T5S TABLESAW
MTST5S-0136 MANUAL

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Table of Contents

1. INFORMATION

1-1 GENERAL INFORMATION

- OAV equipment & tools, inc. specialize supplying table saws. This machine has complete cast iron trunnion bracket instead of sheet metal and direct dust collection outlet. If you have any comments to improve this saw, please don't hesitate to contact us through your agent.
- HSS (High Speed Steel) saw blade should not be used. The saw blade made in accordance with EN847-1: 1997 should be used on the machine.

  Generally, this machine will be installed on the following conditions:

  1) Supply voltage: 0.9 - 1.1 nominal supply voltage
  2) Source frequency: 0.99 - 1.01 nominal frequency
  3) Ambient temperature: 5°C - 40°C.
  4) Altitude: shall be at altitudes up to 1000m above mean sea level.
  5) Relative humidity: not exceed 50% at 40°C.
  6) Atmosphere: Free from excessive dust, acid fume, corrosive gases and salt.
  7) Avoid exposing to direct sunlight or heat rays which can change the environmental temp.
  8) Avoid exposing to abnormal vibration.
  9) Electrical equipment shall withstand the effects of transportation and storage temperature within a range of -25°C to 55°C and for short periods not exceeding 24 hours at up to +70°C.
- This machine was designed for certain applications only. We strongly recommend that this machine **NOT** be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application **DO NOT** use the machine until you have had detail instruction from your dealer.

1. INFORMATION

1-2 SAFETY RULES

For your own safety read instruction manual before operating

1) **Read instruction manual before operating the machine for your safety.**
   Person(s) who operate the machine must be trained, read and understood the safety measures, and possess the ability to obey and execute the regulation stated in this manual. Learn the machine's application and limitations as well as the specific hazards peculiar to it.
2) **Ground all machines.**
   It should make sure the "PE" terminal being connection before machine operating.
3) **Keep guards in place and working area clean.**
   Keep guards in place and in working order.
4) **Don't use in dangerous environment.**
   Don't use machines in damp or wet locations, or expose the machine to rain.
   Please provide a suitable illumination around the machine for safe operation.
5) **Keep children and visitors away.**
   All children and visitors should be kept at a safe distance from work area.
6) **Store idle tools (saw blades).**
   When not in use, saw blades should be store in a dry, high or locked up place, out of reach of children.
7) **Wear proper apparel.**
   Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry that may get caught in moving parts. Wear protective hair covering to contain long hair.
   Please wear gloves when replacing the saw blade and wear eye-shield/ ear-shield when operating the machine.
8) **Stay alert.**
   Watch what you are doing. Do not operate machine when you are tired.
9) **Don't force machines.**
   The machine will do the job better and be safer at the rate for which it was designed.
10) **SHUT OFF** isolated the power before leaving the machine.
    Shut off the power and conduct only when the machine is stationary, inspection, maintenance, adjustment and cleaning.
11) **No smoking!!**
    Don’t smoking while operate machine.
12) **Have your machine repaired by a qualified person.**
    Repairs should be carried out by qualified-persons using original spare parts; otherwise this may result in considerable danger to the user.

1. INFORMATION

13) Check damaged parts.

If a guard or other part that is damaged it should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced

14) Disposing of wasted material

Disposing wasted material and wasted lubricating oil as per the local regulation.

15) Fire extinguisher:

Workshop should have a fire extinguisher or other devices according to the local safety regulations.

16) Correct position for operation.

Please stand in front of machine for operation.

17) Use recommended ancillary equipment.

Consult the instruction manual of drawing for recommended accessories.

The use of improper accessories may cause risk of injury to persons.

If ancillary equipment is removed the original guards or safety devices shall be replaced.

OAV and our authorized agency are responsible for a future connection of the machine with ancillary equipment only if we ourselves have designed such connection.

18) Reduce the risk of unintentional starting.

Make sure switches of control panel are OFF position before operating.

19) Never leave machine running unattended. Always turn power off. Don't leave machine until it comes to a complete stop.

20) Make sure machine is disconnected from power supply:

Make sure machine is disconnected from power supply before started the normal maintenance and service, adjustment, or repairing.

21) Reaction with emergency situation:

This machine provides two emergency buttons. One is self-latching push-button on the control panel. Other emergency buttons are position on the front side on the machine near in-feed working area. The emergency button is colored red and yellow background. After emergency stop, follow the normal start up procedure to obviate the hazard.

22) Never open the protective cover or the machine door while the machine is running.

23) When the machine is malfuncting, shut it down and correct the fault before using the machine.

24) Wear ear protectors (plugs or muffs) during operation.

25) Remove adjusting keys and wrenches before turning machine on. Be sure that the keys

and adjusting wrenches have been removed and all the nuts and bolts are secured.

26) After switching off the saw motor, allow the saw blade to stop freely. Never attempt to stop the blade by hand or other objects.

27) Only make complete cuts. Ensure that the width of the item being cut is not too small.

28) The max. Rotation speed marked on the saw blade must not be exceeded.

29) The machine shall be not loaded with more than one work piece at a time.

30) During cutting operation the machine will generate harmful dust. User must install exhaust system for the extraction of harmful dust.

31) Use correctly sharpened saw blades. Observe the max. Speed marked on the saw blade.

32) Report faults on the machine, including guards or saw blades, as soon as they are discovered.

33) Adopt safe procedures for cleaning, maintenance and remove of chips and dust. Regularly clean the machine of dust and chips to avoid the risk of fire.

34) Follow manufacturers' instructions for use, adjustment and repair of saw blades.

35) Ensure that any spacers and spindle rings used are suitable for the purpose as stated by the manufacturer.

36) Refrain from removing any off-cut or other part of the work piece from the cutting area whilst the machine is running.

37) Ensure that guards and other safety devices necessary for machine operation are in position, in good working order and properly maintained.

38) Safety working practice.

a) Use of push block and push stick. Push sticks should be used to avoid working with hands close to the saw blade. Push blocks should be between 300mm and 400mm long, 80mm to 100mm wide and 15mm to 20mm deep. Push blocks should be used when cutting small work pieces and in circumstances where it is necessary to push the work piece against the fence.

b) Selection of saw blade and riving knife. The operator should only select saw blade of a diameter and thickness suitable for the machine.

c) Selection of riving knife slot. The riving knife guiding slot should be no more than 0.5mm wider than the riving knife guiding elements.

d) Fixing of saw blade to spindle. Where the spindle diameter is less than the saw blade bore diameter, flanged bushes provided by the machine manufacture should be used to make up the difference. The use of loose rings or bushes is not permitted.

e) Lighting. It is important to provide adequate lighting around the machine.

39) Guide the work piece along the rip fence and through the rotating saw blade, using the push stick if necessary. When the push stick becomes damaged replace it.

40) Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.

41) **THE DUST GENERATED BY CERTAIN WOODS AND WOOD PRODUCTS CAN BE INJURIOUS TO YOUR HEALTH.** Always operate machinery in well-ventilated areas, and provide for proper dust removal. Use wood dust collection systems.

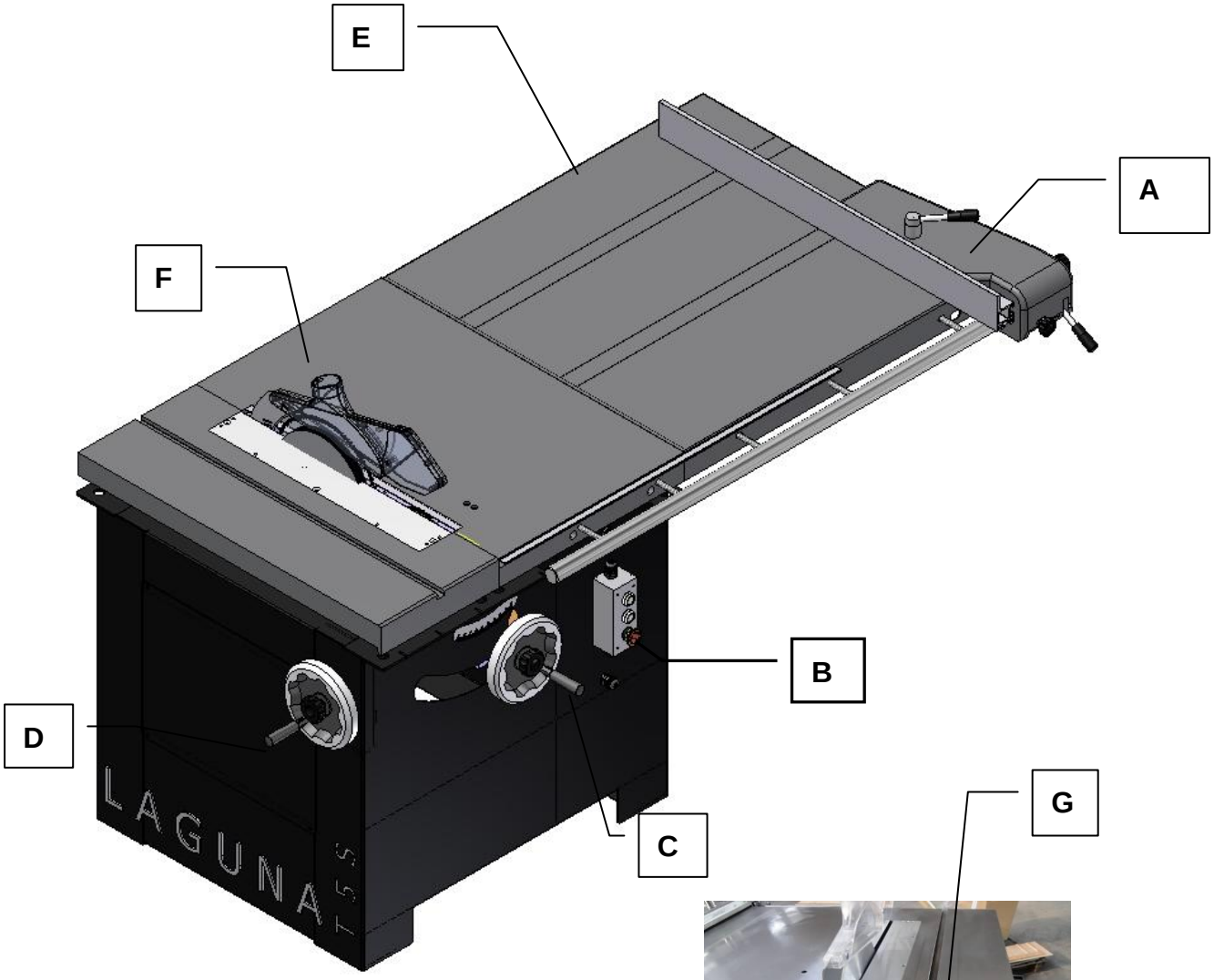
2. MACHINE INFORMATION

2-1 SPECIFICATIONS

ITEM	MODEL
Extension table (rear)	952X896mm
Table size	896x1850 mm
Round rail	§ 40
Main saw blade (Max.)	305mm
Main saw bore	25.4mm
Max. cutting height with blade at 90°	90mm
Max. cutting height with blade at 45°	64mm
Main motor power (1ph)	5HP(3.75 Kw)
Main blade speed	4000rpm
Scoring blade motor	3/4HP (0.56KW)
Scoring blade speed	8000RPM
Cuting width	1300mm
Cuting width adjustment	Manual
Main saw blade tilting adjustment	Manual (0° ~ 45°)
Main saw height adjustment	Manual
Scoring saw height adjustment	Manual
Saw guard	overhead guard as option
Crosscut fence	Manual
Dust collection system	120mm/64mm
N.W./G.W./MEAS. (Machine)	312/382KGS (1450x1150x1090mm)
Ctn QTY:	16/32 sets

2. MACHINE INFORMATION

2-2 MAIN FEATURE

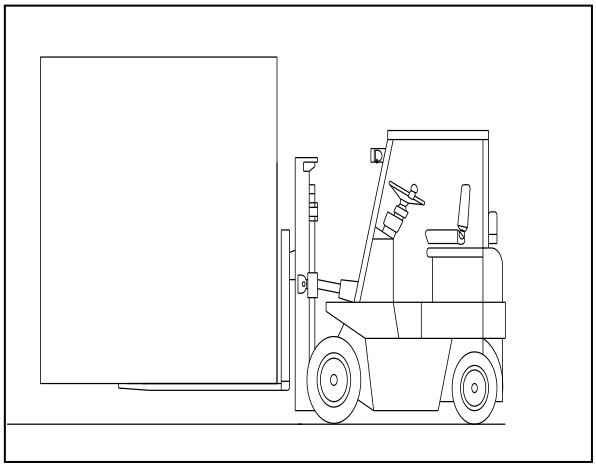


A. RIP FENCE
B. MAIN SWITCH
C. BLADE UP AND DOWN HAND WHEEL
D. BLADE TILTING HAND WHEEL
E. EXTENSION TABLE
F. STANDARD GUARD
G. MITER GAUGE

3. ASSEMBLY & SETUP

3-1 SETUP SAFETY

1. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
2. Make certain the machine is properly grounded.
3. Provide adequate space and surrounding for work area with non-glare, overhead lighting. Keep the floor around the machine clean and free of scrap material, oil and grease.
4. This model is a heavy-duty machine that weight more than 300kgs. Serious personal injury may occur if safe moving methods are not followed. To be safe, you will need assistance and power equipment when moving the shipping crate and removing the machine from the crate.



3. ASSEMBLY & SETUP

3-2 UNPACKING

Please check the packing condition after receiving the items. If they are intact, the operators can start to inventory and assemble the machine parts.

Packing List

1. Machine frame unit x1 wooden
2. Assembly parts for miter gauge+ tools + rip fence unit x1
3. Assembly parts for extension table x1
4. Assembly parts for fence plate x1
5. Assembly parts for round rail x1

3. ASSEMBLY & SETUP

3-3 EXTENSION TABLE

The machine extension table prevents the work piece from tipping after cutting and increases the working safety.

Follow the steps below to fit the extension table:

1. Remove the screws **A** (Fig.3-3.1) from the side of the cast iron table, position the extension table over the holes on the cast iron table and secure it with the screws. If necessary, correct the alignment to cast iron table and use the adjustment screws **B (**Fig 3-3.1b) under the extension table.
2. Check that the extension table is level and parallel with the main table by placing the fence **E** (see Fig. 3-4.1) on both cast iron table & extension table as Fig. 3-3.1a. The extension table must be **Level and parallel** with the cast iron table. If it has to be lower, the acceptable distance is less than 0.2mm.
3. Adjust [B] screws to adjust the extension table parallel with the extension table.

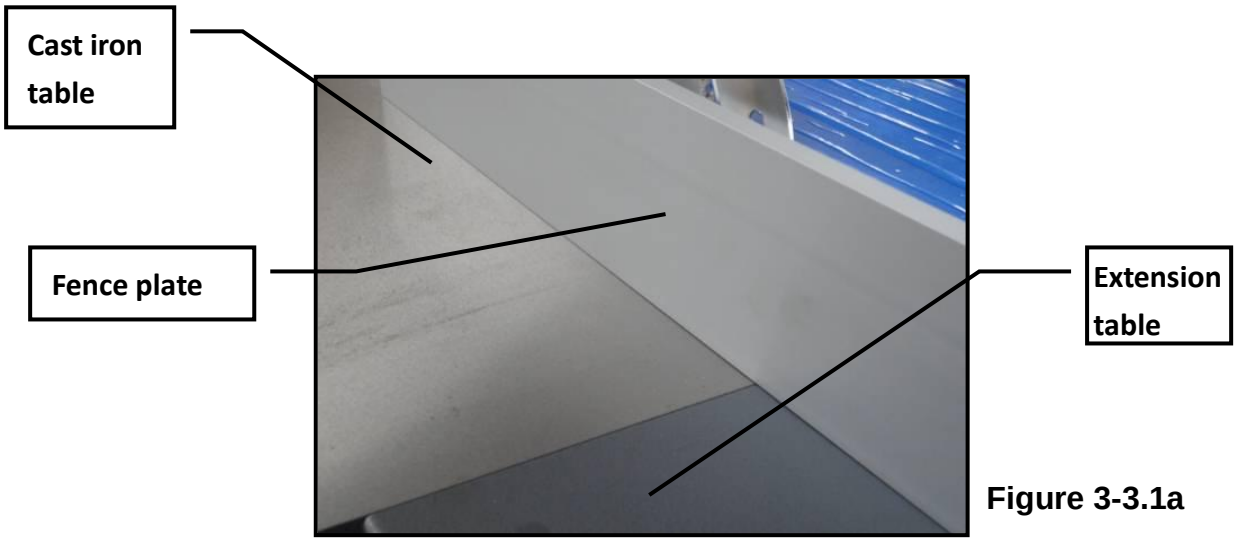


Figure 3-3.1a

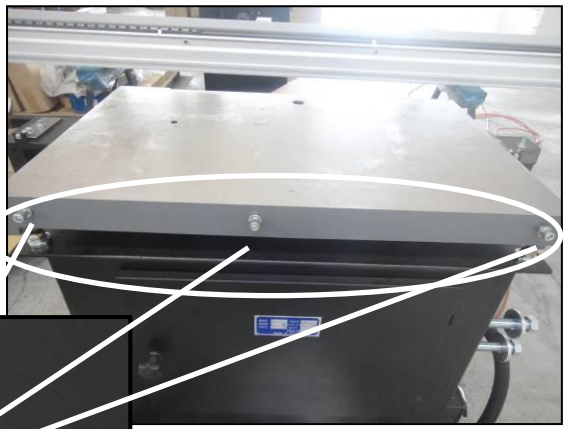


Figure 3-3.1

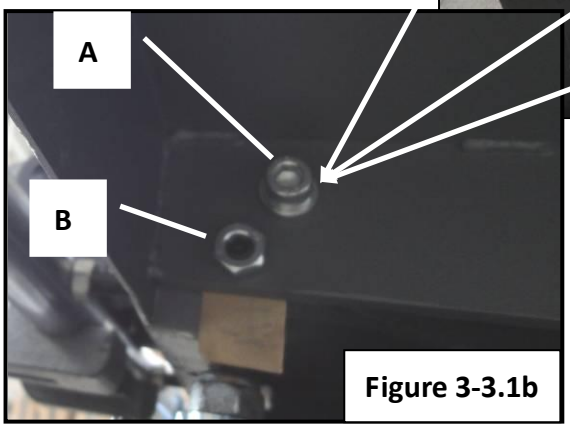


Figure 3-3.1b

3. ASSEMBLY & SETUP

3-4 RIP FENCE

1. Insert the studs G (Fig. 3-4.1a) of the round bar into the position **A** (Fig. 3-4.1) of cast table and extension table. Then put the washer and nut at the back side of the table, and fasten it in position (there are 4 studs for fixing the round bar).
2. Mount the fence scale (ruler) to the edge of the cast table and extension table. Fasten the 3 sets of screws & washers **H** (Fig. 3-4.1b) .
3. Slide rip fence seat **D** (Fig. 3-4.1) into round bar through metal locker, then rotate it **90° counter clockwise.**

   *Note: Move handle **B** (Fig. 3-4.1) up to release rip fence, down to lock the rip fence.*
4. Mount the fence **E** (Fig. 3-4.1) to the slide rip fence seat.

   Notice: Before operation, the 0 mark on the rip fence scale (ruler) must be aligned with the right side of the blade to ensure accuracy.

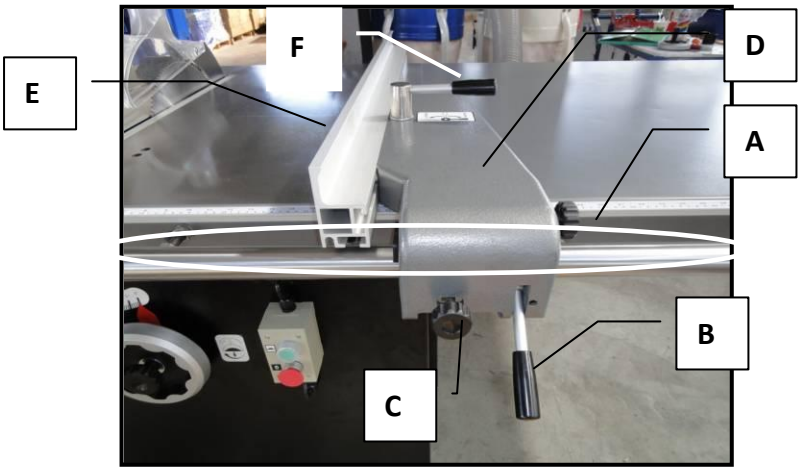


Figure 3-4.1

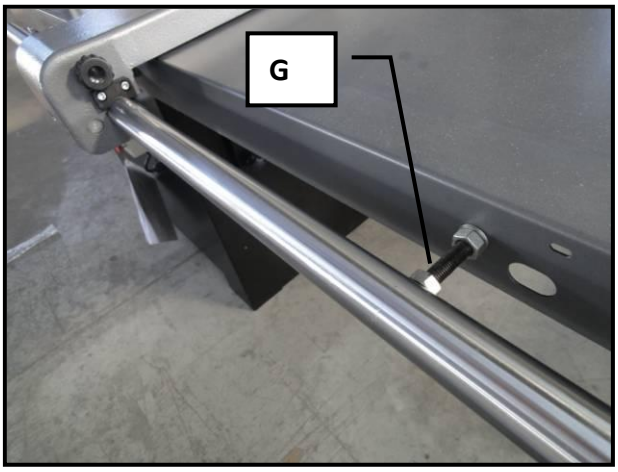


Figure 3-4.1a

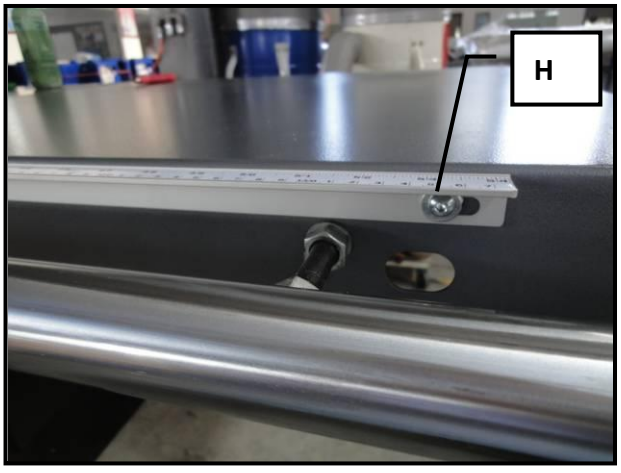


Figure 3-4.1b

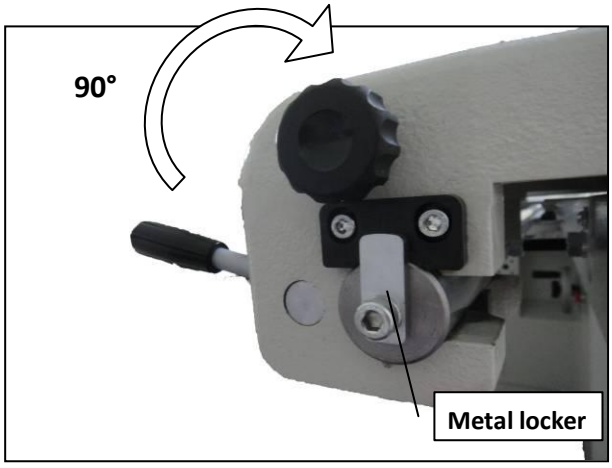


Figure 3-4.1c

3. ASSEMBLY & SETUP

5. Check if the bottom edge of the fence **E** (Fig. 3-4.2) rests on the top surface of the table.

*Note: If the fence rests on the table, it will scratch the table surface. So, the operator has to readjust the ride height of rip fence unit by adjust screws **F** (Fig. 3-4.2a&b) until it is just clear of the table. Ensure that the fence has to be **parallel** to the tables.*

6. Retighten the cam bolt and check the ride height. Re-adjust if necessary.

7. Tighten the lever **D** (Fig. 3-4.2).

Fence scale alignment

Before operation, the 0 mark on the rip fence scale must be aligned with the right side of the blade to ensure that the rip fence measurements will be accurate.

To align the fence scale with the blades:

(1) Disconnect the power source.

(2) Set the blade to 0° with the tilting wheel (90° with the cast iron table).

(3) Raise the saw blade up as far as it can go.

(4) Tighten the lever **A** and knob **B** (Fig. 3-4.2) to clamp the rip fence.

(5) Measure the distance **C** *(Fig. 3-4.2)* and check if the distance value is matched to the value on scale rule.

*Note: the lever D (Fig. 3-4.2) must be tighten to ensure the fence **E** (Fig. 3-4.2) is locked in position.*

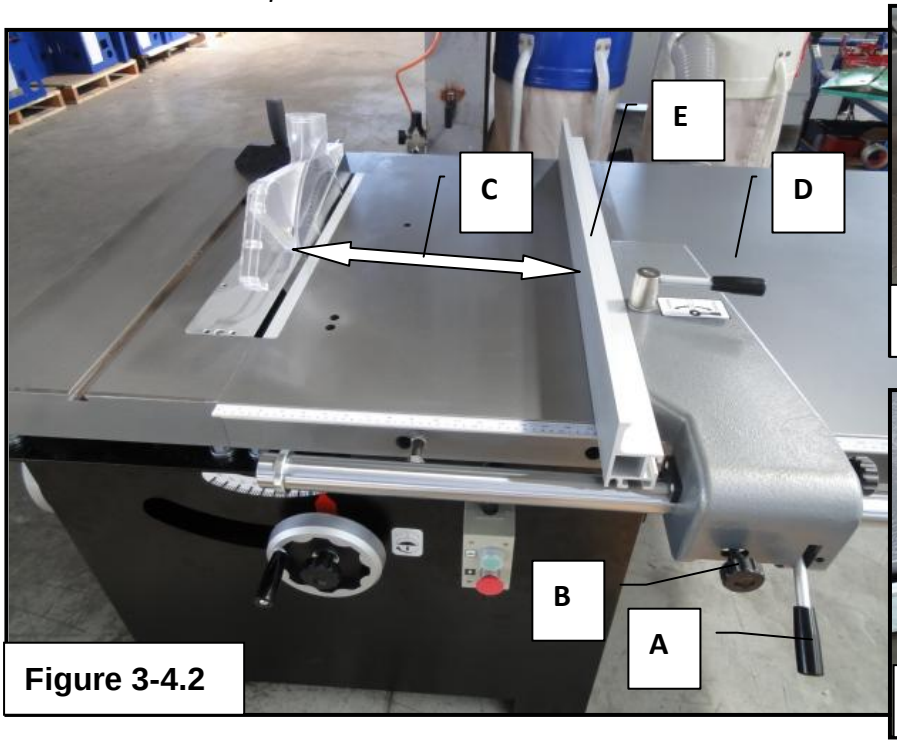


Figure 3-4.2

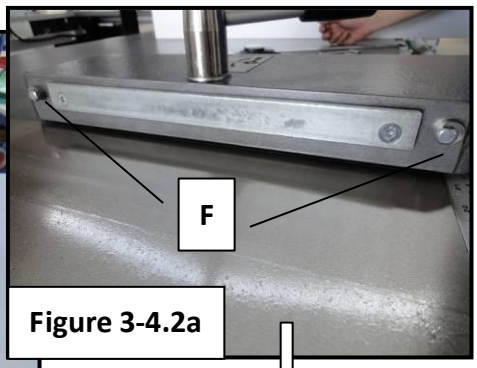


Figure 3-4.2a

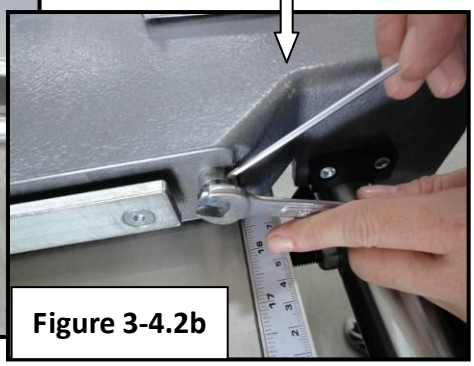


Figure 3-4.2b

3. ASSEMBLY & SETUP

3-5 FITTING OR CHANGE SAW BLADE & RIVING KNIFE

I. FITTING THE SAW BLADE

This machine is designed to accommodate the saw blade with the size up to 305mm, but every time you change blade, the riving knife must also to be adjusted to match the size of the blade installed.

Note: please wear gloves during installation or replacing of saw blades.

1. **Disconnect the power source.**
   NOTE: Serious personal injury could occur if the machine is connected to the power.
2. Move the blade tilt to 0° and raise the saw blade as high as it can be adjusted.
3. Push the saw guard up and loosen the fixed bolts. Remove the throat plate.(Fig.3-5.1 & 3-5.2)
4. Open the red cover, R (Fig. 3-5.2a).
   Note: the red cover is used as a guard for protecting operators from injury.

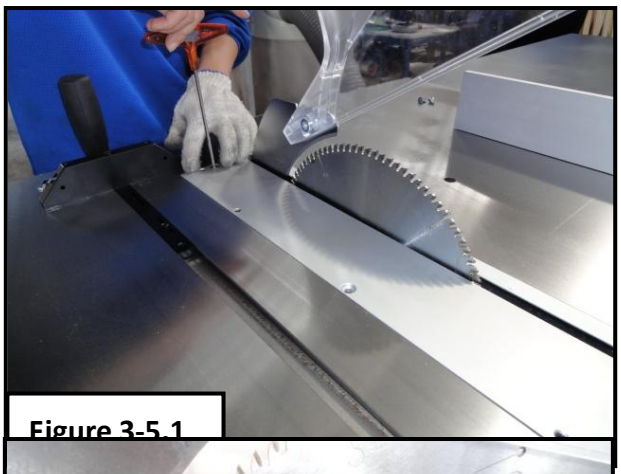


Figure 3-5.1

Figure 3-5.2

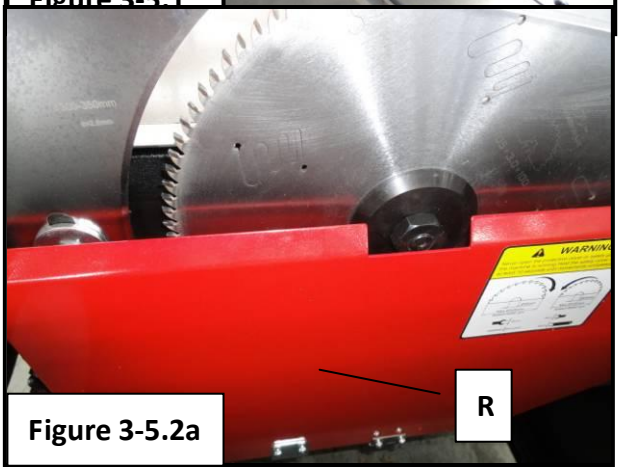


Figure 3-5.2a

3. ASSEMBLY & SETUP

5. Insert the T-wrench to hole **A** (Fig. 3-5.3) to lock the main saw spindle. Then use wrench to loose the nut and washer, remove the saw blade (Fig. 3-5.4) and fit the new saw blade.
6. Tighten the nut and washer (Fig. 3-5.4) and close the red cover R (Fig. 3-5.2a).
7. Reassemble the throat plate, move the blade guard back into its original position.

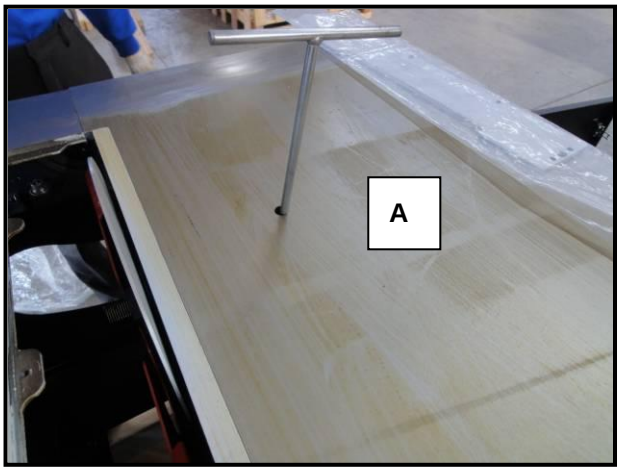


Figure 3-5.3

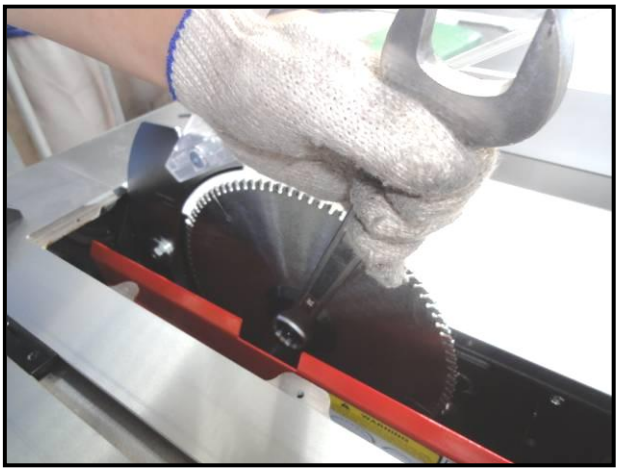


Figure 3-5.4

3. ASSEMBLY & SETUP

II. DADO FITTING

1. **Disconnect the power source.**
   NOTE: Serious personal injury could occur if the machine is connected to the power.
2. Move the blade tilt to 0° and raise the saw blade as high as it can be adjusted.
3. Push the saw guard up and. Take off the throat plate.(Fig.3-5.1 & 3-5.2)
4. Open the red cover, (Fig. 3-5.2a).
   Note: the red cover is used as a guard for protecting operators from injury
5. Insert the T-wrench to hole **A** (Fig. 3-5.3) to lock the main saw spindle. Then use wrench to loose the nut and washer then fit the 1st blade (Fig. 3-5.5)
6. Fit cutter. (Fig 3-5.6)
7. Fit the 2nd blade. (Fig 3-5.7)
8. Tight the nut and washer on then close the red blade guard cover.
9. Place the Dado throat plate as Fig. 3-5.8 to finish the fitting process.

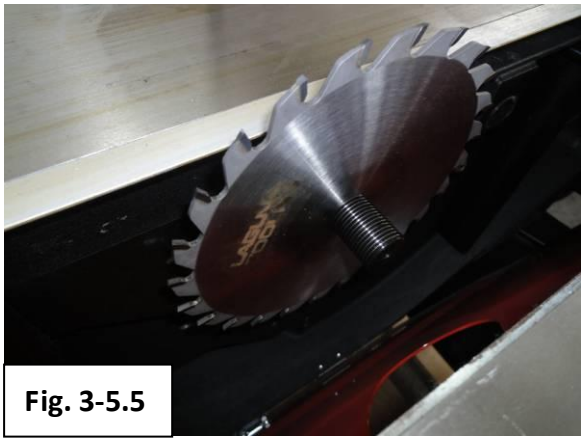


Fig. 3-5.5

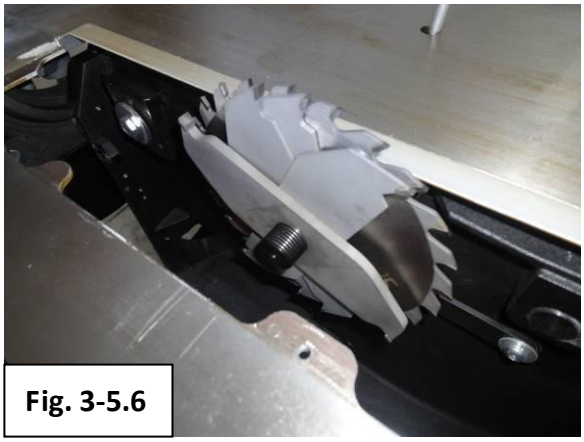


Fig. 3-5.6

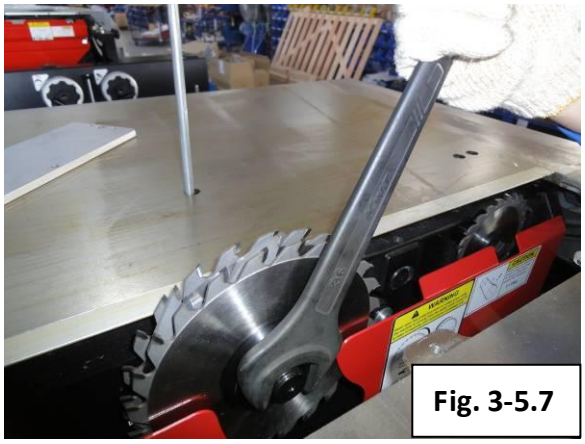


Fig. 3-5.7

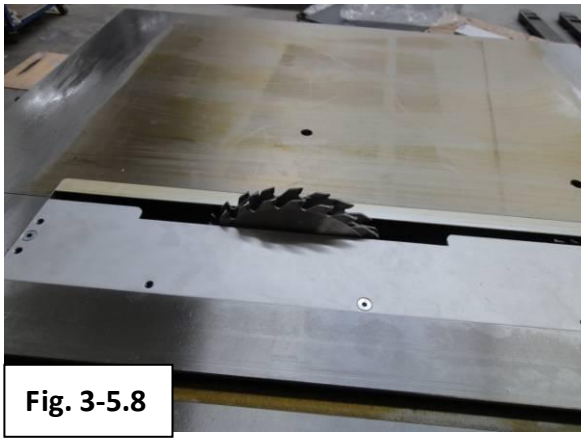


Fig. 3-5.8

3. ASSEMBLY & SETUP

III. RIVING KNIFE FITTING

1. Fit the riving knife as Fig. 3-5.9 and tighten the screw **B**.
   Note: Make sure the riving knife is installed and aligned with the blade. It is very important that the riving knife is correctly set.
2. For smooth operation, the distance of riving knife to the tooth of saw blade must no exceed 8mm, it has to be approx. **3mm higher**. (Fig. 3-5.9a)

Figure 3-5.9

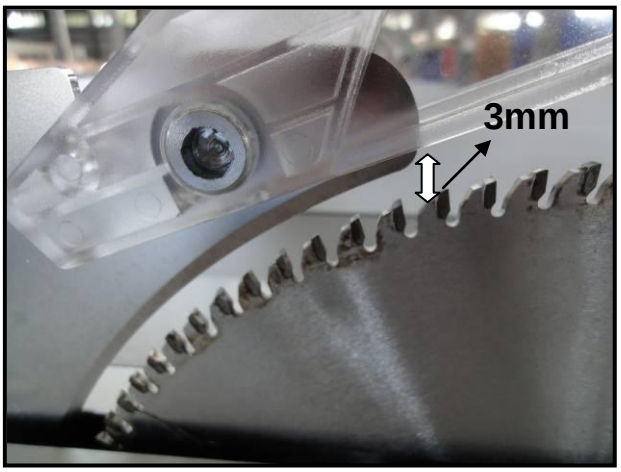


Figure 3-5.9a

3. ASSEMBLY & SETUP

3-6 FITTING OR CHANGE SCORING BLADE

1. Disconnect the machine from the power source, or the serious personal injury could occurred.
2. Push the saw guard up and loosen the throat plate fixed bolts. Remove the throat plate.(Fig.3-6.1&3-6.2)
3. Open the red cover **R** (Fig. 3-5.2a).
4. Insert the wrench to fix the spindle of scoring blade. (Fig. 3-6.3)
5. Loosen the nut **A** and washer **B** (Fig. 3-6.3) then take the scoring blade out.
6. Replace it with new one
7. Tighten the washer **B** and nut **A** (Fig. 3-6.3) to fix the saw blade.
8. Take the wrench out and close the red cover (Fig. 3-5.2a)
9. reassemble the throat plate.

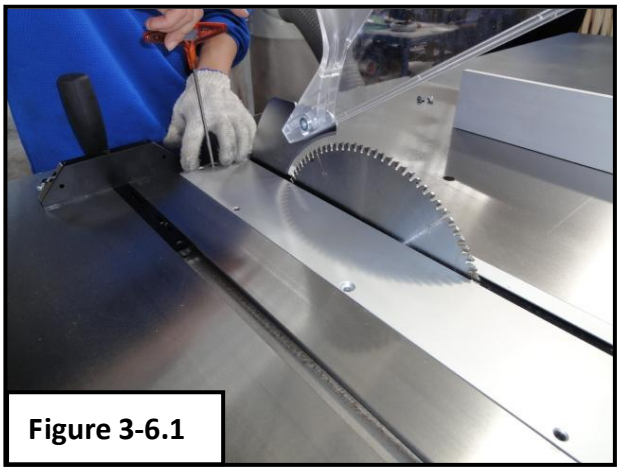


Figure 3-6.1

Figure 3-6.2

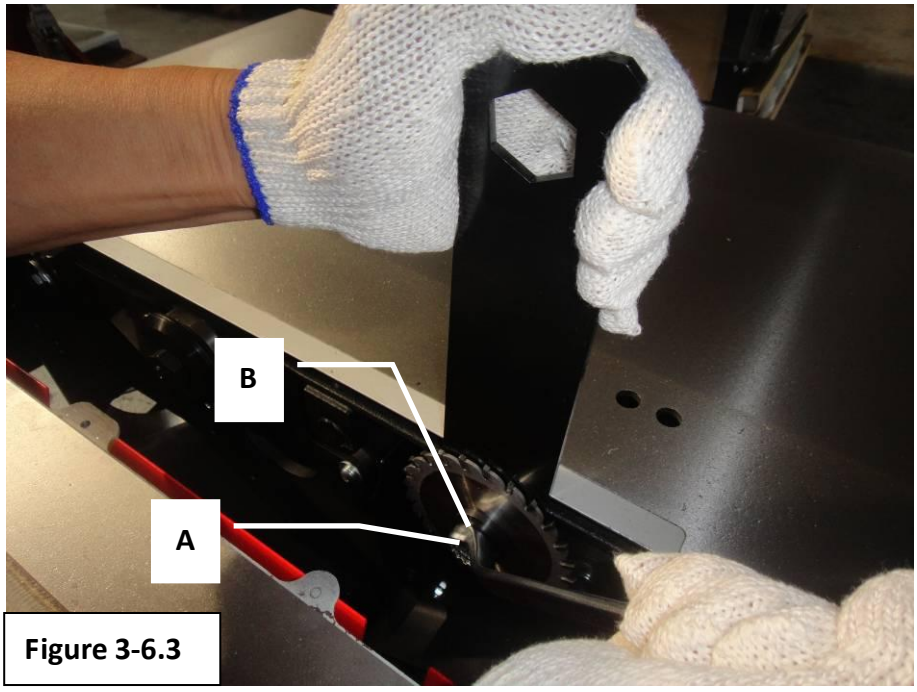


Figure 3-6.3

3. ASSEMBLY & SETUP

3-7 SAW BLADE GUARD

1. Install the standard saw blade guard by tightening the screw A (Fig. 3-6.1) on the riving knife.

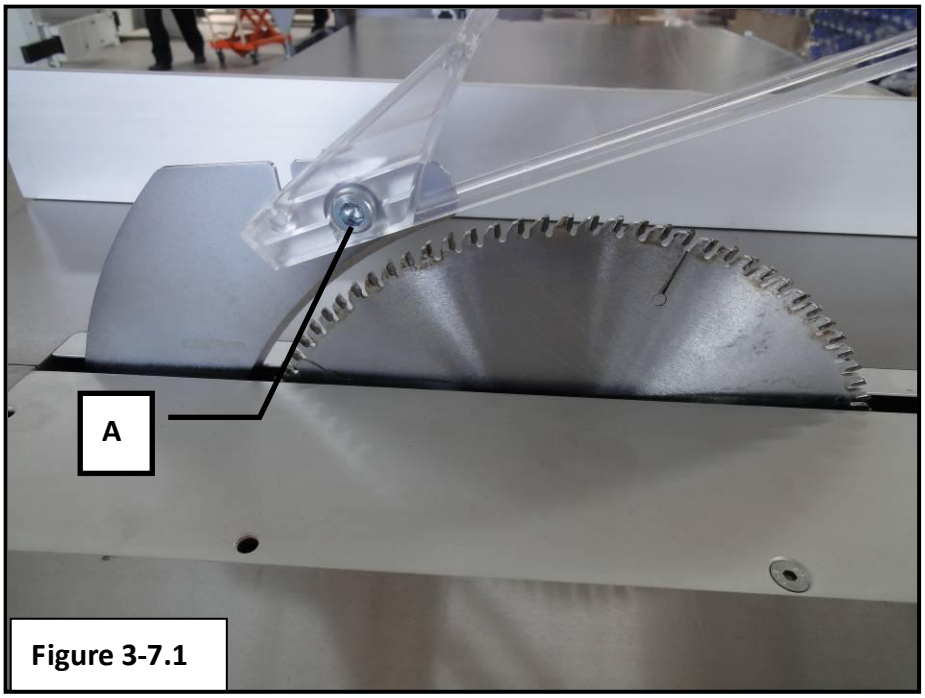


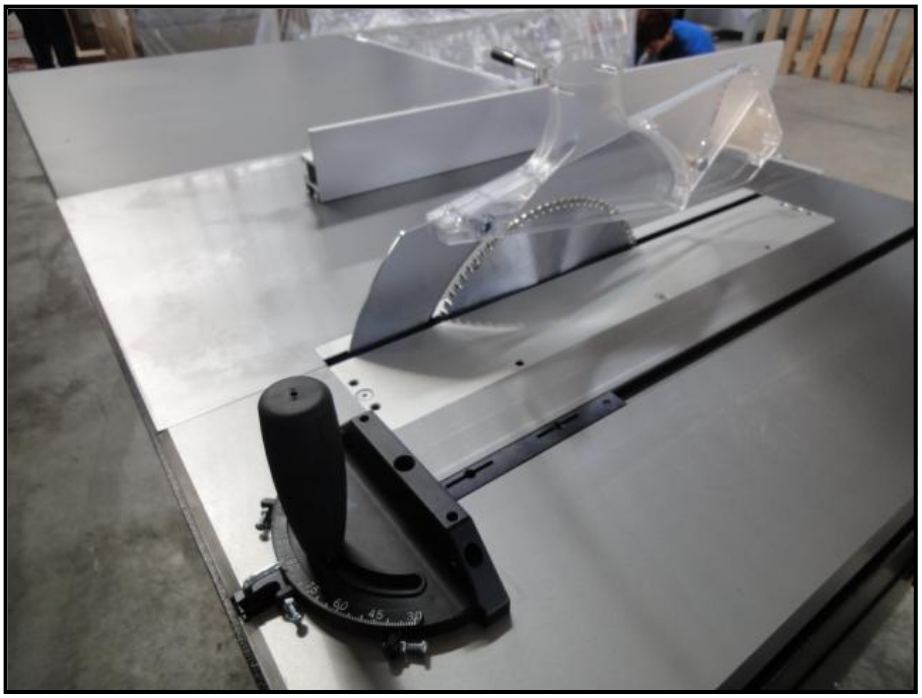
Figure 3-7.1

3. ASSEMBLY & SETUP

3-8 ACCESSORIES

1. Miter gauge

Allows precise oblique cuts between + 45˚ and - 45˚ on the cast iron table.



3. ASSEMBLY & SETUP

3-9 WIRING & TEST RUN

I. Wiring

1. Always check to see if the wires in your circuit are capable of handling the amperage draw from your machine, as well as any other machines that could be operating on the same circuit. Consult a qualified electrician. *Note: A fire may occur if your particular electrical configuration does not comply with local codes. The best way to ensure compliance is to check with your local licensed electrician.*

2. Install the machine on a dedicated circuit to reduce the possibility of overloading the circuit and tripping the circuit breaker. If the circuit breaker trips and the circuit are of the correct load capacity, have the circuit inspected by qualified electrician. Never use a larger circuit breaker than stated below, or you will increase the risk of fire.

3. The power cord section need to fitted motor power rating by the user, consult a qualified electrician.

4. Please CUT OFF power source before open the terminal box for the electrical connection, the terminal box is fitted at the side next to the machine door, the connection terminals for the supply cables are marked with L1, L2, L3, N and PE

5. Make sure all electrical circuits are grounded before you connect them to the machine. DO NOT use the machine if it is not grounded.

6. When the power source is connected to the reverse phase, the motor will rotate in the wrong direction. Please change the incoming wire L2 and L3.

3. ASSEMBLY & SETUP

II. Test run

1. Before starting the saw, make sure you have performed the preceding assembly and adjustment instructions, and you have read through the rest of the manual and are familiar with the various functions and safety issues associated this machine.

   Failure to follow this warning could result in serious personal injury or even death!
2. If any problems occur, press the emergency STOP button **(Fig3.8.1).** Investigate and correct the problem before operating the machine further. If you need help, refer to the troubleshooting section in the back of this manual or contact our agent.

   Note: Always wear safety glasses, a respirator, and hearing protection and NO smoking when operating this machine
3. Reassemble the electric box cover back. Turn the main switch ON. Test run the saw blade.

Figure 3-8.1

4. OPERATION

4-1 CONTROL PANEL & HAND WHEEL

A. MAIN BLADE ON Button—Start the main saw blade.

B. SCORING BLADE ON Button—Start the scoring blade.

Note: The main saw blade must be ON for the scoring blade to start.

C. The hand wheel for adjust the blade up or down. (Fig. 4-1.1)

Note: The saw blade height must exceeds the piece thickness 1 ~ 1.5cm

D. The hand wheel for adjust the blade tilting angle. (Fig. 4-1.2)

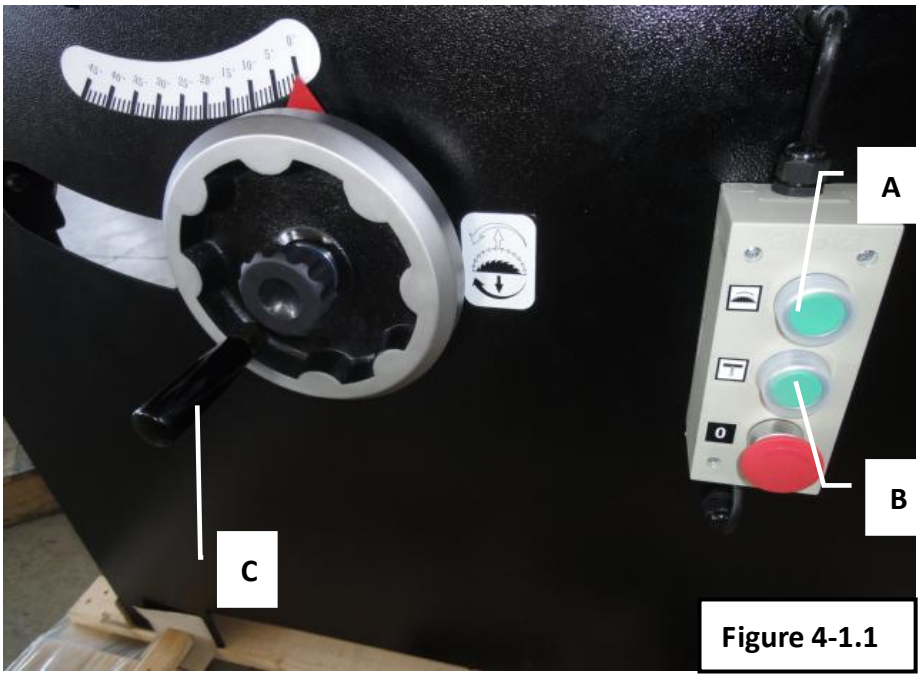


Figure 4-1.1

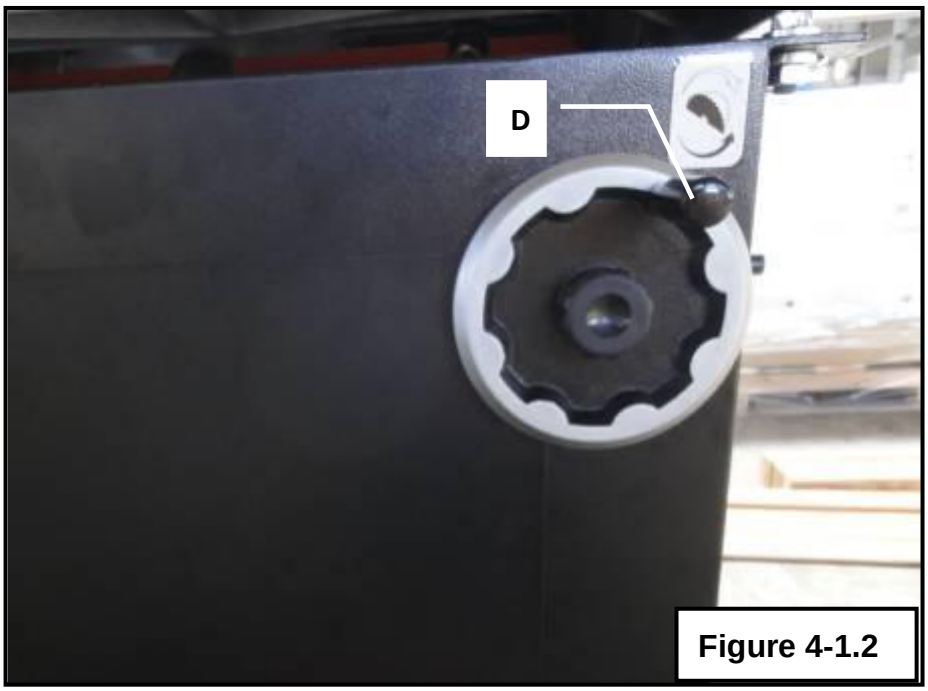


Figure 4-1.2

4. OPERATION

4-2 SCORING BLADE TILTING AND LIFTING

I. Aligning the scoring blade with the main blade

Insert the T-wrench as Fig. 4-2.1 and turn it with 2 hands.

II. Scoring blade height adjustment

Insert the T-wrench as Fig.4-2.2 and turn it with 2 hands.

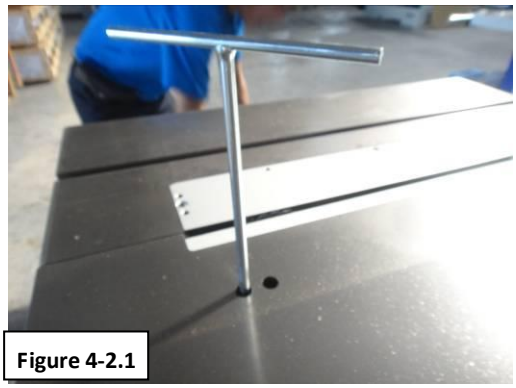


Figure 4-2.1

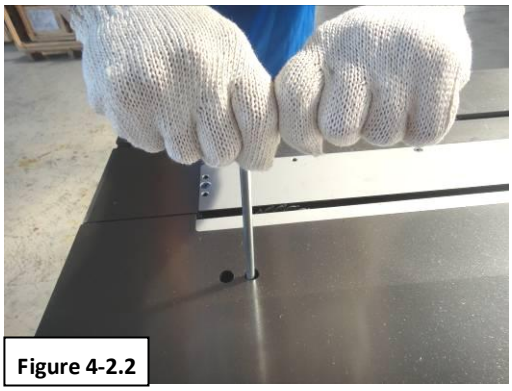


Figure 4-2.2

4. OPERATION

4-3 RIP FENCE CUTTING

Notice: Always wear safety glasses, a respirator, and hearing protection. DON'T smoking when operating this machine.

1. Loosen knob **C** (4-3.1) and lift the lever **B** (Fig. 4-3.1) then move the rip fence unit **A** (Fig. 4-3.1) according to the size of panel .
2. Position the rip fence unit to the desired approx width and lock knob **C** (Fig. 4-3.1).
3. Adjust the micro-adjust lock knob **D** (Fig. 4-3.1) to the required size by checking the scale on table edge.
4. Push down the lever **B** (Fig. 4-3.1) after adjusting, and then cut the panel.

Micro-adjust rip fence:

1. Turn knob **C**(Fig. 4-3.1) to lock rip fence
2. Pull lever **B** up (Fig. 4-3.1) and adjust knob **D** (Fig. 4-3.1). Then the fence unit can be micro-adjusted to the required distance.
3. After adjusting, lock the fence unit by lowering lever **B** (Fig. 4-3.1)

※ Note: fence plate **E** (Fig. 4-3.1) can move in longitudinal direction after unlocking handle **F** (Fig. 4-3.1). After every adjustment, tighten handles to ensure that the fence is locked in position.

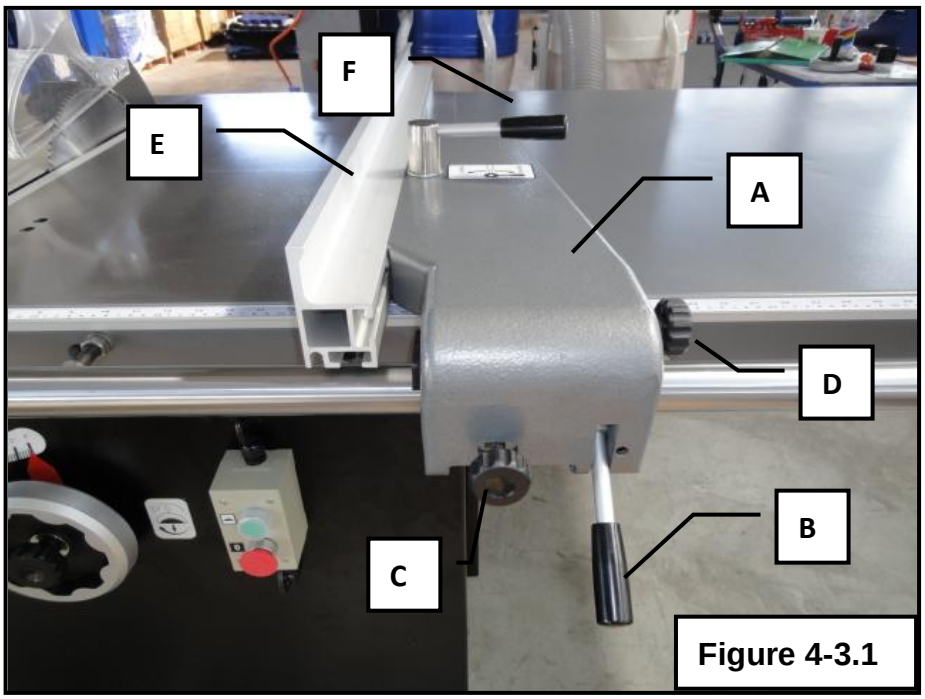


Figure 4-3.1

4. OPERATION

4-4. MITER GAUGE CUTTING

Note: Always wear safety glasses, a respirator, and hearing protection and NO smoking when operating this machine.

1. The miter gauge allows cuts from + 45˚ to - 45˚.
2. Slide the miter gauge onto the table groove (Fig. 4-4.1).
3. Position the gauge at the desired angle and clamp handle to lock the fence in place.
4. Position the blade guard to the correct height for your work piece
5. Load the work piece onto the table saw.
6. Take all the necessary safety precautions, and then perform the cutting operation.

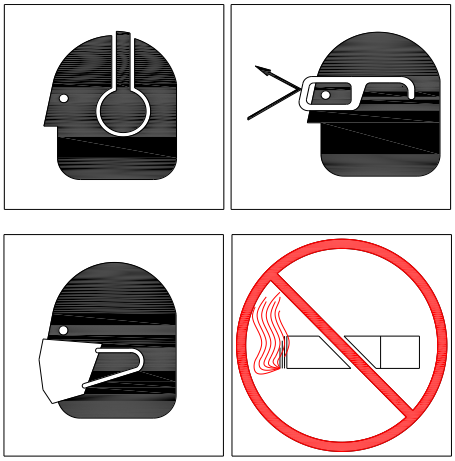


Figure 4-4.1

5. MAINTENANCE

5-1. CLEANING & CHECKING

Note: Disconnect the machine from the power source. Serious personal injury could occur if you connect your machine to the power source before you maintenance.

1. Before using solvents and cleaning, make sure that these substances do not cause damage to the painted, anodized or galvanized surfaces as well as plastic parts. For information on these substances, please refer to the safety data sheets available from the manufacturers of the solvents or cleaning agents.
2. Cleaning the machine is relatively easy. Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. Use compressed air to blow dust from between the two sections of the sliding table [if fitted]. If any resin has built up, use a resin dissolving cleaner to remove it. Treat all unpainted cast iron and steel with a non-staining lubricant after cleaning.
3. Cleaning & check schedule refer next page

5. MAINTENANCE

Cleaning & Checking Schedule

Check items	Daily	Weekly	Monthly	3-months	6-months	yearly
Check emergency stop and indicate lamp are working normally.	✓				✓	
Check for unusual noise, pressure and ventilation of the machine.	✓			✓	✓	
Clean the exterior part of the machine.	✓		✓			
Check all the screws are tight.					✓	
Check screws and nuts of limit switch are tight.	✓				✓	✓
Check all wires and electric connections near the power switch to see if there have any loosened lines.			✓		✓	✓
Check belt is running normally. If any break or failure, replace it.	✓		✓		✓	
Check the load voltage and current of the motor.			✓			✓
Check the continuity of all the wires.		✓				
Clean the interior part of the electrical box and check the continuity of the wires.			✓			
Tighten the terminal screws of the power supply wires in the control box.					✓	
Any worn or damaged parts to be replaced.	✓			✓		
Clean & vacuum dust buildup from inside cabinet.			✓			

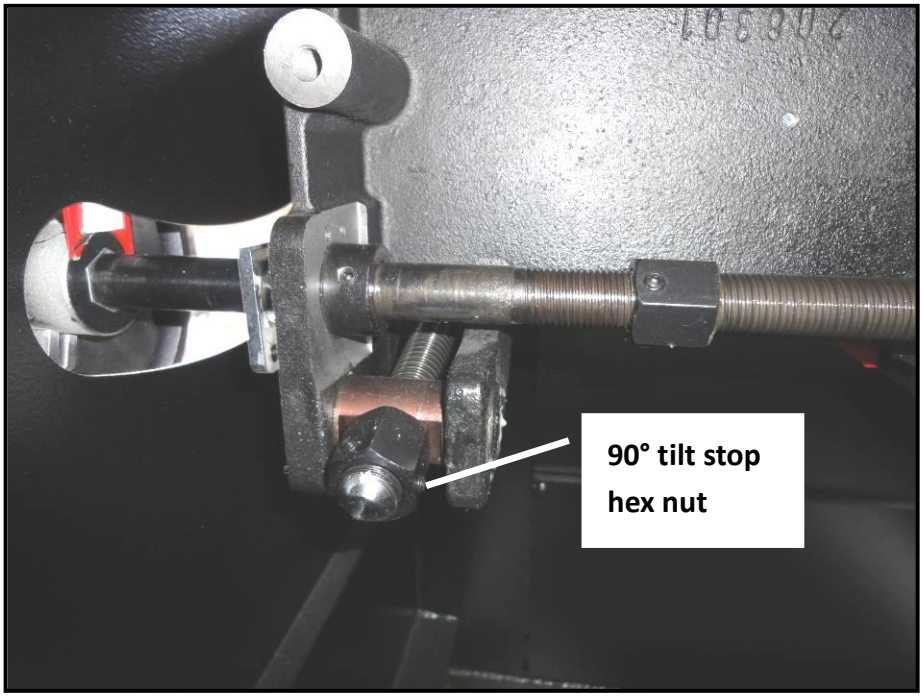
5. MAINTENANCE

5-2 LUBRICATION

Note: Disconnect the machine from the power source. Serious personal injury could occur if you connect your machine to the power source before you maintenance.

Lubricate areas indicated below every 6-12 months, depending on frequency of use.

1. Blade tilt trunnion
2. Scoring blade worm gear
3. Blade height linkage
4. Blade height bearing
5. Blade worm gear
6. Blade height slide



5. MAINTENANCE

5-3. REPLACING BELT

I. REPLACING THE V-BELTS

1. Disconnect the saw from the power source.

Note: Serious personal injury could occur if you connect your machine to the power.

2. Tilt the motor unit 45° by turning the tilting wheel (Fig. 4-2.2).

3. Open the rear door of machine.

4. Loose the 3 bolts shows on Fig. 5-3.1. to loosen the motor.

5. Slowly lift the motor and tighten the bolt for fixing. Then replace the V-belts with new ones.

Note: make sure the motor pulley and arbor pulley are lined up after replacing.

6. Loosen the bolts as step 4 described, and pivot the motor down to the original position.

7. Re-tighten the bolts for fixing.

8. Close the rear door

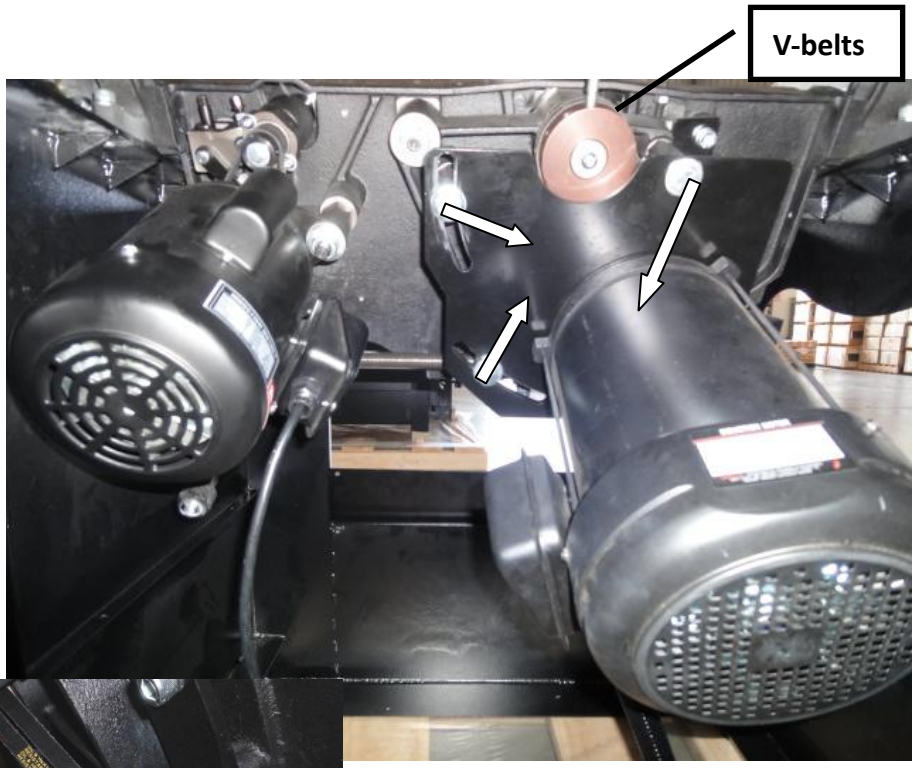


Figure 5-3.1

Figure 5-3.1a

5. MAINTENANCE

II. REPLACING THE BELT OF SCORING MOTOR

1. Disconnect the saw from the power source.
   Note: Serious personal injury could occur if you connect your machine to the power.
2. Tilt the motor unit 45° and move to the lowest position by turning the adjusting wheels (Fig. 4-2.1&2)..
3. Lift the small motor to make belt slack.
4. Note the position of the belt on the pulleys.
5. Remove the belt.
6. Replace it with the new flat belt.
7. Move the motor units back to the original position and close rear door to finish.

Figure 5-3.2a

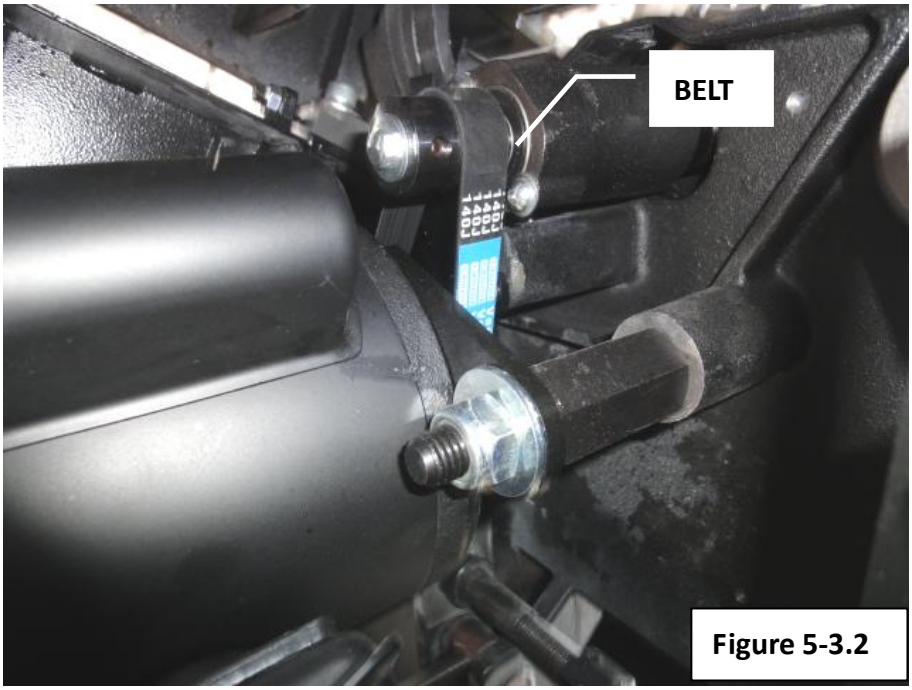


Figure 5-3.2

6. TOOLS

6-1. TOOLS INVENTORY

Tool box

- Push Stick
- Hose Support Plate
- Hexagonal Key 4mm
- Scoring Arbor Wrench
- T-wrench
- Riving Knife ψ350

7. TROUBLESHOOTING

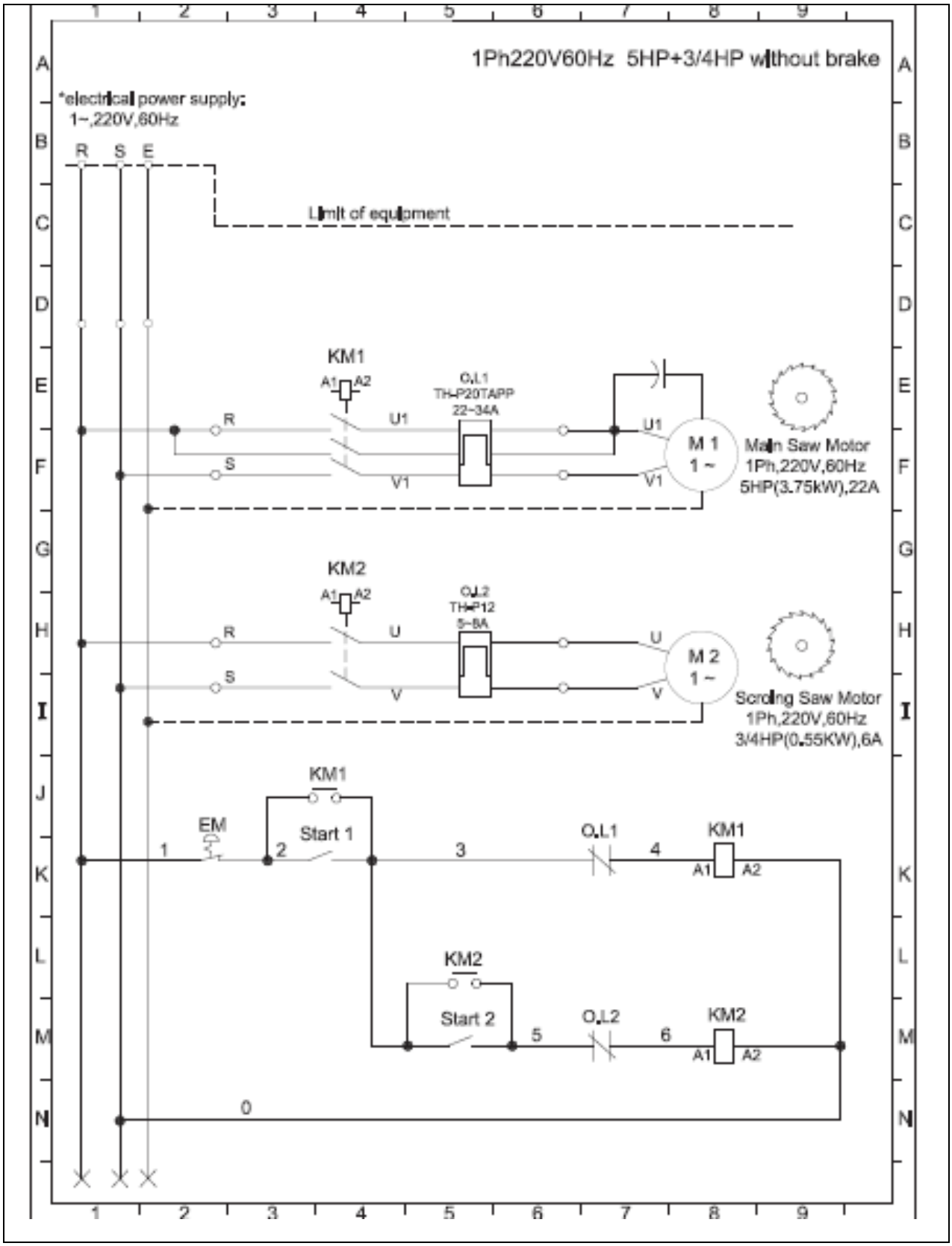
WARNING-Disconnect the machine from the power source before troubleshooting or serious personal injury could occur.

Problem	Possible cause	Troubleshooting
The machine cannot be switched on.	1. Door in machine frame or saw blades cover plate is opened. 2. Control circuit fuses defective.	1. Close the machine door or cover plate. 2. Turn the main switch off, then open the switch cabinet and identify which of the fuses is defective and remove it. Replace new fuses, only using fuses of the same rating!
The machine switches off automatically during operation.	1. Power failure in one or several phases due to responding factory fuses. 2. Overload protection has responded due to blunt blade or excessive feed speed. 3. Control circuit fuses defective.	1. Eliminate cause of phase failure. 2. Change saw blade or reduce feed speed. Allow motor to cool down. 3. Turn off the main switch, open the switch cabinet and identify which of the fuses is defective and remove it. Replace new fuses, only using fuses of the same rating!
Motor will not start, or it growls on start up.	1. Emergency stop button is pressed. 2. Power supply fuse or circuit breaker has tripped. 3. Thermal overload has tripped. 4. Toggle switch is broken inside. 5. Start capacitor is at fault. 6. Motor fan cover is dented, stopping the fan from being able to spin. 7. Motor is at fault.	1. Adjust the button clockwise to make it pop out. 2. Disconnect power, and inspect circuit for electrical shorts and repair. Replace circuit breaker if it is old or has tripped many times. 3. Reset the thermal overload. 4. Disconnect power, and use an ohmmeter to check switch terminals for continuity, and replace switch if required. 5. Replace start capacitor. 6. Replace motor fan cover (and fan, if damaged). 7. Replace motor.
Motor overheats.	1. Motor thermal protector activated. 2. Air circulation through the motor restricted.	1. Wait for the motor temperature cold down; then motor thermal protector will re-set automatically 2. Clean out motor to provide normal air circulation.

7. TROUBLESHOOTING

Problem	Possible cause	Troubleshooting
Motor stalls (resulting in blown fuses or tripped circuit).	1. Short circuit in motor or loose connections. 2. Low voltage. 3. Incorrect fuses or circuit breakers in power line. 4. Ampere setting too low, conductor overloaded.	1. Repair loose or shorted terminals, or worn insulation on motor. 2. Correct the low voltage conditions. 3. Install correct fuses or circuit breakers. 4. Reset the ampere value correctly by checking the machine information from the name plate.
Main blade runs backwards.	1. Two of the power wires are reversed.	1. Exchange wires L1 & L3 in the terminal box.
Blade makes a squealing noise on start-up.	1. Belt worn out.	1. Replace belt.
Workpiece jammed when feeding forward.	1. Blunt saw blade. 2. Riving knife thickness does not match the saw blade used.	1. Fit a sharp saw blade 2. Fit the correct riving knife; it must thicker than the main saw blade (or at least the same) .
The finished size of the cut workpiece does not match the cutting width set on the rip fence.	1. Dimension scale for cutting widths is misadjusted. 2. Incorrect scale position.	1. Reset the dimension scale to correct size. 2. Reset scale position. Cut a work piece on the rip fence, precisely measure the cut width and position the scale to match work piece size.
The finished size of the cut workpiece does not match the cutting width set on the crosscut stop.	1. Dimension scale for cutting widths is misadjusted. 2. Incorrect fence position.	1. Reset the flip stop to correct size. 2. Cut a work piece on the crosscut fence, precisely measure the cut width and reset crosscut fence position to match work piece size.
Saw blade burns on the sliding table side.	1. Insufficient free cut on sliding table.	1. Readjust the free cut.
Saw blade burns on the rip fence side.	1. Excessive free cut on the rip fence. 2. Insufficient free cut on rip fence.	1. Readjust the rip fence. 2. Readjust the free cut.
Work piece has burn marks.	1. Blunt saw blade. 2. Feed too low. 3. Saw blade has too many teeth. 4. Incorrect free cut.	1. Change the saw blade. 2. Increase the feed rate. 3. Change the saw blade. 4. Readjust the free cut.

Electrical drawing


1Ph220V60Hz 5HP+3/4HP without brake
*electrical power supply:
1~,220V,60Hz
R S E
Limit of equipment
KM1
A1 A2
O.L1
TH-P20TAPP
22~34A
R
S
U1
V1
M 1
1 ~
Main Saw Motor
1Ph,220V,60Hz
5HP(3.75kW),22A
KM2
A1 A2
O.L2
TH-P12
5~8A
U
V
M 2
1 ~
Scroling Saw Motor
1Ph,220V,60Hz
3/4HP(0.55KW),6A
KM1
EM
Start 1
1
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3
O.L1
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KM1
A1 A2
KM2
Start 2
5
O.L2
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KM2
A1 A2
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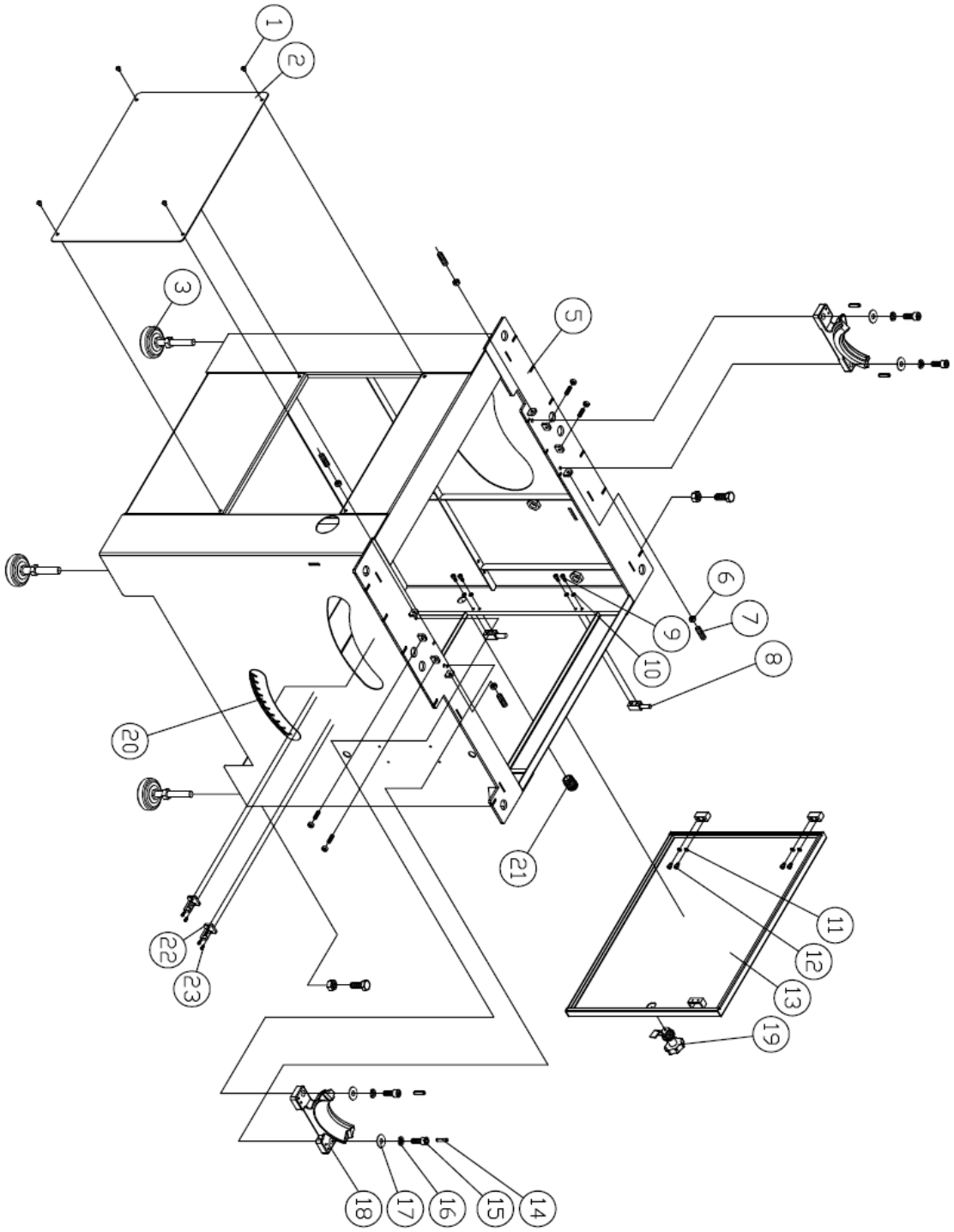
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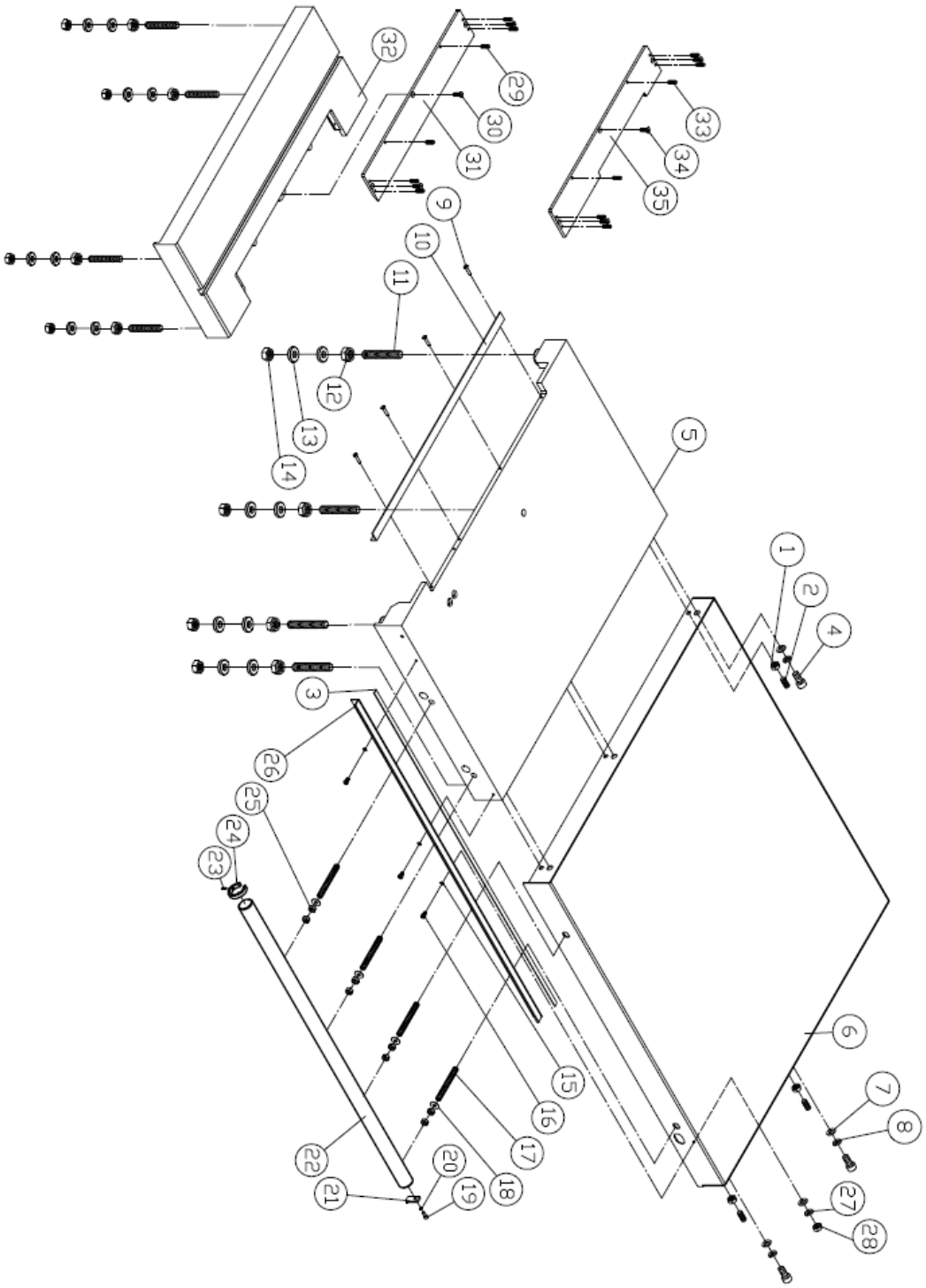
ITEM	PART NO	PARTS NAME	SIZE	Q`TY		NOTE
1	SJ060200	Button Head Screw	M6*10	4		
2	206584	Plate		1		S5
3	201150	Adjust Foot	M16x100	4		
4						
5	206582	Machine frame		1		T9
6	NH081300	Hex Nut	M8	8		
7	SS080700	Setscrew	M8x35	8		
8	203412	Block		2		
9	SR059300	Cap Screw	M5*12	4		
10	WS050000	Lock Washer	M5	4		
11	WS050000	Lock Washer	M5	4		
12	SR059200	Cap Screw	M5*8	4		
13	205259	Door		1		S5
14	PS062500	Spring Pin	ψ6*25	4		
15	SH100700	Hex Head Bolt	M10*35	4		
16	WS100000	Lock Washer	M10	4		
17	WF102730	Washer	M10*ψ27	4		
18	207540	Base		2		X2
19	203430	Lock		1		
20	LM206309	Label		1		
21	203889	Corrugated Tubing Fitting	N-PGN21-28B	1		
22	170736	Hanger		2		
23	SP049300	Pan Head Screw		4		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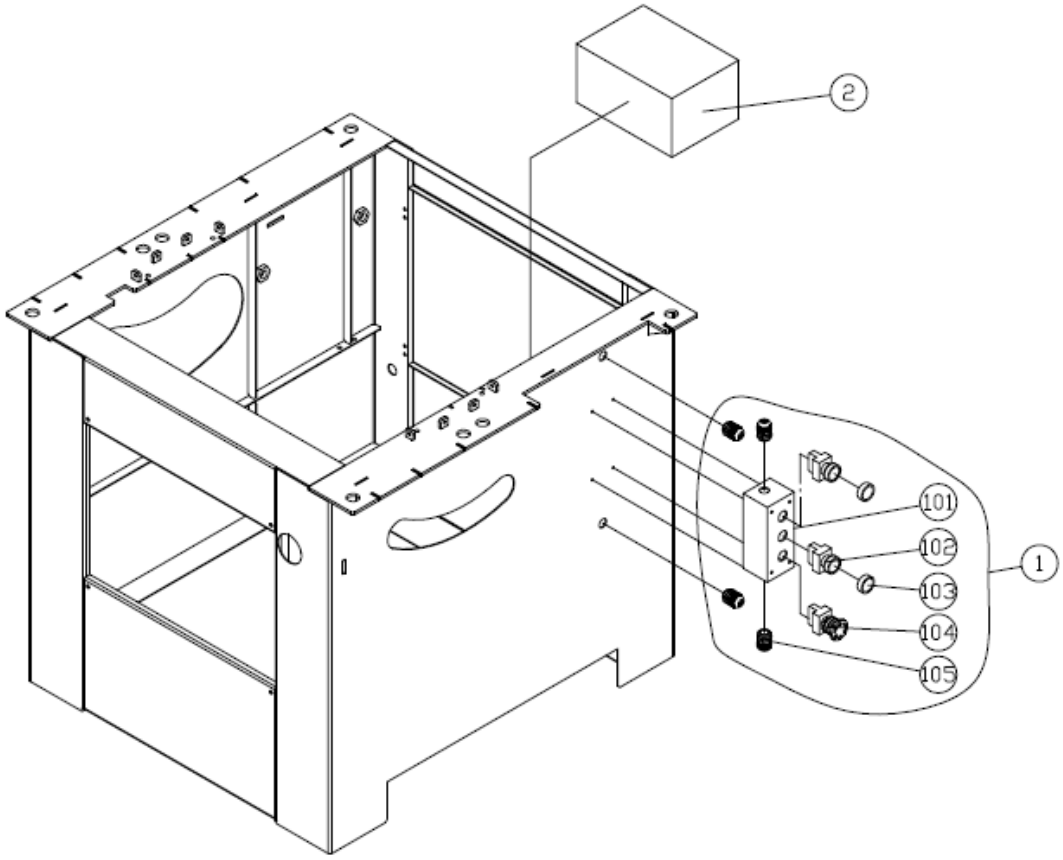
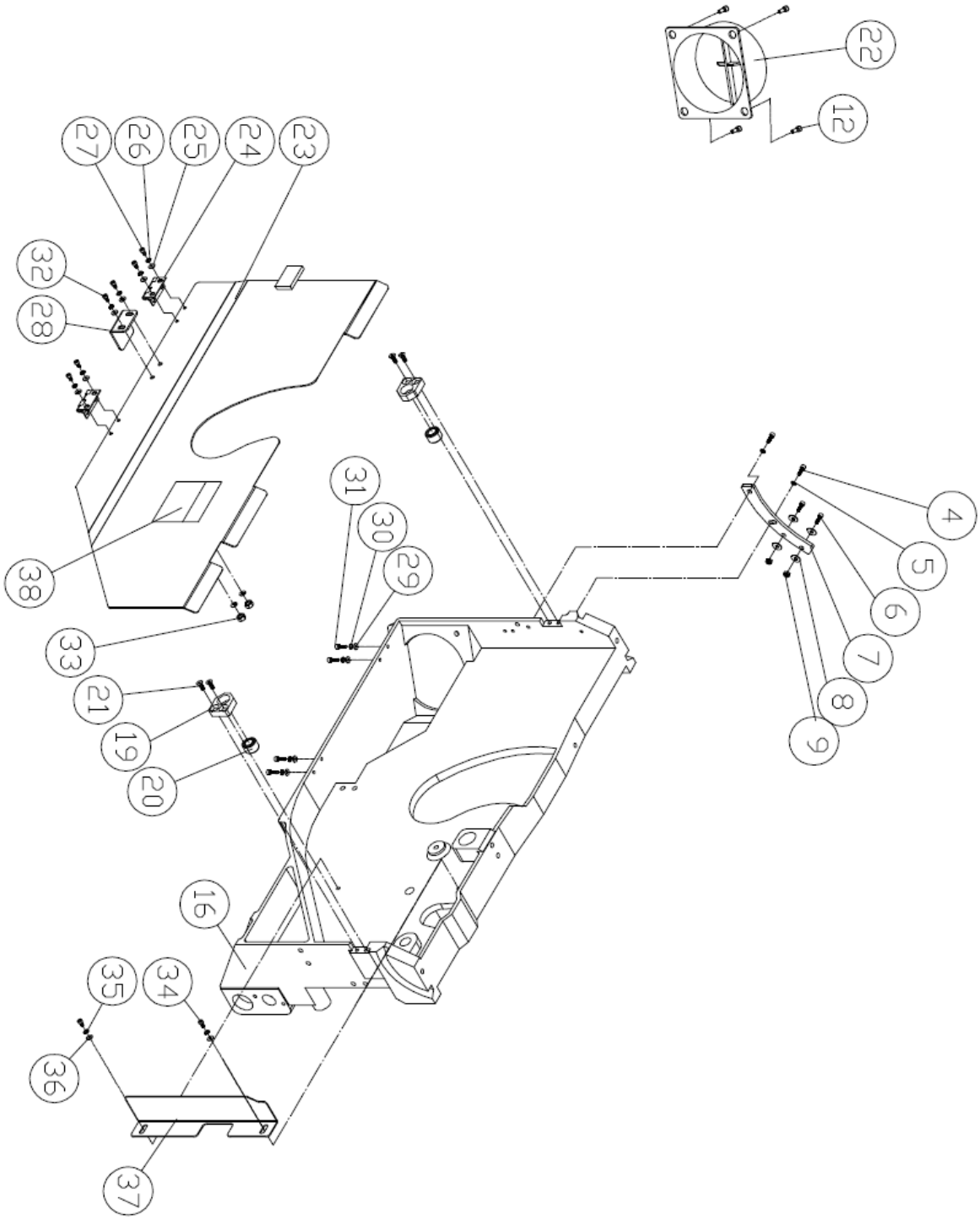
ITEM	PART NO	PARTS NAME	SIZE	Q`TY	NOTE
1	SS100400	Set Screw	M10*20	3	AH206306
2	NH101700	Hex Nut	M10	3	AH206306
3	LM206306	Ruler	Metric System	1	Standard
	LM001042	Ruler	Metric/ Imperial System	1	Option
4	SR100500	Cap Screw	M10*25	3	AH206306
5	206362S5	Table		1	S5
6	207078	Ext. Plate	(Big)	1	S5
7	WF102030	Washer	M10*ψ20	5	AH206306
8	WS100000	Lock Washer	M10	5	AH206306
9	SJ069300	Button Head Screw	M6*12	4	
10	206354	Table Insert		1	
11	SS162000	Set Screw	M16*100	8	
12	NL162400	Lock Nut	M16	8	
13	205016	Washer		16	
14	NH162400	Hex Nut	M16	8	
15	WF061620	Washer	M6*16	4	AH206306
16	SJ069300	Button Head Screw	M6*16	3	AH206306
17	200881	Screw	M12×1.75p×115L	4	
18	WF132225	Washer	M13×22	4	
19	SR089300	Cap Screw	M8×16	1	
20	WS080000	Lock Washer	M8	1	
21	206437	End Washer		1	
22	201004	Round Rail		1	
23	SS060200	Setscrew	M6×10	1	
24	200957	Ring Stop		1	
25	NH121900	Hex Nut	M12	8	
26	207984	Measuring Rule Rail		1	
27	WS060000	Lock Washer	M6	1	AH206306
28	NH061000	Hex Nut	M6	1	AH206306
29	SS089200	Set Screw	M8*8	6	
30	SI060400	Counter Sunk Screw	M6×20	3	
31	207347	Table Insert		1	
32	207343S5	Table		1	S5
33	SS089200	Set Screw	M8*8	6	
34	SI060400	Counter Sunk Screw	M6×20	3	
35	206639	Table Insert		1	For Dado



ITEM	PART NO	PARTS NAME	SIZE	Q`TY	NOTE
1	AB994887	Switch Box(ASM.)		1	
101	994887	Switch Box		1	
102	994855	Switch Button-ON		2	
103	994855A	Dust Cove		2	
104	994808	Emergency Stop Button	R2PNR4-1B-R	1	
105	709411	Cable Gland	PG11	4	
2	AB206640	Operate Housing		1	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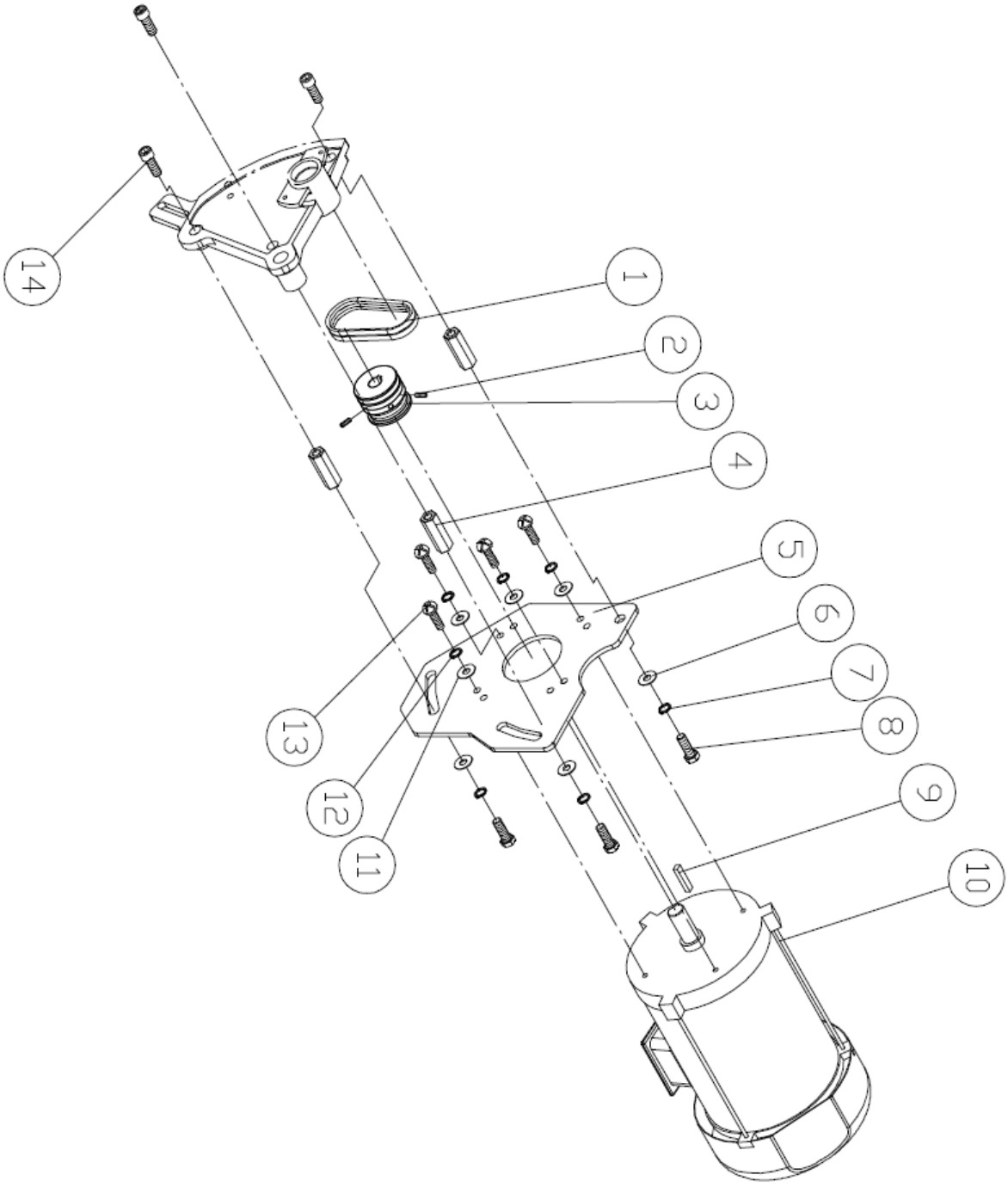
ITEM	PART NO	PARTS NAME	SIZE	Q`TY	NOTE
4	SR069300	Cap Screw	M6*12	2	
5	WS060000	Lock Washer	M6	2	
6	SR059400	Cap Screw	M5*16	2	
7	206337	Fix Plate		1	
8	WF051010	Washer	M5*10	4	
9	NL050800	Lock Nut	M5	2	
12	SF089300	Hex Head Bolt(+)/W	M8x12	4	
16	206301	Channel Base		1	YF206301
19	206359	Plate		2	
20	203249	Magnetic Iron(assembly)		2sets	A
	203249-1	Magnetic Iron		1	
	203249-3	Screw		1	
21	SM060400	Sunkhead Socket Screw	M6x20	4	
22	206118	Dust Port		1	
23	206638	Cover		1	F1L
24	207940	Hinge		2	
25	WF051010	Washer	M5*10	8	
26	WS050000	Lock Washer	M5	6	
27	SR059200	Cap Screw	M5*8	4	
28	207152	Plate		1	
29	WF051010	Washer	M5*10	4	
30	WS050000	Lock Washer	M5	4	
31	SR050200	Cap Screw	M5*10	4	
32	SR059400	Cap Screw	M5*16	2	
33	NH050800	Hex Nut	M5	2	
34	SR060200	Cap Screw	M6*10	2	
35	WS060000	Lock Washer	M6	2	
36	WF061620	Washer	M6*ψ16	2	
37	206479	Plate		1	
38	LM206310	Warning Label		1	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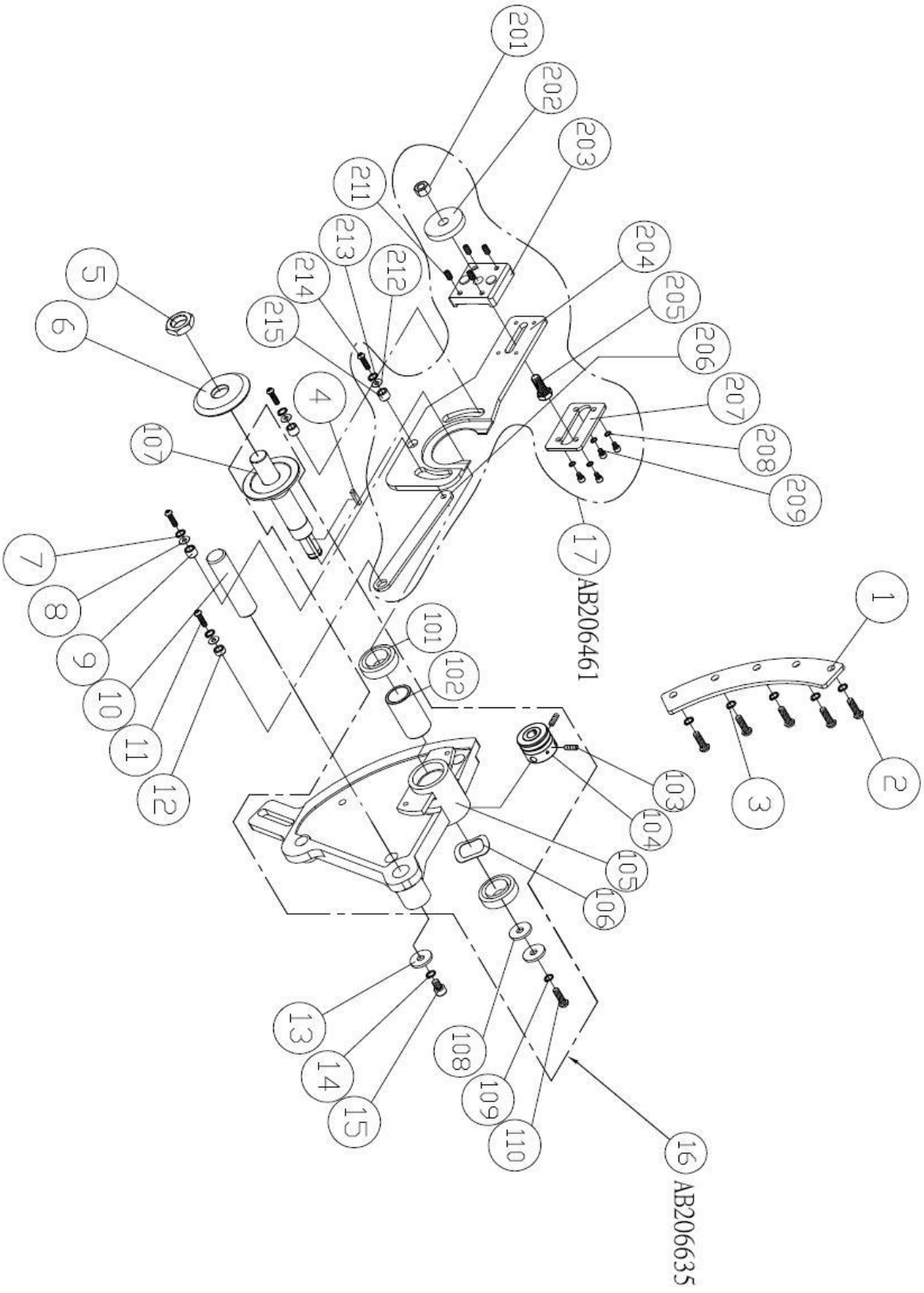
ITEM	PART NO	PARTS NAME	SIZE	Q`TY	NOTE
1	208044	Belt	3VX-265	2	50Hz/S
	206399	Belt CSA	3VX-250	2	60Hz/S
2	SS080200	Setscrew	M8×10	3	
3	208043	Belt Pulley	50Hz	1	CE/S
	208042	Belt Pulley	60Hz	1	CSA/S
4	201333	Shaft		3	
5	206396	Main Motor Plate		1	
6	WF132225	Washer	M13×ψ22	3	
7	WS120000	Lock Washer	M12	3	
8	SH120600	Hex Head Bolt	M12×30	3	
9	KD080745	Key	8x7x45	1	
10	M20H21502DCS01	Main Motor	5HP(220V/440V)	1	M20H
11	WF081818	Washer	M8×ψ18	4	
12	WS080000	Lock Washer	M8	4	
13	SJ080400	Hex Head Bolt	M8×20	4	
14	SR120600	Cap Screw	M12×30	3	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ITEM	PART NO	PARTS NAME	SIZE	Q`TY	NOTE
1	206304	Gip Plate		1	
2	SJ100500	Button Head Screw	M10×25	5	
3	WS100000	Spring Washer	M10	5	
4	KD050520	Key	5x5x20	1	
5	206637	Nut	TW-1-12UNF(Left tooth)	1	
6	206636	Arbor Flange	ψ25.4	1	
7	WS080000	Lock Washer	M8	3	
8	WF083030	Washer	M8×ψ30	3	
9	200964	Bushing		3	
10	201205	Shaft		1	
11	SJ080400	Button Head Screw	M8×20	3	
12	201346	Bushing		1	
13	WF083030	Washer	M8×ψ30	1	
14	WS080000	Lock Washer	M8	1	
15	SR080400	Cap Screw	M8×20	1	
16	AB206635			1	
101	BB620604	Bearing	6206LLB(Black)	2	
102	206311	Spacer		1	
103	SS050200	Setscrew	M5×10	3	
104	208041	Pulley		1	
105	206302	Rotate Plate		1	YF206302
106	WW476004	Wave Washer	ψ47×ψ60	2	
107	206635	Main Arbor	ψ25.4	1	
108	WF083030	Washer	M8×ψ30	2	
109	WS080000	Lock Washer	M8	1	
110	SJ080400	Button Head Screw	M8×20	1	
17	AB206461	Fix Block ASM		1	
201	NH101704	Hex Nut	M10 thin	1	
202	WF104040	Washer	M10×ψ40	1	
203	206461	Fix Block		1	
204	206309	Locate Plate		1	
205	SH100600	Hex Head Bolt	M10×30	1	
206	206360	Link Plate		1	
207	201881	plate		1	
208	WS050000	Lock Washer	M5	4	
209	SJ050200	Button Head Screw	M5×10	4	
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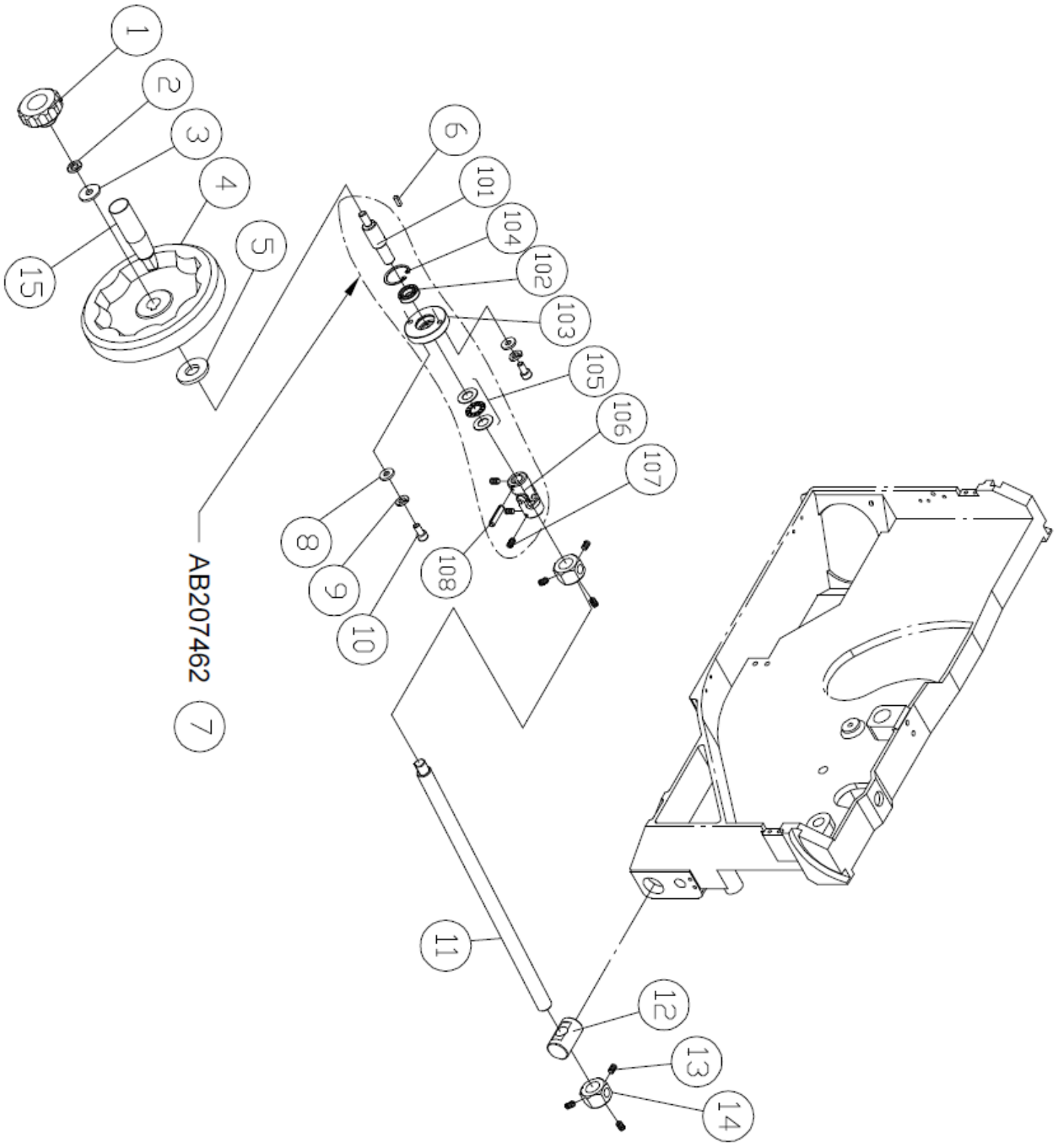
211	SS050200	Setscrew	M5x10	4	
212	WF083030	Washer	M8×ψ30	1	
213	WS080000	Lock Washer	M8	1	
214	SJ080400	Button Head Screw	M8×20	1	
215	200964	Bushing		1	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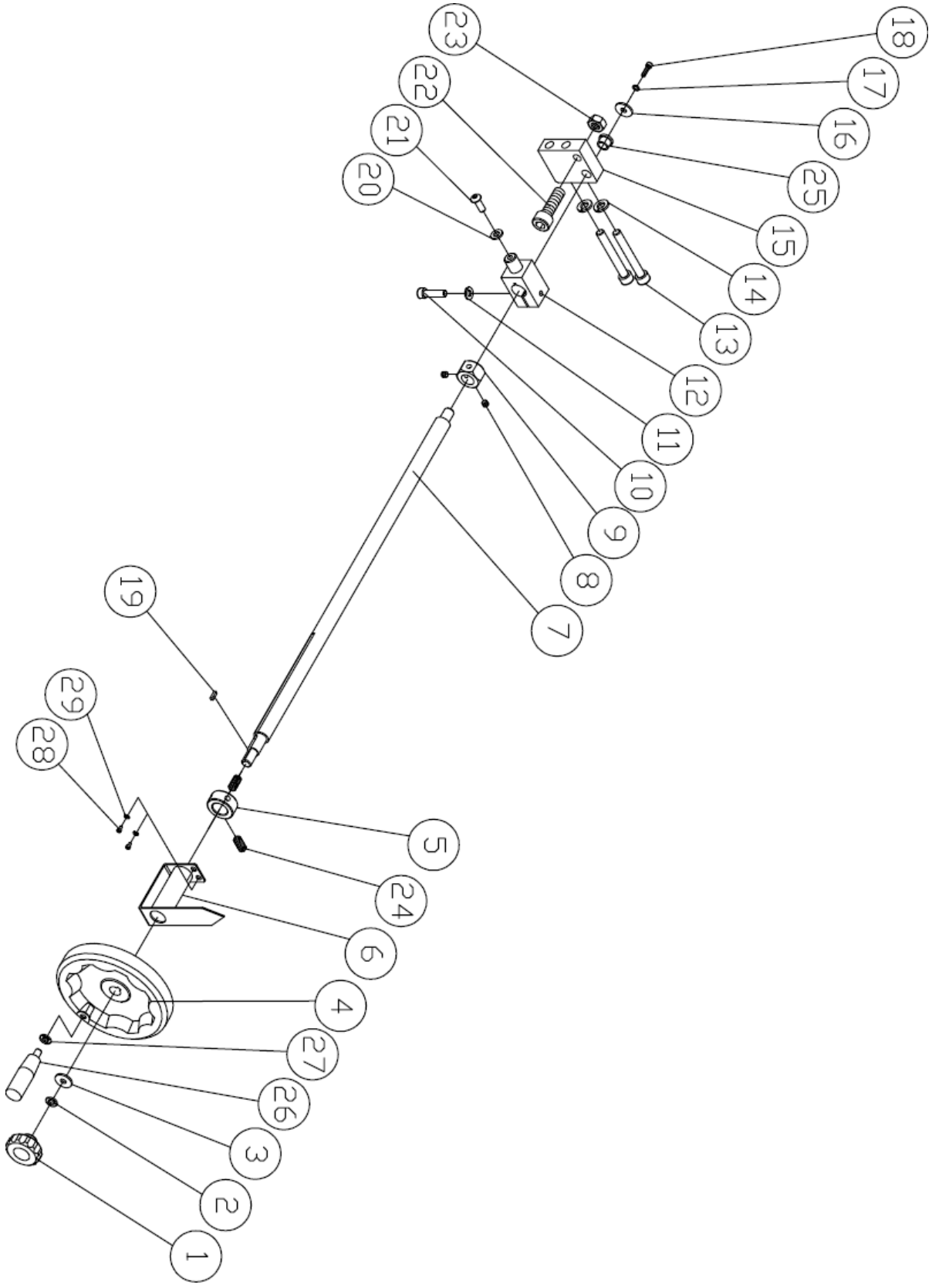
ITEM	PART NO	PARTS NAME	SIZE	Q`TY	NOTE
1	100203	Lock Knob	M10	1	
2	204263	Washer	ψ10×ψ20	1	
3	WF102730	Washer	M10×ψ27(For Plastic)	1	Standard
	WF104030	Washer	M10×ψ40(For Cast Iron)	1	Optional
4	206434A	hand wheel	8" (Plastic) Without handle	1	Standard
	200866	hand wheel	8" (Cast Iron) With folding handle	1	Optional
5	207167	Washer	T8	1	Optional
	201567	Washer	T5	1	Standard
6	KS070720	Key	7x7x20	1	
7	AB207462	Hand Wheel Shaft Assembly		1	
101	207462	Hand Wheel Shaft		1	
102	BB690202	Bearing	6902ZZ	1	
103	207252	Locate Ring		1	
104	RR280010	Ext. Retaining Ring	R28	1	
105	994204	Thrust Bearing	NTB1528+AS	1	
106	207461	Free Joint	ψ14	1	
107	SS069100	Set Screw	M6×6	3	
108	PS062600	Spring Pin	ψ6×ψ26	1	
8	WF081818	Lock Washer	M8xψ18	2	
9	WS080000	Lock Washer	M8	2	
10	SR080400	Cap Screw	M8×20	2	
11	207176	Screw		1	
12	206328	Shaft		1	
13	SS069100	Set Screw	M6×6	6	
14	206379	Set Nut		2	
15	200866	Handle	Folding Handle	1	Standard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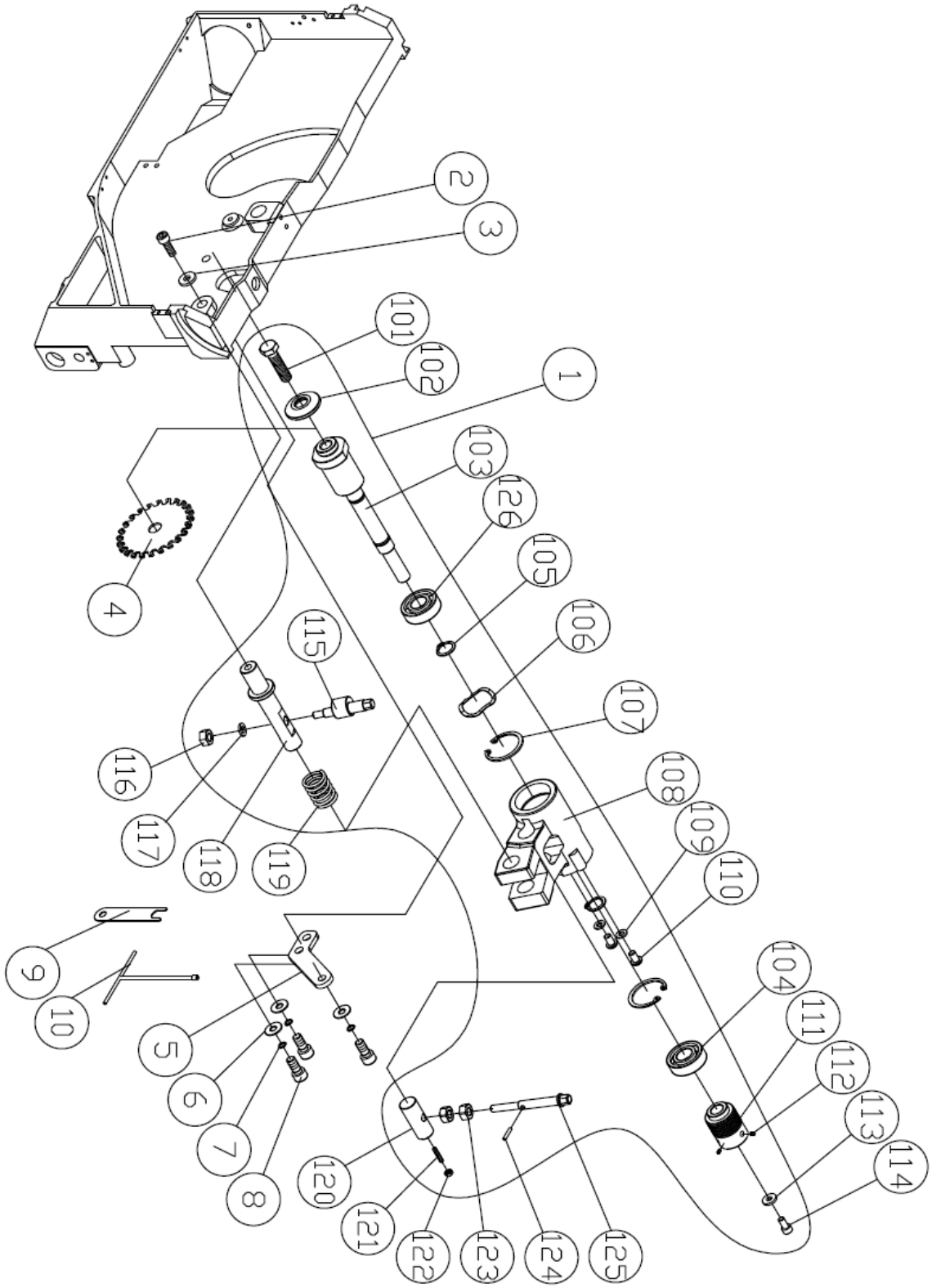
ITEM	PART NO	PARTS NAME	SIZE	Q`TY	NOTE
1	100203	Lock Knob	M10	1	
2	204263	Washer	ψ10×ψ20	1	
3	WF103030	Washer	M10×ψ30	1	
4	204289B	Hand Wheel	Without Handle (Plastic)	1	Optional
	204176A	Hand Wheel	Cast Iron (With handle)	1	Standard
5	200855	Bushing		1	
6	206586	Finger Guide		1	F1L
7	206327	Screw		1	
8	SS069100	Setscrew	M6×6	3	
9	206379	Set Nut		1	
10	SR060600	Cap Screw	M6×30	1	
11	WS060000	Lock Washer	M6	2	
12	206326	Hex Nut		1	
13	SR081200	Cap Screw	M8×60	2	
14	WS080000	Lock Washer	M8	2	
15	206325	Locate Block		1	
16	WF061310	Washer	M6×13	1	
17	WS060000	Lock Washer	M6	1	
18	SR069300	Cap Screw	M6×12	1	
19	KS050520	Key	5*5*20	1	
20	WF061620	Washer	M6×ψ16	1	
21	SJ060200	Cap Screw	M6×10	1	
22	SS100700	Setscrew	M10×35	1	
23	NH101700	Hex Nut	M10	1	
24	SS080200	Setscrew	M8x10	2	
25	017177	Bearing		1	
26	206460	Handle	M10 7"	1	Standard
27	WF101608	Washer	M10×ψ16×t0.8	1	
28	WS060000	Lock Washer	M6	2	
29	SR060200	Cap Screw	M6*10	2	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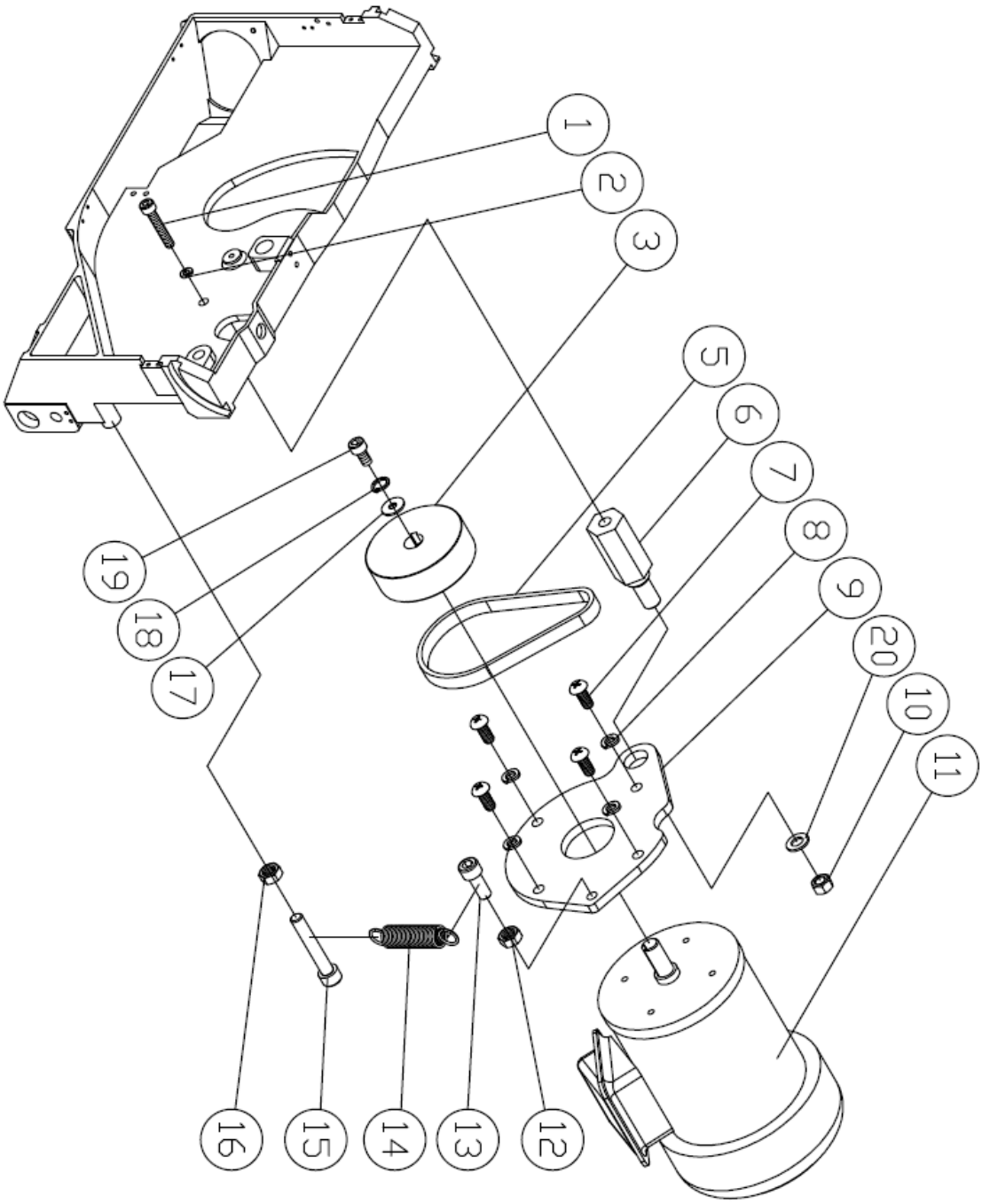
ITEM	PART NO	PARTS NAME	SIZE	Q`TY	NOTE
1	AB206315-1	Pulley ASM		1	
101	SH120440	Hex Head Bolt	M12×20	1	
102	206320	Flange		1	
103	206321	Shaft		1	
104	BB620204	Ball Bearing	6202LLB(Black)	1	
105	RS150000	Int. Retaining Ring	S15	2	
106	WW263403	Wave Washer	ψ26*ψ34 t=0.3 (6202)	2	
107	RR350000	Int. Retaining Ring	R35	2	
108	206303	Shaft		1	YF206303
109	WF061310	Washer	M6x13	2	
110	SJ069400	Button Head Screw	M6*16	2	
111	206315	Pulley		1	
112	SS069100	Set Screw	M6×6	3	
113	WF061620	Washer	M6x16	1	
114	SH069402	Hex Head Bolt	M6×16(L.H)	1	
115	206316	Shaft		1	
116	NL061000	Lock Nut	M6	1	
117	206395	Spring	ψ15*ψ6.2*0.5t	1	
118	206318	Shaft		1	
119	206323	Spring		1	
120	206319	Shaft		1	
121	206386	Set Screw	M6*25	1	
122	NH061000	Hex Nut	M6	1	
123	203239	Hex Nut	M8	2	
124	PS031200	Spring Pin	ψ3*12	1	
125	206317	Screw		1	
126	BB600304	Ball Bearing	6003LLB(Black)	1	
2	SR080400	Cap Screw	M8*20	1	
3	WF083030	Washer	M8*ψ30	1	
4	200973	Scoring Saw Blade	φ20	1	
5	206365	Fix Plate		1	
6	WF061310	Washer	M6x13	3	
7	WS060000	Lock Washer	M6	3	
8	SR069400	Cap Screw	M6*16	3	
9	206366	Wrench		1	
10	206369	Wrench	8mm	1	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ITEM	PART NO	PARTS NAME	SIZE	Q`TY	NOTE
1	SR122000	Cap Screw	M12*100	1	
2	WS120000	Lock Washer	M12	1	
3	206314	Pully		1	50Hz
	206336	Pully		1	60Hz
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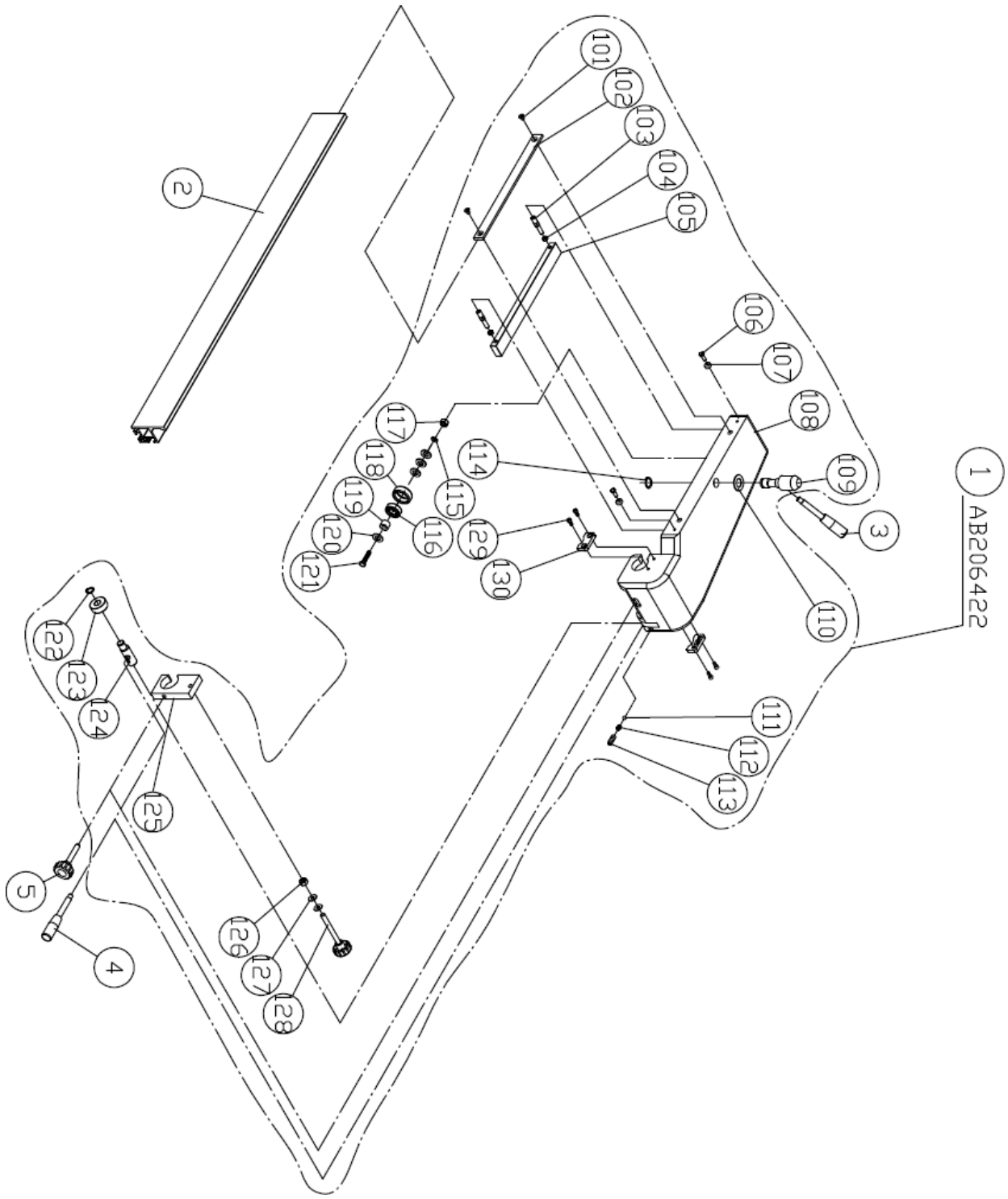
5	LJ014070	Belt	140J7	1	60Hz
	LJ015070	Belt	150J7	1	50Hz
6	206313	Shaft		1	
7	SJ080400	Button Head Screw	M8*20	4	
8	WS080000	Lock Washer	M8	4	
9	206331	Plate		1	
10	NL142200	Lock Nut	M14	1	
11	M20P21072DCS01	Scoring Motor	0.75P (M20P)	1	Feature
12	NH101700	Hex Nut	M10	1	
13	SR100400	Cap Screw	M10*20	1	
14	201275	Expansion Spring		1	
15	SR101000	Cap Screw	M10*50	1	
16	NH101700	Hex Nut	M10	1	
17	WF063030	Washer	M6*ψ30	1	
18	WS060000	Lock Washer	M6	1	
19	SR069400	Cap Screw	M6*16	1	
20	WF143530	Washer	M14*ψ35	1	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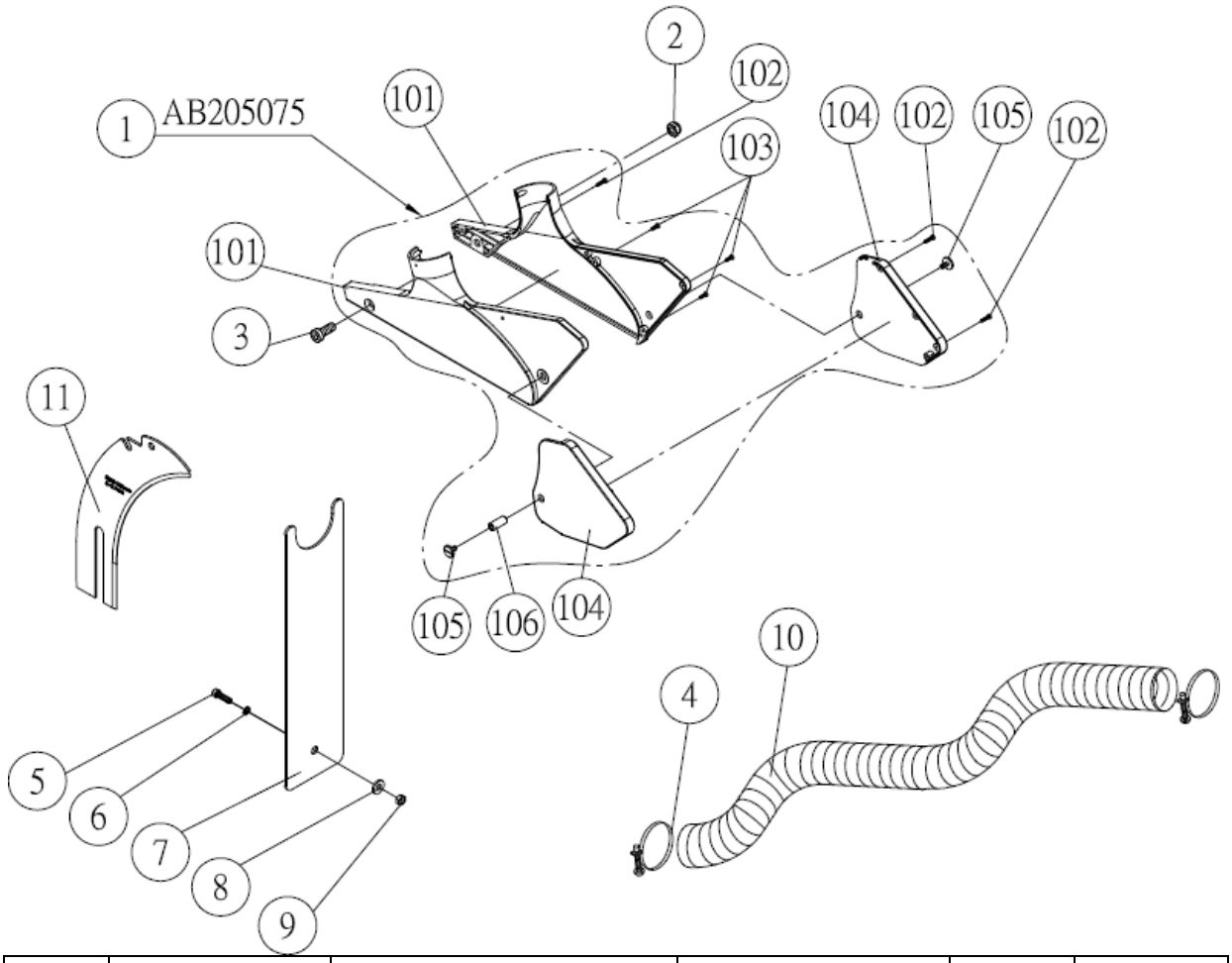
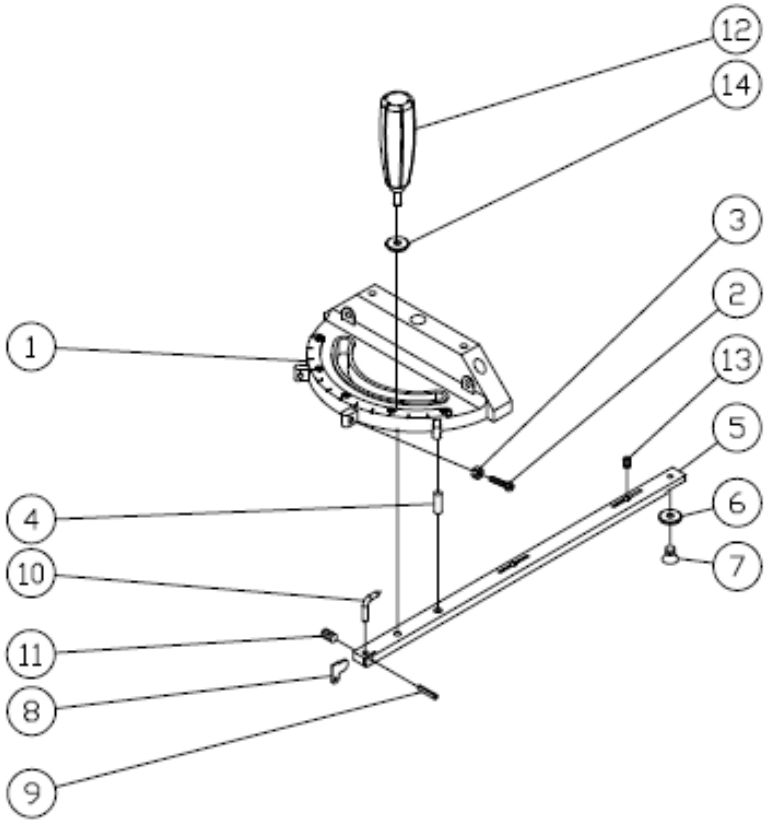
ITEM	PART NO	PARTS NAME	SIZE	Q`TY	NOTE
1	AB206422S5	Rip Fence Housing Assem.		1	
101	SI069400	Counter Sunk Screw	M6*16	2	
102	206433	Fixed Plate		1	
103	203193	Shafts		2	
104	NL081000	Lock Nut	M8	2	
105	200875	Plate		1	
106	SH069400	Hex Head Bolt	M6*16	2	
107	203179	Eccentric Ring		2	
108	206422	Seat		1	
109	203213	Eccentric Shaft		1	
110	WF203630	Washer	ψ20*ψ36	1	
111	994181	Steel Ball	ψ8	1	
112	150099	Spring		1	
113	SS100200	Set Screw	M10*10	1	
114	RS200000	Retaining Ring	S20	1	
115	WS080000	Lock Washer	M8	1	
116	BB620202	Ball Bearing	6202ZZ	1	
117	NA081300	Hex Nut	M8	1	
118	203356	Ring		1	
119	206435	Ring		1	
120	WF083030	Washer	M8*ψ30	4	
121	SH080700	Hex Head Bolt	M8*35	1	
122	RS150000	Retaining Ring	S15	1	
123	203649	Ring		1	
124	203650	Shaft		1	
125	206428	Fixed Block		1	
126	NL101700	Lock Nut	M10	1	
127	200069	Washer	M10	2	
128	205114	Adjust Knob	M10*110	1	
129	SR060200	Cap Screw	M6*10	4	
130	205822	Scraper	ψ40 (for shift)	2	
2	205663	Fence Plate	1M	1	
	203191X7	Fence Plate	1.2M	1	X7 / Option
3	200884	Handle		1	
4	200884	Handle		1	
5	206432	Handle		1	



ITEM	PART NO	PARTS NAME	SIZE	Q`TY	NOTE
1	AB205075	Hood Assembly		1	Assembly
101	205075	Hood		1	
102	ST029404	Screw	M3×16	3	
103	ST029304	Screw	M3×12	3	
104	205076	Hood		1	
105	203110	Screw	M5×10	2	
106	205124	Shaft		1	
2	NL101700	Lock Nut	M10	1	
3	205162	Cap Screw	M10×25	1	
4	200535	Hose Clamp	2-1/2"	2	
5	SR100500	Cap Screw	M10x25	1	
6	WS100000	Lock Washer	M10	1	
7	200965	Hose Support Plate		1	
8	WF102025	Washer	M10x20	1	
9	NL101700	Hex Nut	M10	1	
10	200536	Hose	ψ64x3000	1	
11	205067	Plate		1	



ITEM	PART NO	PARTS NAME	SIZE	Q`TY	NOTE
1	200152	MITER GAUGE BOLT		1	
2	SP050400	PAN HEAD BOLT	M5x20	3	
3	NH050800	NUT	M5	3	
4	200086	STEEL PIN		1	
5	130376	GUIDE PIECE		1	
6	200156	GUIDE PIECE		1	
7	SN069200	COUNTERSUNKS HEAD BOLT	M6x8	1	
8	200158	LOCATING PIECE		1	
9	PS030600	SPRING PIN	ψ3x6	1	
10	200160	POINTER		1	
11	SS050100	SET SCREW	M5x5	1	
12	612150	HANDLE	M8x20	1	
13	SS089100	SET SCREW	M8x6	2	
14	WF081820	WASHER	M8xψ18	1	

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