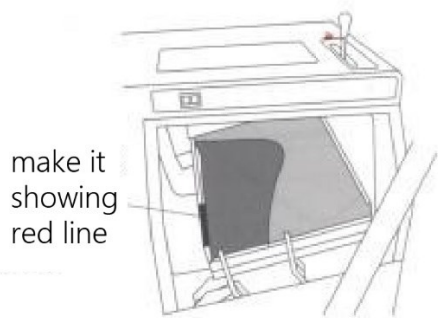
Handle 3

Take Angle lever in proper state(condition).

red line is getting disappear



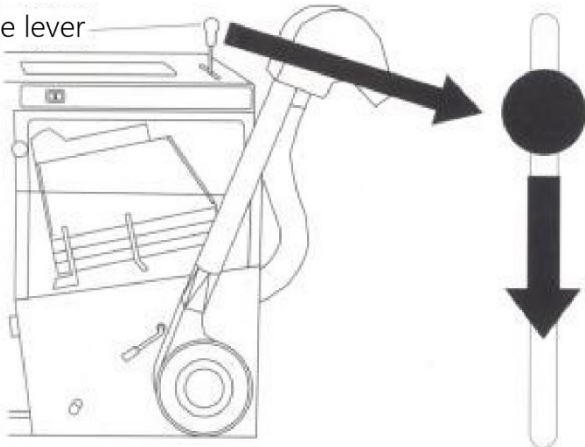
<urgent>



make it
showing
red line

<proper>

angle lever



Cause 4

Condition of Rice supply from hopper is bad.

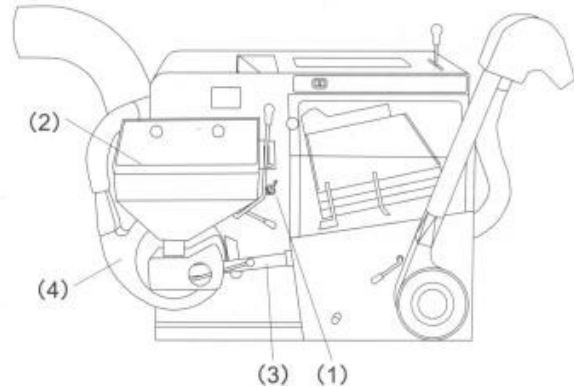
There are many getting mixed in rice with like husks or dusts.

Handle 4

Check bottom of hopper has dusts(blocks) or not.

Check dusts(blocks) in it or not with taking cover of hulling fan case off.

Clean (pull out) dusts are mixed in rice.



Cause 5

Moisture of rice is high.

Handle 5

Make Condition of Drying rice good. (14%~16%)

Way to take hulling fan case off

(1) take hopper right-sided clutch wire off.

(2) take hopper off.

(3) take returning rice pipe off

(4) take cover of hulling fan case off.

Attaching it; on reverse of it

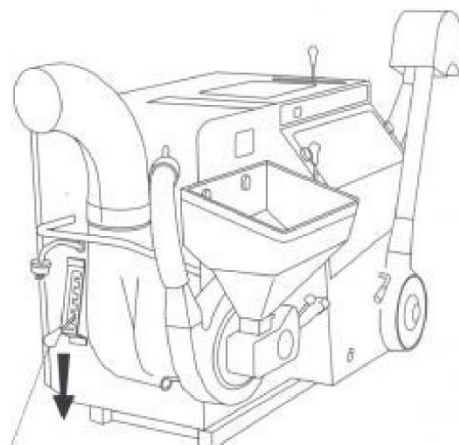
6. There are many damages on complete rice

Cause 1

Principle rpm is fast

Handle 1

Make it slow.



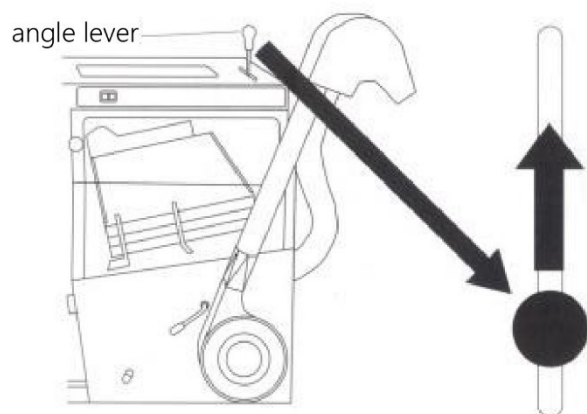
principle gearshift lever

Cause 2

Swash plate angle is urgent so left side gets rolled.

Handle 2

Take Angle lever in proper state.

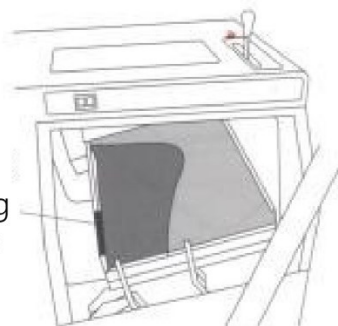


red line is getting disappear



<urgent>

make it
showing
red line



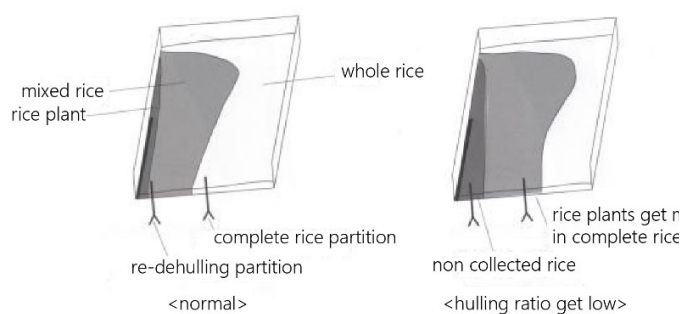
<proper>

Cause 3

Re-dehulling partition is biased in right side.

Handle 3

Take Re-dehulling partition to left side.



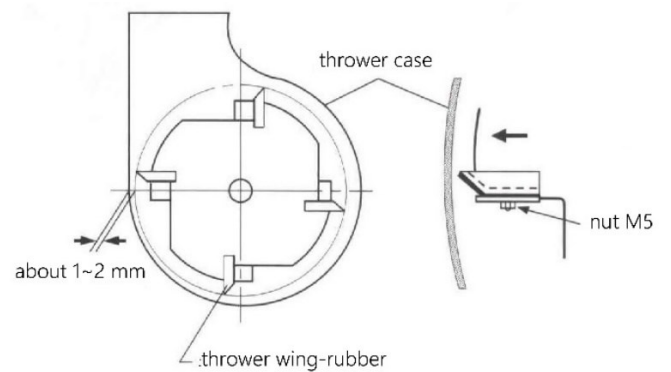
Cause 4

● Distance(reach) between thrower wing and case is little(narrow).

● Thrower wing is worn.

Handle 4

Check distance between thrower case and thrower wing's rubber.



Cause 5

Hulling fan's lining is worn.

Handle 5

Exchange it

Cause 6

Condition of rice is bad.

Handle 6

1 Condition of rice is bad. ----- Make it good (14%~16%)

2 Whole rice (brown rice) is cracked. ----- get principle rpm low

3 Immediate after drying, it is getting brown rice ----- before get brown rice, take it more than 1 day after complete drying.

14. Check/Maintenance with main expendables (consumable supplies)

□ Safe point

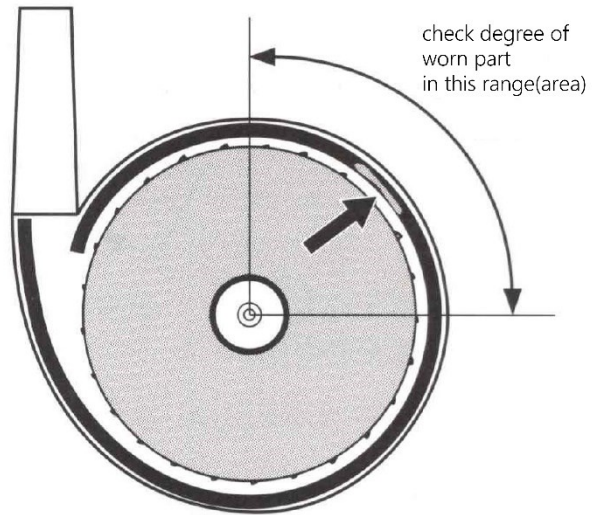
[Warning] when you check, repair and fix it, please pull power plug out of.

[Warning] after check, attach pulled out covers on original state.

1. Hulling pan & lining

Lining is used and is changing right and left in middle of. So, when amounts of whole rice get in under chart, check state of worn out.

Re use it with changing right and left when Most highest worn part's thick(ness) gets 1 Of 2 or 3.



Check time	100 ~ 150 bags(pack)
------------	-------------------------

■ Standards of durability

Hulling fan	lining
300 ~ 400 packs	200 ~ 300 packs

※ Number of durability for lining is representing with using in case changed right and left

[Caution]

Durability of Hulling fan and lining is affected with degree of fever on working whole rice.

If you get it in under conditions, durability can get lower than it is showing.

Especially, in more than 2 things of 1 to 3 phrase are added, sometimes it can be extremely low. So please keep care of it.

- ① immediate After drying, in rice plants are warm yet, do whole rice work. (with after cooling it.)
- ② do whole rice work with over efficiency. (work with proper efficiency)
- ③ do whole rice work with high speed rotation. (work with proper rpm)

2.Exchange tips for hulling fan & lining

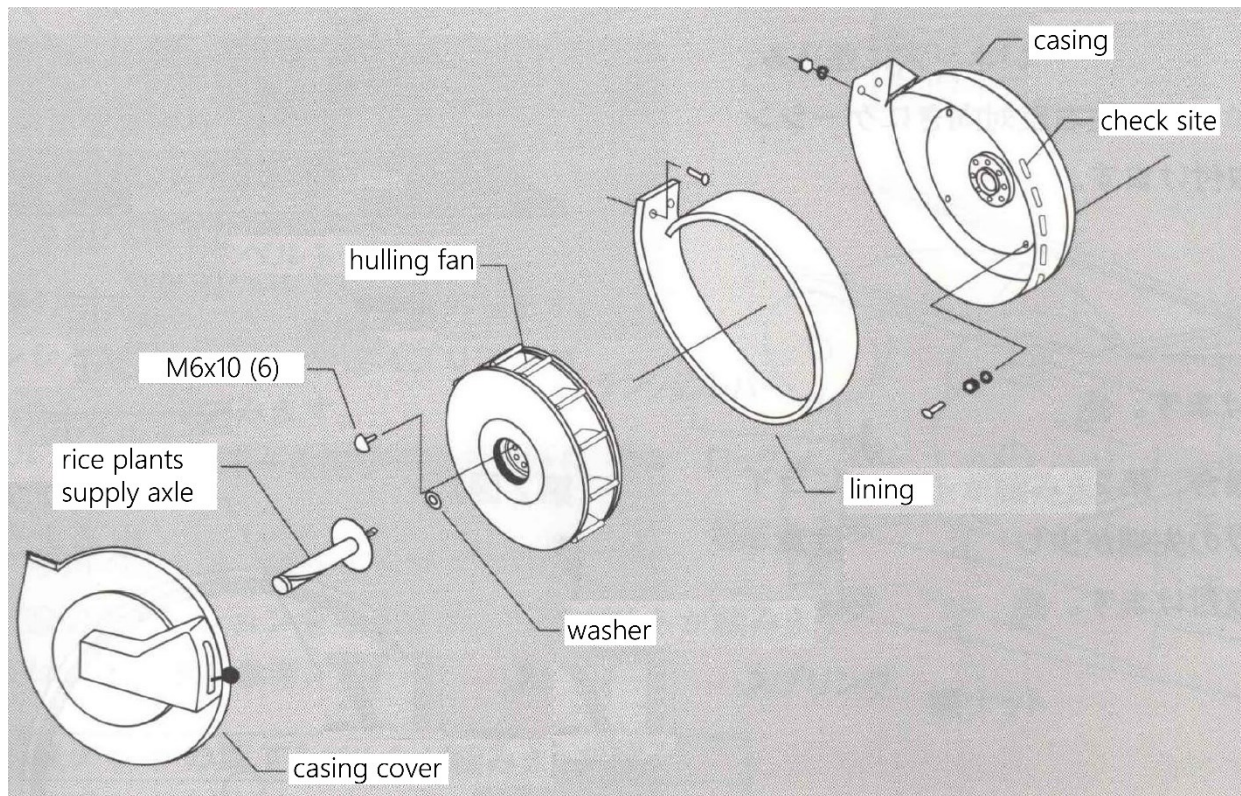
Using tools monkey wrench(spanner) (size 21mm)

(+) driver

Spanner (size 8mm, 10mm)

- (1) take rice hopper off. (2 butterfly bolt)
- (2) take returning rice pipe off.
- (3) take cover of hulling fan case off. (picture 1)
- (4) turn rice supply shaft to right side (left screw) and pull it out from principle shaft with monkey wrench.
- (5) release hulling fan, 6 of m6 x 20 flange combined with principle part and take it out.
- (6) because m5 x 20 screw is attached on hulling fan case so if you release nuts, you can take lining out of(from) case.

Picture 1

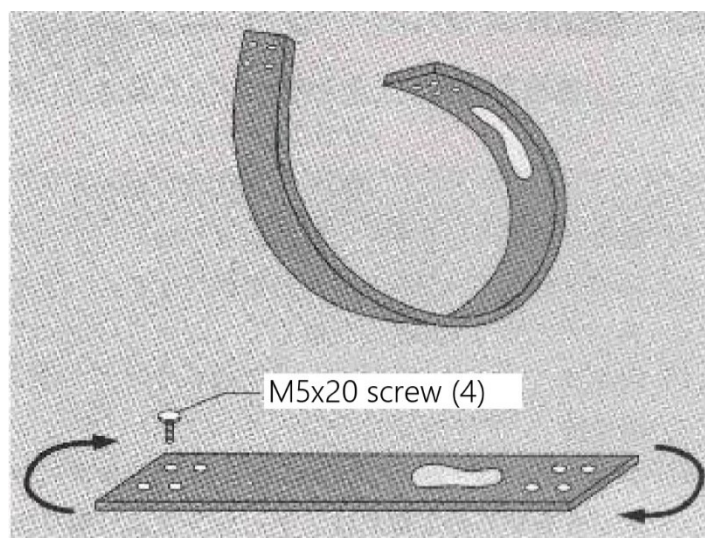


Operate-manage point.

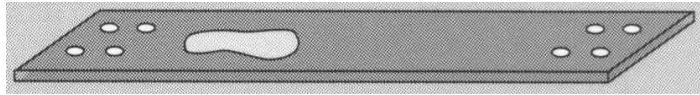
When whole rice is come out from Check out point, it means Lining is worn so hole is open and if you go on in this statement, it must be bad in hulling ratio. Also broken rice are coming out more and more. So please exchange lining to new one.

When Most worn part of lining gets 1 of 2 or 3 for thick(ness), make it reverse on right and left and follow steps in under tips

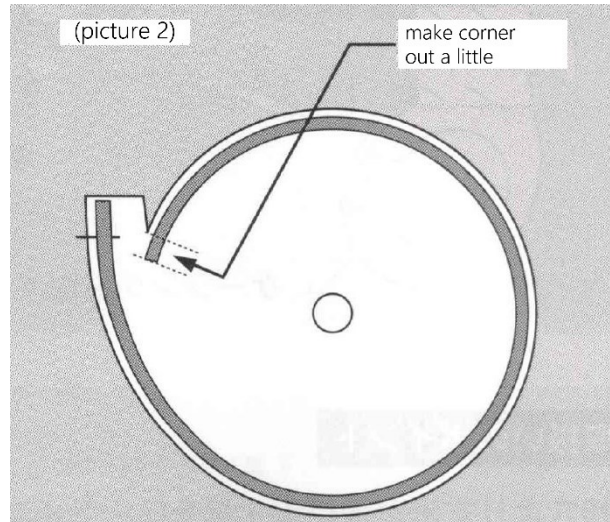
①Take Lining out and take m5x20 screw out.



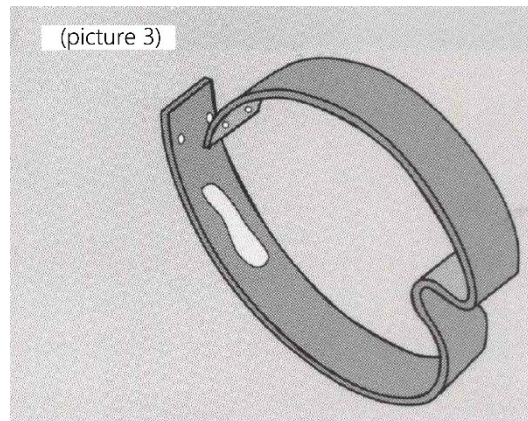
② Take M5x20 screw into new screw hole and attach lining to case in opposite side of right and left.



③ on this case, attach it with lining end-tip can be coming out a little like picture 2 showing.



④ after connect lining to casing on temporary, press lining dent to put it in casing and if you take hand off from it, lining is closing to casing.



3. Check and fix belt

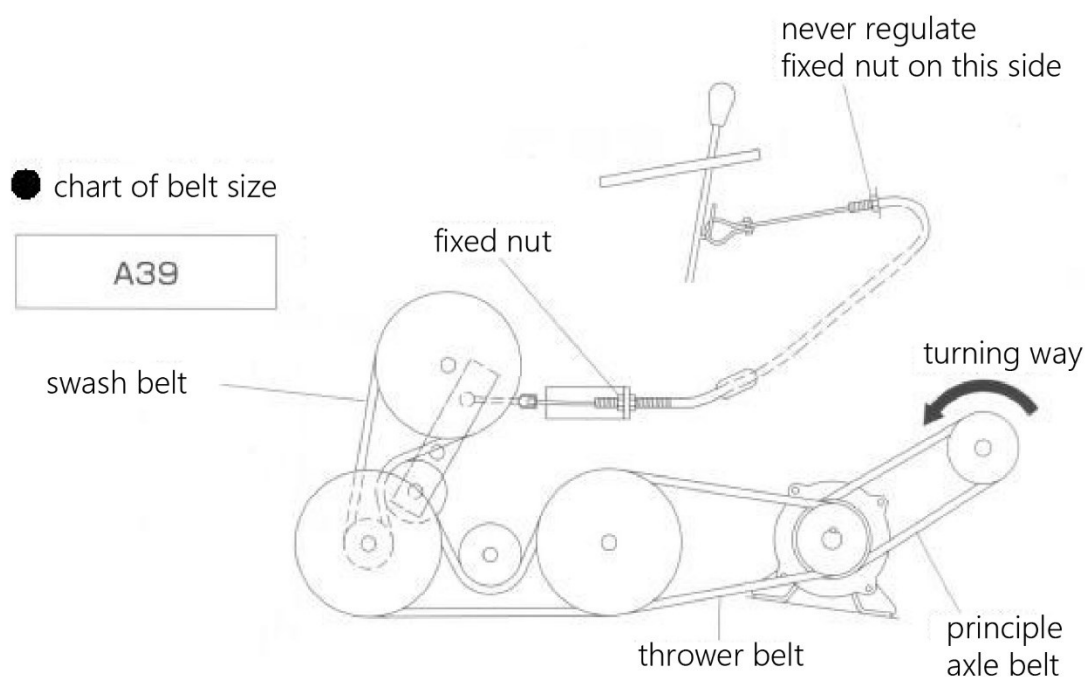
Operate-manage point.

- check cracks in belt and (if it has) exchange it immediately.

(1) Swashing belt

Using tool – wrench(spanner) (13mm)

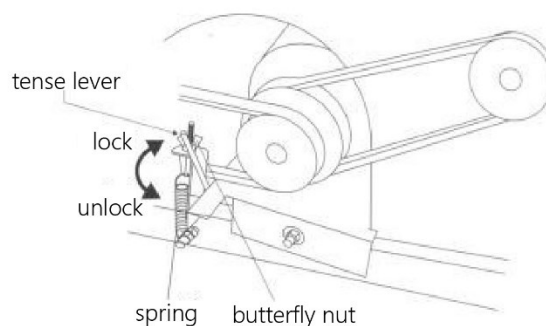
Release fixed nut and regulate swashing belt.



(2) thrower belt

Principle (axis) belt gives proper tense in spring with butterfly nut. Standard is showing on under chart.

On SY10 gearshift pulley case, regulate belt's tension to pulley's width at most wide state. (principle rpm in fastest state.)



● Belt size chart

50 cycle	A32 red
60 cycle	A31 red

butterfly rotate counts	15~20
spring height (mm)	about 19~25

□ Safe point

[Caution] motor is tensed because it is pulled strongly with spring. So when you release belt, care about not being stocked(caught).

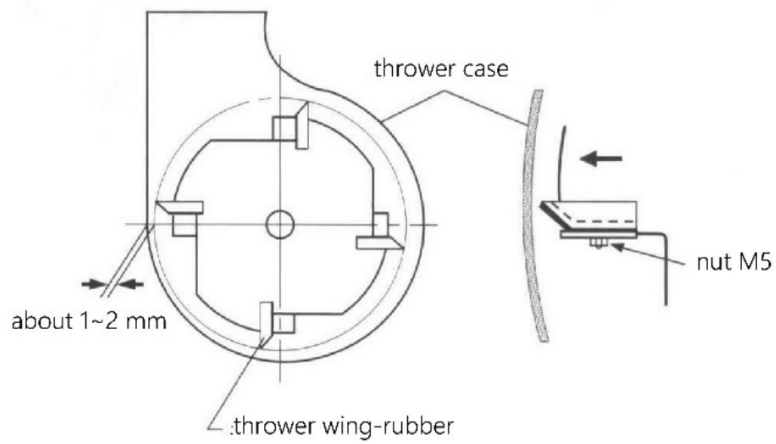
4. Regulate Thrower wing

Using tool ---- wrench(spanner) (size 8mm)

Gap between thrower case and wing is ruled in 1~2mm on bounding spot.

If it is over 1~2mm, it can make carrying grain ability(power) reduced(low) and it causes stuck or damage.

Regulate 2 nuts of m5 loose.



15. Peruse

■ Consume things

name	Parts cord	number	Standard of durability	note
Hulling fan	2451160000	1	250~400 bags	
Lining	1731190000	1	150~300 bags	
V belt A31 red	B-VA31R	1	150~200 hours	60Hz
V belt A32 red	B-VA32R	1	150~200 hours	50Hz
V belt SA75	B-VSA75	1	150~200 hours	60Hz
V belt A39	B-VA39	1	150~200 hours	50Hz
Rubber elbow	1961270100	1	~500 bags	
Thrower wing	1441441100	8	200~250 hours	

※ SA belt can be replaced and used to LA belt