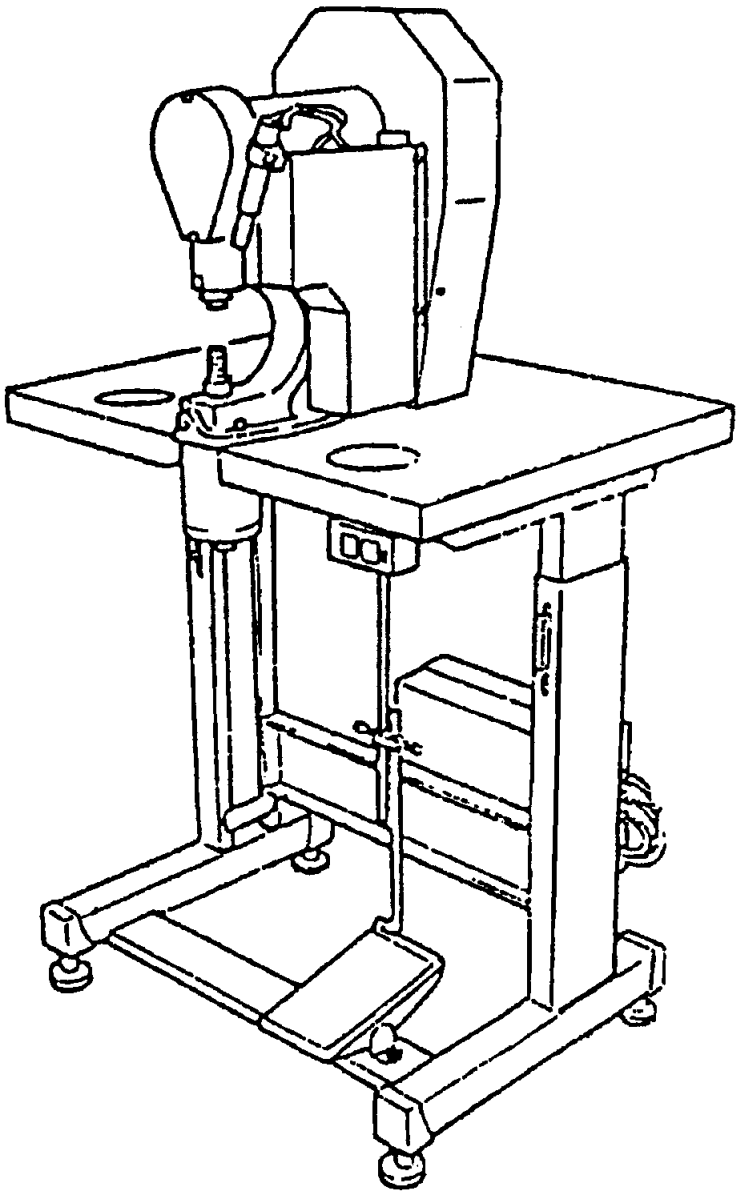
SCOVILL

Great Designs Deserve Great Fasteners.

Model 89-M200



Semi-Automatic Attaching Machine

CONTENTS

SAFETY INSTRUCTIONS

Observe the instructions below in order to operate the machine safely.

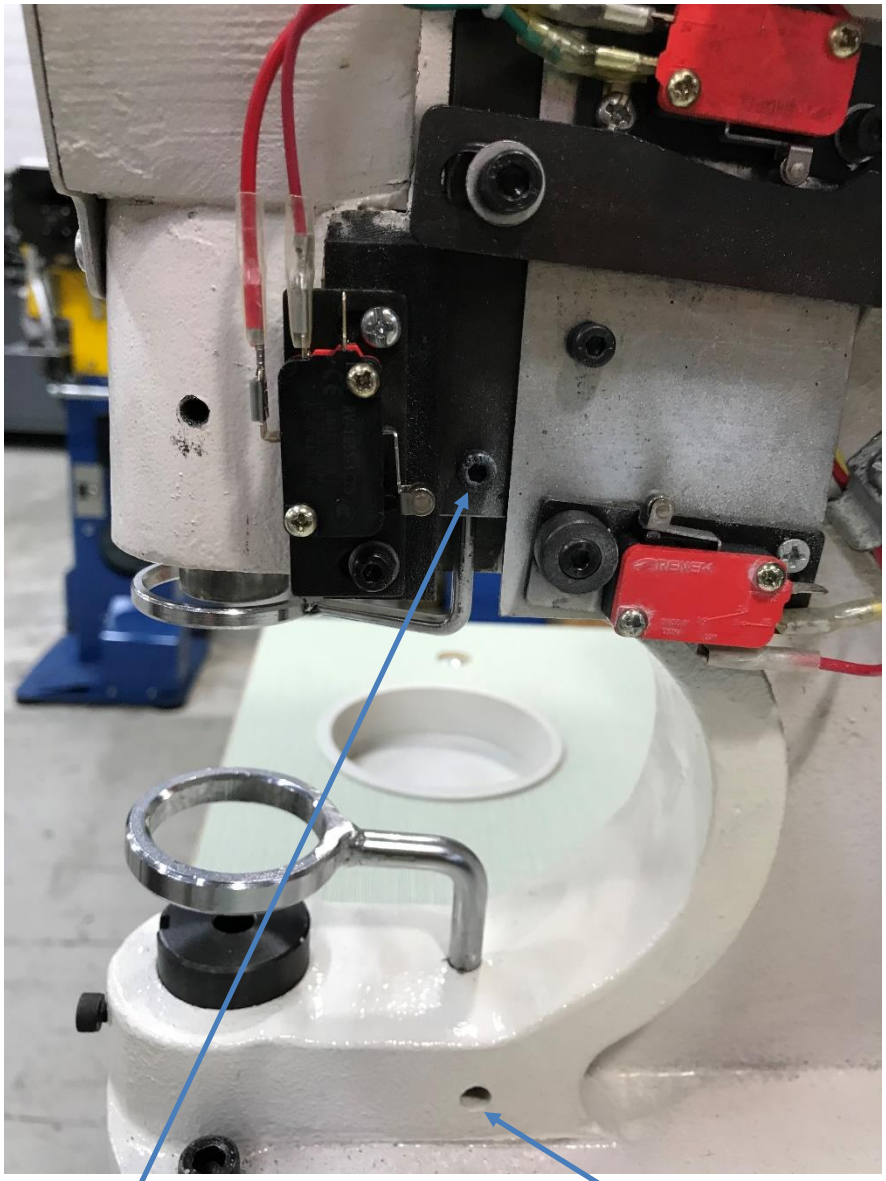
- Before using the equipment, read the operation manual provided for each piece of equipment, so that you use the equipment safely.
- NEVER remove any of the safety devices.
- For safety, NEVER remove any of the covers for the drive unit while working with the machine.
- Make sure finger guards are adjusted properly. Refer to “Ring Guard” set up.
- Warning labels indicating prohibitions and cautions are affixed to the machine and safety devices. Operators should observe the instructions on these labels for their own safety.
- Check that the machine's surroundings are safe before starting up the machine.
- NEVER put your hands between the punch and die while the power is turned on (and especially during startup). The safety devices cannot protect your hands from crushing by the punch and die.
- Stop the machine immediately if you notice anything wrong.
- Install the machine on a firm, level surface that is able to bear its weight. If the machine has casters, lock them after the machine is installed.
- Before connecting the electric cable, check that the power supply is of the specified type.
- Make sure that the machine has been grounded to prevent electrical leakage.
- Be sure to turn off the power before replacing the fixtures, before leaving the machine unattended, and at the end of work.
- For work safety, keep the machine and its surroundings tidy and free of all objects that could obstruct the work.
- Inspect the machine before the start of work and after the end of work, without fail.
- Never modify the machine for any reason. Modifying the machine is hazardous.

Ring Guard Set Up

Upper ring guard Lower ring guard

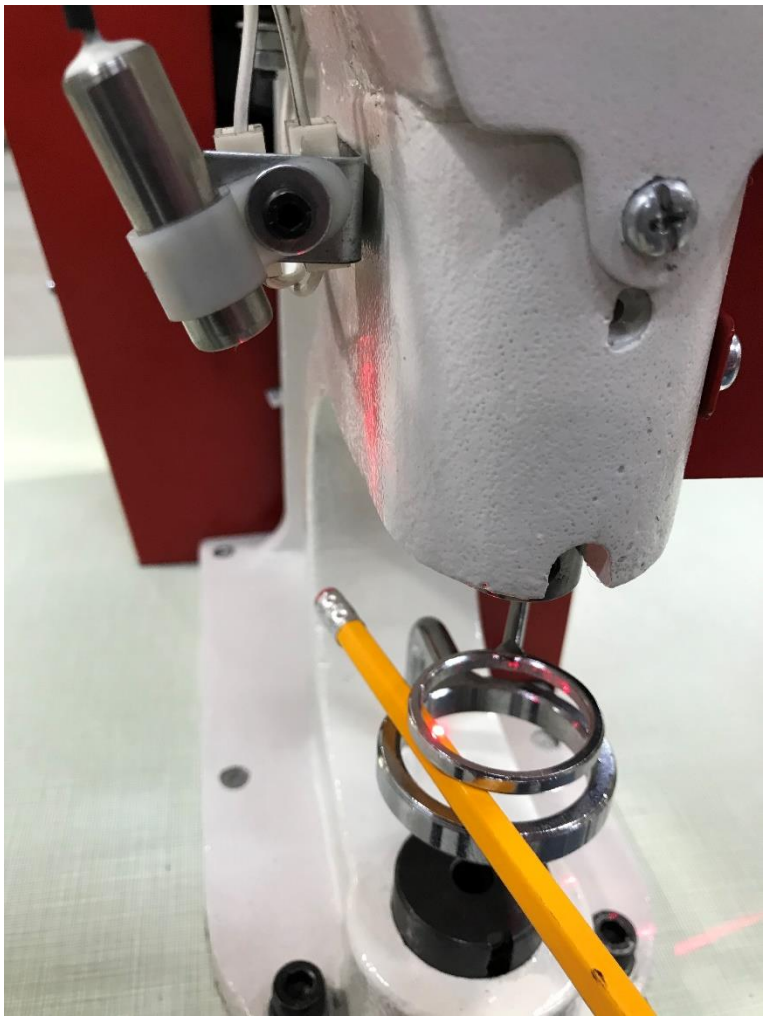
Before adjusting the ring guards make sure the machine is off and unplugged.

Remove the side guard to expose the upper ring guard locking screw.



Upper ring guard locking screw

Lower ring guard locking screw



Leaving the side guard off. Turn the machine on and place a #2 pencil or equivalent on the lower ring guard, then press the pedal. The machine **should not cycle.** If the machine cycles it will be necessary to adjust the upper guard down first until the machine no longer cycles with the pencil on the lower finger guard. If this cannot be achieved, it will be necessary to adjust the lower ring guard up until the machine does not cycle. When this is complete place the attaching tools in the machine along with the application and press the foot pedal. If the machine cycles, place the pencil or equivalent on the material away from the setting tools and press the foot pedal to ensure the machine **does not** cycle. If it does cycle the guards will need to be adjusted until the machine no longer cycles. When this is complete replace the side guard and review the “Operation” section of this manual.

NOTE: If the machine does not cycle when the material is placed on the setting die the ring guards will need to be adjusted to allow the machine to cycle. If this occurs the ring guard spacing should be check again with the pencil or equivalent.

1. Machine Overview

1.1 Features

- No adjustment is needed to allow for fabric thickness. Products can be fitted to any fabric whose thickness is within the range prescribed by Scovill standards, even if the garment has both minimum and maximum thicknesses.
- The height of the lower tool holder is easily adjusted to accommodate almost any size and type of fastener. This allows the setting pinch to be changed quickly and accurately when different attaching tools are used.
- Simple structure facilitates maintenance, minimizes troubles and makes for greater safety.
- Motor-powered machine is operated by a pedal, freeing hands for other work. (The trip mechanism is designed to prevent double-tripping.)
- The fitting unit is equipped with safety devices, letting operators feel safe as they work.
- A target light for more accurate positioning is optionally available.

NOTE: Do not use the machine for any purpose other than that for which it is intended.

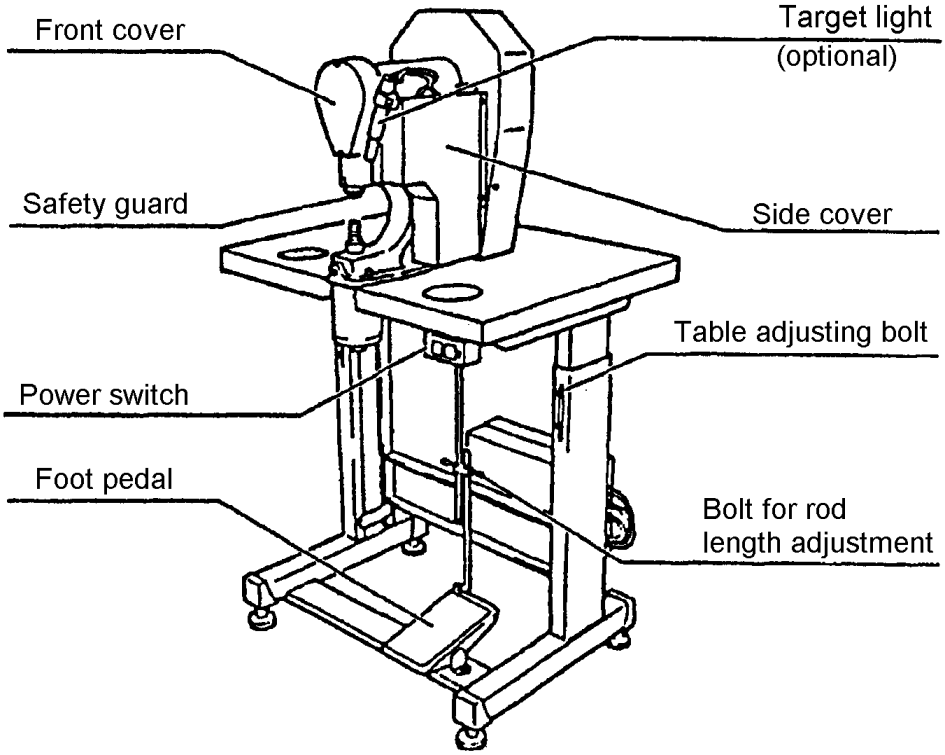
1.2 Products (fittings)

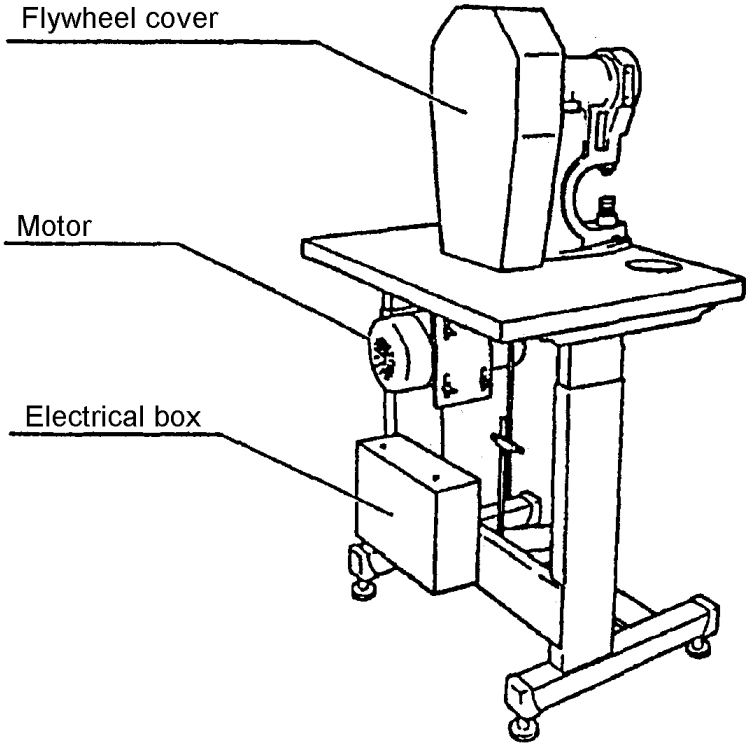
- The machine is ideal for fitting jeans buttons, jeans rivets, snap buttons, and Grippers, etc.
- For details, see the product catalog.

Included with each M200 machine is a set of five hex head socket wrenches: 3mm, 5mm, 6mm, 8mm, and 12mm.

- The 3mm wrench fits the set screws that hold the upper and lower attaching tools in the holders. It also fits the two set screws that allow the height and position of the lower safety ring to be adjusted.
- The 5mm wrench fits the screw located on the front of the compensator spring housing. This screw locks the lower tool holder in the correct position once the setting pinch has been adjusted.
- The 6mm wrench fits the two screws that hold the compensator housing to the head of the machine, below the lower die holder.
- The 8mm wrench fits the screw that adjusts the height of the lower tool holder.
- The 12mm wrench adjusts the tension on the compensator spring

1.3 Names of Machine Parts





1.4 Machine specifications

1. Machine dimensions

Width	700mm
Depth	550mm
Height	1,190-1,240mm (adjustable)

2. Machine weight

NET	78kg

3. Power source

250W single phase motor

4. Capacity

0.2 sec per cycle

Actual production: 3,000 pieces / 8 hours

5. Power supply

Power supply specifications of various countries

Destination country	Power supply spec.
Japan	Single phase, 100V AC, 50/60Hz, 0.6kVA
China, Thailand. Indonesia,	Single phase, 220V AC, 5OHz, 0.6kVA
Philippines	Single phase, 220V AC, 60Hz, 0.6kVA
India. Bangladesh	Single phase, 230V AC, 5OHz, 0.6kVA
Malaysia	Single phase, 240V AC, 5GHz, 0.6kVA
Taiwan	Single phase, 110V AC. 6OHz, 0.6kVA

1.5 Equipment

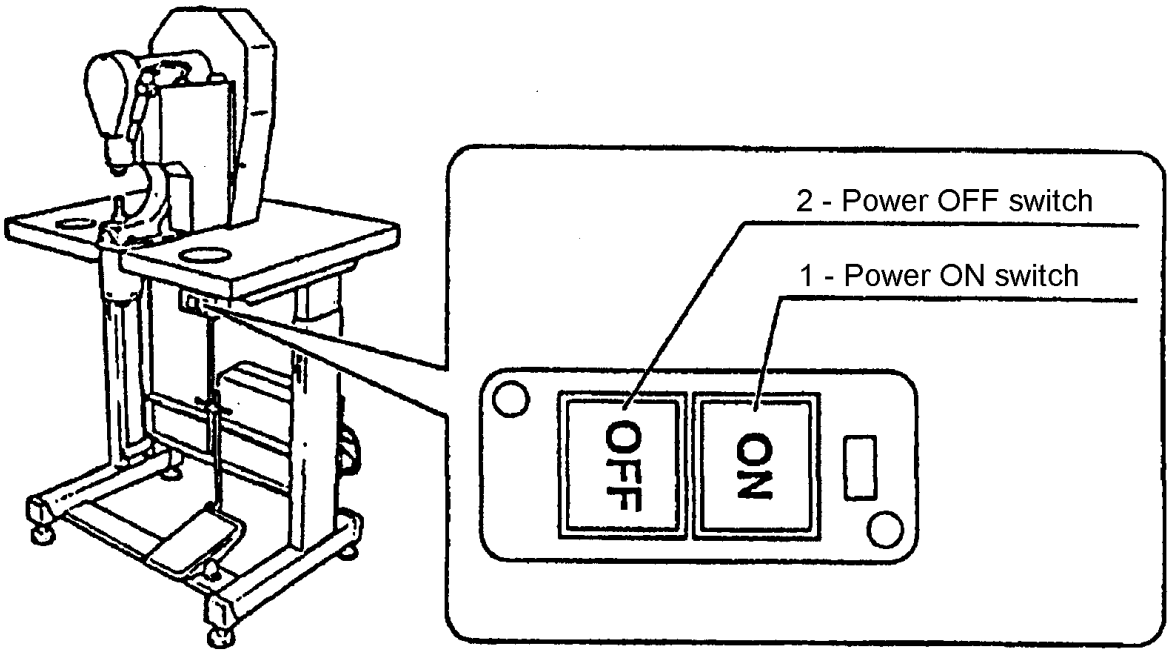
1. Accessories (standard tools)

- Bar wrench (3,4) 1 of each Total 2
- Fuses 2

2. Options

- Laser Light projector unit
- Hook and eye unit

2. Control Unit Functions



NO.	Name	Function
1	ON	Turns on the power, starting up the motor. Also turns on the target light (optional). Power is turned off automatically if over-current occurs.
2	OFF	Turns off the power, stopping the motor.

3. Operation

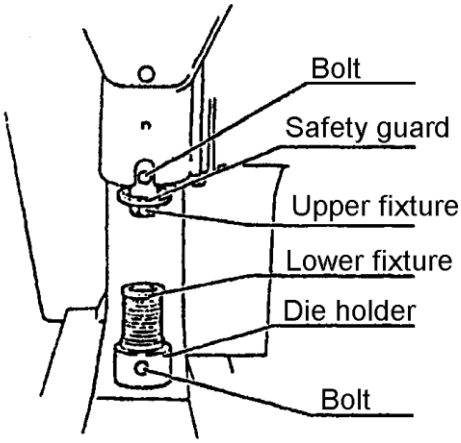
*****CAUTION*****

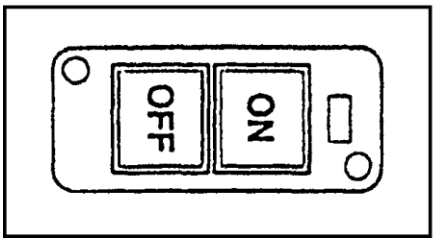
Be sure to turn off the power at the end of work, before replacing the fixtures, before leaving the machine unattended, and before repairing the machine.

For safety, be sure to install the side cover over the drive unit and the flywheel cover before working with the machine.

While the motor is running, NEVER put your finger(s) between the punch and die with the foot pedal depressed. Should the safety devices malfunction, your fingers could be injured.

3.1 Operation procedure





1) Check that the machine is connected to the power supply.

2) Secure the upper fixture in place with the bolt

3) Set the lower fixture in place. There is no need to secure it with the bolt.

NOTE: However, if the lower fixture has orientation, secure it in place with the bolt. Also, secure a lower fixture for hooks and eyes with the bolt.

4) Turn on the power. The motor will run, and the target light (optional) will project light.

5) Insert the product into the upper fixture and lower fixture.

6) Set the fabric in place. Make sure that it is in the correct position.

7) Depress the pedal. The safety guard will descend, and the attaching operation will be executed. However, if a foreign object is sensed below the punch, the punch will not descend.

8) Repeat steps 5 through 7 above as many times as necessary to perform the fitting work.

NOTE: Before starting the fitting work proper, it is recommended to perform a test attachment to check work safely.

3.2 Replacing the fixtures

1) Turn off the power.

2) Loosen the upper fixture bolt, and remove the fixture by pulling it out downwards,

3) Remove the lower fixture by putting it out upwards.

4) Install the fixtures for the next product by performing steps 2 and 3 above in reverse.

5) Make necessary pinch setting adjustments. Attachments can now be made.

NOTE: When replacing the lower fixture, check that there are no fasteners or foreign objects inside the die holder.

3.3 Adjusting the Setting Pinch and Compensator (refer to diagram below)

Adjusting the Setting Pinch

- Turn the main power switch OFF.
- Install the upper and lower attaching tools as described in section 3.2.
- Load a fastener onto each attaching tool. Trip the machine to make an attachment, and check it to see if the setting pinch is correct.
- Loosen the locking screw “A”. Insert the 8mm wrench up through the bottom of the compensator housing as indicated in diagram. Turn the wrench clockwise to lower the die holder and reduce the setting pinch. Turn the wrench counter clockwise to raise the lower die holder and increase the setting pinch.
- Make several small adjustments to the height of the lower tool holder until the setting pinch is correct. Tighten the locking screw “A”.

Adjusting the Tension on the Compensator Spring

The compensator assembly is designed so that there is no need to re-adjust the setting pinch for different thicknesses of material after installing a set of attaching tools. You must be sure that the measured thickness of the material is within the MINIMUM and MAXIMUM limits of the fastener being used. The compensator is set at the factory to work correctly for most situations. If for any reason the compensator must be re-set, the following procedure should be used.

1. Loosen the set screw “B”.
2. Insert the 12mm wrench into the large compensator adjusting screw on the bottom of the compensator housing as indicated in diagram below.
3. Turn the wrench counter clockwise until the compensator spring is fully compressed.
4. Make attachments on the MINIMUM material thickness until the correct setting pinch is achieved.

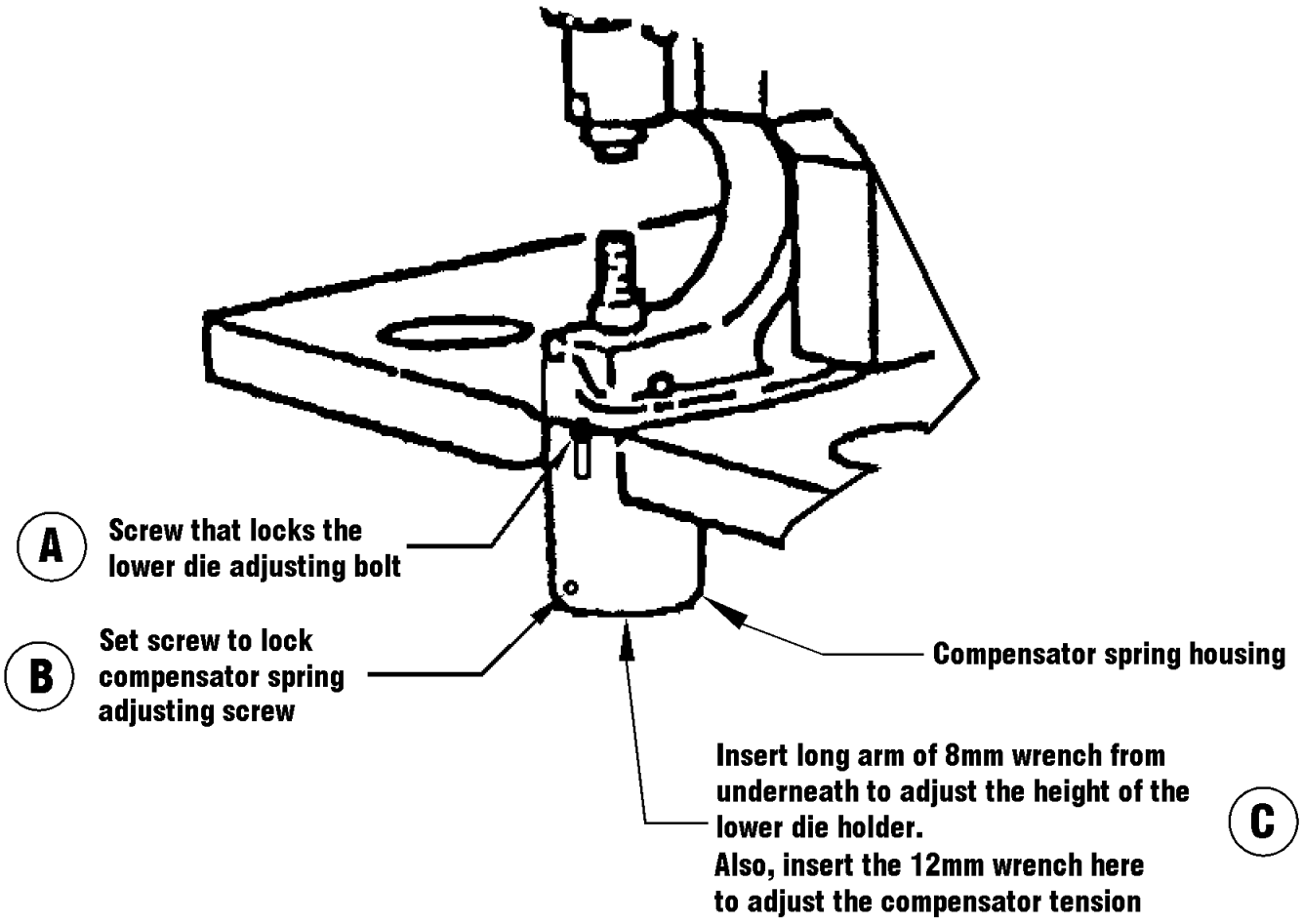
5. Using the 12mm wrench, turn the compensator adjusting screw clockwise about 2 full turns so that it can begin to move.

6. Make one attachment on the MAXIMUM material thickness, and determine if the setting pinch is too tight.

7. If the setting pinch is too tight, repeat steps 5 and 6 until the setting pinch is correct.

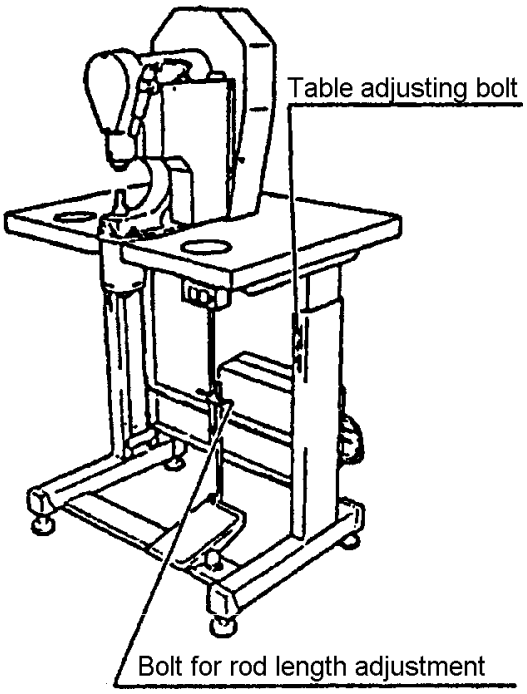
8. Finally, make several attachments on the MINIMUM material thickness, and verify that the setting pinch is still correct.

NOTE: If the correct setting pinch cannot be obtained on both the minimum and maximum material thicknesses, contact your nearest Scovill representative for assistance.



3.4 Adjusting the table's height

The table's height can be adjusted within a range of 50mm. Follow the procedure below to carry out the adjustment.

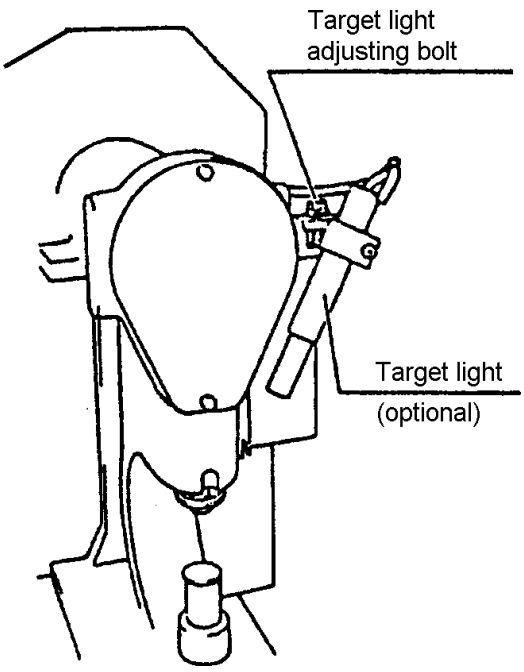


NOTE: When the table adjusting bolts are loosened, the table descends by its own weight. Therefore, this adjustment work should be performed by 2 or 3 persons together.

1) Loosen the bolt for rod length adjustment. Then loosen the 8 adjusting bolts of the table's legs, and adjust the table's height.

2) When adjustment is complete, retighten the table leg adjusting bolts. Retighten the bolt for rod length adjustment.

3.5 Adjusting the position of the target light (optional)



1) Loosen the target light adjusting bolt(s).

2) Position the fabric to which the products are to be fitted, and adjust the target light's position so that the cross mark is over the fitting position.

3) Retighten the target light adjusting bolt(s) to secure the target light in position.

NOTE: Before making final attachments, it is recommended to mark a test piece of fabric and make an attachment on it to check that the location is correct.

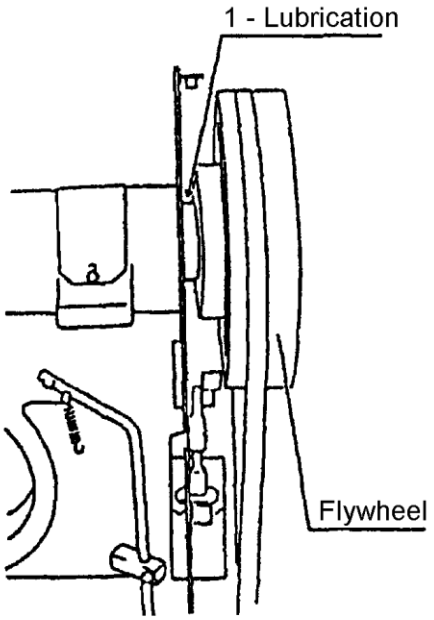
4. Maintenance and Management

4.1 Periodic inspection

Once every month, inspect the sliding and rotating parts and linkages for wear, abnormal noise, and looseness of bolts and nuts. Also, check the electrical equipment, and other pertinent components.

4.2 Lubrication

Lubricate the parts indicated below once per month. For the lubricating oil, use machine oil (90# approx.).



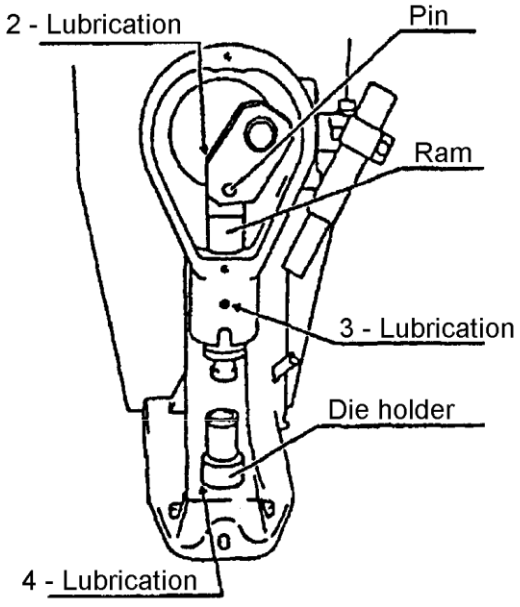
1) Remove the flywheel cover, and then apply 4 or 5 drops of oil to the shaft via the top of the clutch unit, while slowly rotating the shaft by hand.

2) Remove the front cover, rotate the flywheel by hand, and stop it in the position where the oiling hole in the ram's pin portion becomes visible. Then apply 2 or 3 drops of oil through the hole.

3) Apply 2 or 3 drops of oil through the ram's front oiling hole.

4) Remove the lower die holder. Apply some lubricating oil to a cloth, and wipe the oil onto the die holder's sliding surfaces with the cloth.

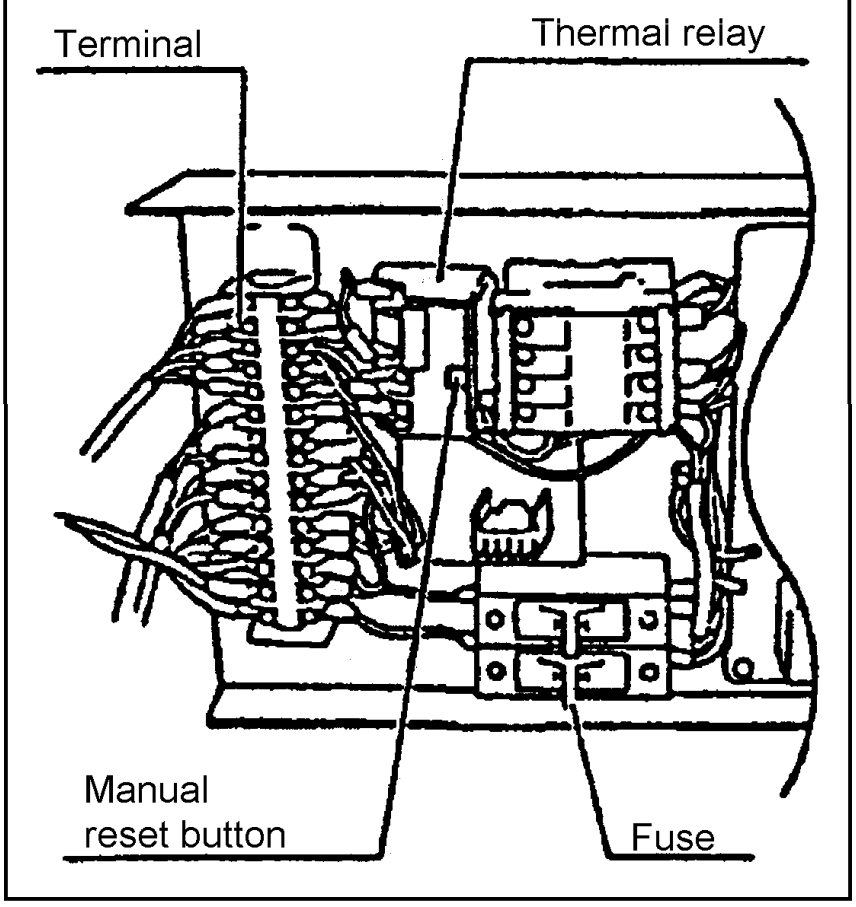
NOTE: To prevent dirt from adhering to the products, wipe away any surplus lubricating oil and any oil adhering to the fitting unit and its surroundings.



5. Troubleshooting

Trouble	Cause	Action
1. Motor does not rotate.	1) Plug is disconnected.	Connect plug.
	2) Power is not turned on.	Turn on power.
	3) Thermal relay inside electrical box has tripped.	Press the thermal relay Manual Reset button.
	4) Fuse is blown.	Replace with spare fuse.
	5) Terminal inside electrical box is loose or disconnected.	Connect terminal securely.
	6) Power input voltage has dropped.	Measure voltage, if possible, and contact inquiry address.
	7) If none of 1 through 6 is applicable, motor is probably faulty.	Contact inquiry address.
2. Punch does not descend when pedal is depressed.	1) Motor does not rotate.	Refer to 1 above.

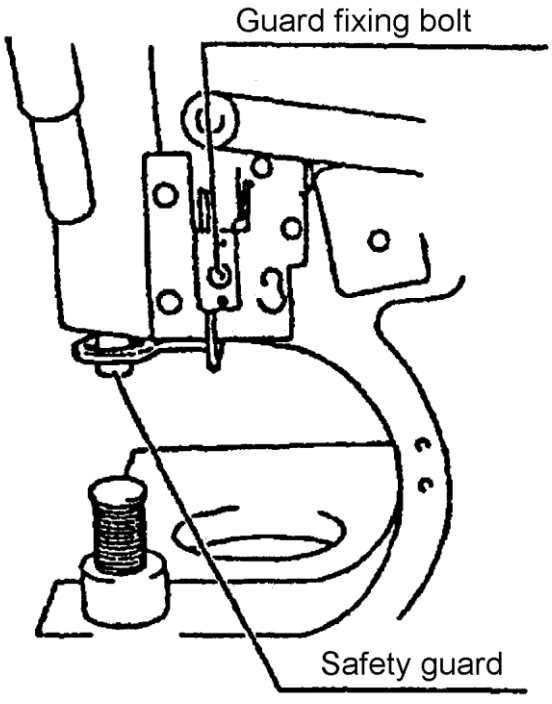
Notes



5. Troubleshooting (cont)

Trouble	Cause	Action
2. Punch does not descend when pedal is depressed.	2) Safety guard is in contact with fabric.	Adjust safety guard's position. Adjustment procedure: Remove side cover, loosen guard fixing bolts, and lift up guard. Recommended clearance between fabric and guard is 1 mm. CAUTION Do not lift the guard too high. An overly high guard position is hazardous.
	3) Clutch unit part(s) damaged.	Remove side cover and check parts. Contact inquiry address if damage is found.
3. Upper punch stops (near to bottom dead center) in the middle of fitting.	1) V-belt is loose.	Tension V-belt appropriately. Tensioning procedure: 1) Loosen the motor set bolt, and move the motor downward. 2) Make sure the belt is taut. Then securely tighten the bolt.
	2) Overload is caused by fabric thickness outside prescribed range.	Immediately turn OFF the power, and eliminate overload. Overload elimination procedure: 1) Turn OFF the power, and remove the flywheel cover. 2) Using the bar wrench, rotate the shaft in the reverse direction (clockwise) to raise the punch, and then take out the fabric.

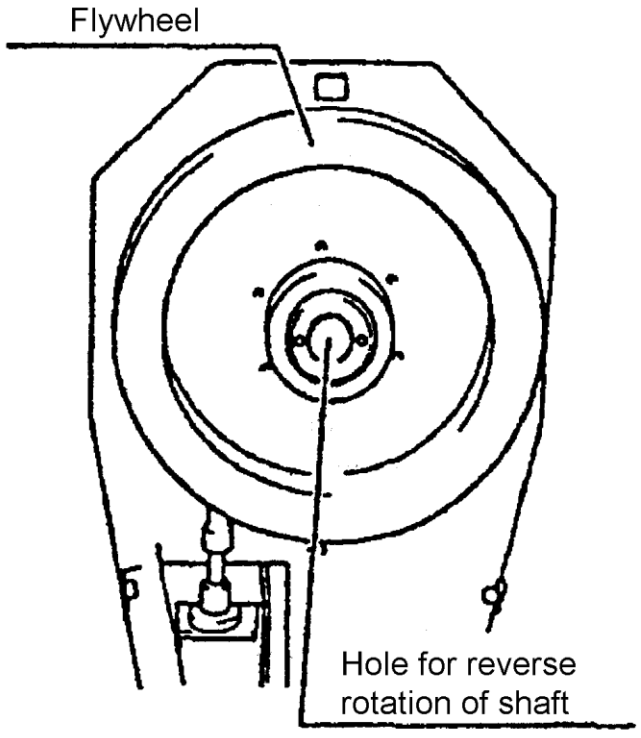
Notes

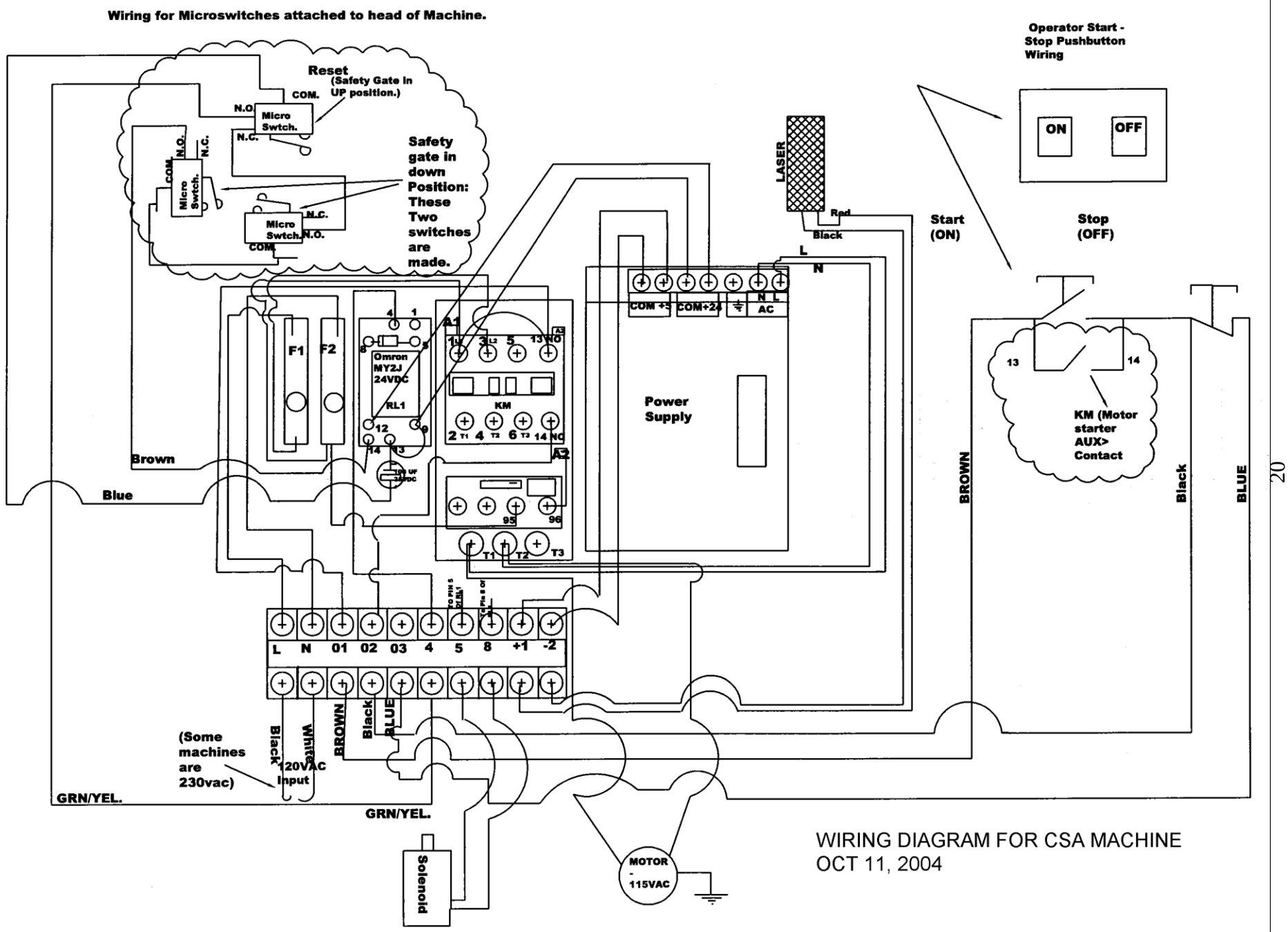


5. Troubleshooting (cont)

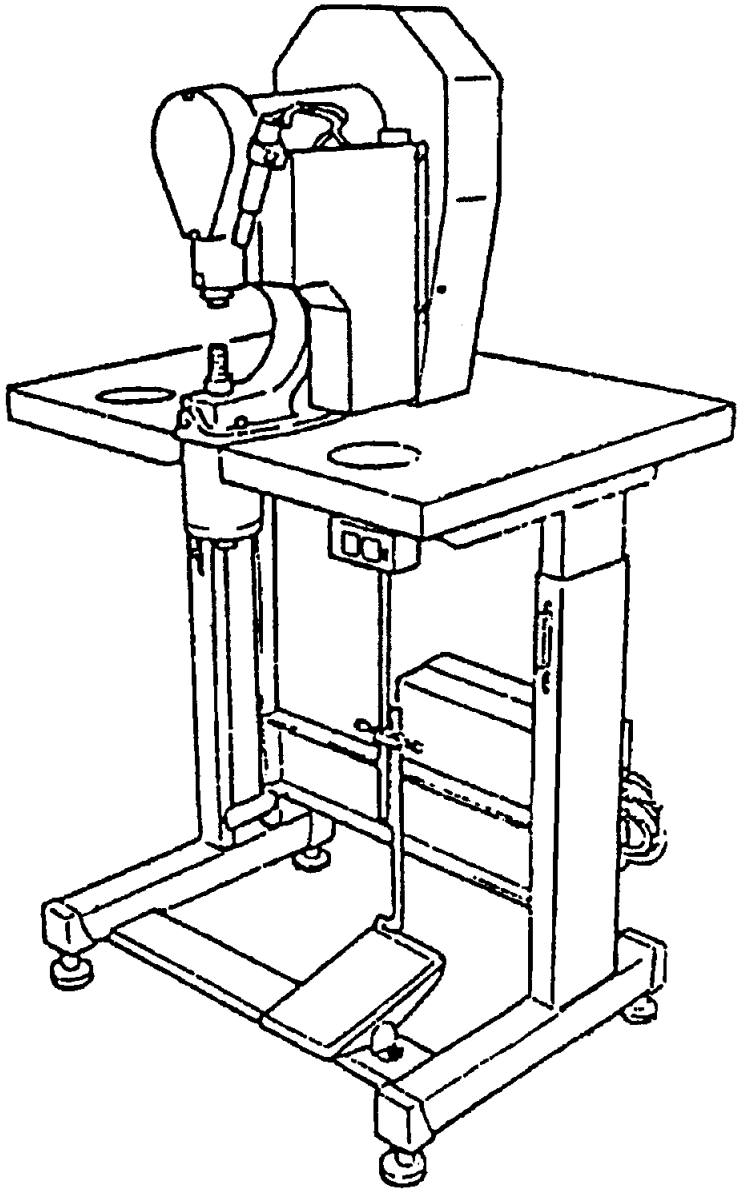
Trouble	Cause	Action
3. Upper punch stops (near to bottom dead center) in the middle of fitting (con't).	2) Overload is caused by fabric thickness outside prescribed range (con't).	3). Rotate the flywheel in the regular direction (Counter clockwise) by hand, until it is in the normal position. 4). Turn on the power, and check that the motor runs. If it does not, perform the following: Thermal relay inside the electrical box may have tripped due to overload. Reset the relay. CAUTION If fabric thickness is outside of the prescribed range, contact the inquiry address.
4. Light projector (option) does not project light.	1) Power is not turned on.	Turn on power.
	2) Power connector is disconnected.	Properly insert connector.
	3) Lamp's bulb is dead.	Replace bulb. It no spare available, contact inquiry address.

Notes




Wiring for Microswitches attached to head of Machine.
Reset
(Safety Gate in UP position.)
COM.
N.O.
N.C.
Micro Swtch.
Safety gate in down Position: These Two switches are made.
Micro Swtch.
Micro Swtch.
Operator Start - Stop Pushbutton Wiring
ON
OFF
LASER
Red
Black
Start (ON)
Stop (OFF)
L
N
COM +5
COM+24
N L
AC
Power Supply
F1
F2
Omron MY2J 24VDC
RL1
A1
A2
KM
13
14
KM (Motor starter AUX> Contact
Brown
Blue
BROWN
Black
BLUE
L N 01 02 03 4 5 8 +1 -2
(Some machines are 230vac)
Black
White
120VAC Input
BROWN
Black
BLUE
GRN/YEL.
GRN/YEL.
Solenoid
MOTOR - 115VAC
WIRING DIAGRAM FOR CSA MACHINE
OCT 11, 2004

PARTS LISTS AND ASSEMBLY DRAWINGS



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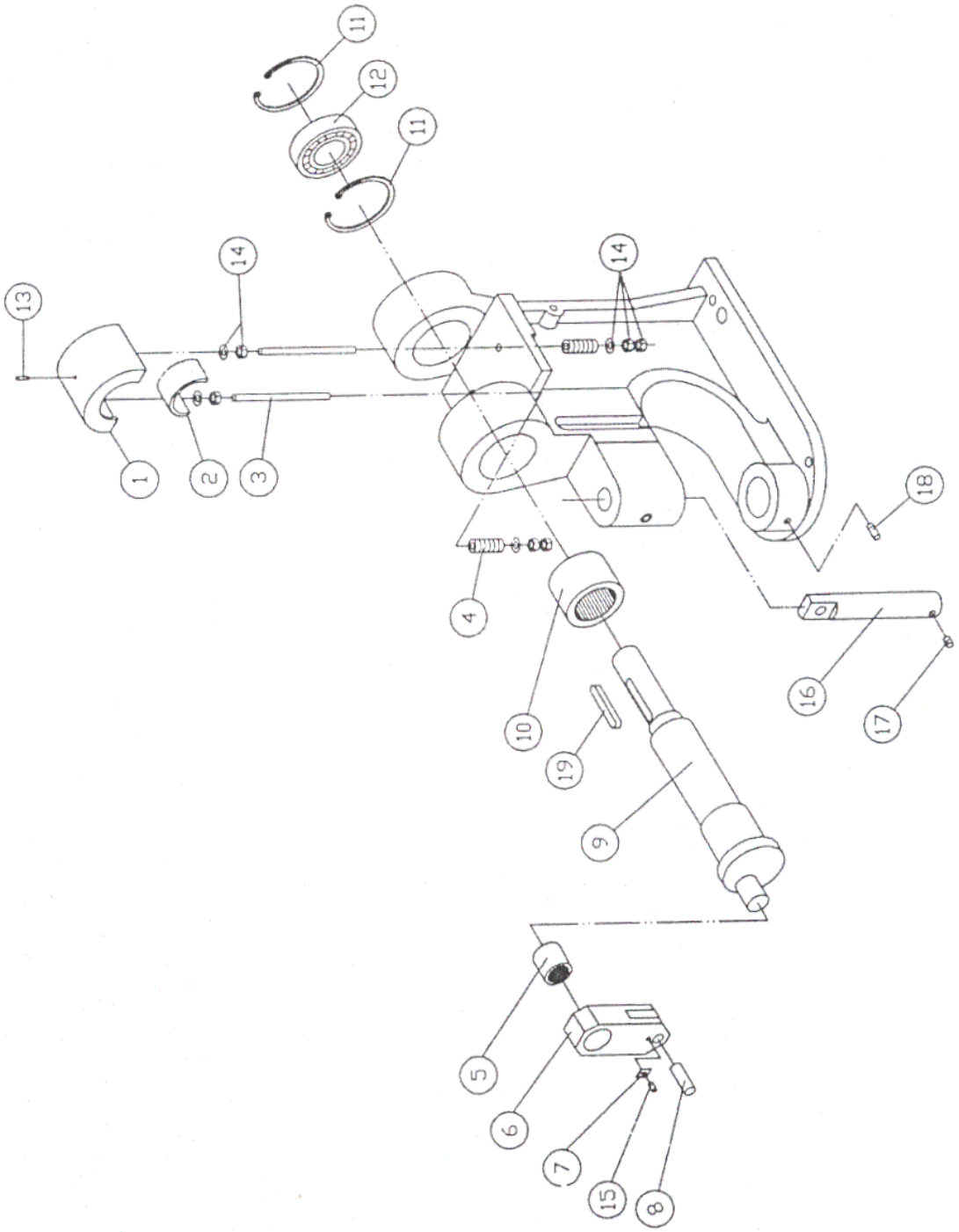
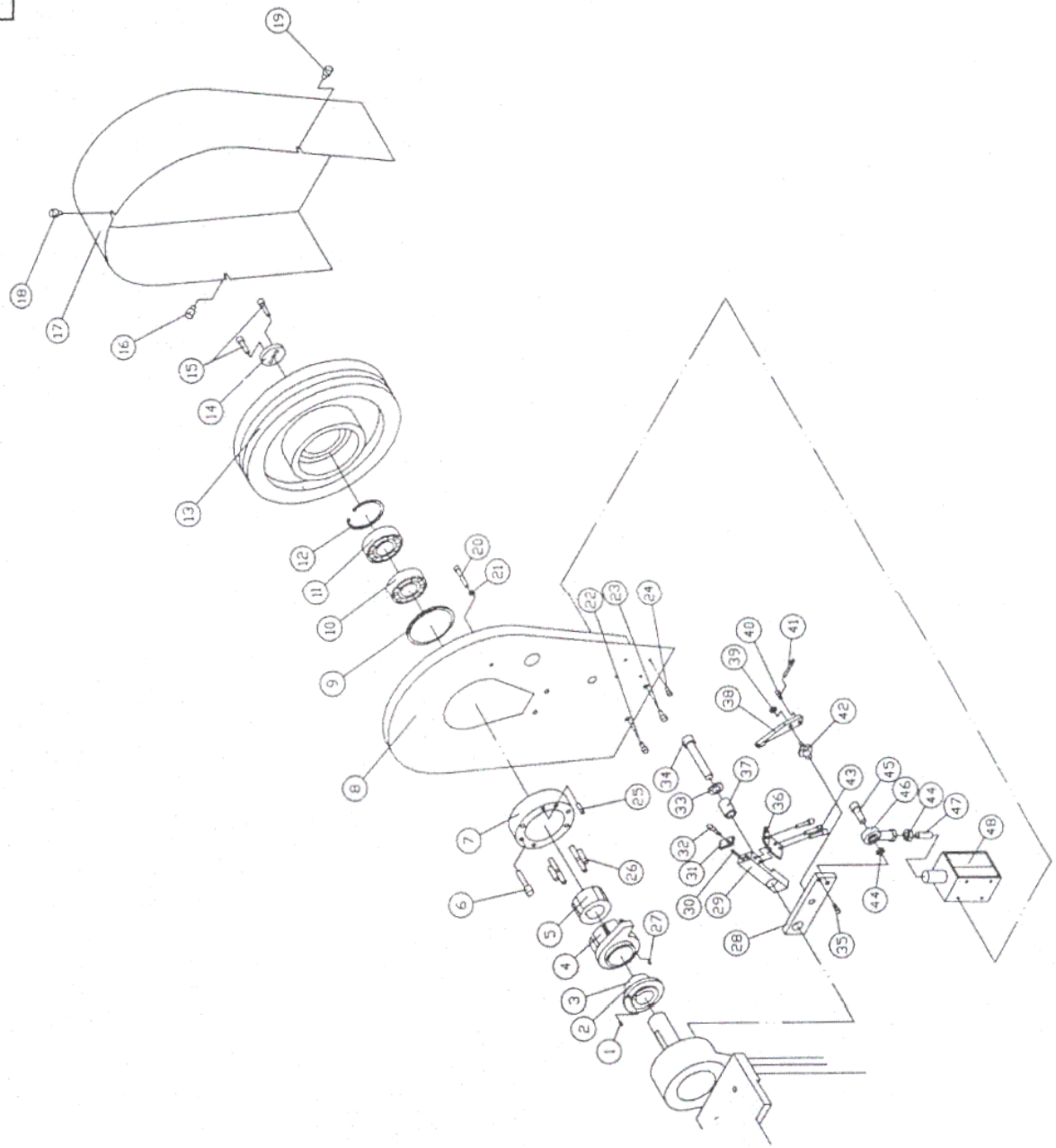


Scovill 89-M200 Upper Frame, Drawing P-1

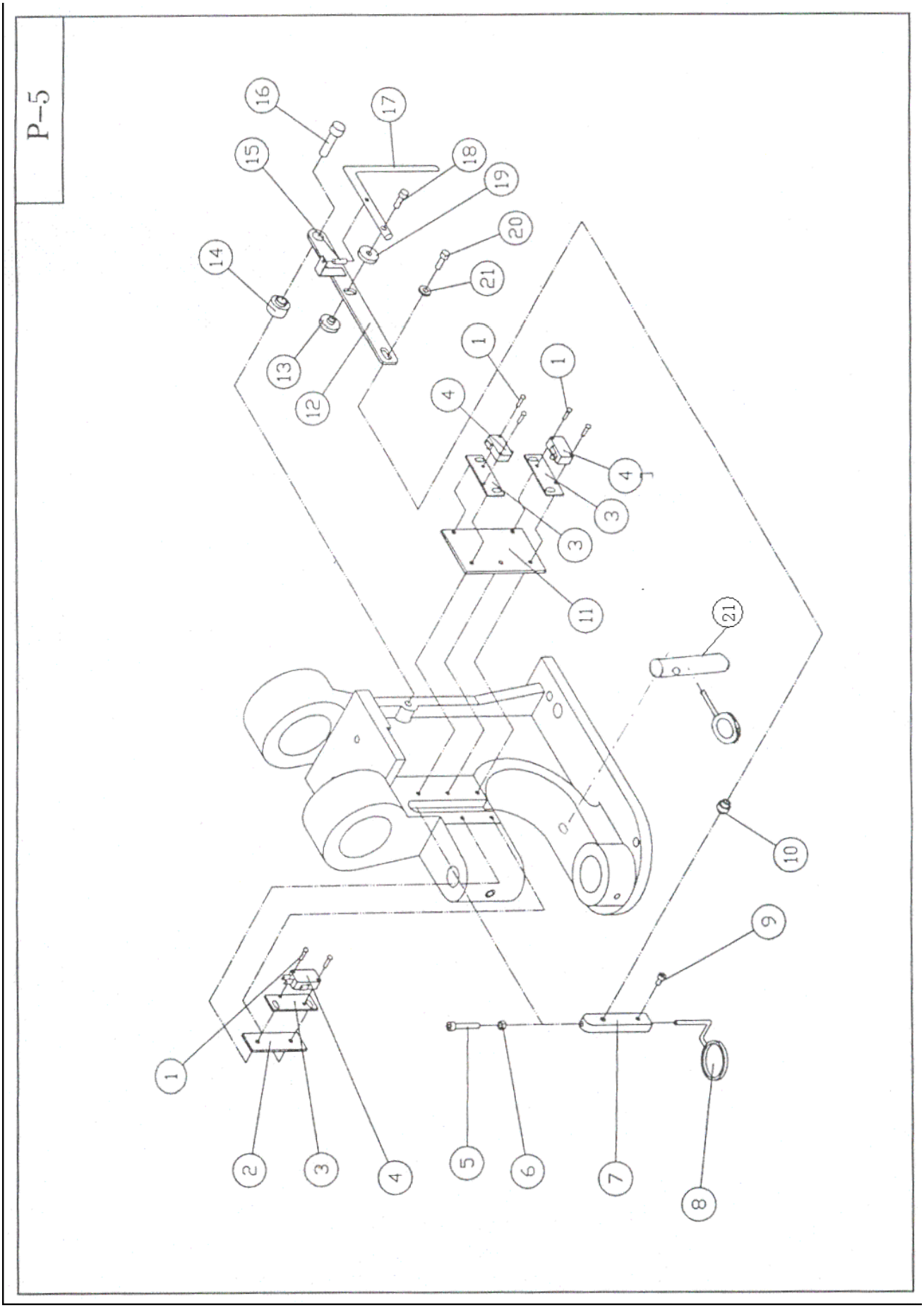
No.	P/N	Description	Qty
1	G0101	Shoe Holder	1
2	G0102	Break Plate	1
3	G0103	Break Clamp Rod	2
4	G0104	Break Spring	2
5	G0105	Bearing 7942-20	1
6	G0106	Eccentric Link	1
7	G0107	Stopping Pin	1
8	G0108	Pin	1
9	G0109	Rotating Shaft	1
10	G0110	Inner Ring 7943-45	1
11	G0111	Snap Ring Φ62	2
12	G0112	Ball Bearing 60206	1
13	G0113	Spring Pin 4×10	1
14	G0114	Nut M6	10
15	G0115	Screw M4×8	1
16	G0116	Upper Shaft	1
17	G0117	Screw M6×8	1
18	G0118	Screw M5×15	1
19	G0119	Key 8×45	1

P–3



Scovill 89-M200 Flywheel & Clutch Assembly, Drawing P-3

No.	P/N	Description	Qty
1	G0201	Screw M3×8	1
2	G0202	Spring φ5×30	1
3	G0203	Clutch Inner Ring	1
4	G0204	Clutch Cover	1
5	G0205	Clutch Holder	1
6	G0206	Screw M6×40	1
7	G0207	Clutch Outing Ring	1
8	G0208	Cover (middle)	1
9	G0209	Stop Ring	1
10, 11	G0210	Bearing 60205	2
12	G0212	Inner Snap Ring φ52	1
13	G0213	Pulley	1
14	G0214	Bearing Stop Pin	1
15	G0215	Screw M5×16	2
16,18,19	G0216	Nut M5×8	3
17	G0217	Rear Cover	1
20	G0220	Screw M4×30	1
21	G0221	Nut M4	1
22, 23	G0222	Screw M6×12	2
24	G0224	Screw M4×8	1
25	G0225	Open Pin φ5×30	1
26	G0226	Roller	6
27	G0227	Open Pin φ3×10	1
28	G0228	Holder	1
29	G0229	Plate	1
30	G0230	Spring φ5×20	1
31	G0231	Screw M6 x 16	1
32	G0232	Screw M5×10	1
33	G0233	Washer φ10	1
34	G0234	Screw M10×30	1
35	G0235	Screw M6×30	1
36	G0236	Supporting Plate	1
37	G0237	Bushing	1
38	G0238	Fork	1
39	G0239	Nut M4	1
40	G0240	Screw M4×10	1
41	G0241	Spring φ10×35	1
42	G0242	Supporting Stud	1
43	G0243	Screw M4×10	1
44	G0244	Nut M6	1
45	G0245	Screw M6×30	1
46	G0246	Bearing φ6	1
47	G0247	Link	1
48	G0248	Solenoid	1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Scovill 89-M200 Safety Mechanism, Drawing P-5

No.	P/N	Description	Qty
1	G0301	Screw M3×12	6
2	G0302	Front Presser Plate	1
3	G0303	Microsoft Switch Holder	3
4	G0304	Microsoft Switch (V-155-1C25)	3
5	G0305	Screw M5×25	1
6	G0306	Nut M5	1
7	G0307	Safety slider	1
8	G0308	Safety Guard (upper)	1
9	G0309	Nut M4×10	1
10	G0310	Front Holder of the link	1
11	G0311	Rear Presser plate	1
12	G0312	Link	1
13	G0313	Stud	1
14	G0314	Rear Holder of the link	1
15	G0315	Spring φ8×10	1
16	G0316	Screw M8×30	1
17	G0317	Upper Rod	1
18	G0318	Screw M5×25	1
19	G0319	Washer	1
20	G0320	Screw M5×20	1
21	G0321	Washer	1
22	G0322	Safety Guard (lower)	1

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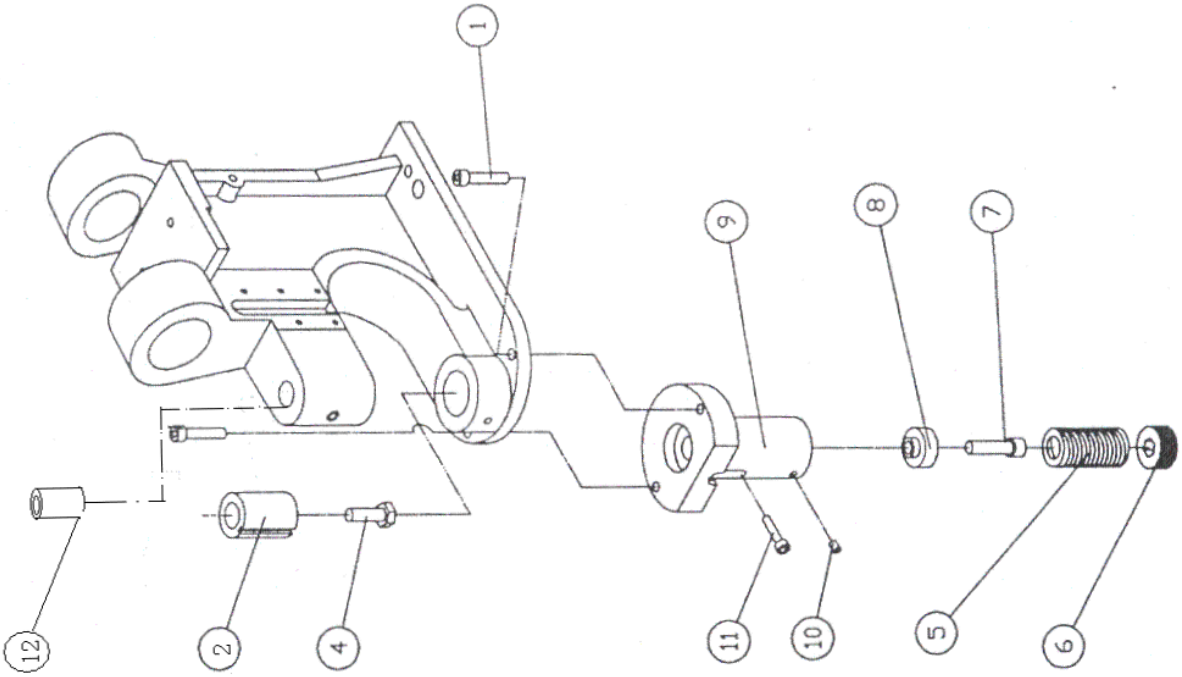

Scovill 89-M200 Lower Frame & Die Holder, Drawing P-7

No.	P/N	Description	Qty
1	G0401	Screw M8×30	6
2	G0402	Lower Adaptor 下下下	1
4	G0404	Screw M10×20	3
5	G0405	Spring ϕ30×85	1
6	G0406	Nut	1
7	G0407	Screw M10×45	1
8	G0408	Fixer	1
9	G0409	Adjusting Part	1
10	G0410	Screw M6×10	1
11	G0411	Screw M6×20	1
12	G0412	Bushing	1

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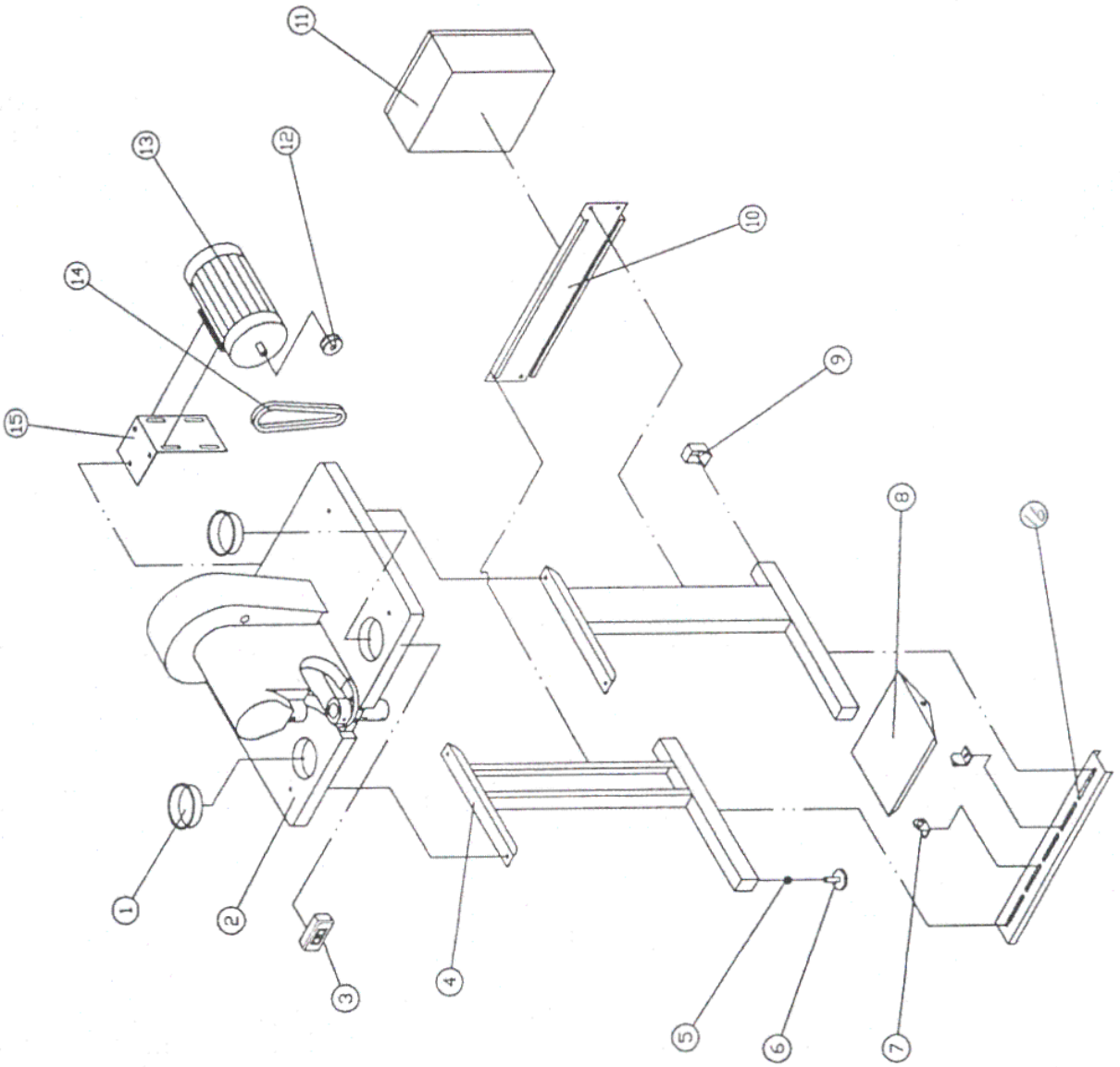
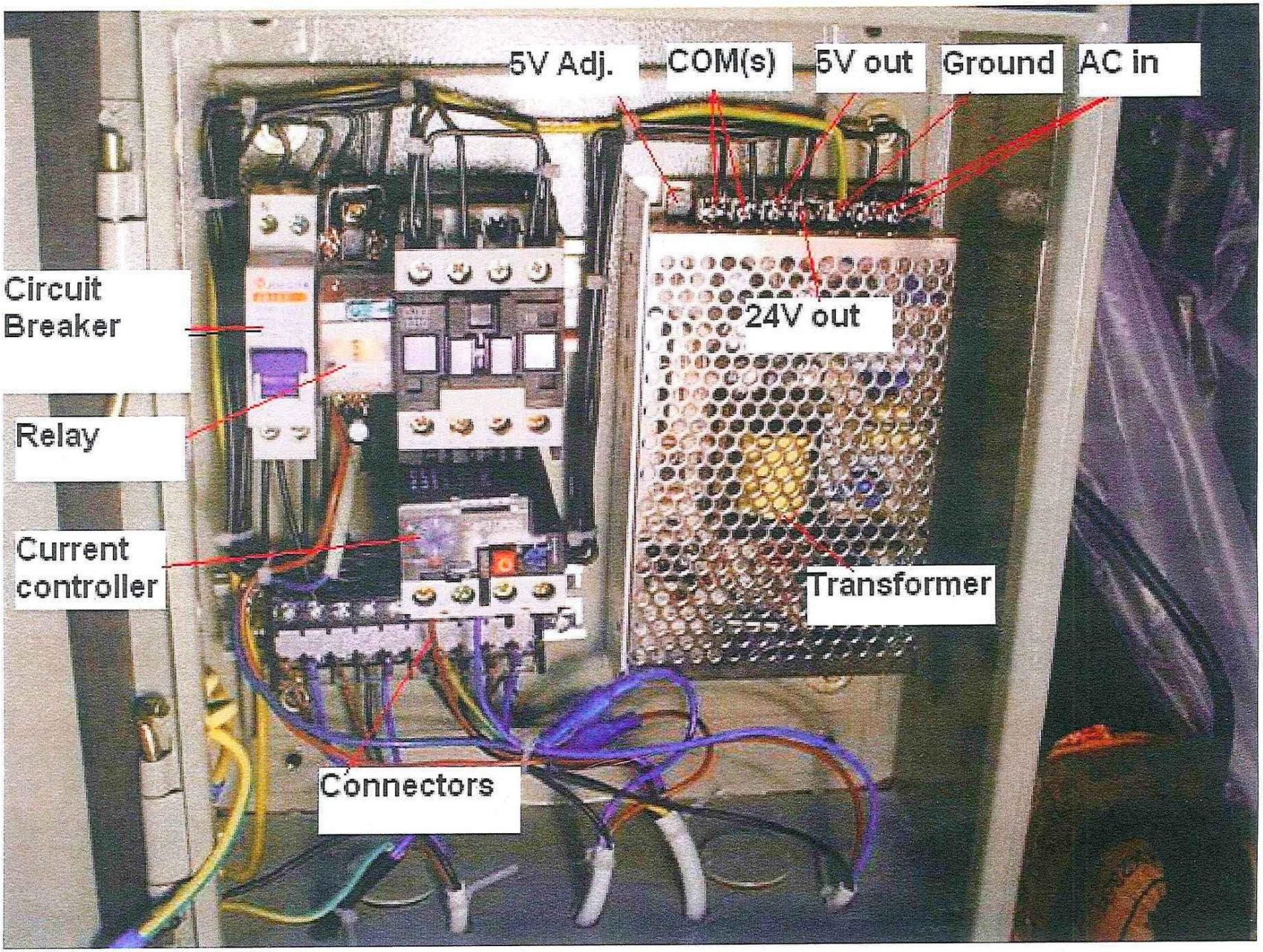


Scovill 89-M200 Table & Stand, Drawing P-9

No.	P/N	Description	Qty
1	G0501	Button Salver	1
2	G0502	Table	1
3	G0503	Switch	1
4	G0504	Stand	3
5	G0505	Nut M12	1
6	G0506	Stud	1
7	G0507	Supporter	1
8	G0508	Pedal	1
9	G0509	Cap	4
10	G0510	Beam	1
11	G0511	Electrical Box (J×F-1)	1
12	G0512	Small Pulley	1
13	G0513	Motor (220V)	1
14	G0514	Belt A1270	1
15	G0515	Base Plate	1
16	G0516	Pedal Beam	1

Scovill 89-M200 Electrical Parts

No.	P/N	Description	Qty
1	G0601	Circuit Board	1
2	G0602	Relay	1
3	G0603	Fuse	2
4	G0604	Thermal Relay (KM)	1
5	G0605	Laser Light	1


5V Adj.
COM(s)
5V out
Ground
AC in
Circuit Breaker
24V out
Relay
Current controller
Transformer
Connectors

89-M200 Electrical Box

Version as of 1/1/2017