SU LEE MACHINE ®

SEMI AUTOMATIC END CUTTER

MODEL:SA-190

INSTRUCTION BOOK AND PARTS BOOK

MAINTENANCE & REPLACING OF PARTS

A. ADJUSTING THE GRINDER

When the blade is worn out, adjust the grinder position by removing the screw for the grinder arm. Adjust to an appropriate distance between the grinder and the blade edge. After finishing the adjustment, replace the screw and tighten.

B. REPLACING THE GRINDING WHEEL

Remove the grinding wheel (2626) by unscrewing it off; then mount the new grinding wheel.

C. REPLACING THE KNIFE

1. Take off the grinding wheel unit (F).
2. Unscrew the lock nut (G) for the knife.
3. Take off the knife.
4. Mount the new knife. (note: when mounting the new knife, make sure that the side printed with "SU LEE SPARE PARTS" is facing the operator).
5. After the knife has been replaced, adjust the position of the grinder (B) to the proper position.

D. REPLACING THE LOWER BLADE

1. Take off the lower blade arm by unscrewing the screw (H) for the lower blade arm.
2. Mount the new lower blade – replace the screw and tighten. (note: make sure that the surface of the lower blade is adjacent to the blade edge).

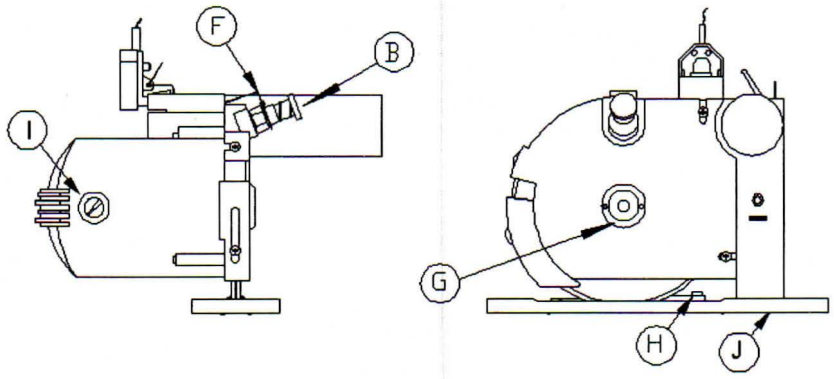
E. REPLACING THE CARBON BRUSH

When to change the Carbon brush: too much weaving of the carbon brush will cause motor troubles. The Carbon brush must be replaced when it wears down to 5-6 m. m.

1. The Carbon brush cap is replaced by turning it left with the attached wrench.
2. Always replace the right and left Carbon brushes simultaneously. (note: be sure to hold the metallic part of the brush. Keep fingers away from the Carbon).

F. CLEANING THE TRACK AND THE MASTER MACHINE

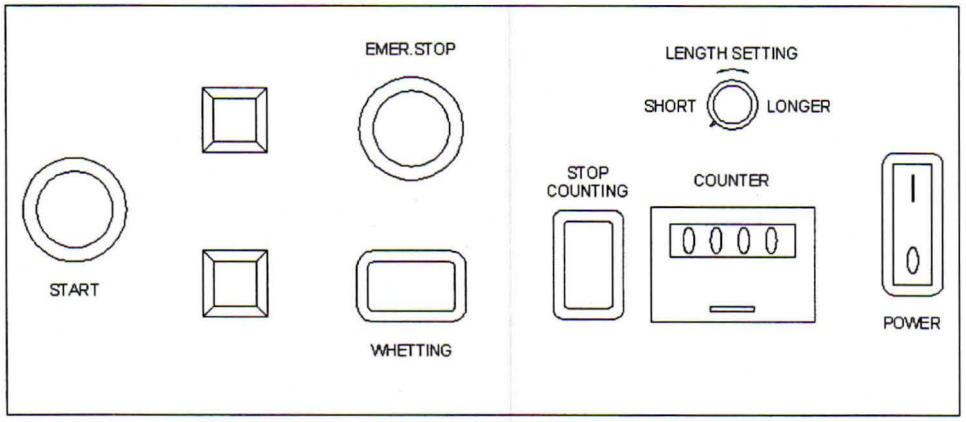
1. After the machine has been continuously running for 10-20 hours, clean out all of the leftover cotton and cloth in the track with a brush. Re-apply oil to the inside of the track.
2. After the machine has been continuously running for 30 days, it is recommended that the track is given a thorough cleaning. Remove the master machine from the track and clean out the L-shaped track with a brush. Re-apply oil to the inside of the track. Then mount the master machine back in the track groove after cleanliness is ensured.



SA-190 INSTALLATION INSTRUCTIONS

1. Following the diagram on page 7, fix the lift motor set clamp (A) onto the right side of the cutting table
2. Fix the second motor set clamp (B) onto the left side of the table opposite to the lift motor set clamps.
3. Place the track lifter (D) through the wheels of motor set clamp (B). (see diagram on p.7)
4. Fasten one end of the lift belt into the belt press piece of the clamp assembly (A) first. Then, allow the other end of the lift belt to pass through the upper roller of the of the track lifter (D), then down and back up through the down roller, and finally tighten it in the belt press piece. (note: make sure that the lift belt is flat on the table)
5. Place rail (C) onto the lift rod. (note: The end with the power line should be place on the side of the lift motor set clamps)
6. Fasten both ends of the rail (C) onto the lift rod with set screws (E). Be sure to place the screws into the lower grooves of the rail, and to fasten with the nuts and washer.
7. Slide the Knife Machine Head (G) onto the rail (C). The Knife should be facing away from the power lines.
8. Fix the transmission motor assembly (H) on the end with the power-line, and fix it with the rail fixing screw (E). Connect the two plugs.
9. Fix the belt pulley (I) to the other end of the rail with the rail fixing screw (E).
10. Fasten one end of the timing belt (F) to the back of the Knife Machine Head (G). Stretch the timing belt (along the center groove of the rail) and pull it around the belt pulley on top of the transmission motor assembly (H). (See Diagram on p.7)
11. Put the timing belt (F) back through the left groove of the rail, until it comes out of the other side. Then pull the timing belt around the opposite belt pulley (I), and back through the center groove towards the Knife Machine Head (G). Fasten the timing belt to the front of the Knife Machine Head (G).
12. Adjust the timing belt (F) tension by means of the belt-adjusting screw (J) (about 5mm).
13. Install the control box frame (K), and place the control box (L) on top of it.
14. Installation of the wiring bracket:
    a. Fix set clamp (M) onto the cutting table.
    b. Lead the twin-hole electric wire (Q) through set clamp (M), then wiring pipe (N), then wiring pipe (R).
    c. Secure both wiring pipes.
    d. Connect one end of the twin-hole electric wire (Q) to the cutter, to a suitable length, then fix it with the binding belt.
15. Installation of the Fabric Supporting Rack:
    a. Fix fabric supporting racks (S) to both sides of the cutting table.
    b. Place the iron tube (T) onto the fabric supporting rack.
    c. Install the levers (U) respectively onto each of the fabric supporting racks (S).
    d. Put the fabric support rod (V) through the two levers (U) to finish the installation.
16. Connect the three wires underneath control box (L) respectively (two-pins, five-pins, and seven-pins).

FUNCTION OF KEYS



Power Switch: Turns on the power for the whole machine.

Length Setting Tuner: Sets the length of the cut into the cloth. Turn to the right for a longer distance, or turn to the left for a shorter distance.

Counter: Counts the number of sheets that have been cut.

Counter Stop Switch: This switch stops the counter.

Emergency Stop Switch: Stops all operations immediately.

Up Switch: Use this switch to lift the rail.

Down Switch: Use this switch to bring the rail down.

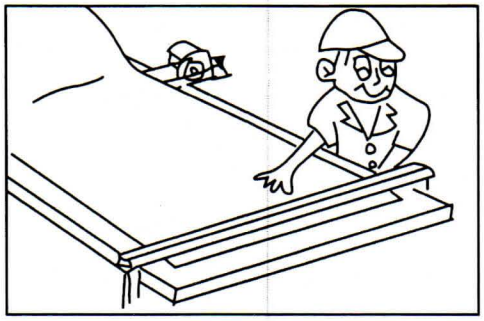
Whetting Switch: Use this switch to make the motor run in place; this allows the operator to press the whetting stone against the blade, thus sharpening the blade.

Starting Switch: Allows the blade to make one run across the cloth.

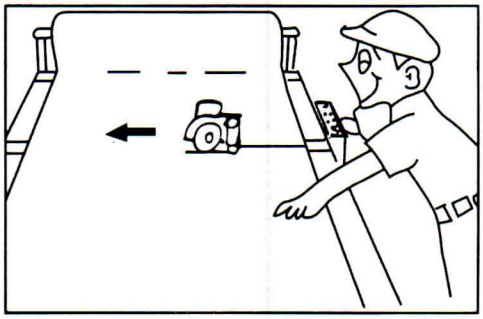
OPERATION INSTRUCTIONS

1. Before operating the machine, make sure the surface of the track is clear of all objects.
2. Turn on the power switch, which will light up.
3. Push the COUNTER reset to 0000, and release the STOP COUNTER SW. This will allow the machine to count the number of layers cut.
4. A. Pull the cloth to the angle track, lay it down then smooth it out.

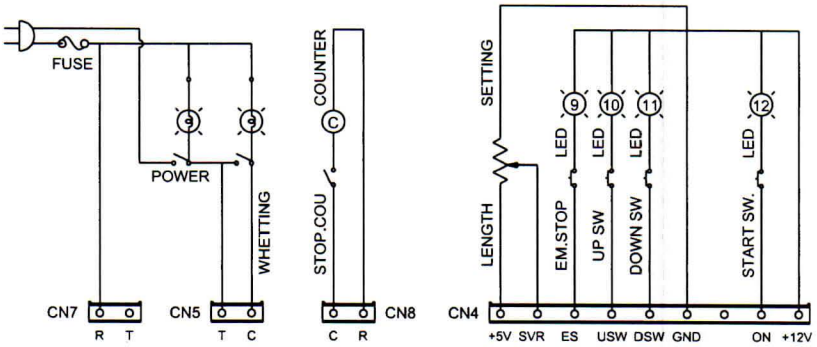
B. Push the UP Switch, then the cloth press track will lift and press down onto the cloth.



C. Push the START SW, and the cutter will automatically make one run up and down the track. The computer box will reset after 5 seconds.



5. When the blade becomes dull, push the WHETING SW to run the motor in place. Once the blade starts rotating, then sharpen the knife by pushing the grind switch (part no. 2623) against the edge of the knife. Repeat several times, then turn off the machine.



SIGNAL INPUT LIGHT: GREEN

LED 1: S1-BACK STOP SENSOR

LED 2: S6-DOWN STOP SWITCH

LED 3: S7-UP TOP SENSOR

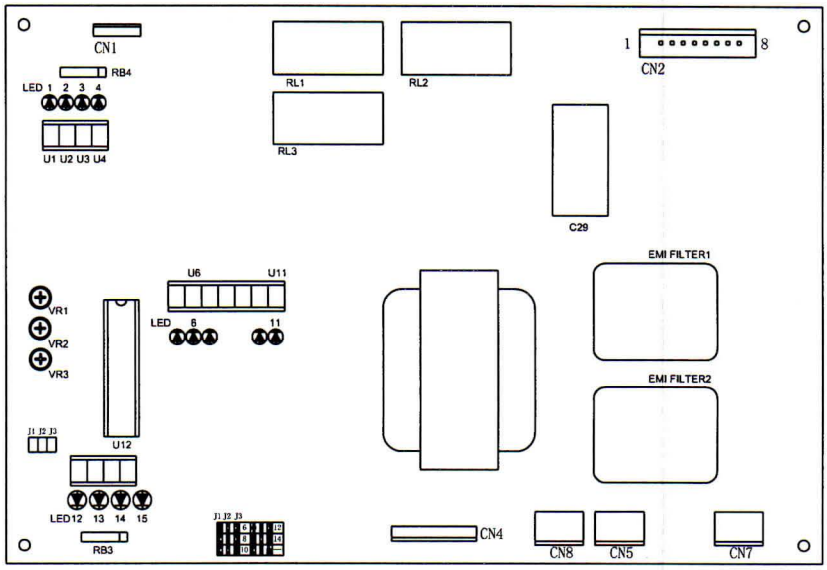
LED 4: S2-RETURN SENSOR

LED 12: START SWITCH

LED 13: DOWN SWITCH

LED 14: UP SWITCH

LED 15: EMER.STOP SWITCH



POWER OUTPUT LIGHT: RED

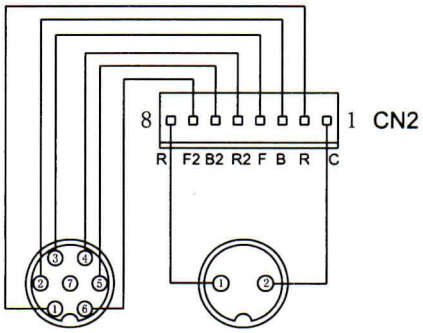
LED 5: CUTTER MOTOR TURN AND GO

LED 6: TRACK LIFT

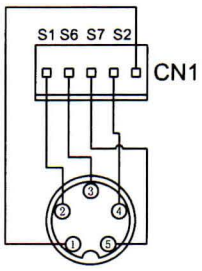
LED 7: TRACK DOWN

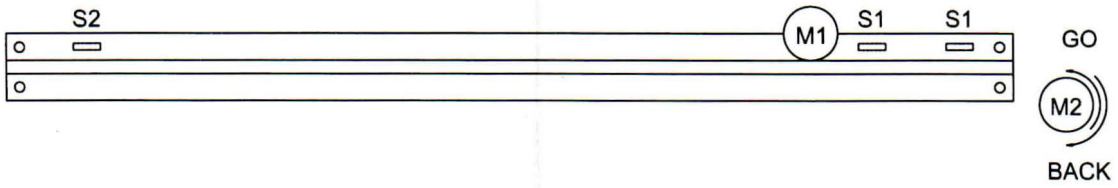
J1: 6'
J2: 8'
J3: 10'
J1 J2: 12'
J1 J3: 14'

AC OUT PUT



DC IN PUT





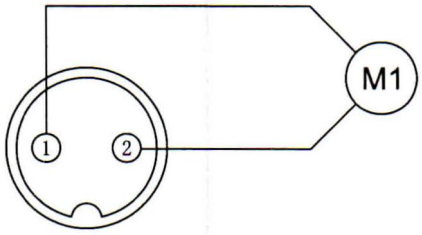
M1: CUTTING MOTOR

M2: GO-BACK MOTOR

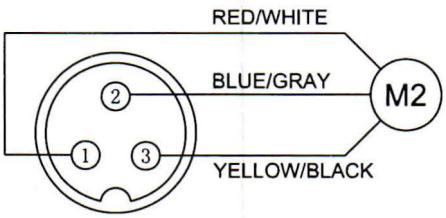
S1: BACK STOP SENSOR

S2: RETURN SENSOR

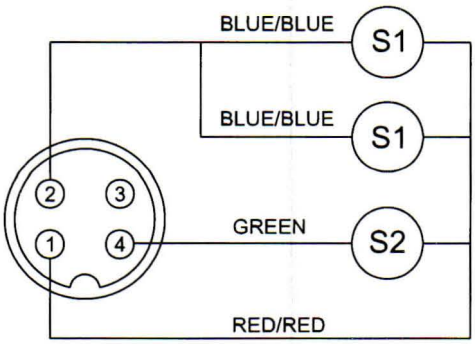
AC OUT PUT

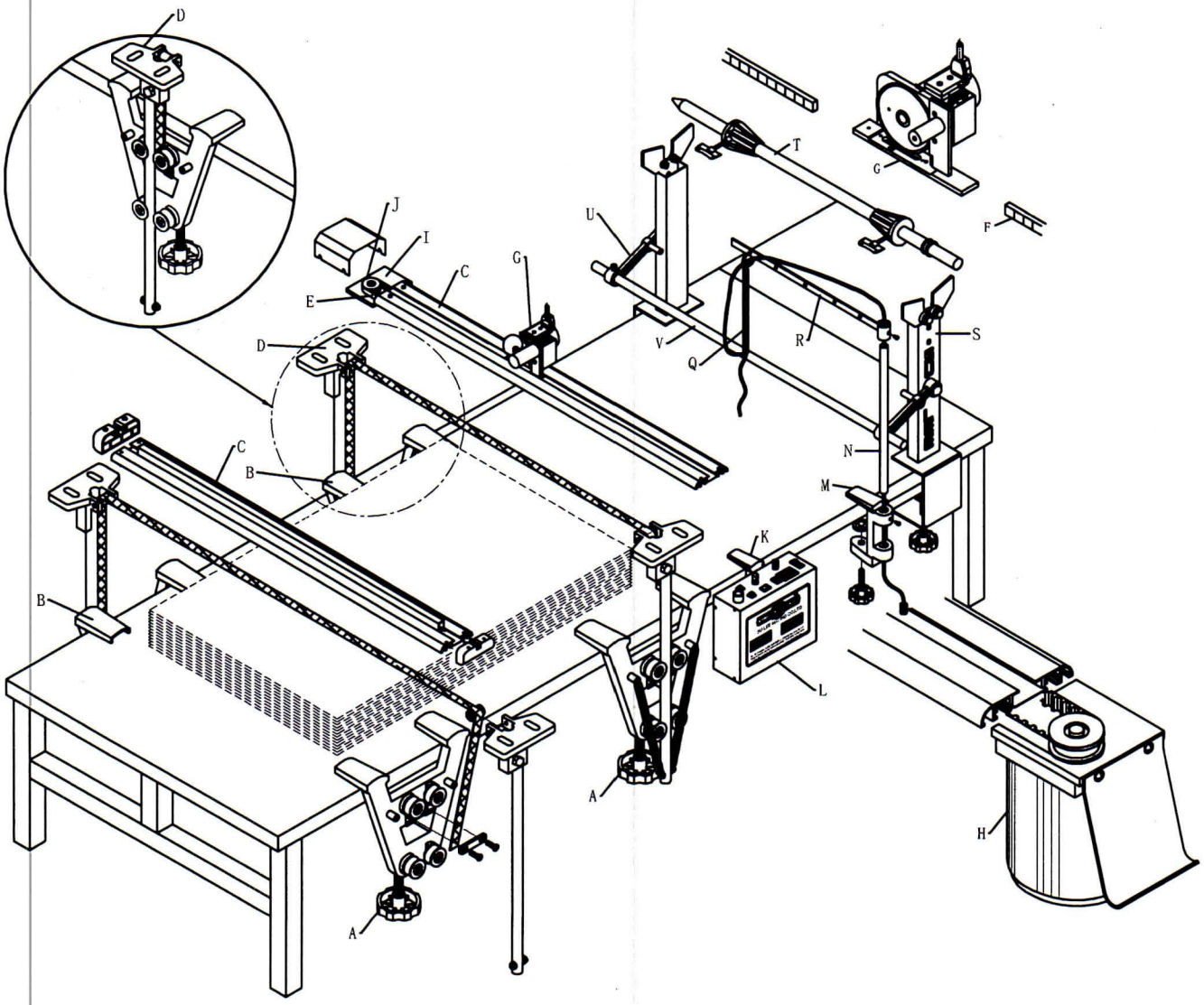


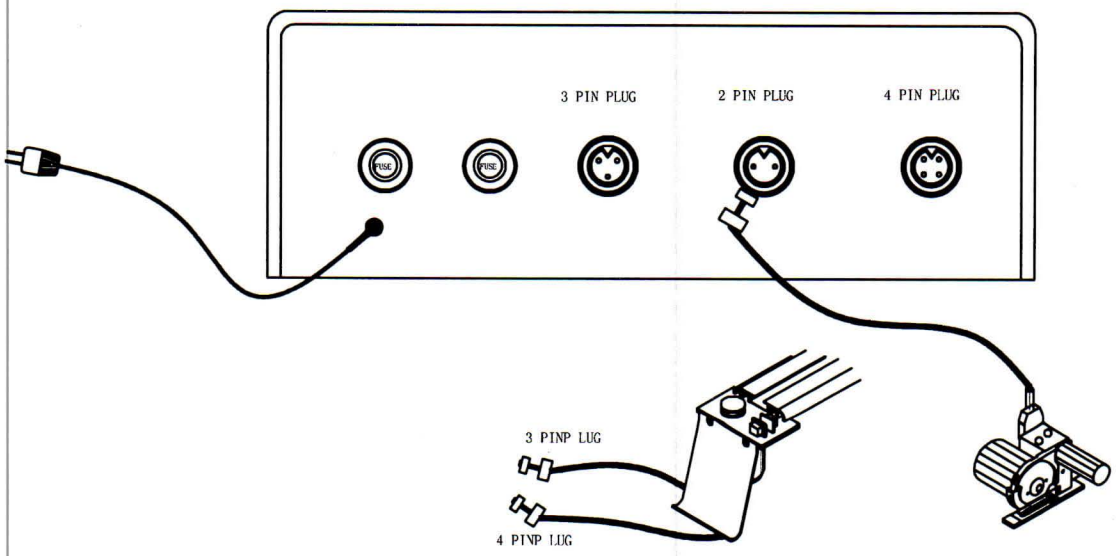
AC OUT PUT



DC IN PUT







INDICATION OF LED LIGHTS

Open the control box cover, and press the START SW.

LED 5 lights up: Cutter is rotating and advancing.
LED 5 goes out: Cutter is rotating and has stopped advancing.
LED 8 & LED 6 light up: Cutter is reversing and the track is lifting (LED2 goes out).
LED 8 goes out: Cutter has stopped reversing.
LED 6 goes out: Track has stopped lifting.
LED 2 lights up: Track has reached the surface of the table.
LED 7 goes out: Track has stopped moving.

SIMPLE TROUBLESHOOTING OF SA-190

Q1: When the track can only move upwards, but cannot move downwards. This problem is most probably caused by…
Ans: A stuck microswitch underneath the track or a broken wire which controls the up-and-down movements of the track.

Q2: When the track cannot stop when returning to the starting point, or its chain continuously falls off. This problem is most probably caused by…
Ans: A malfunction of the microswitch under the track. Check if the LED Light (2) is lit. If it is not lit, then this indicates that no signal for stopping the mobile cutter has been keyed in. In such a case, simply straighten the microswitch and check the circuit.

Q3: When the cutter does not rotate, this problem is most probably caused by…
Ans: A broken wire between the control box and the cuter. As the cutter advances, an output of power is needed. Check the outer circuit and the control box to see if there is any break on the connecting wire.

Q4: When the cutter advances to the end, severe bumping occurs. This problem is most probably caused by…
Ans: Open the control box and check the LED Light (4); if it is not lit, then this indicates that no signal for reversing the cutter has been keyed in. If so, go over the outer circuit with an electric meter to check for any broken circuits.

Q5: When the cutter returns, severe bumping occurs. This problem is most probably caused by…
Ans: Check the LED Light (1) and other by using the same way mentioned above.

Q6: When the cutter is advancing and reversing, slight bump may occur or every time the cutter cannot be back to the bottom, it is probably caused by:
Ans: Improper positioning of the "Sensor Magnetic Spring Switch", which controls the advancing, reversing, and stopping of the cutter, or an improper tension of the drive belt. Either (a) move the "Sensor Switch" to the proper position or (b) adjust the tension of the TIMING belt until it has ~5mm of elasticity.

Q7: When the cutter has been checked, but still does not work smoothly, this is probably caused by:

(a). The TIMING belt is not well set.

(b). There is some broken cloth or other foreign material which is stuck on the inner section of the track.

(c). The surface of the track is dented or damaged.

Ans:

(a). Straighten out the TIMING belt. Then adjust the tension of the TIMING belt until it has ~5mm. of elasticity.

(b). Clean out the inner section of the track by drawing out the copper plate, as broken cloth is likely to drop down under the copper plate. Remove any material that is in the track. After replacing the copper plate, apply a little sewing machine oil onto the copper plate before replacing the cutter.

(c). Replace the track.

Q8: When the START SW is pressed, the cutter rotates but cannot advance. This problem is probably caused by...

(a). A bad connection of the wire between the motor and the cutter.

(b). A damaged motor.

Ans:

(a). Check the connection of the black and yellow wire of the M2 motor.

(b). Replace the motor.

Q9: When the START SW is pressed, the cutter can advance and reverse and the blade can rotate smoothly, but the track cannot lift up or press down, this is probably caused by...

(a). Bad insertion of the 5-pin plug

(b). Loose wiring of the motor controlling the ascending and descending movements.

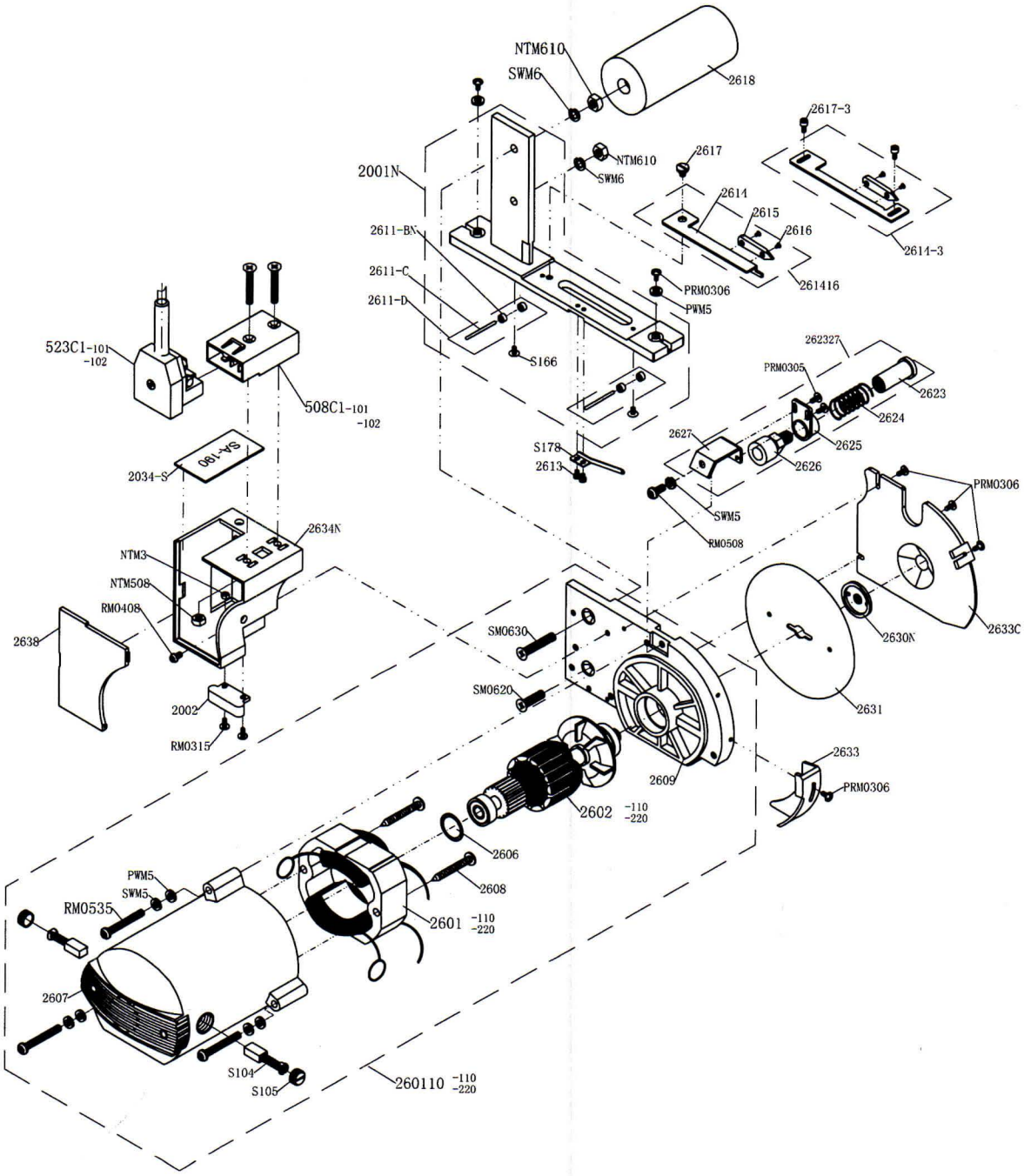
(c). A damaged motor.

Ans:

(a). Check the 5-pin plug and make sure that it is inserted properly.

(b). Check the wiring of the motor controlling the ascending and descending movements.

(c). Replace the motor.



PART NO.	PART NAME
260110-110	110V MOTOR ASSEMBLY
260110-220	220V MOTOR ASSEMBLY
2601-110	110V STATOR
2601-220	220V STATOR
2602-110	110V ARMATURE
2602-220	220V ARMATURE
2603	WASHER FOR ARMATURE
2606	O RING
2607	MOTOR COVER
2608	SCREW FOR STATOR
2609	MOTOR PLATE
2610	RUBBER FOR BEARING
2611-BN	ROLLER
2611-C	ROLLER SHAFT
2611-D	ROLLER SHAFT SET
2613	SCREW FOR PRESSURE SPRING
261416	LOWER BLADE SET
2614	LOWER BLADE ARM
2614-3	3rd LOWER BLADE
2615	LOWER BLADE
2616	SCREW FOR LOWER BLADE
2617	SCREW FOR LOWER BLADE ARM
2617-3	SCREW FOR 3rd LOWER BLADE ARM
2618	BALANCEIRON
262327	WHETSTONE ASSEMBLY
2623	WHETSTONE COLLAR
2624	SPRING FOR WHETSTONE COLLAR
2625	WHETSTONE ARM(UPSIDE)
2626	WHETSTONE
2627	WHETSTONE ARM(BOTTOM)
2630N	LOCK NUT FOR KNIFE
2631	KNIFE(ROUND)
2633	KNIFE GUARD
2633C	KNIFE COVER
2634N	TERMINAL BOX
2638	COVER FOR TERMINAL BOX
2001N	STANDARD FOR FA-200
2001-A	LINK FOR TIMING BELT
2002	MAGNET FOR SENSOR
2034-S	MODEL PLATE FOR SA-190
S104	CARBON BRUSH
S105	CAP FOR CARBON BRUSH
S166	SCREW FOR ROLLER SHAFT
S178	PRESSURE SPING FOR LOWER BLADE
508C1-102	110V TERMINAL BLOCK WITH PINS
508C1-101	220V TERMINAL BLOCK WITH PINS
523C1-102	110V CURRENT CONNECTOR
523C1-101	220V CURRENT CONNECTOR

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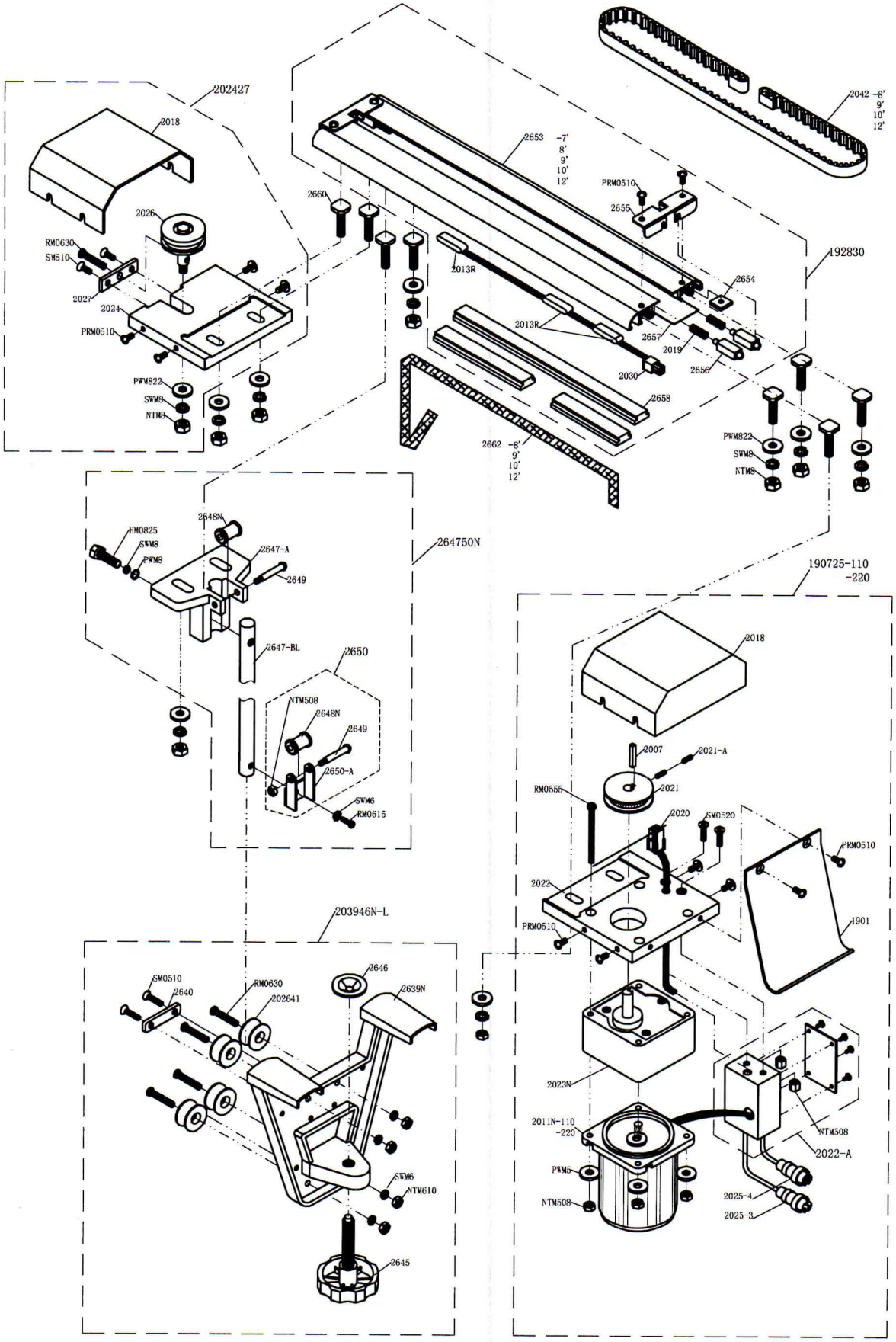
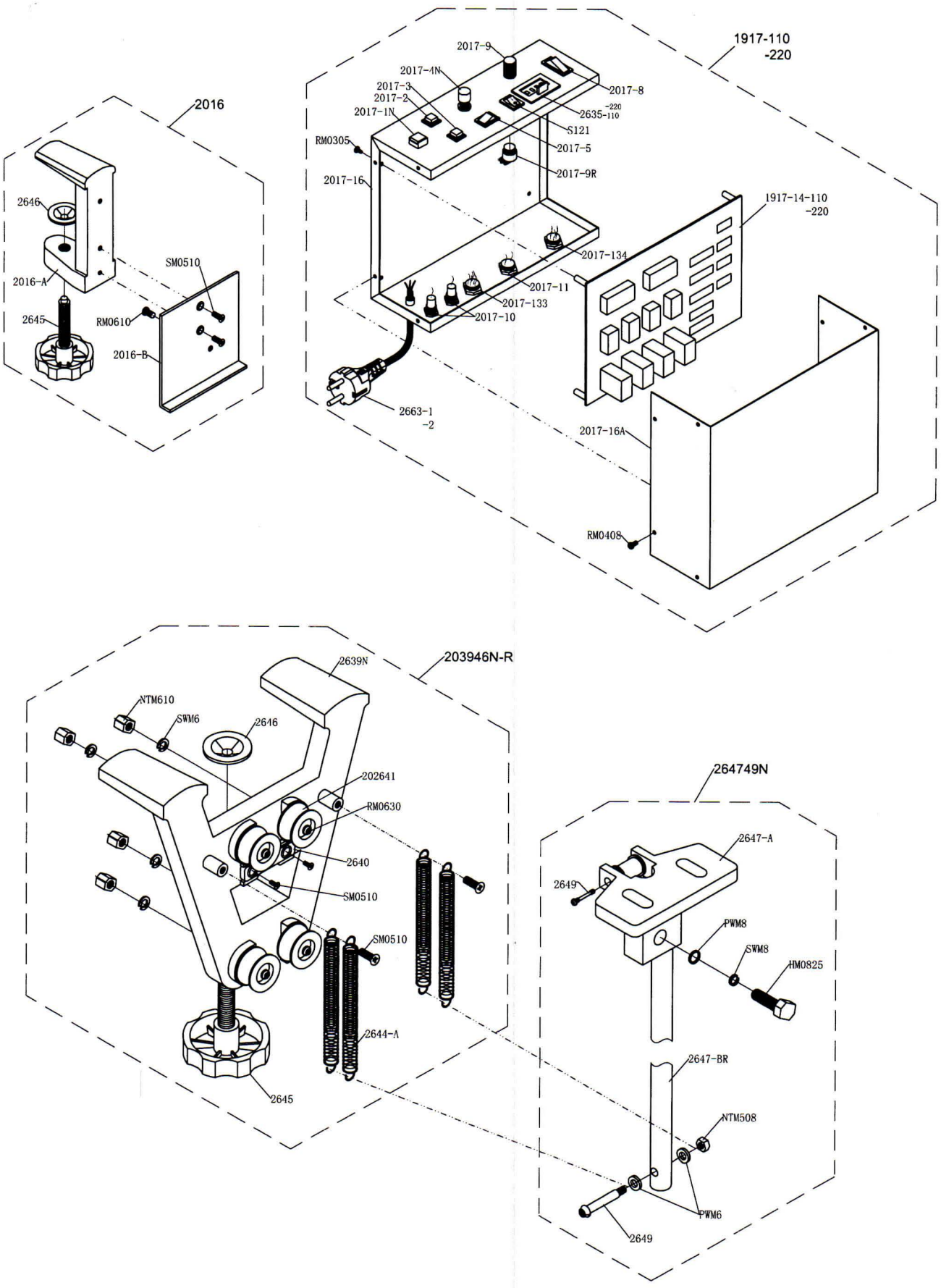
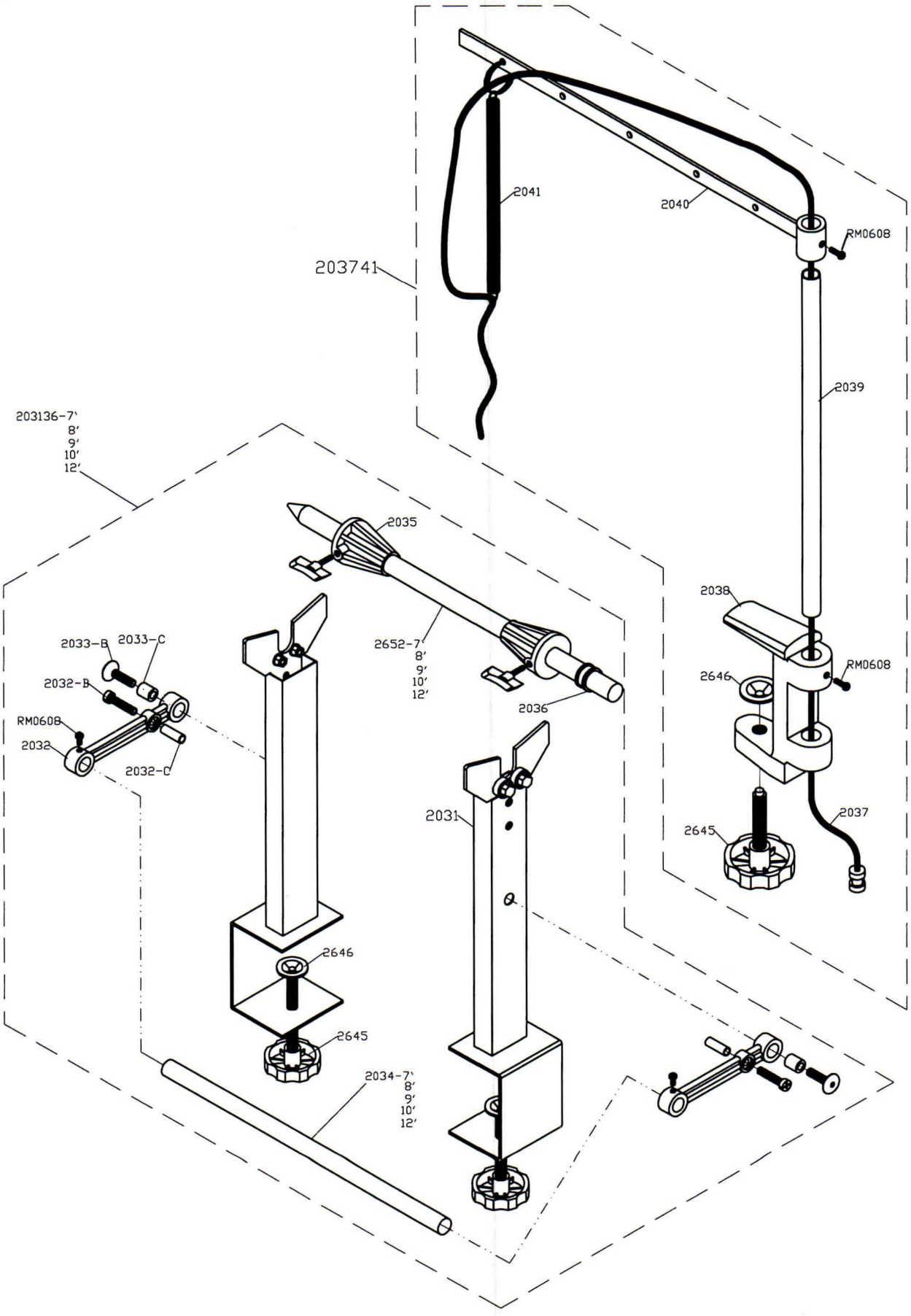


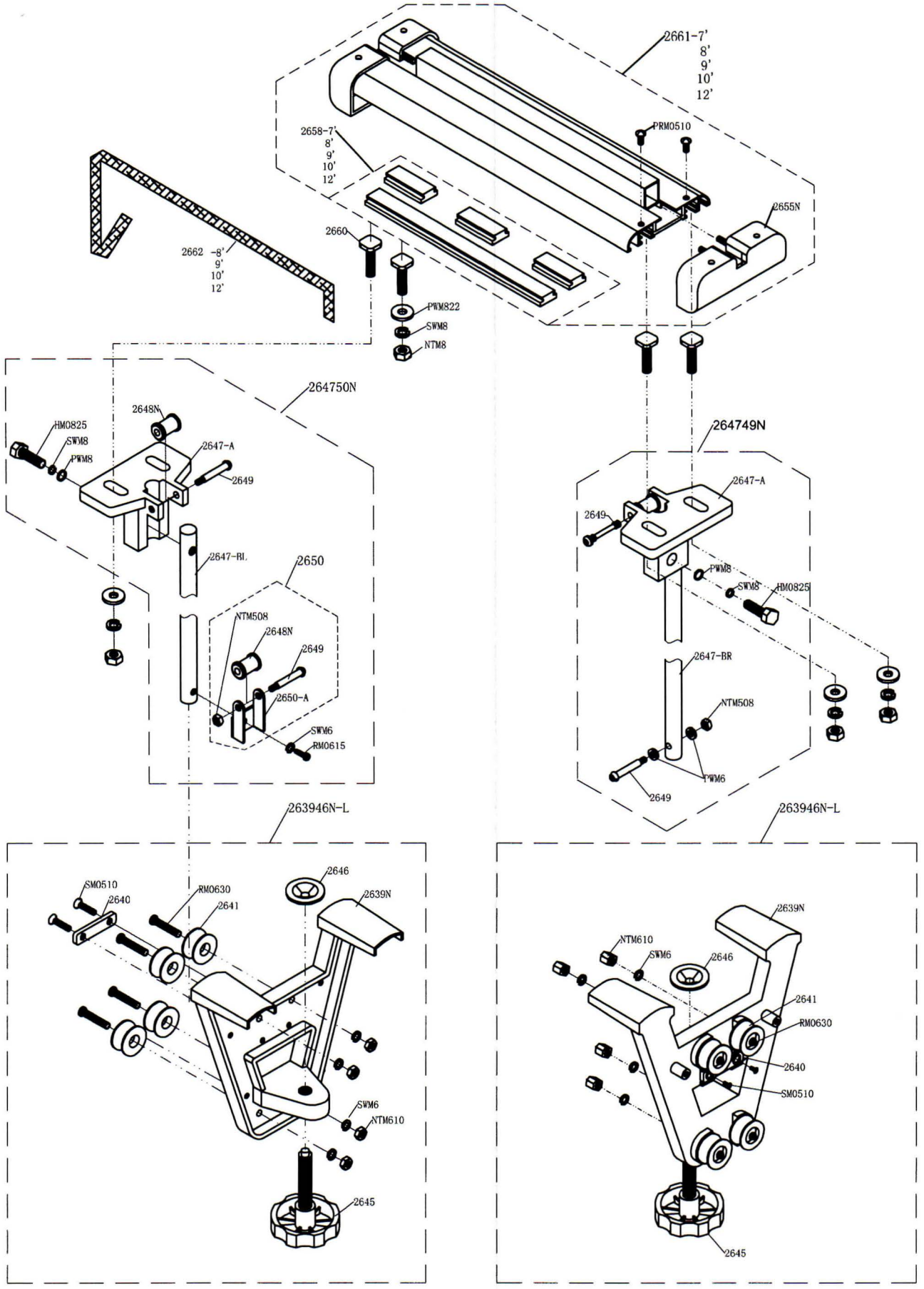
PART NO.	PART NAME
1901	HANDLE
190725-110	110V TRANSMISSION MOTOR SET
190725-220	220V TRANSMISSION MOTOR SET
192830	SA-190 RAIL SET (SIZE)
203946N-L	LEFT CLAMP SET
2639N	A CLAMP
2640	LIFT BELT CATCH
2645	BIG SCREW
2646	WASHER FOR BIG SCREW
264750N	LEFT BAR LIFTER .
2647-A	BAR LIFTER PLATE
2647-BL	LEFT BAR
2648N	ROLLER FOR LIFT BELT
2649	ROLLER SHAFE
2650	ROLLER SET
2650A	SUPPORT
2653	RAIL
2654	SQUARE NUT
2655	RAIL GUARD
2656	IMPACT-RESISTANT RUBBER
2657	STEEL PIECE (SIZE)
2658	RAIL RUBBER (SIZE)
2660	SCREW FOR RAIL
2662	LIFT BECT (SIZE)
2007	GEAR LATCH
2011N-110	110V F.R.MOTOR
2011N-220	220V F.R.MOTOR
2013R	SENSOR SWITCH
2018	TRANSMISSION BASE COVER
2019	SPRING FOR 2656
2020	RAIL PLUG SOCKET (M)
2021	TRANSMISSION GEAR
2021-A	SCREW FOR TRANSMISSION GEAR
2022	F.R.MOTOR BASE
2022-A	F.R.MOTOR TERMINAL BOX
2023N	REDUCTION GEAR
202427	TRANSMISSION PULLEY SET
2024	TRANSMISSION PULLEY BASE
2025-3	THREE HOLES CABLE
2025-4	FOUR HOLES CABLE
2026	TRANSMISSION PULLEY
202641	CUPRUM WHEEL
2027	PULLEY FIXED BLADE
2030	RAIL PLUG SOCKET (F)
2042	TIMING BELT



PART NO.	PART NAME
1917-110	110V CONTROL BOX SET
-220	220V CONTROL BOX SET
1917-14-110	110V P.C.BOARD
1917-14-220	220V P.C.BOARD
2016	CONTROL BOX STANDARD
2016-A	CONTROL BOX FIXED CLAMP
2016-B	CONTROL BOX BASEPLATE
2017-1N	START SWITCH
2017-2N	UP SWITCH
2017-3	DOWN SWITCH
2017-4N	EMER. STOP SWITCH
2017-5	WHEETING SWITCH
2017-8	POWER SWITCH
2017-9	LENGTH SETTING TUNER CUP
2017-9R	LENGTH SETTING TUNER
2017-10	FUSE BASE
2017-11	2 HOLES PLUG
2017-133	3 HOLES PLUG
2017-134	4 HOLES PLUG
2017-16	CONTROL BOX
2017-16A	CONTROL BOX COVER
203946N-R	RIGHT CLAMP SET
2635-110	110V COUNTER
2635-220	220V COUNTER
2640	LIFT BELT CATCH
2644-A	SPRING FOR LIFT
2645	BIG SCREW
2646	WASHER FOR BIG SCREW
264749N	RIGHT BAR LIFTER .
2647-BR	RIGHT BAR
2648N	BIG ROLLER
2649	ROLLER SHAFT



PART NO.	PART NAME
203136	SUSTAINING FRAME UNIT
2031	SUSTAINING FRAME
2032	ROCKER
2032-B	ROCKER STOP SCREW
2032-C	ROCKER STOP SCREW COVER
2033-B	ROCKER SCREW
2033-C	ROCKER COVER
2034	ROCKER LEVER (SIZE)
2035	CLOTH FIXTURE
2036	CLOTH SUPPORT FIXING RING
203741	WIRE FRAME ASSEMBLY
2037	TWO HOLES CABLE
2038	WIRE SUPPORT BASE
2039	WIRE SUPPORT LEVER
2040	WIRE BRACKET ARM
2041	SPRING FOR WIRE STAND
2652	SUSTAINING BAR(SIZE)



PART NO.	PART NAME
2655N	RAIL GUARD
2661	CLOTH PRESS TRACK SET
263946N-L	LEFT CLAMP SET
2641	BLUE WHEEL

INSTRUCTION MANUAL

1. Turn on the Power Switch. The Press Track will move down, until the micro-switch makes contact with either the table or the cloth, at which point the press track will stop.

2. If you want to raise the press track up to 10 cm. and have it stay there, push the UP switch until the press track has reached 10 cm., then turn off the Power switch.

SPECIFICATON

KNIFE SIZE: 4 1/4 inch
POWER: 130w
VOLTAGE: 100-120v
220 - 240v
CYCLE: 50-60Hz
SIZE (FOR TRACK): 36"-96"
SPECIAL ORDER: OVER 97" -120"

HOW TO ORDER END CUTTER:

MODEL	SIZE	Q'TY
SA-190H(220v/50Hz)	72"	20 SETS
ER-109 (CLOTH PRESS)	72"	20 SETS

Warranty

Su Lee products have a limited six-month warranty starting from the date of invoice. This limited warranty covers any original defective parts and workmanship. If your Su Lee product malfunctions due to such a defect within this six-month period, Su Lee Machines will repair or replace it at no charge within a reasonable amount of time.

This warranty does not cover any damage caused to the product including, but not limited to, misuse or neglect. This warranty is also void if any products other than genuine Su Lee knives, emery wheels or parts are used in the machine.