W715 30-10-09

HARE&FORBES

MACHINERYHOUSE

Established 1930

Distributors of New & Used Workshop Equipment

PANEL SAW

MODEL: PS-1850

OPERATION MANUAL AND PARTS LIST

⚠WARNING

General Machinery Safety Instructions

Machinery House
requires you to read this entire Manual before using this machine.

1. **Read the entire Manual before starting machinery.** Machinery may cause serious injury if not correctly used.
2. **Always use correct hearing protection when operating machinery.** Machinery noise may cause permanent hearing damage.
3. **Machinery must never be used when tired, or under the influence of drugs or alcohol.** When running machinery you must be alert at all times.
4. **Wear correct Clothing.** At all times remove all loose clothing, necklaces, rings, jewelry, etc. Long hair must be contained in a hair net. Non-slip protective footwear must be worn.
5. **Always wear correct respirators around fumes or dust when operating machinery.** Machinery fumes & dust can cause serious respiratory illness. Dust extractors must be used where applicable.
6. **Always wear correct safety glasses.** When machining you must use the correct eye protection to prevent injuring your eyes.
7. **Keep work clean and make sure you have good lighting.** Cluttered and dark shadows may cause accidents.
8. **Personnel must be properly trained or well supervised when operating machinery.** Make sure you have clear and safe understanding of the machine you are operating.
9. **Keep children and visitors away.** Make sure children and visitors are at a safe distance for you work area.
10. **Keep your workshop childproof.** Use padlocks, Turn off master power switches and remove start switch keys.
11. **Never leave machine unattended.** Turn power off and wait till machine has come to a complete stop before leaving the machine unattended.
12. **Make a safe working environment.** Do not use machine in a damp, wet area, or where flammable or noxious fumes may exist.
13. **Disconnect main power before service machine.** Make sure power switch is in the off position before re-connecting.
14. **Use correct amperage extension cords.** Undersized extension cords overheat and lose power. Replace extension cords if they become damaged.
15. **Keep machine well maintained.** Keep blades sharp and clean for best and safest performance. Follow instructions when lubricating and changing accessories.
16. **Keep machine well guarded.** Make sure guards on machine are in place and are all working correctly.
17. **Do not overreach.** Keep proper footing and balance at all times.
18. **Secure workpiece.** Use clamps or a vice to hold the workpiece where practical. Keeping the workpiece secure will free up your hand to operate the machine and will protect hand from injury.
19. **Check machine over before operating.** Check machine for damaged parts, loose bolts, Keys and wrenches left on machine and any other conditions that may effect the machines operation. Repair and replace damaged parts.
20. **Use recommended accessories.** Refer to instruction manual or ask correct service officer when using accessories. The use of improper accessories may cause the risk of injury.
21. **Do not force machinery.** Work at the speed and capacity at which the machine or accessory was designed.
22. **Use correct lifting practice.** Always use the correct lifting methods when using machinery. Incorrect lifting methods can cause serious injury.
23. **Lock mobile bases.** Make sure any mobile bases are locked before using machine.
24. **Allergic reactions.** Certain metal shavings and cutting fluids may cause an ellergic reaction in people and animals, especially when cutting as the fumes can be inhaled. Make sure you know what type of metal and cutting fluid you will be exposed to and how to avoid contamination.
25. **Call for help.** If at any time you experience difficulties, stop the machine and call you nearest branch service department for help.

MACHINERYHOUSE

⚠WARNING

Sawbench/Panel Saw Safety Instructions

Machinery House
requires you to read this entire Manual before using this machine.

1. **Maintenance.** Make sure the saw is turned off and disconnect from the main power supply and make sure all moving parts have come to a complete stop before any inspection, adjustment or maintenance is carried out.

2. **Saw Condition.** Saw must be maintained for a proper working condition. Never operate a saw that has damaged or worn parts. Scheduled routine maintenance should performed on a scheduled basis.

3. **Blade Condition.** Never operate a saw with a dropped, cracked or badly worn blade. Before using a saw inspect blades for missing teeth and cracks. A damaged blade can cause serious injury.

4. **Replacing Blade.** Make sure teeth are face forward to the workpiece. Wear gloves to protect hands.

5. **Hand Hazard.** Keep hands and fingers clear from the line of cut of the blade. Serious injury can occur.

6. **Leaving a saw Unattended.** Always turn the saw off and make sure all moving parts have come to a complete stop before leaving the saw. Do not leave saw running unattended for any reason.

7. **Avoiding Entanglement.** Blade guard must be used at all times. Remove loose clothing, belts, or jewelry items. Never wear gloves while machine is in operation. Tie up long hair and use the correct hair nets to avoid any entanglement with the saw moving parts.

8. **Understand the machines controls.** Make sure you understand the use and operation of all controls.

9. **Power outage.** In the event of a power failure during use of the saw, turn off all switches to avoid possible sudden start up once power is restored.

10. **Work area hazards.** Keep the area around the saw clean from oil, tools, chips. Pay attention to other persons in the area and know what is going on around the area to ensure unintended accidents.

11. **Workpiece Handling.** Workpiece should be stable on the table and support either by the rip fence or crosscut table during cutting. Hold downs, push sticks and featherboards and other safety devices can be used to make cutting operations safe.

12. **Hearing protection and hazards.** Always wear hearing protection as noise generated from saw blade and workpiece vibration can cause permanent hearing loss over time.

13. **Saw Blade Hazards.** Never reach behind or over a blade with your hands while saw is operating, If you loose your balance or kick back occurs you could be pulled into the spinning saw blade.

14. **Operator position.** Never stand or have any part of your body in line with cutting path of the saw blade.

15. **Use a Push Stick.** Always use a push stick when ripping narrow material.

16. **Blade guards & blade splitter.** Always use blade guards and blade splitter when cutting completely through the workpiece.

17. **Crosscutting operation.** While using a mitre guide to crosscut a workpiece, remove the rip fence.

18. **Stalled blade.** In the case that the blade stalls while in operation, turn the saw off before freeing the stalled saw blade.

19. **Blade height.** Always adjust blade to the correct height above the workpiece.

20. **Kickback.** Kickback is defined as high speed expulsion of workpiece from the table saw towards the operator.

21. **Call for help.** If at any time you experience difficulties, stop the machine and call you nearest branch service department for help.

PLANT SAFETY PROGRAM

NEW MACHINERY HAZARD IDENTIFICATION, ASSESSMENT & CONTROL

Sawbench - Panel Saw

Developed in Co-operation Between A.W.I.S.A and Australia Chamber of Manufactures
This program is based upon the Australian Worksafe Standard for Plant(NOHSC:1010-1994)

Item No.	Hazard Identification	Hazard Assessment	Risk Control Strategies (Recommended for Purchase / Buyer / User)
A	ENTANGLEMENT	HIGH	Eliminate, avoid loose clothing / Long hair etc.
B	CRUSHING	LOW	Ensure machine is bolted down to prevent it falling.
C	CUTTING, STABBING, PUNCTURING	MEDIUM	Isolate main power switch before changing blade, cleaning or adjusting. Check blade is tight and in good condition before starting. Make sure blade guard is down and adjusted when changing thickness. Ensure blade is at the correct height when cutting. Hands must always be kept well away from blade at all times. Use a push stick where required.
D	SHEARING	MEDIUM	Make sure all guards are secured shut when machine is on.
F	STRIKING	LOW	Support long heavy workpieces and stand clear of offcuts falling. Remove all loose objects around moving parts. Wear safety glasses.
H	ELECTRICAL	MEDIUM	All electrical enclosures should only be opened with a tool that is not to be kept with the machine. Machine should be installed & checked by a Licensed Electrician.
K	ERGONOMIC	MEDIUM	Heavier pieces must be carried by more than one person, or use supports.
O	OTHER HAZARDS, NOISE, DUST.	LOW	Wear hearing protection as required. Must be connected to dust extraction.
Plant Safety Program to be read in conjunction with manufactures instructions			

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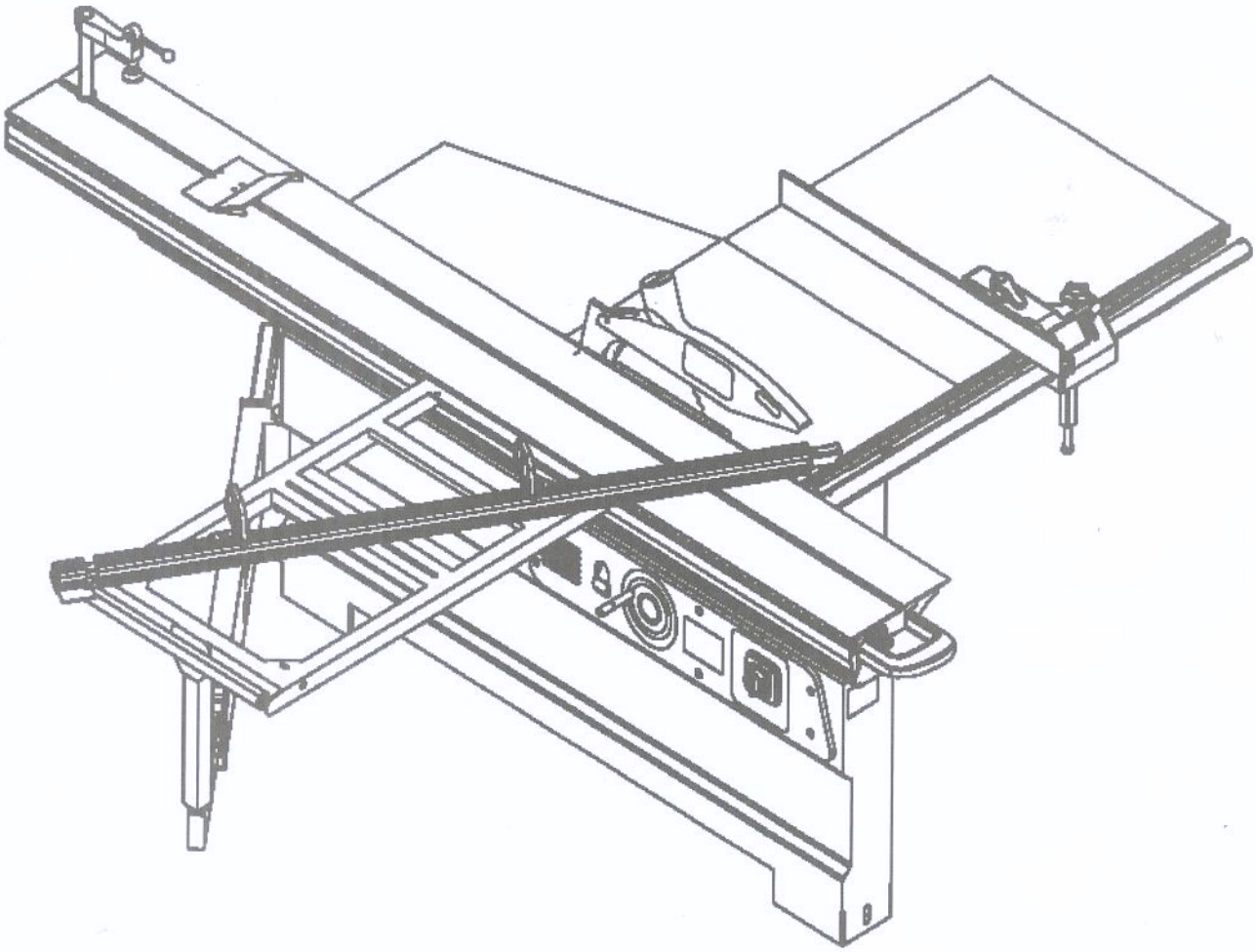
Authorised and signed by:
Safety officer: .....
Manager: .....

Revised Date: Aug-08

W715

SS-1800

Sliding Table Saw Operation Manual



Operating Instructions

Dear Customer,

Please read and understand the information contained in these operating instructions and the accompanying documents. To obtain maximum life and efficiency from your machine, and to use the machine safely, read this manual thoroughly and follow instructions carefully.

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*1. Safety

1.1 Authorized use

1. This machine is designed for sawing wood, wood derived materials as well as similar to be machined hard plastics only.
   Machining of other materials is not permitted and may be carried out in specific cases only after consulting with the manufacturer.

2. The machine must only be used in a technically perfect condition.

3. No metal workpieces may be machined.

4. No cuts without using the rip fence, the 90° fence or the sliding table may be performed.

5. No submerged cuts by removing the riving knife and/or saw guard may be performed.

6. The use of a power feeder is not considered.

7. The proper use also includes compliance with the operating and maintenance instructions given in this manual.
   The machine must be operated only by persons familiar with its operation, maintenance and repair and who are familiar with its hazards.
   The required minimum age must be observed.

8. When working on the machine, all safety mechanisms and covers must be mounted.

9. In addition to the safety requirements contained in this operating instruction and your country's applicable regulations, you should observe the generally recognized technical rules concerning the operation of woodworking machines.

10. Any other use exceeds authorization.
    In the event of unauthorized use of the machine, the manufacturer renounces all liability and the responsibility is transferred exclusively to the operator.

1.2 General safety notes

1. Woodworking machines can be dangerous if not used properly. Therefore the appropriate general technical rules as well as the following notes must be observed.

2. Read and understand the entire instruction manual before attempting assembly or operation.

3. Keep this operating instruction close by the machine, protected from dirt and humidity, and pass it over to the new owner if you part with the tool.

4. No changes to the machine may be made.

5. Daily inspect the function and existence of the safety appliances before you start the machine.
   Do not attempt operations in this case, protect the machine by unplugging the mains cord.

6. Remove all loose clothing, wear proper apparel. Do not wear loose clothing, gloves, neckties, rings or jewelry which may get caught in moving parts.

7. Wear protective hair covering to contain long hair and wear non-slip footwear.

8. Before operating the machine, remove tie, rings, watches, other jewellery, and roll up sleeves above the elbows.

9. Do not wear gloves while operating this machine.For the safe handling of sawblades wear work gloves.

10. Observe the chapter "save operation" in this manual.

11. Check the correct rotation of the sawblade before operating the machine.

12. Do not start cutting operation until sawblade is at full speed.

13. Control the stopping time of the machine, it may not be longer than 10 seconds.

14. Do not use side pressure to stop rotating blade.

15. Insure that the workpiece does not roll when cutting round pieces.

16. Use suitable table extensions and supporting aids for difficult to handle workpieces.

17. Always hold and guide the workpieces safely during machining.

18. Pay particular attention to instructions on reducing the risk of kickback.

19. The supplied raving knife must always be used. Adjust the space to the sawblade to be between 2 to 5mm.

20. Do not perform any operation freehand.

21. Never reach around or over the saw blade.

22. When ripping narrow workpieces (<120mm) use as push-stick or push-wood.

23. Always use crossfeed guide for cutting off.

24. The use of dado-blades is not permissible.

25. Make sure that small cut off workpieces will not be caught and thrown away by the rising saw blade teeth.

26. Remove cut and jammed workpieces only when motor is turned off and the machine is at a complete standstill.

27. Install the machine so that there is sufficient space for safe operation and workpiece handling.

28. Keep work area well lighted.

29. The machine is designed to operate in closed rooms and must be placed stable on firm and levelled ground.

30. Make sure that the power cord does not impede work and cause people to trip.

31. Keep the floor around the machine clean and free of scrap material, oil and grease.

32. Stay alert!
    Give your work undivided attention. Use common sense.Be mentally alert at all times when running machine.

33. Never operate machine when tired, or under the influence of drugs or alcohol.

34. Keep children and visitors a safe distance from the work area.

35. Never reach into the machine while it is operating or running down.

36. Never leave a running machine unattended. Before you leave the workplace switch off the machine.
37. Do not operate the electric tool near inflammable liquids or gases.
    Observe the fire fighting and fire alert options, for example the fire extinguisher operation and place.
38. Do not use the machine in a dump environment and do not expose it to rain.
39. Wood dust is explosive and can also represent a risk to health.
    Dust from some tropical woods in particular, and from hardwoods like beach and oak, is classified as a carcinogenic substance.
    Always use a suitable dust extraction device
40. Before machining, remove any nails and other foreign bodies from the workpiece.
41. Specifications regarding the maximum or minimum size of the workpiece must be observed.
42. Do not remove chips and workpiece parts until the machine is at a complete standstill.
43. Never operate with the guards not in place – serious risk of injury!
44. Connection and repair work on the electrical installation may be carried out by a qualified electrician only.
45. Always unwind any extension cords fully.
46. Have a damaged or worn cord replaced immediately.
47. Do not use the machine when the ON-OFF switch does not operate correctly.
48. Make all machine adjustments or maintenance with the machine unplugged from the power source.
49. Never use sawblades made from High Speed Steel (HSS).
50. Remove defective sawblades immediately.
51. A worn table insert must be replaced.

1.3 Remaining hazards

When using the machine according to regulations some remaining hazards may still exist

The moving sawblade in the work area can cause injury.

Broken saw blades can cause injuries.

Thrown workpieces can lead to injury

Tipping of the workpiece due to insufficient support can lead to injury.

Wood chips and sawdust can be health hazards. Be sure to wear personal protection gear such as safety goggles ear- and dust protection.
Use a suitable dust exhaust system.

The use of incorrect mains supply or a damaged power cord can lead to injuries caused by electricity.

The type and condition of the sawblade is important in keeping the noise level as low as possible.
This does not negate the fact that extra safety equipment such as ear protection must be used.

*2. Machine specifications

2.1 Technical data

SS-1800:

Machine Table	840x550 mm
Rear extension table	800x550mm
Right extension table	830x400mm
Sliding table size	1500x350mm
Max. travel of sliding table	1700mm
Max. length of cut	1450mm
Crosscut table	500 x 500mm
Dust port diameter	5"
Sawblade diameter	300 mm or 12"
Blade bore diameter	30 mm or 1"
Blade speed n_0	4000 rpm

Scoring blade diameter	80mm
Scoring blade bore diameter	20mm
Scoring blade speed n_0	8000 rpm
Cutting height at 90°/45°	90/ 76 mm
Tilting range of blade	90°- 45°
Max. width of rip cut	1240mm
Weight	400 kg

SS-3000:

Machine Table	840x550 mm
Rear extension table	800x550mm
Right extension table	830x950mm
Sliding table size	3000x350mm
Max. travel of sliding table	3300mm
Max. length of cut	3100mm
Crosscut table	1150 x 650mm
Sawblade diameter	300 mm or 12"
Blade bore diameter	30 mm or 1"
Blade speed n_0	4000 rpm
Scoring blade diameter	80mm
Scoring blade bore diameter	20mm
Scoring blade speed n_0	8000 rpm
Cutting height at 90°/45°	96/ 76 mm
Tilting range of blade	90°- 45°
Max. width of rip cut	1240 mm
Dust port diameter	5"mm
Weight	570 kg

2.2 Noise emission

Determined according to EN 1807:1999 (Inspection tolerance 4 dB)
Workpiece plywood 16mm:
T=16mm, L=800mm, moisture 8,5%

Acoustic power level (acc. EN 3746):

Idling	98,3 dB (A)
Operating	104 dB (A)

Acoustic pressure level (EN 11202):

Idling	84,4 dB (A)
Operating	90,2 dB (A)

The specified values are emission levels and are not necessarily to be seen as safe operating levels. Although there is a correlation between emission and imission levels, these do not constitute a basis for determining the necessity of additional safety measures. Workplace conditions which could influence the noise imission level include the duration of resonance, spatial particulars, other noise sources etc. For example, the number of machines and other work being performed. The permissible workplace levels can vary from country to country.

This information is intended to allow the user to make a better estimation of the hazards and risks involved.

2.3 Dust emission

The sliding table saw has been dust emission inspected.

At an air velocity of 20m/sec on the dust port dia 115 or 127mm:

Vacuum pressure	800Pa
Volume flow	565 m³/h

The TRK-value of 2 mg/m^3 has not been exceeded.

2.4 Content of delivery

Sliding table
Crosscut table (SS-3000)
Crosscut fence (SS-3000)
Miter fence (SS-1800)
Rear extension table
Right extension table
Rip fence with dual fence profile
Rip fence support rail
Saw guard
Sawblade 300 or 12" (optional)
Scoring blade 80mm (optional)

Back stop
Push stick
Operating manual
Spare parts list

*3. Transport and start up

3.1 Transport and installation

The machine will be delivered on a crate.

Use a forklift or lifting straps to lift the machine off the pallet (Fig 1).

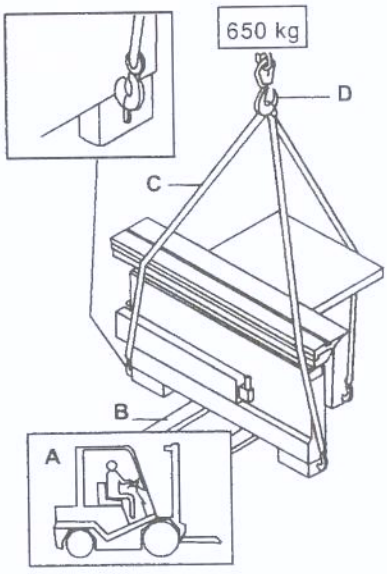


Fig 1

Warning:
The machine weight is 650 kg.
Assure the sufficient load capacity and proper condition of your lifting devices.
Never step underneath suspended loads.

For transport to the desired location use a forklift or hand trolley. Make sure the machine does not tip or fall off during transport.

The machine is designed to operate in closed rooms and must be placed stable on firm and levelled ground.

The machine must be levelled in both directions to assure good sliding motion of the sliding table.

If possible, the machine must be placed on rubber plates which act as shock absorbers and reduce the noise level.

For packing reasons the machine is not completely assembled.

3.2 Assembly

If you notice any transport damage while unpacking, notify your supplier immediately. Do not operate the machine!

Dispose of the packing in an environmentally friendly manner.

Clean all rust protected surfaces with a mild solvent.

Mounting Rear Extension Table
Attach rear extension table to the machine table and put surfaces in level with help of screws (U).

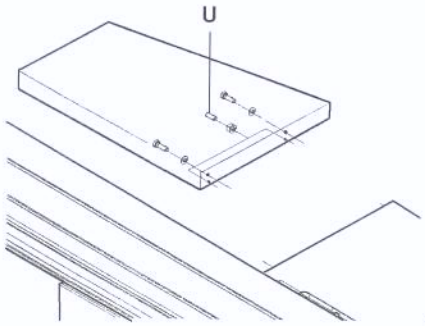


Fig 2

Mounting Right Extension Table
Attach right extension table to the machine table and put surfaces in level.

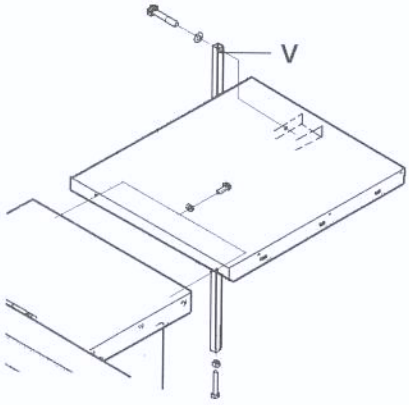


Fig 3

The right table extension has an adjustable support leg (V).

Mounting rip fence base rail
Mount the rip fence base rail (Y) to the front of the saw table and right table extension.

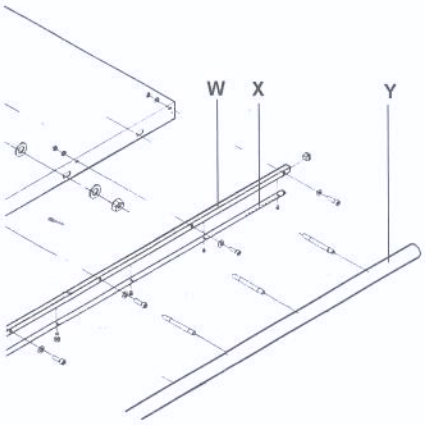


Fig 4

Mount the scale carrier (W).

Mounting rip fence
Mount the rip fence to the rip fence base rail.

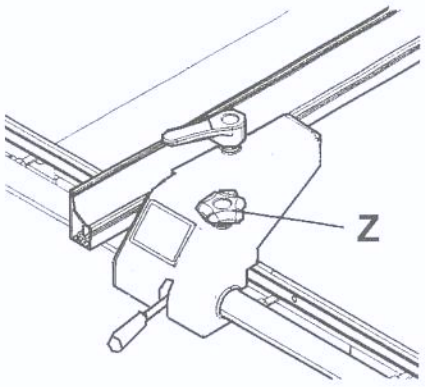


Fig 5

Adjust the rack (X, Fig 4) so that the micro adjust pinion (Y) engages nicely (with little but not too much gear space).

Mounting Sliding Table
For access to blots remove the covers (F and G).

With the help of another person lift the sliding table (A) onto machine cabinet and lock in place with screws (D), washers and nuts (E).

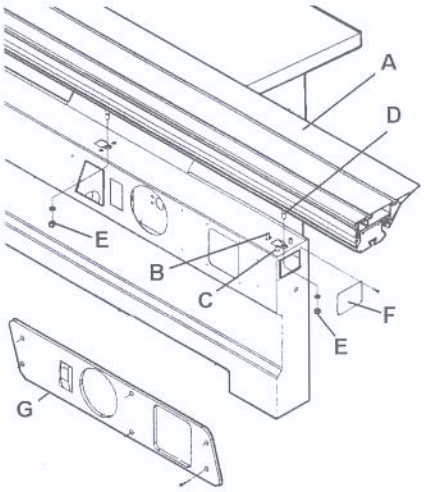


Fig 6

The locating bolts (B and C) are aligned ex works.

The sliding table must be aligned to run parallel to the sawblade and surface to be min 0,3mm higher than the machine table.

Mounting Sliding Table Handle
See Fig 7

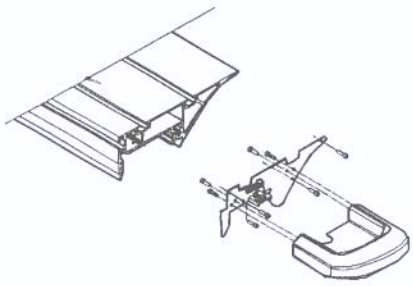


Fig 7

Mounting Crosscut Table
See chapter 5.7

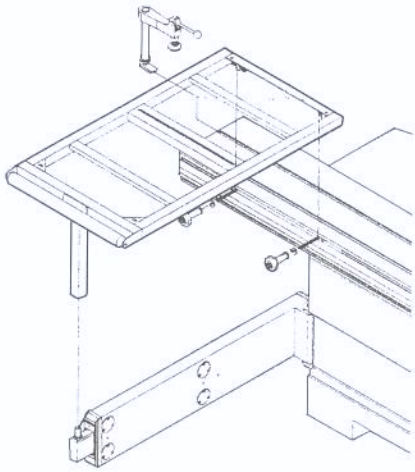


Fig 8

Mounting Crosscut Fence
See chapter 5.8

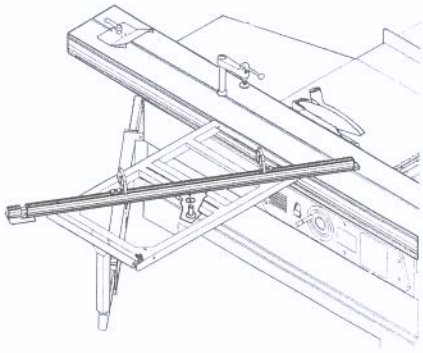


Fig 9

Mounting Mitre Fence (SS-1800)
See chapter 5.9

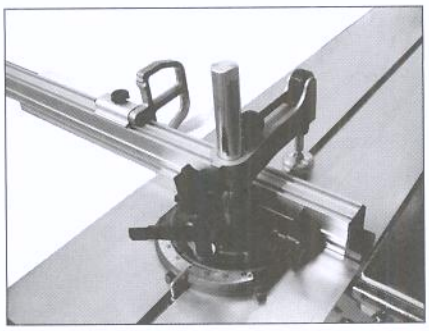


Fig 10

Mounting Sawblade
See chapter 5.1

Mounting sawguard
See chapter 5.3

3.3 Dust connection

Before initial operation, the machine must be connected to a dust extractor. The suction should switch on automatically when the saw is switched on.

A hose, a Y-piece and a hose support are supplied with the machine.

The flow rate on the suction port dia 100mm must be 20m/sec.

Flexible hoses must be of non-flammable quality, and must be connected to the machine ground system.

3.4 Mains connection

Mains connection and any extension cords used must comply with applicable regulations.

The mains voltage must comply with the information on the machine licence plate.

The mains connection must have a 16A surge-proof fuse.

Connections and repairs to the electrical equipment may only be carried out by qualified electricians.

Attention:
-Check first if the saw spindle runs freely and if all safety devices are fitted before starting the machine.

- If the direction of rotation is not correct, the phase converter inside the CCE Euro plug must be pushed in and turned 180°.

(Clockwise direction of the spindle is correct).

For safety reasons this must only be done without the sawblade installed!

3.5 Starting operation

You can start the machine with the green On-button. The red Off-button stops the machine.

The scoring sawblade is started and stopped simultaneously with the main sawblade.

Note:
-When the lower sawblade cover is open, it is impossible to start up the machine.

-In case of machine overload the motor overload cut-off will react.
After appr.10 min of cooling the machine can be started again.

4. Machine operation

Correct working position:
In front of the machine standing out of the line of cutting (danger zone).

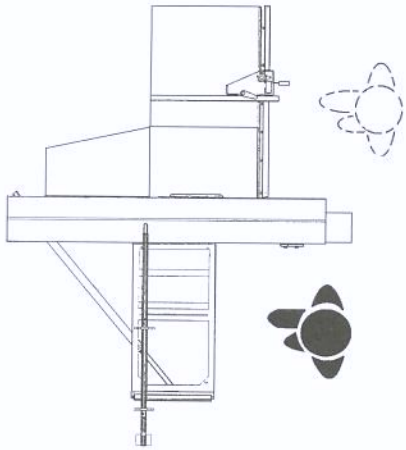


Fig 11

Workpiece handling:
Hands placed flat on the workpiece outside the cutting area.
Feed the workpiece towards the saw blade in the direction of the saw line. Push the workpiece steadily forward; complete the cut as a single movement.

Support long and wide workpieces with helping roller stands.

The use of a power feeder is not considered.

Crosscut with crosscut fence

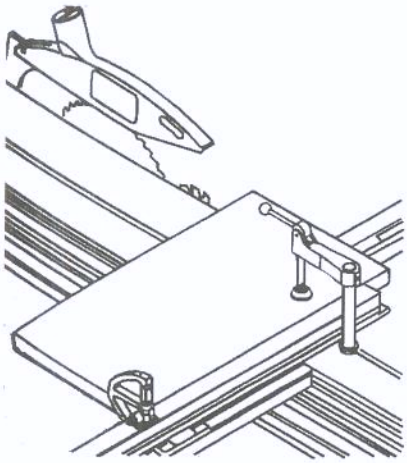


Fig 12

Trimming with back stop

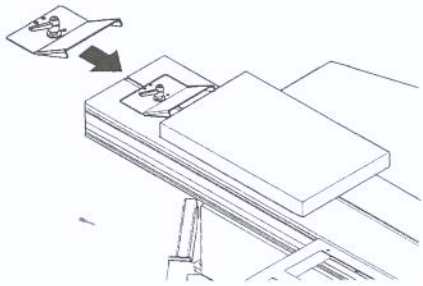


Fig 13

Operating hints:

1. Work only with a sharp and flawless sawblade.
2. Use a suitable wedge to prevent round timber from turning under the pressure of the cut
3. Use suitable table extensions and supporting aids for difficult to handle workpieces.
4. Always hold and guide the workpieces safely during machining.
5. Do not perform any operation freehand.
6. When ripping narrow workpieces (<120mm) use as push-stick or push-wood.
7. Make sure that small cut off workpieces will not be caught and thrown away by the rising saw blade teeth.
8. Remove cut and jammed workpieces only when motor is turned off and the machine is at a complete standstill.
9. Pay particular attention on reducing the risk of kickback.
10. The supplied raving knive must always be used.

5. Setup and adjsutments

General note:

Setup and adjustment work may only be carried out after the machine is protected against accidental starting by pulling the mains plug.

5.1 Changing sawblade

The sawblade has to meet the technical specification.

The diameter of the saw blades used on the machine is 300 mm / 12".

Check sawblade for flaws (cracks, broken teeth, bending) before installation. Do not use faulty sawblades.

Warning:
The use off HSS saw blades is prohibited; use only carbide tipped saw blades.

The sawblade teeth must point in cutting direction (down)

Always wear suitable gloves when handling sawblades.

WARNING:
When installing or changing saw blade, always disconnect saw from power source, unplug!

Push the sliding table to the front (SS-1800) or to the rear (SS-3000) and open the lower sawblade cover.

Raise the main sawblade to its highest position.

Remove the saw guard.

Changing main saw blade:

Loosen the arbor nut (J, Fig 14) while stopping the arbor against rotation with the locking pin (K).

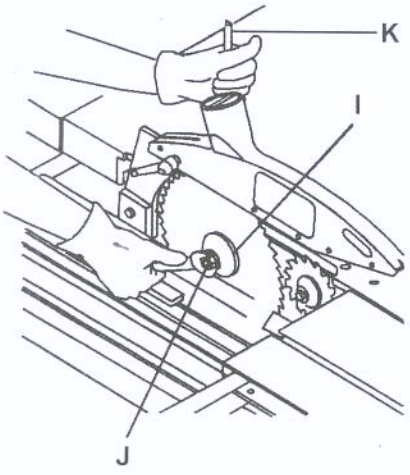


Fig 14

Attention: left hand thread.

Remove the arbor nut (J) and flange (I).

Place saw blade on arbor shaft making sure teeth point down at the front of the saw.

Reinstall flange and arbor nut and securely tighten.

Remove the locking pin (K).

Check the correct position of the raving knife in regards to the saw blade (see Chapter 5.2).

Reinstall the saw guard.

The scoring sawblade is changed as follows:

Put the enclosed spanner onto the saw arbor nut (M)

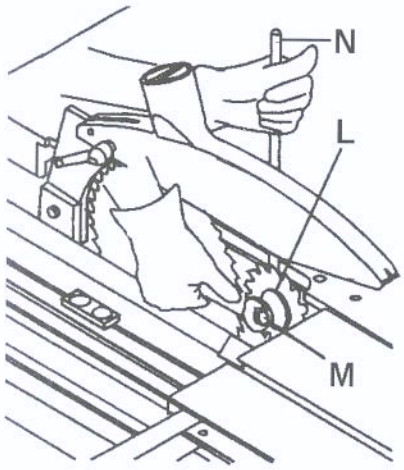


Fig 15

Put the locking pin (N) in the opening of the saw table and turn the arbor with the spanner until the locking pin engages in the hole in the saw arbor pulley.

Now unlock the nut.

Change the scoring blade.

After changing the blade tighten the bolt.

5.2 Mounting the riving knife

The supplied riving knife must always be used.

The machine is equipped with a riving knife for the use of sawblades diameter 250 to 305 mm.

The riving knife has to be adjusted in such a way that over its entire length the gap between sawblade and riving knife does not exceed min.3 mm and max.8 mm (Fig 16).

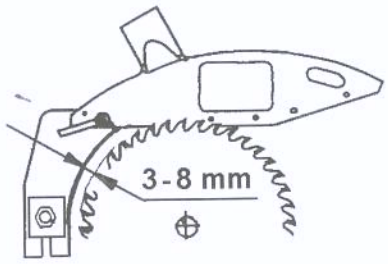


Fig 16

The riving knife (P, Fig 17)) can be adjusted in both vertical and horizontal direction.

The height setting has to be adjusted in such a way that the sawguard bottom never exceeds more than 3 mm above the highest placed sawblade tooth.

After height adjustment always locks the central bolt (Q, Fig 17).

The riving knife is side adjusted ex works.
The 4 little adjustment screws are used for the exact setting of the riving knife in line with the sawblade.

For slotting or grooving a special riving knife is needed.
The riving knife has to be adjusted in such a way that the upper part of the riving knife is never set lower than the highest sawtooth in use.

Never remove this riving knife. Kickbacks are severe and very dangerous.

No submerged cuts by removing the riving knife and/or saw guard may be performed.

To adjust the riving knife:

1. Disconnect the saw from the power source.
2. Move the blade tilt to 0° (blade 90° to table) and raise the main blade all the way up.
3. Check both sides of the blade with a straight edge touching the teeth as shown in Figure A:

   ---If the straightedge touches the riving knife evenly on both sides, go to step 4.

   ---if the straightedge only touches the riving knife on one side, go to step 5.

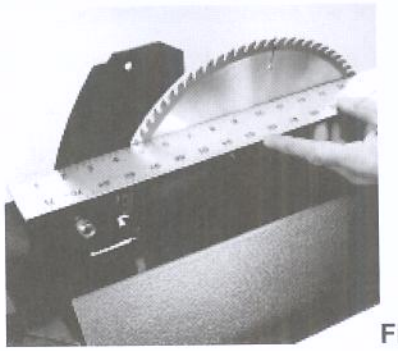


Figure A (checking riving knife alignment)

4. Place a machinist's square flat on the table and slide it against the riving knife as shown in Figure B.

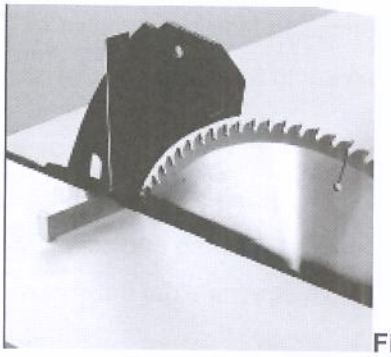


Figure B (checking vertical alignment)

--- If the square lies flat against the riving knife, the riving knife is correctly adjusted.

--- If there is a gap between the square and the riving knife, go to Step 6.

5. Slide the table all the way forward to access the blade arbor, loosen the cap screw securing the lower blade guard, slide the cap screw up, and pull open the lower blade guard.
6. Loosen the riving knife center bolt and remove the riving knife.
7. Use the set screws shown in Figure C to adjust the riving knife bracket and re-install the riving knife.

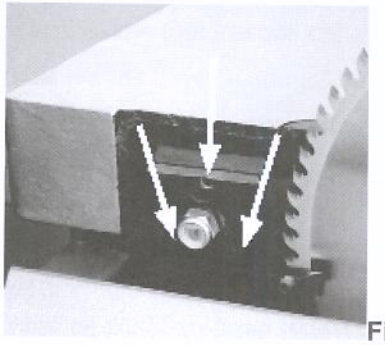


Figure C (set screw for adjusting riving knife0

8. Repeat step 3-7 until the riving knife is centered on the blade and aligned at 90° to the table.
9. Position the riving knife about 3 or 1/8" away from the nearest carbide tooth on the main blade.
10. Tighten the center bolt to secure the riving knife in position.
11. Move the lower blade guard back to its original position, and move the slideing table back to center.

5.3 Mounting the saw guard

The sawguard (O) must always be used.

Attach the saw guard to the riving knife (P).

The sawguard must be lowered to the workpiece to minimise the amount of exposed teeth.

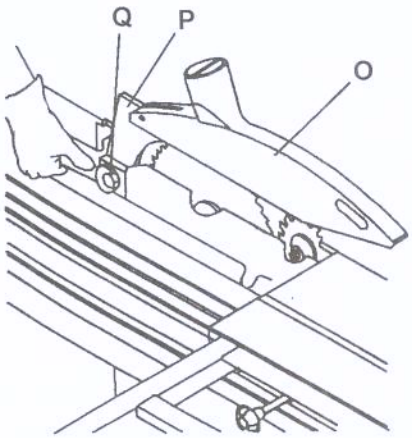


Fig 17

Adjustment shall never be performed when the machine is running.

The saw guard has to be connected to the dust extractor system.

5.4 Rising and tilting sawblade

Setup adjustments of the sawblade shall never be performed when the machine is running.

Use the front handwheels to raise the saw blade. One turn of the handwheel equals 2,5 mm of height setting.

Use the left handwheel to tilt the saw blade.

Both 45° and 90° positive stops are factory set and need no adjustment.

Start the machine with care.

5.5 Setup of scoring sawblade

The vertical adjustment of the scorer sawblade is done by turning the screw (T).

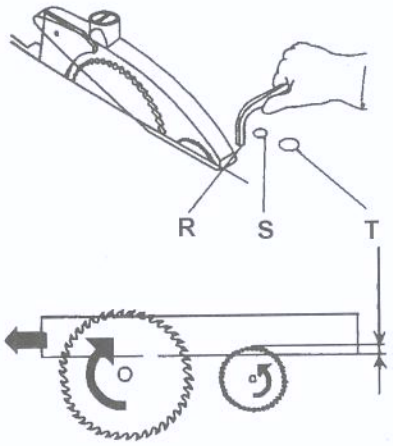


Fig 18

The maximum cutting depth using a scorer sawblade diameter of 80 mm is 4 mm .

Each time the main sawblade is replaced by a new one, or even a newly sharpened sawblade, the scorer has to be adjusted to match the main sawblade teeth width.

It is very important that this is done in the correct way to ensure a clean cut, free of splintering.

The supplied scoring sawblade has tapered teeth. Cutting depth also adjusts cutting width.

Before any horizontal adjustment can be done, the horizontal lock (S) has to be loosened.

The lateral movement of the scorer sawblade is achieved by turning the excenter (R), lock again (S) after adjustment (R).

5.6 Sliding table setup

When loading panels and when cutting using the parallel fence the sliding table should be locked.

To lock the table engage the index pin on the front end of the sliding table.

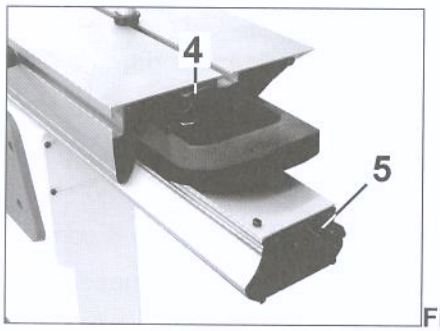


Fig 19

If over a long period of time many short movements of the sliding table are made by e.g. crosscutting solid wood, then it is possible that the ball carrier between the upper and lower part of the sliding table will move.

This means it will no longer be correctly positioned to allow the sliding table to slide through its full course.

The operator will feel resistance in the sliding table motion and the full stroke will not be achieved.

This effect can be corrected simply by pushing the table with a few short, light pushes against the buffer stop at the end, until the position of the ball carrier is adjusted and the table can be moved again along its full stroke.

It is recommended to clean the sliding table once a week, and to remove all sawdust and chips which gradually slow down the sliding table.

After all dust has been blown off, thin oil, such as WD-40, should be sprayed onto the steel guide rods on both the upper and lower part of the sliding table.

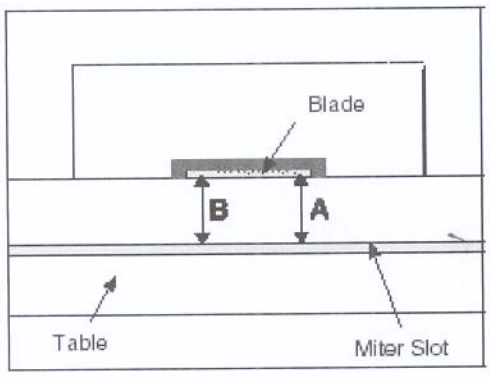
Never use a thick oil or grease!

Sliding table parallelism

To adjust the sliding table parallel with the main blade:

1. Move the blade tilt to 0° (blade 90° to table), and raise the main blade as high as it will go.
2. Finger tighten the nut securing the center of the sliding table.
3. Make a mark near the edge of the blade with a felt tip pen. This will allow you to take your measurements from the exact same place on the blade.
4. Using an adjustable square or a dial indicator, measure the distance (A) between the miter slot and the front of the blade as shown in **Figure C (Measuring gap between the table and the blade)**

   ****Using a dial indicator will provide the most accurate results**



Figuare C (Measuring gap between the table and the blade)

5. Rotate the blade 180° and slide the table with the measuring device to position B.
6. Measure the difference between the two positions (use the feeler gauge if using the adjustable square). Make note of the difference between the two measurements on a piece of paper.

   ---If the difference was less than 0.004" then the blade parallelism is correct.

   ---If the difference was greater than 0.004", then the sliding table needs to be adjusted.

   Continue with the next step.
7. Push the end of the table that is loser to the blade out half the distance noted in Step 6.
8. Repeat Steps 4-7 until the gap between the blade and the sliding table is equal.
9. Tighten the table mounting nuts to secure the sliding table and replace the access plates.

5.7 Crosscut table setup

Crosscut table setup shall never be performed when the machine is running.

Lift the crosscut table onto telescopic arm support and slide onto sliding table T-groove and lock in place.

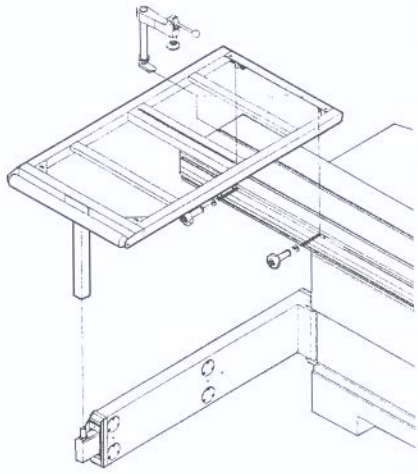


Fig 20

Crosscut table and telescopic arm are aligned ex works (The table surface must be in level with the sliding table).

The crosscut table can be positioned along the sliding table.

The telescopic arm support (JTSS-3000) is too short to allow the cross-cut table to be set at the front end of the sliding table.

Start the machine with care.

5.8 Crosscut fence setup (SS3000)

Crosscut fence setup shall never be performed when the machine is running.

The cross-cut table has 2 precision holes, allowing the crosscut fence to be put in 2 positions:
At the back and front of the cross-cut table.

Simply put the fence onto the cross-cut table and lock it in position using the two knobs.

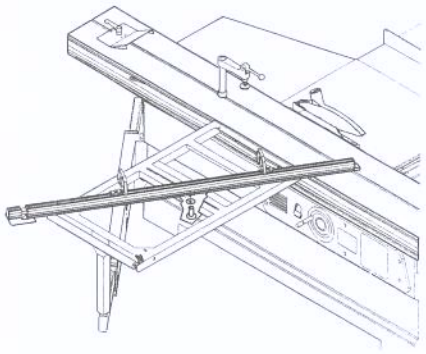


Fig 21

The 90° adjustable stops are factory set.

Calibration of the scale on the cross-cut fence:
The scale on the fence is factory set and needs no further adjustments.

To check the settings, put the stop at a certain measure and cut off a sample.

Measure the exact length of the sample, unlock the screw which holds the fence pivoting T-nut and move the fence until the measurement corresponds to the length of the previously cut length.

When using the telescopic extension, the second material stop has to be set to the very end to make the different scales correspond with one another.

The best way to check if all scales correspond is to make several test cuts on the different scales.

When, after some time, the protection cap at the front on the cross-cut fence is cut away, a new one has to be installed.

5.9 Mitre fence setup (SS1800)

Mitre fence setup shall never be performed when the machine is running.

To set the required angle: unlock the rod (E) of the wood clamp and the indexable handle (F).

The 45° and 90° positive stops (G) are factory set.

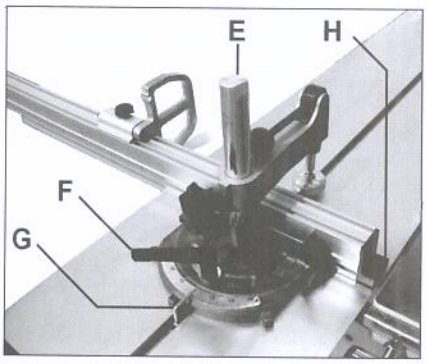


Fig 22

A worn rail end insert (H) has to be replaced (Article No:XXXXXXXXX).

5.10 Rip fence setup

Rip fence setup shall never be performed when the machine is running.

To move the fence, lift the handle (1).

To lock the fence in position push the handle (1) down.

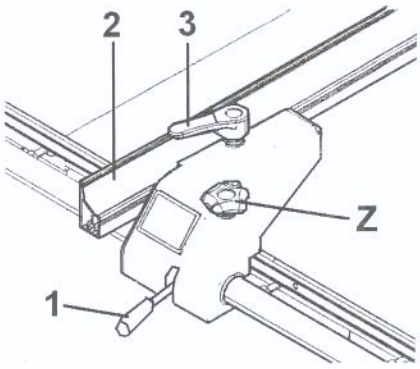


Fig 23

When cutting small workpieces with the sawunit inclined at 45°, the fence must be used in the low position.

Simply unlock the clamping handle (3), slide off the fence and slide it back on in the low position and lock.

The rip fence has a micro adjust feature. Push down the knob (Z) to engage rack and pinion.

When cross cutting using the parallel fence, to avoid the wood getting stuck between the fence and the riving knife (resulting in a highly dangerous kickback) it is necessary to position the fence so that its end corresponds with the front of the sawblade.

Start the machine with precaution.

The rip fence must be parallel to the sawblade and is adjusted at the factory.

6. Maintenance and inspection

General notes:
Maintenance, cleaning and repair work may only be carried out after the machine is protected against accidental starting by pulling the mains plug.

Repair and maintenance work on the electrical system may only be carried out by a qualified electrician.

Clean the machine regularly.

Inspect the proper function of the dust extraction daily.

Keep the inside of the cabinet clear of sawdust and wood chips. Make sure the motor fan and fan cover are also kept clear of sawdust.

After a days use push the sliding table all of the way forward and backward.

Remove rust from the table e.g. with WD-40® and a Scotch-Brite™ Hand Pad.

Never smoke while cleaning the machine, and especially when using petrol, kerosene or other inflammable products. This could lead to an explosion and serious burns for the operator.

All protective and safety devices must be re-attached immediately after completed cleaning, repair and maintenance work.

Defective safety devices must be replaced immediately.

Check saw blades regularly for faults. Replace a defective sawblades immediately.

Main drive belt tensioning:

Check regularly the condition of the belts and, if necessary, tighten or replace.

Remove the rear machine access door.

Tension the belt by pushing the motor down with the tensioning screw (B, Fig 24).

Make sure the belt is not over tensioned, because this could lead to damage of the saw arbor and bearings.

Main drive belt changing:
To access the belts for changing remove the 3 alen countersunk screws (C, Fig 24) that hold the lower sawblade guard (chip collect) and lower it to the bottom of the machine cabinet.

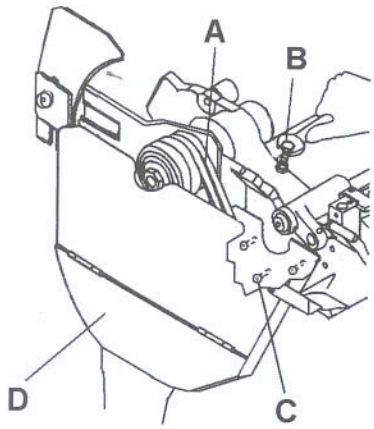


Fig 24

Replace V-belts (two pieces needed).

Tighten belts and reassemble.

Scoring unit belt tensioning:

The scoring unit belt is self tensioning (Fig 25).

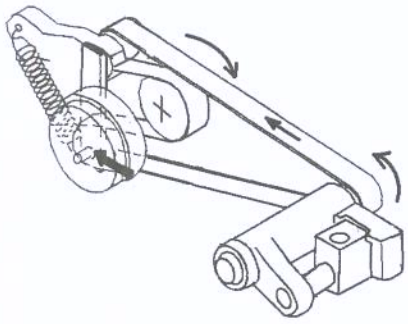


Fig 25

Scoring unit belt changing:

Check regularly the condition of the belts and, if necessary replace.

To access the belt remove the rear machine access door.

Use only original flat belt.

7. Trouble shotting

Warning: Disconnect power to the machine when performing any trouble shotting. Failure to do this may result in serious personal injury.

Motor doesn't start, or it growls on start up.

*No electricity-
check mains and fuse.

*Defective switch, motor or cord-
consult an electrician.

*Overload has reacted-
Wait and start again.

*Lower sawblade cover still open-Close cover correctly.

Machine vibrates excessively
*Stand on uneven floor-
adjust levelling screws for even support.

*dust on sawflanges-
clean saw arbor and flanges.

*defective sawblade -
replace sawblade immediately

*Bad V-belts-
replace V-belts

Cut is not accurately square
*Stops not adjusted correctly-
check with square and adjust stops.

Material binds blade when ripping
*Fence not aligned with sawblade-
check and adjust rip fence.

*Wrapped wood-
select another piece of wood.

Material kicked back from blade
*Fence not aligned with sawblade-
check and adjust rip fence.

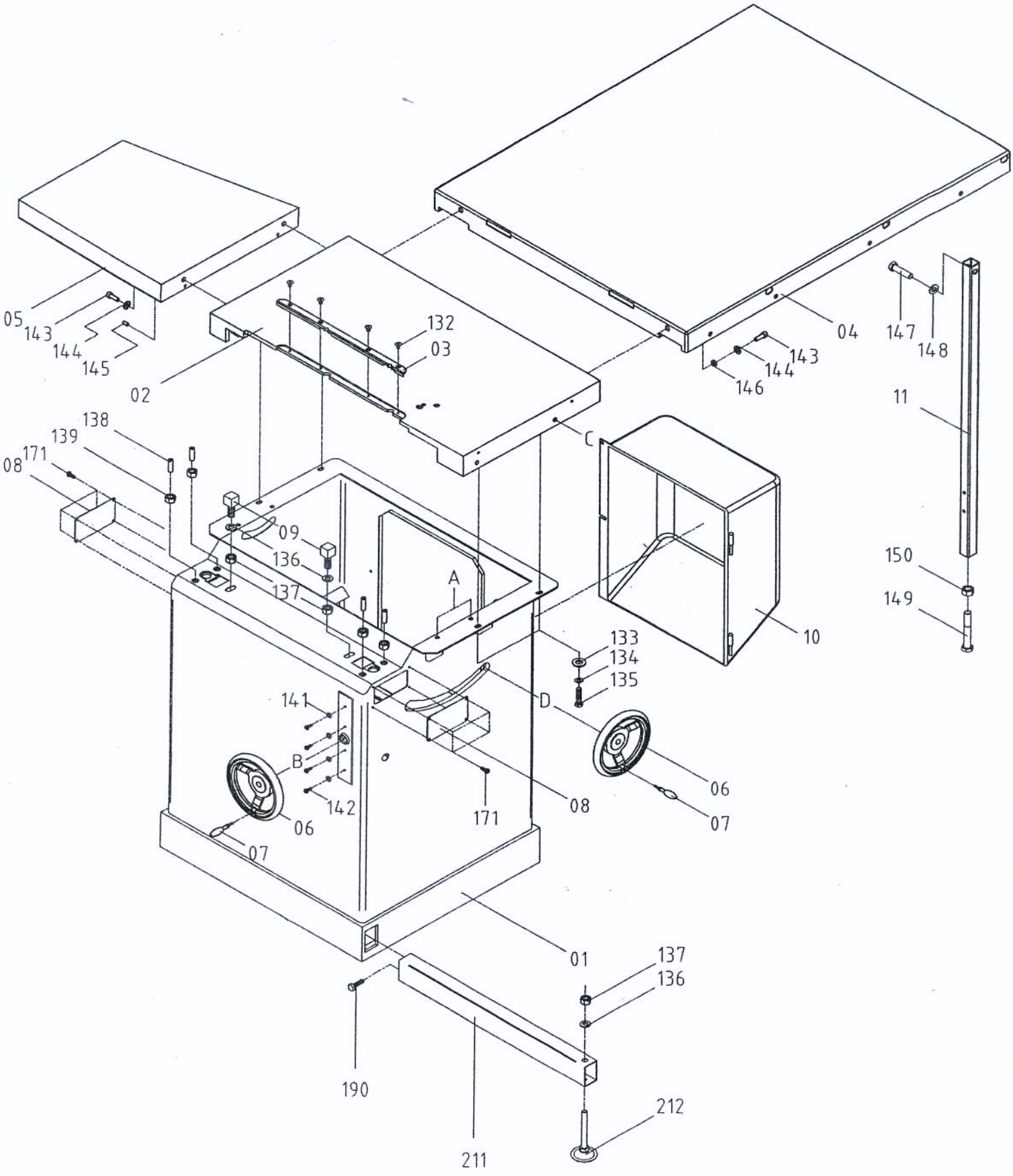
*Riving knife is not in place-
high danger, mount immediately with guard.

Cutting surfaces is bad
*Wrong sawblade used
*Blade mounted backwards
*resin collection on sawblade
*sawblade is dull
*workpiece inhomogeneous
*Feed pressure too high-
Do not force the workpiece.

Blade does not raise or tilt
*Sawdust in mechanisms-
clean and regrease.

Sliding table does not move
*Sawdust in bearing guides-
wipe out any sawdust.

Breaking time exceeds 10 sec.
*Motorbreak needs readjustment or change-
to replace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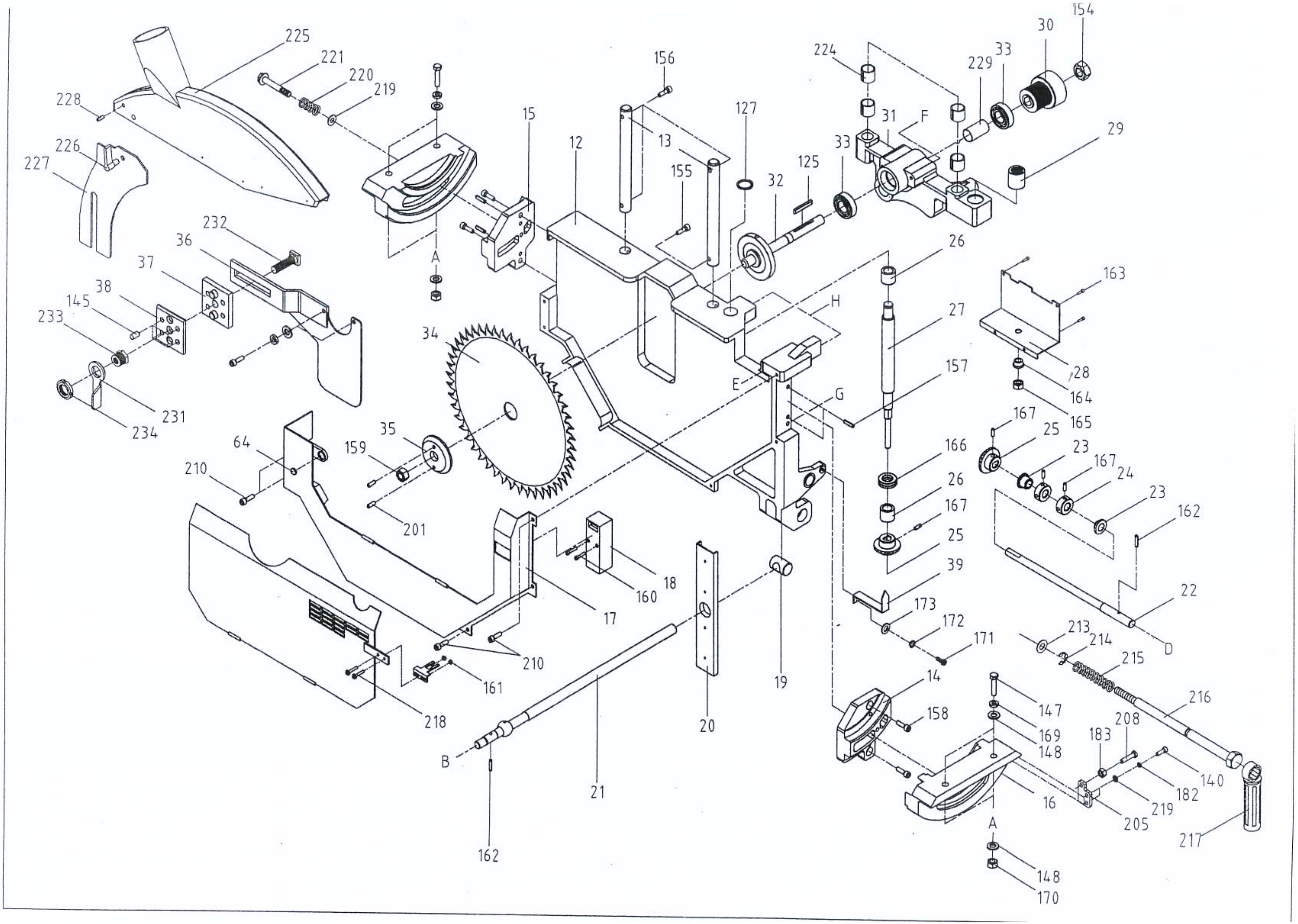
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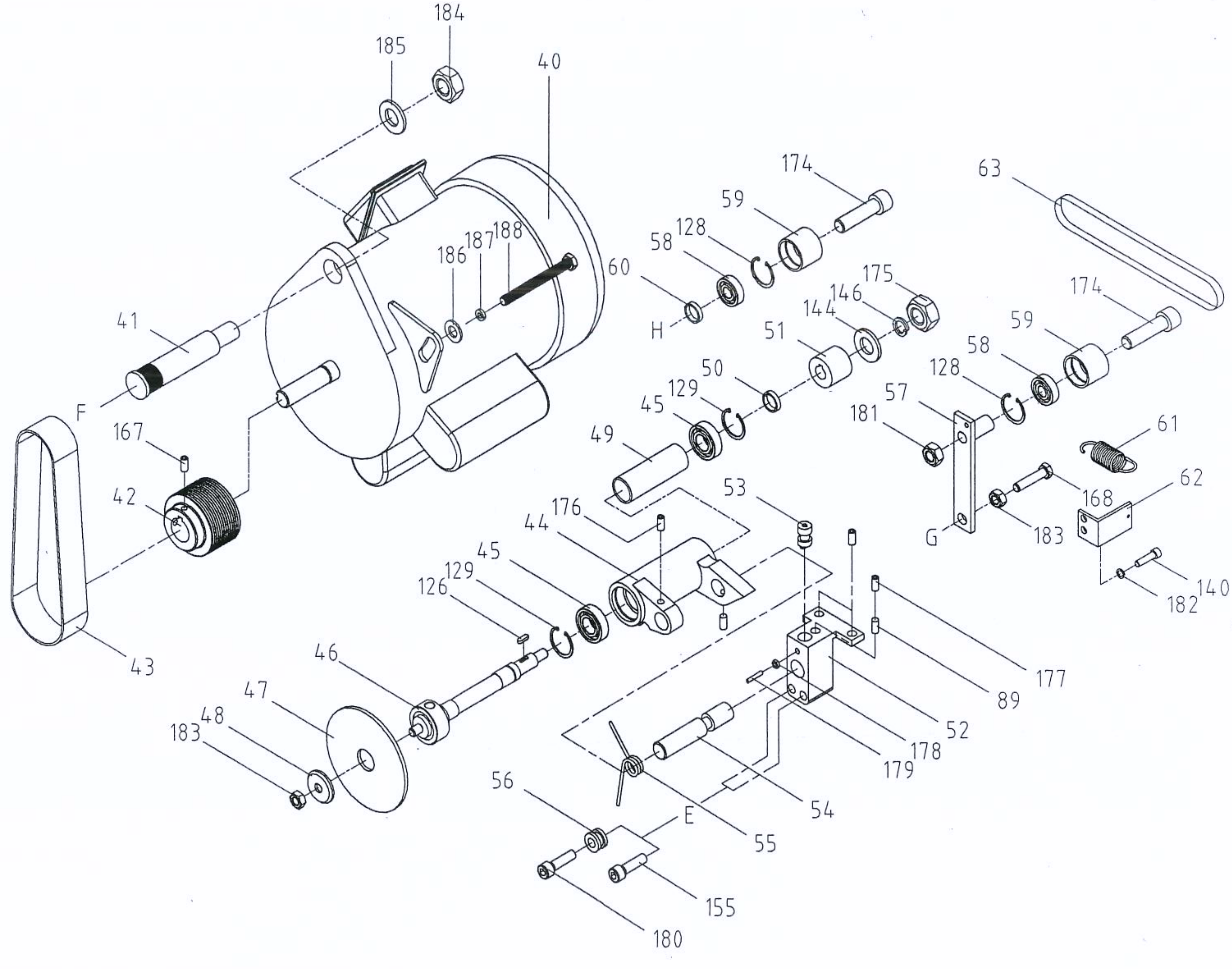
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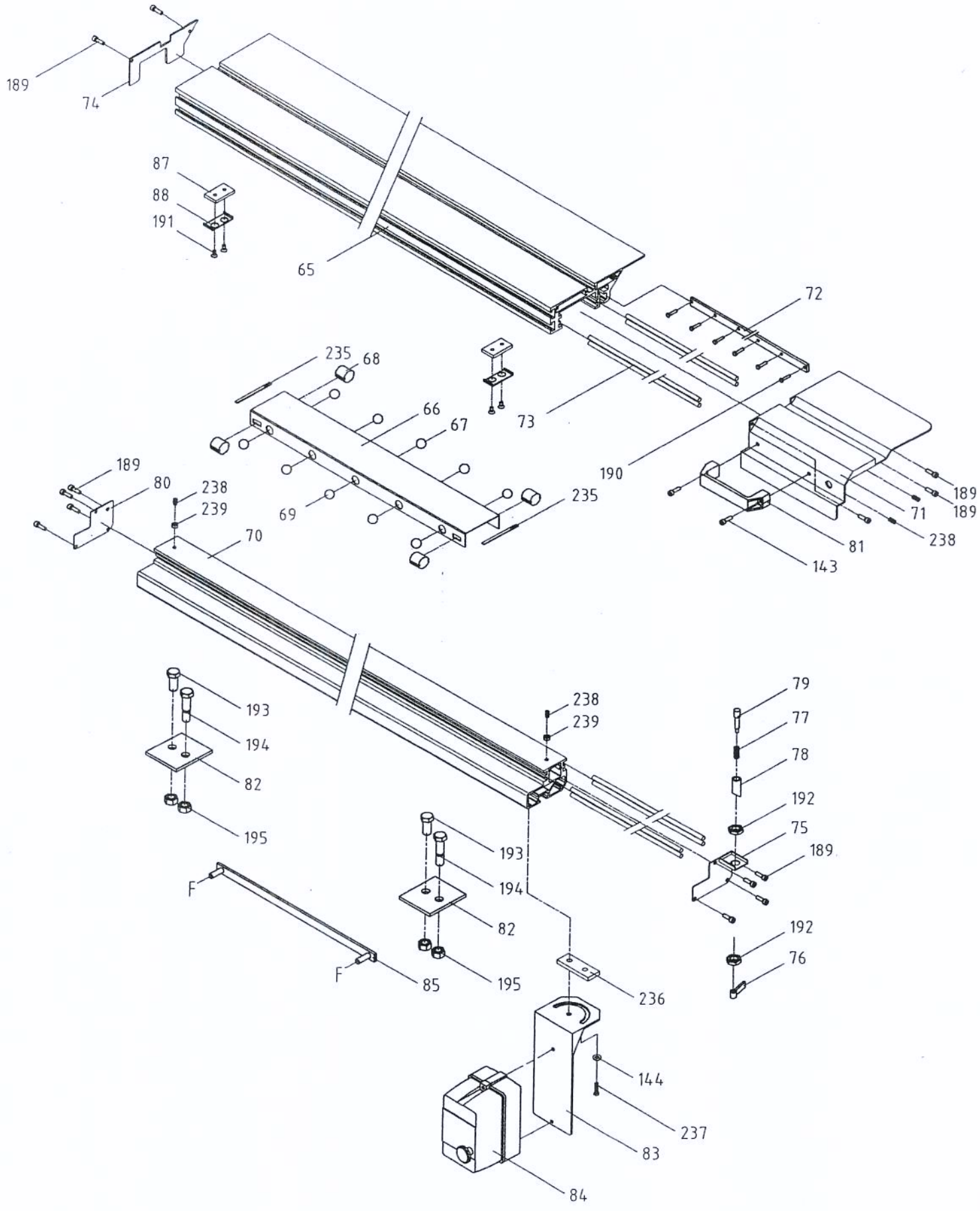
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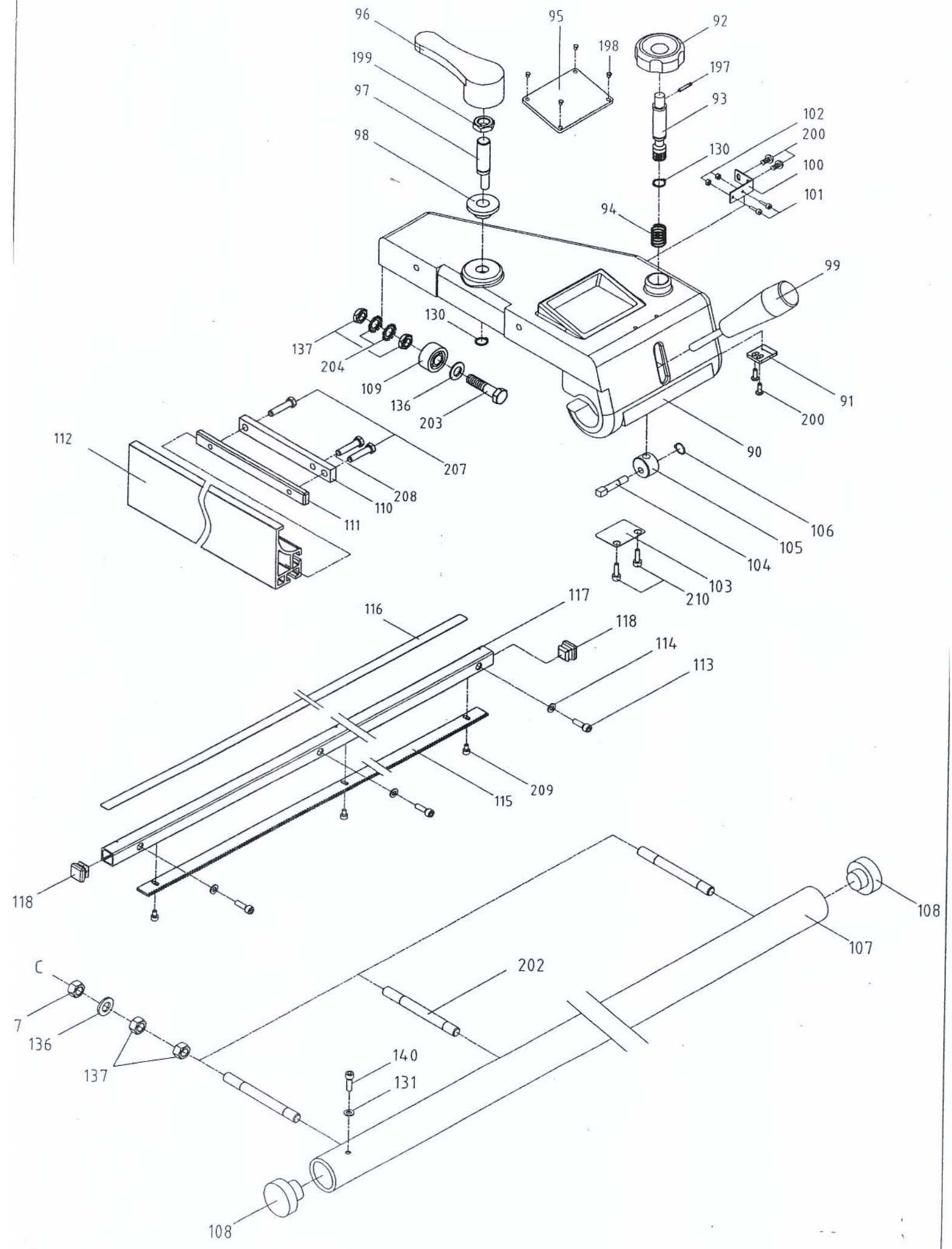
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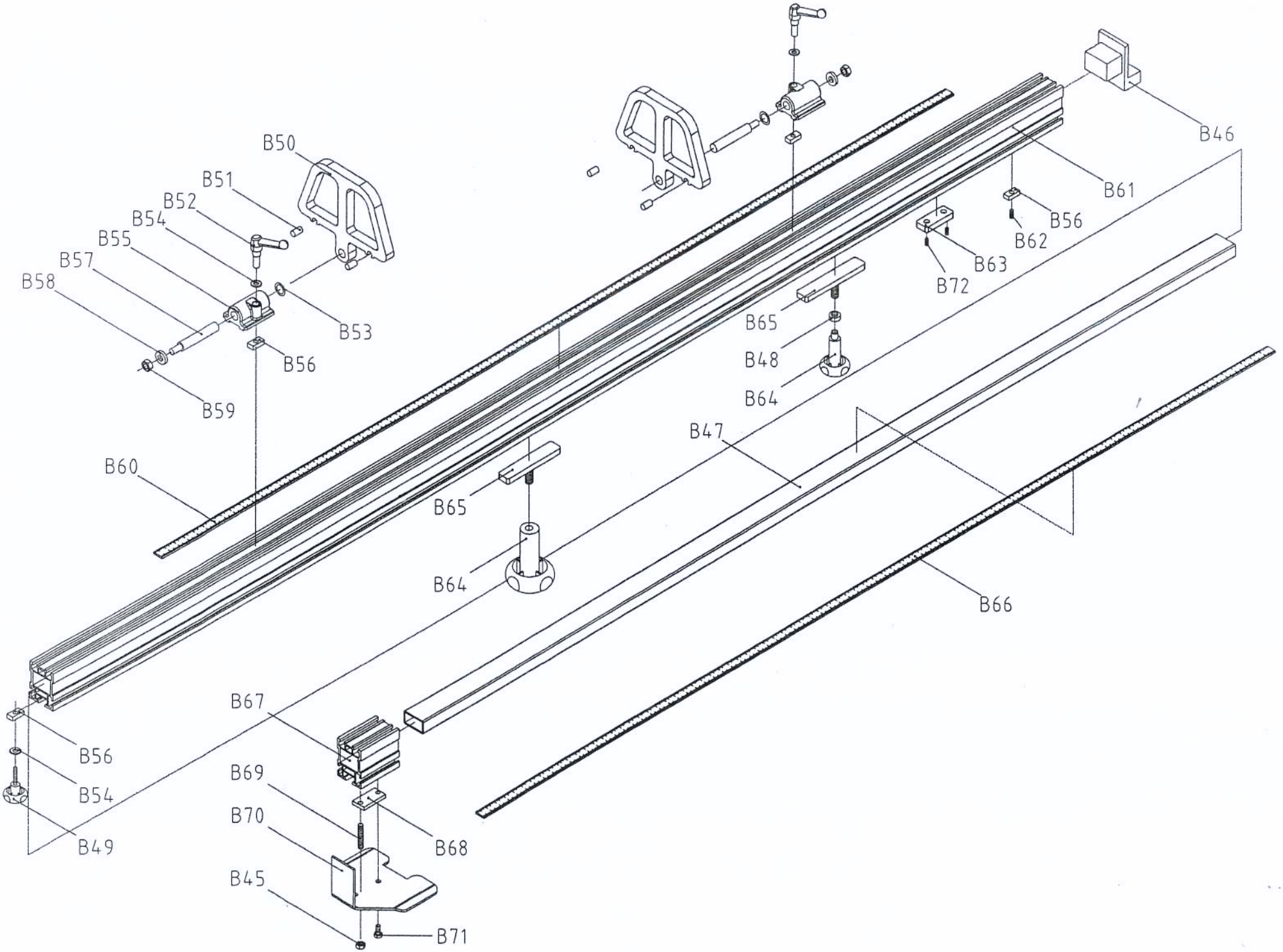
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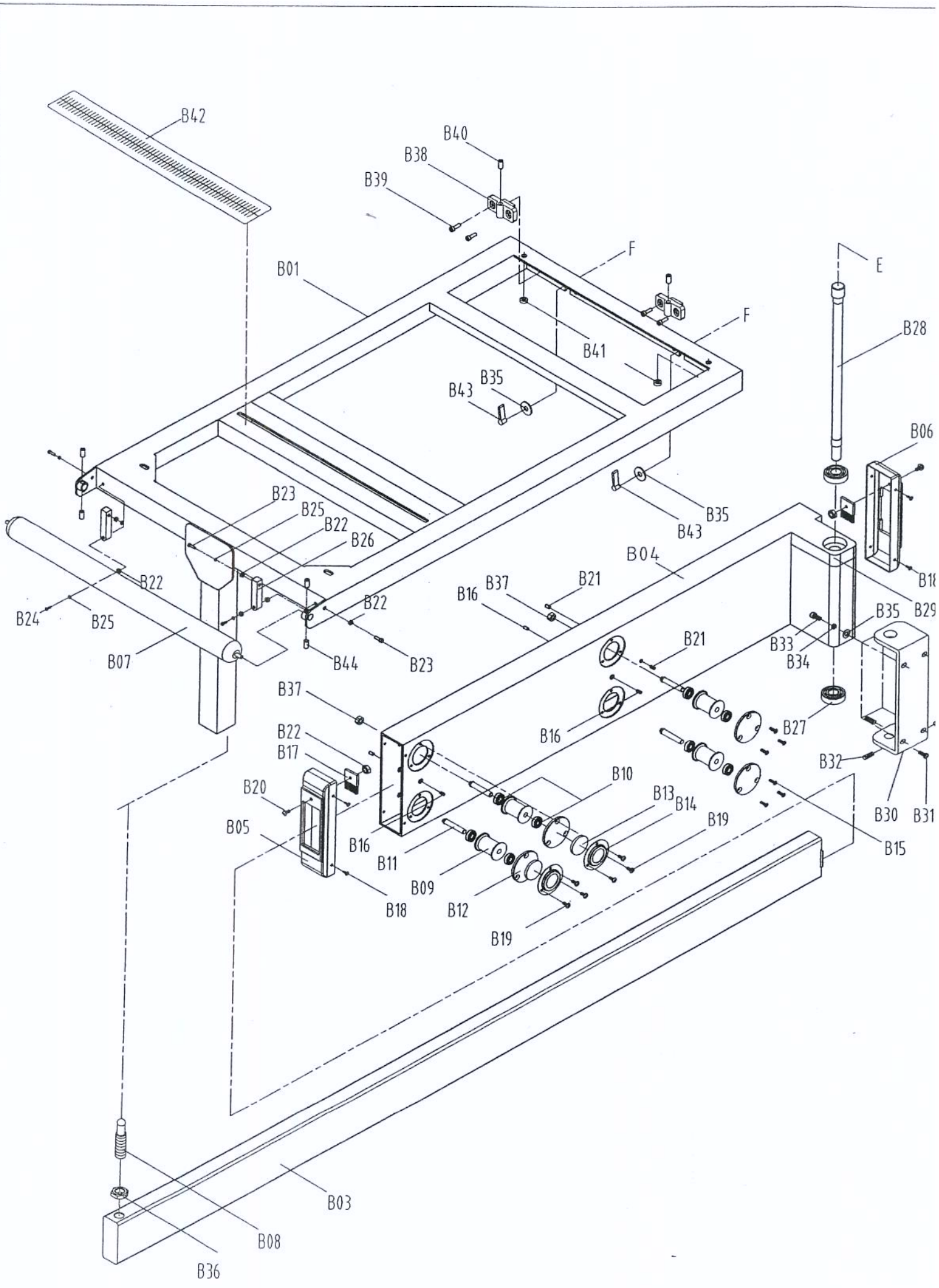
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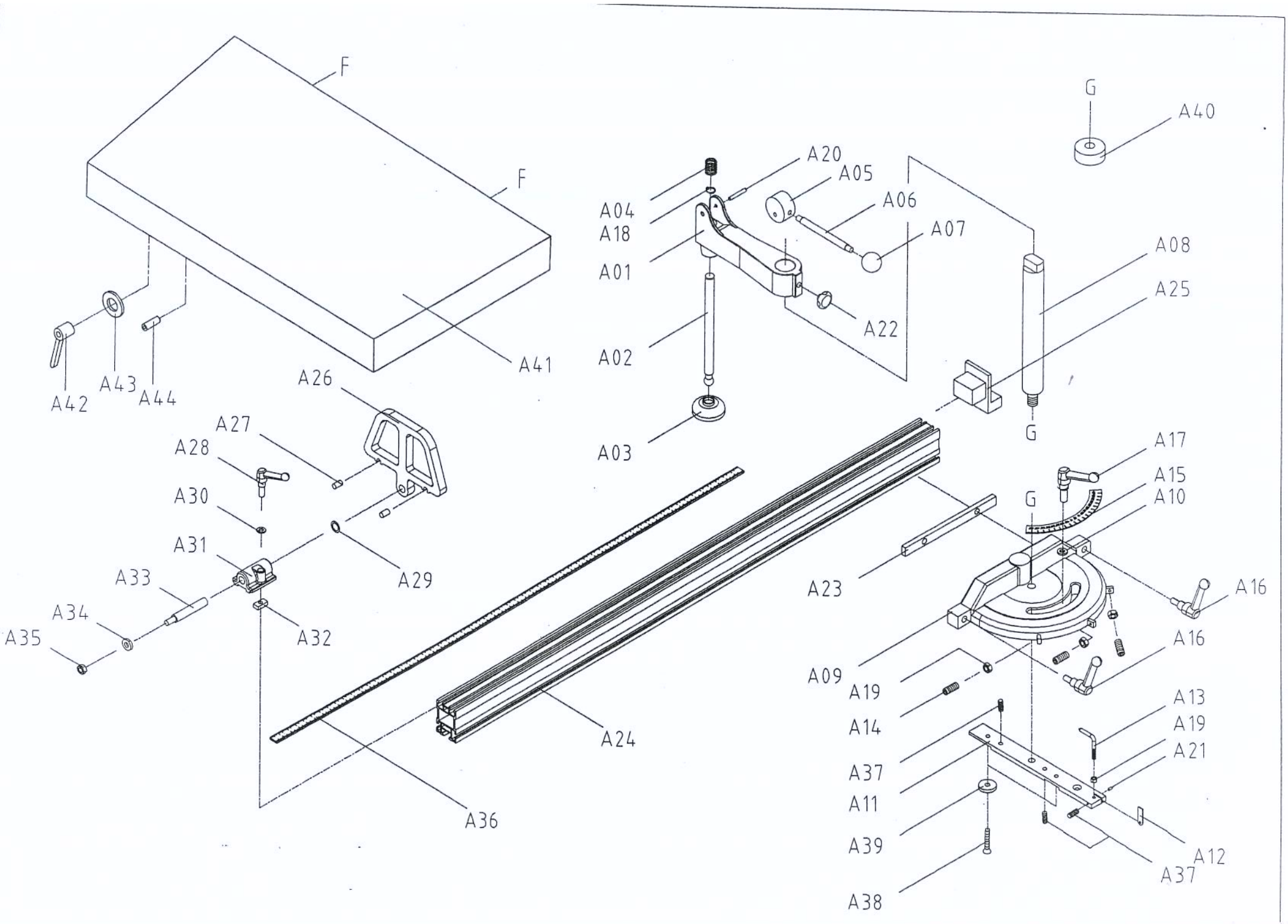
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PART NO.	REFENCE NO.	DESCRIPTION	Q'TY
1	12900001	CABINET	1
2	12900002	MAIN TABLE	1
3	12300009	TABLE INSERT	1
4	12900003	SIDE EXTENSION WING	1
5	12900004	FRONT EXTENSION WING	1
6	12700002B	HAND WHEEL	2
7	10108004	HANDLE	2
8	12900005	SIDE DOUBLI PLATE	2
9	12300160	POSITION SCREW	2
10	11500005a	MOTOR REAR COVER	1
11	12300012	EXTENSION WING STRUT	2
12	12900006	BODY	1
13	12900007	GUIDE BAR	2
14	12900008	FRONT TRUNNION	1
15	12900009	REAR TRUNNION	1
16	12900010	TRUNNION BRACKET	2
17	12900011	DUST COVER	1
18	W1230002	LIMIT SWITCH	1
19	12500008	NUT	1
20	11101007	SHELF	1
21	12900012	OHM	1
22	12900013	HAND WHEEL SPINDEL	1
23	20900023	BODY TUBE	2
24	20900024	POSITION RING	2
25	20900022	BEVEL GEAR	2
26	20900028	BUSH	2
27	12900031	SHAFT	1
28	12900014	GEAR COVER	1
29	20900019	SCREW BUSH	1
30	12900015	COMPLEX PULLEY	1
31	12900016	HOIST	1
32	12900017	MAIN SPINDLE	1
33	C1106202	BALL BEARING 6202LU	2
34	B1230005	12" BLADE (OPTIONAL)	1
35	12300114J	BLADE PRESSURE PLATE	1
36	12900018	RIVING KNIFE BASE	1
37	12300118J	PLATE	1
38	12300125J	FIXED PLATE	1
39	12900019	INDICATOR	1

PART NO.	REFENCE NO.	DESCRIPTION	Q'TY
40	M000000	MOTOR	1
41	12100019	BRACKET SHAFT	1
42	12500015A	PULLEY	1
43	V12912190	BELT	1
44	12300129	SCORING BLADE CONNECTING ROD	1
45	C1206002	BALL BEARING 6002	2
46	12300127	SCORING BLADE ARBOR	1
47	B1230002	SCORING BLADE	1
48	12300126J	SCORING PRESSURE PLATE	1
49	12300182J	SCORING BLADE SPINDLE BUSH	1
50	12900020	SCORING BLADE BUSH	1
51	12300134	SCORING BLADE PULLEY	1
52	12300132	CONNECTING ROD BASE	1
53	12300133	ADJUSTING ROD	1
54	12300128	CONNECTING ROD SPINDLE	1
55	12300130	TORSION SPRING	1
56	12300131	TORSION BUSH	1
57	12300137	PULLEY SUPPORT	1
58	C1106000	BALL BEARING 6000	3
59	12300135	PUEELY	3
60	12300103	PULLEY SPACER	2
61	12900033	TENSION SPRING	1
62	12900036	SPRING FIXED PLATE	1
63	V1290001	BELT	1
64	12300168J	MAGNET	1
65	12900021	SLIDING	1
66	12900022	STEEL BALL BASE	1
67	12300042	STEEL BALL	5
68	12300041	STEEL BALL BASE SPONGE	4
69	12300043	STEEL BALL	5
70	12900023	SLIDING BASE	1
71	12900024	FRONT HANDLE COVER	1
72	12300022	ADJUSTING STICK	1
73	12300023	CHUTE WICHER	8
74	12900025	SLIDING REAR COVER	1
75	12900026	SLIDING BASE FRONT COVER	1
76	12300026	STOP LEVER	1
77	12300028	SPRING	1
78	12300027	BOLT	1

PART NO.	REFENCE NO.	DESCRIPTION	Q'TY
79	12300029	STOP PIN	1
80	12900027	SLIDING BASE REAR COVER	1
81	20703016	HANDLE	1
82	12300047	ADJUSTING PLATE	2
83	12400010Z	SWITCH BASE	1
84	W2092301	MAGNETIC SWITCH	1
85	12900029	LOCKING PLATE	1
87	12300021T	RUBBER PLATE	2
88	12300192	RUBBER PLATE FIXED PLATE	2
89	12300179J	COPPER COLUMN	1
90	12300074	RIP FENCE BASE	1
91	12400018	INDICATOR	1
92	K2123075	KNOB M12*1.75	1
93	12300077	GEAR ARBOR	1
94	12300078	SPRING	1
95	J1240011	WARNING LABEL	1
96	12300079	HANDLE	1
97	12300080	ECCENTRIC	1
98	12300165J	SLIDING BASE BUSH	1
99	12300076	RUBBER SHAFT	1
100	12300166J	SLIDING BASE CONNCETING PLATE	1
101	S0010315M	CAP SCR.	2
102	S0120300M	LOCKING NUT	2
103	12300086	HOLD PLATE	1
104	12300085	ECCENTRIC SHAFT	1
105	12300087	ECCENTRIC	1
106	S0520007	C RING	1
107	12300018	RAIL	1
108	12300150	RAIL COVER	2
109	12300081	ROLLER	1
110	12300084J	LOCKING PLATE (SHORT)	1
111	12300083J	LOCKING PLATE (LONG)	1
112	12300082J	FENCE	1
113	S0010620M	CAP SCREW	5
114	S0210300a	FLAT WASHER	5
115	12300017	RACK	1
116	J1230012J	SCALE	1
117	12300013	SCALE BASE	1

PART NO.	REFENCE NO.	DESCRIPTION	Q'TY
118	12300014	GEAR COVER	2
125	S0400545	KEY	1
126	S04700414	KEY	1
127	S0520015	C RING	1
128	S0530026	C RING	3
129	S0533200	CRING	2
130	S0520016	C RING	2
131	12300159	SPRING	1
132	S0040051M	SCREW	4
133	S0210516	FLAT WASHER	4
134	S0230506	SPRING WASHER	4
135	S0020500	HEX. HD. SCREW	4
136	S0210100	FLAT WASHER	10
137	S0111200M	NUT	22
138	S0051435M	SET SCREW	4
139	S0111400M	NUT	4
140	S0010612M	CAP SCREW	5
141	S0210300b	FLAT WASHER	4
142	S0030109	BUTTON-HEAD CAP SCR.	4
143	S0010825M	CAP SCR.	6
144	S0210516	FLAT WASHER	7
145	S0050810M	SET SCREW	6
146	S0230800M	SPRING WASHER	3
147	S0021040M	SCREW	6
148	S0210700	FLAT WASHER	10
149	S0021610M	SCREW	2
150	S0111600M	HEX. NUT	3
154	S0110900	HEX. NUT	1
155	S0010830M	CAP SCR.	2
156	S0010820	CAP SCR.	3

PART NO.	REFENCE NO.	DESCRIPTION	Q'TY
157	10102030	PIN	4
158	S0010502	CAP SCR.	4
159	S0111200L	HEX NUT	1
160	S0010440M	CAP SCR.	2
161	S0120400M	HEX NUT	2
162	S0310526	PIN	2
163	S0030408M	BUTTON-HEAD CAP SCR.	4
164	20701006	BALL BEARING	1
165	S0110500	HEX NUT	1
166	C5151102	THRUST BEARING	1
167	S0050103	SET SCR.	10
168	S0021025M	CAP SCR.	1
169	S0231000M	SPRING WASHER	4
170	S0111000M	HEX NUT	4
171	S0030510M	BUTTON-HEAD CAP SCR.	9
172	S0210303a	FLAT WASHER	1
173	S0220500M	SPACER	1
174	S0011055M	CAP SCR.	3
175	S0110800L	HEX NUT	1
176	S0050606M	SET SCR.	2
177	S0050820M	SET SCR.	3
178	S0110500M	HEX. NUT	1
179	S0050510M	SET SCR.	1
180	S0010835M	BUTTON-HEAD CAP SCR.	1
181	S0121000M	HEX. NUT	1
182	S0230600M	SPRING WASHER	4
183	S0110800M	HEX. NUT	2
184	S0120580	HEX. NUT	1
185	S0210540	FLAT WASHER	1
186	S0210623	FLAT WASHER	1
187	S0230308	SPRING WASHER	1
188	S0020611	SCREW	1
189	S0010625M	CAP SCR.	14
190	S0020616M	SCREW	16
191	S0040820M	SCREW	4
192	S0111600a	HEX. NUT	2
193	S0021430M	SCREW	2
194	S0021440M	SCREW	2
195	S0111400M	HEX. NUT	4

PART NO.	REFENCE NO.	DESCRIPTION	Q'TY
197	S0310530	PIN	1
198	S0710306	RIVET	4
200	S0030420M	BUTTON-HEAD CAP SCR.	4
201	S0310412	PIN	2
202	S0051200M	SET SCR.	6
203	S0021250M	SCREW	1
204	S0221200M	SPACER	2
205	12900034	STOP PLATE	1
207	S0020850M	SCREW	2
208	S0020840M	SCREW	2
209	S0010508M	CAP SCR.	5
210	S0010510M	CAP SCR.	7
211	12900032	EXTENSION TUBE	1
212	12400037J	ADJUSTMENT FEET	1
213	S0210500b	FLAT WASHER	1
214	S05ETW09	E RING	1
215	11105081	LOCKING SPRING	1
216	12700029	LOCKING BOLT	1
217	11102019r 11102019b	HANDLE ASS'Y	1
218	S0030415M	BUTTON-HEAD CAP SCR.	2
219	S0210402	FLAT WASHER	3
220	11105080	SPRING	1
221	11102020	SCREW	1
222	LC1431302	POWER CORD	1
223	L0000011C	MOTOR CORD	1
224	C9001920	BEARING	4
225	12300121	BLADE GUARD	1
226	K5082800M	ADJUST HANDLE	1
227	12300124J	RIVING KNIFE	1
228	S0310630	PIN	1
229	12900037	SHAFT BUSH	1
230	J1290001	SCALE	1
231	12900038	QUICK RELEASE HANDLE	1
232	12900039	QUICK RELEASE SCREW	1
233	12900040	QUICK RELEASE NUT	1
234	S009AN04	BEARING NUT	1

PART NO.	REFENCE NO.	DESCRIPTION	Q'TY
235	30204016	RUBBER STICK	2
236	12400033	SWITCH BASE FIXED PLATE	1
237	S0020820M	SCREW	2
238	S0050612M	SET SCREW	4
239	S0110600M	HEX NUT	2
240	S0910100A	HEX WRENCH	1
241	S0910101	HEX WRENCH	1
242	S1204150	HEX WRENCH	1
243	S1205150	HEX WRENCH 5MM	1
244	S1206150	HEX WRENCH 6MM	1
245	S0920013	OPEN-END WRENCH	1
246	S0920019	OPEN-END WRENCH	1
247	S0911012	OPEN-END WRENCH	1
248	S0912224	OPEN-END WRENCH	1
259	12300163	CLIP PLATE	2
260	S1500100M	DUST-COLLECTING TUBE	1
261	12300156a	LOCKING PLATE	1
262	J1230006	LABEL	1
263	I1290001	MANUAL	1
264	12300154	PUSH TOOL	1
B01	12900028	TABLE	1
B03	12900030	EXTENSION TUBE	1
B04	12400028Z	SLIDING ARM	1
B05	12300058	SLIDING ARM FRONT COVER	1
B06	12300060	SLIDING ARM REAR COVER	1
B07	12300049J	ROLLER	1
B08	12300062	SLIDING ARM CONNECTING ROD	1
B09	12300053a	ECCENTRIC ROLLER	4

PART NO.	REFENCE NO.	DESCRIPTION	Q'TY
B11	12300054a	ECCENTRIC SHAFT	4
B12	12300055	SUPPORTING BASE	4
B13	12300056	MAGNET	2
B14	12300057	MAGNET BASE	2
B15	S0040508M	SCREW	6
B16	11003017	NYLON SCREW	4
B17	12300059	COMB	2
B18	S0030508M	BUTTON-HEAD CAP SCR.	8
B19	S0030510M	SCREW	6
B20	S0030520M	SCREW	2
B21	S0050810M	SET SCREW	2
B22	S0110600M	HEX NUT	8
B23	S0010620M	CAP SCREW	4
B24	S0010625M	CAP SCREW	2
B25	S0210402	FLAT WASHER	4
B26	12300161	SCALE BASE FIXED PLATE	2
B27	C1106204	BEARING	2
B28	12300142	SLIDING ARM SHAFT	1
B29	12300048a	SLIDING ARM BEARING BASE	2
B30	12400027J	SLIDING ARM CONNECTING PLATE	1
B31	S0020820M	CAP SCREW	1
B32	S0050820M	SET SCREW	3
B33	S0011030M	CAP SCREW	4
B34	S0231000M	SPRING WASHER	4
B35	S0210700	FLAT WASHER	6
B36	S0112000M	HEX NUT	1
B37	S0121000M	NYLON NUT	2
B38	12300050	ADJUSTING PLATE	2
B39	S0010610M	CAP SCREW	4
B40	S0050840M	SET SCREW	2
B41	S0110800M	HEX NUT	2
B42	J1230016J	ANGLE LABEL	1
B43	K4102300M	KNOB	2
B44	S0050510M	SET SCREW	4
B45	S0110600M	CAP SCREW	1
B46	12300068J	SCALE BASE COVER	1
B47	12400030J	SCALE EXTENSION TUBE	1
B48	12300164J	TABLE BUSH	1
B49	K1063035M	SCREW	1

PART NO.	REFENCE NO.	DESCRIPTION	Q'TY
B50	12300063	CLAMP	2
B51	12300064	CLAMP PAD	4
B52	12300169J	KNOB	2
B53	S0210100	SPACER	2
B54	S0210401	SPACER	3
B55	12300065J	CLAMP BASE	2
B56	12300066	FIXED NUT	4
B57	12300067J	CLAMP SHAFT	2
B58	S0210500b	FLAT WASHER	2
B59	S0120800M	NUT	2
B60	J1240015J	SCALE (LONG)	1
B61	12400033J	SCALE BASE (LONG)	1
B62	S0050612M	SET SCREW	1
B63	12300069J	LOCATION PAD	1
B64	K2109060M	NUT (LARGE)	2
B65	12300070J	FIXED PAD	2
B66	J1240014J	SCALE (SHORT)	1
B67	12300071J	SCALE BASE (SHORT)	1
B68	12300072	EXTENSION TUBE FIXED PLATE	1
B69	S0050635M	SET SCREW	1
B70	12300073J	SCALE BASE COVER	1
B71	S0020612M	SCREW	1
B72	S0010610M	SET SCREW	2