Operations, Parts and Safety Manual

READ ALL INSTRUCTIONS BEFORE OPERATING THIS FELINS PRODUCT

TABLE OF CONTENTS

SAFETY INSTRUCTIONS

! **GENERAL SAFETY INSTRUCTIONS FOR THE**

FELINS LOOP PLUS STRAPPING MACHINE

This manual gives you information on how to operate and maintain your Loop 1000/1000 Plus Strapping Machine.

Only trained personnel should service machine.

Read these safety instructions before servicing your machine.

BEFORE SERVICING MACHINE

- Read the Operation, Parts and Safety Manual.
- Wear safety glasses.
- Disconnect all electric power.
- Use the correct tools to repair machine.
- Never adjust, repair or oil moving machinery.

ADDITIONAL CONSIDERATIONS

- To insure proper operation of machine, use the specified electric power source.
- Do not overload machine by exceeding Felins' recommended performance limitations.
- Do not spill liquid on machine.
- Keep the Operation, Parts and Safety Manual at your machine. Refer to it often.

SIGNS

- Read all of the signs on the machine.
- Do not remove any signs from machine.
- Replace all missing or damaged signs.

ADDITIONAL SAFETY INSTRUCTIONS ARE LOCATED THROUGHOUT THIS MANUAL.

THEY SERVE TO WARN THE SERVICEMAN ABOUT POTENTIALLY HAZARDOUS SITUATIONS.

INTRODUCTION

DESCRIPTION OF MACHINE

The Loop Plus Strapping Machines have been designed to function as a tabletop strapping machine. It's automatic in operation and light enough to be considered portable.

The machine generates a free standing loop into which the package to be strapped is placed. The package is then moved against the loop support plate that in turn closes the cycle start switch. The loop is tensioned, the straps are welded and then cut free from the strap supply.

All these functions are the result of closely coordinated input actions from four major assemblies: 1MTR, a cam motor that turns two cam assemblies; 2MTR, a reversible drive motor that feeds and tensions strap; 3MTR, the motor that drives the welding components that complete the welding function and also causes loop formation; electronic controls (including the electronic printed circuit board that is used to establish and maintain tension and loop size variables.

Note also that the strap supply is self contained and the entire machine is fully housed to minimize dirt and dust contamination.

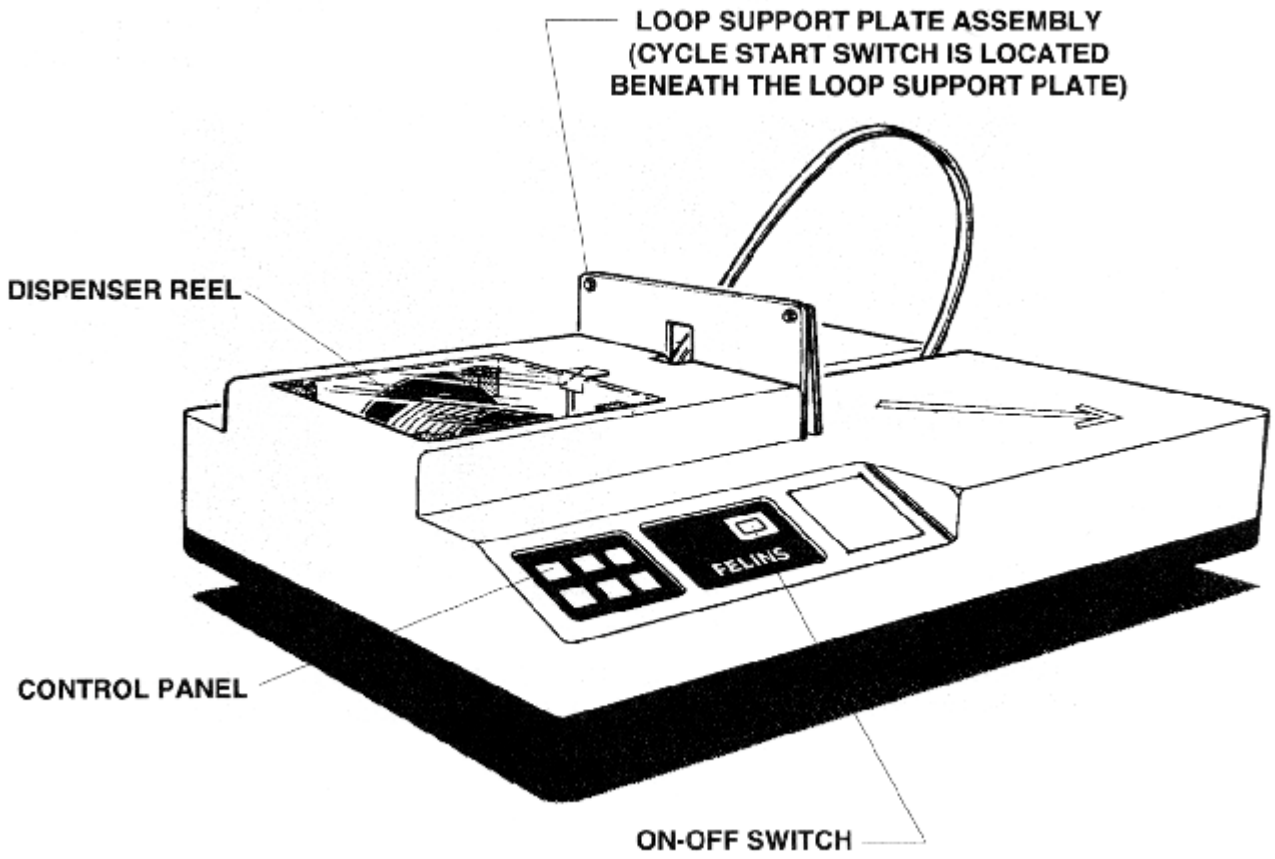


Figure 1 - Major Components, Exterior

LOOP PLUS Major Components

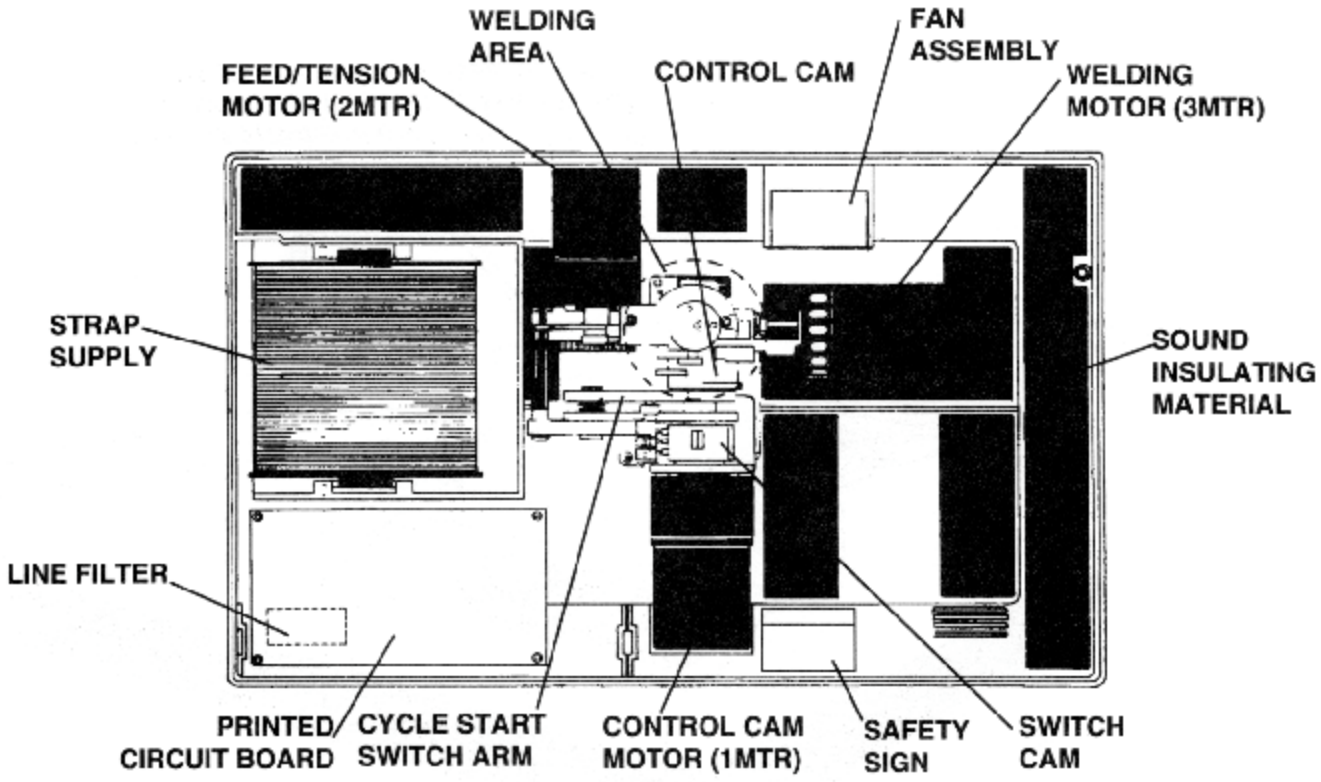


Figure 2 - Major Components, Interior

GENERAL SAFETY

1. To insure proper operation, use specified electric power source.
2. Only qualified service personnel should service this unit.
3. Use only identical replacement fuses.
4. Keep face away from the strapping area during operation.
5. Do not spill liquids on machine.
6. Do not band containers or packages containing liquids on machine.
7. Keep hands, jewelry or loose clothing away from strap and moving anvil.
8. The socket outlet which is the source of power must be installed near the unit and be easily assessable.
9. Use only with polarized grounded supply systems.

Change the specification section as shown:

SPECIFICATIONS

Model:	Loop Plus Strapping Machine (150922)
Strap:	Loop Strap (299000). Coil diameter is approximately 7 1/8" (181mm) wide, 2500 feet (750 M) of strap per coil.
Sealing method:	Friction weld.
Input power:	220/230 volts, 50Hz., 1 phase, 3.15 Amp.
Weight:	45 lbs. (21 Kg.) without strap, 49 Ibs. (22Kg.) with strap.
Overall dimensions:	See figure 3.
Size of surface for proper support:	70 cm. wide by 43 cm. long.
Maximum package size:	60" (1524mm) circumference, timer controlled. Additional length available with manual operation.
Minimum package size:	2 3/4" (70mm) wide. Minimum height depends on compressibility.
Strap tension:	Approximately 2-15 Ibs. (9-67N)
Cycle time:	Approximately 3 seconds (20 cycles/minute)
Handling and transportation:	No special steps required except for obvious care.
Storage:	Storage temperature 0°C. to 60°C.
Maximum noise level:	92db. This is not a continuous sound level. Depending on frequency of usage hearing protection may be needed if operators are using equipment for long periods of time.
Device fuses:	Buss GDC 3.15 A. or equivalent.

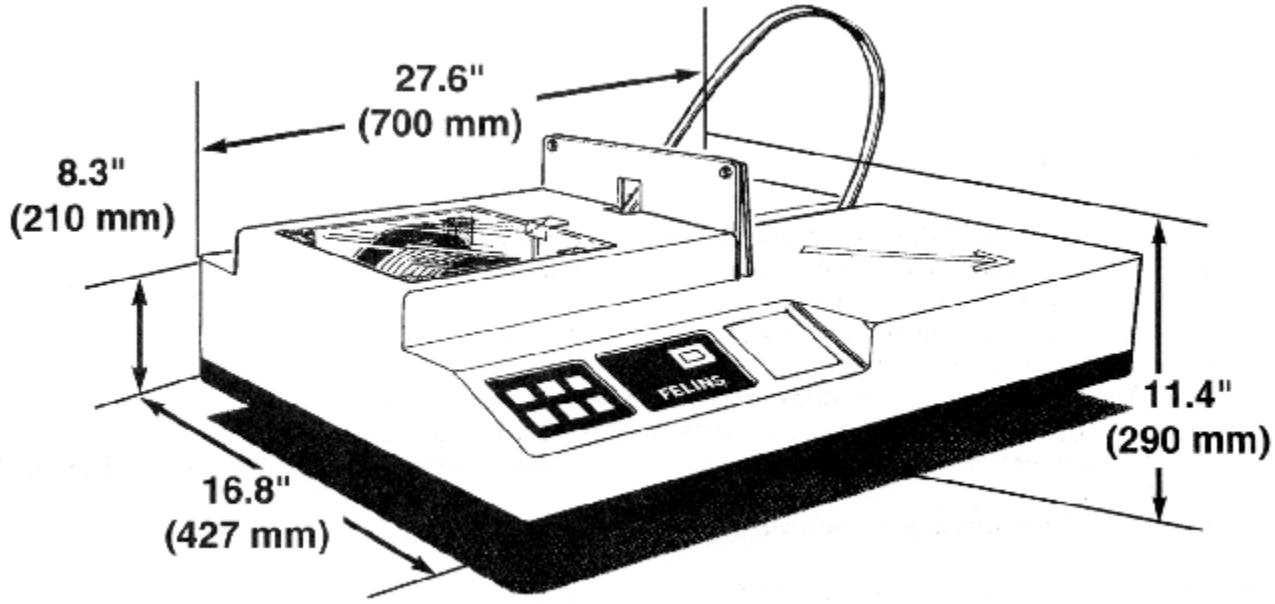


Figure 3 - Dimensions

INSTALLATION

Installation of the machine, requires the following steps be taken:

1. Remove the machine from the shipping carton.
2. Place the machine on a stable surface.
3. Install the loop support plate assembly with the two slot head screws provided.
4. Connect the power cord to the appropriate power source.
5. Load strap into the dispenser. See Operating Instructions Section.
6. Thread the strap into the machine. See Operating Instructions Section.
7. Make necessary operating adjustments. See Operating Instructions Section.
8. Run a trial cycle.
9. Readjust operating parameters, if needed.

! WARNING

The machine must be connected to a grounded outlet only. This will provide continued protection against the risk of electrical shock.

OPERATING INSTRUCTIONS

GENERAL

Operation of the Loop Plus Strapping Machines requires that the operator become familiar with the controls. Once the unit has been set to achieve particular packaging needs, through actuation of the cycle start switch, repeatable strapping operation is simple, reasonably quiet and efficient.

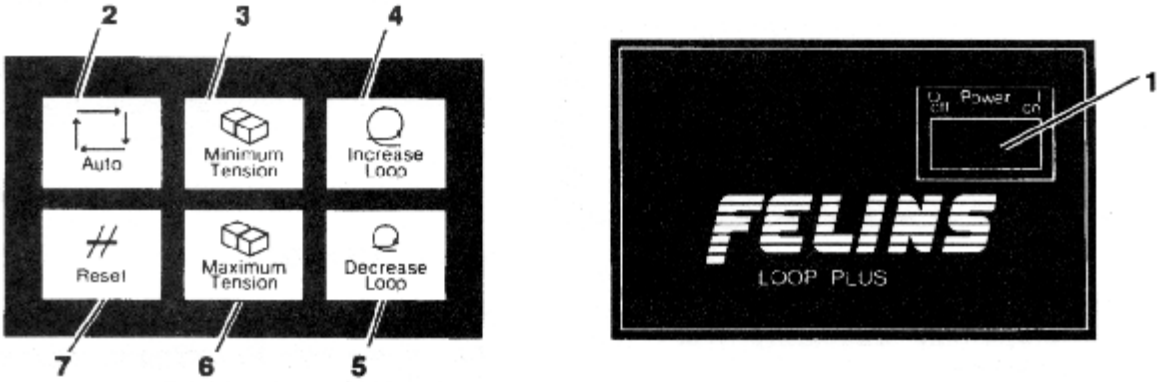


Figure 4 - Control Panel

OPERATOR'S CONTROL PANEL

Figure 4 shows the control switches. The right hand section contains the ON-OFF switch, the left hand section contains the function controls.

NOTE: Before the microprocessor will accept new operating conditions or adjustments, the machine must be stopped in a formed loop condition.

EXPLANATION OF CONTROLS

1. POWER ON-OFF: The rocker switch controls electrical power to the machine. When pushed to the right, power is on and a light, located within the switch, glows. When pushed left, power is off and the light goes out.
2. AUTO: This button, once pushed, will lock and hold all adjustments subsequently made through the following electronic controls until RESET # is pushed.

NOTE: After pushing AUTO T_J the machine will be automatically in minimum tension.

3. MINIMUM TENSION: When this button is pressed, each tie will be made at the lowest tension level available.
4. INCREASE LOOP: This button will increase the size of the loop, up to a set maximum, as long as the button is held. When the button is released, the final loop size will be repeated each time to this selected size.
5. DECREASE LOOP: This button will reduce the size of the loop. Reduction in size will continue as long as the button is held. When released, the final loop size will be repeated each time to this reduced size.
6. MAXIMUM TENSION: When this button is pressed, each tie will be made at the highest tension level available.
7. RESET: Actuating this button will partially erase memory, allowing a cycle to be run without the benefit of tension, but will retain the previously programmed loop size. This button should only be used during loop threading and minor maintenance procedures. Note, when forming a loop in RESET, provide slack strap in the dispensing area, otherwise loop will be poorly formed.

8. CYCLE START SWITCH. See Figure 1. The cycle start switch arm is located at the extreme left hand end of the strapping platform, beneath the loop support plate. When pressed, this switch arm initiates the tension, weld, and cut-off portion of the strapping cycle. When released, the loop generation portion of the cycle occurs.

STRAP LOADING

! WARNING

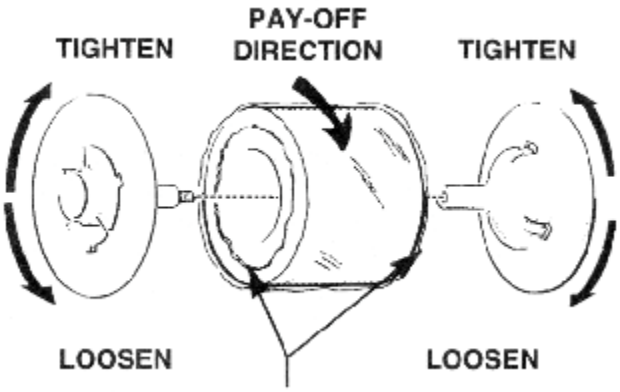
Turn off electrical power.

To load a coil of strap in the machine, remove the smoke colored plastic dispenser cover and lift the dispenser assembly from the dispensing section.

Rotate both end flanges, as shown in Figure 5, in directions indicated. Continue to loosen until the two halves separate. Discard paper core.

Carefully open shrink film from both ends of the fresh coil of strap. **Do not remove film from the face of the coil at this time to keep the coil wraps in place.** Insert left and right hand halves of the dispenser assembly and tighten until the flanges are secure. This will ensure a proper fit when placing the assembly into the dispenser area.

Remove the shrink film from the face of the coil. Note pay-off direction. As seen in Figure 5, the coil will turn in the clockwise direction, with strap paying-off from the top side of the coil. Place the assembly into the strapping unit in this way.



Carefully remove film from both ends but leave on face. Do not damage edges of strap.

Figure 5 - Dispenser Assembly

STRAP THREADING

NOTE: Turn ON electrical power. If strap is loaded and only threading is required, press RESET before proceeding.

To thread the strap in the machine, follow the steps below:

1. Squarely and cleanly cut the lead-end of the strap. Reverse the natural downward curl of the strap by drawing several inches of the lead end through your fingers, inducing an upward curl, sufficient to cause the lead end to rise about 1/16" (1.6mm) from a level surface. Insert the lead end into the rectangular hole. Push it forward about 2" (51mm) until it stops.

Figure 6 - Lead End Bend

NOTE: Size enlarged to show detail.

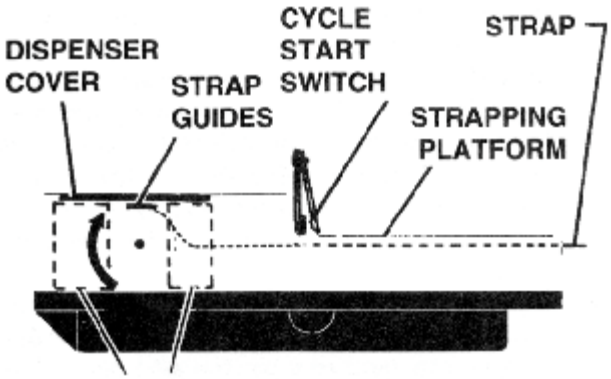


Figure 7 - Threading Diagram

Do not remove foam rubber strap containers!

2. Press INCREASE LOOP Q . This causes the lead end to feed through the welding section and out beyond the strap slot on the strapping platform. Hold INCREASE LOOP Q until approximately 1-1/2 feet (457mm) of strap has been fed out. If the strap doesn't feed, withdraw the strap, press increase loop and reinsert the lead end.

3. Make sure there is slack strap in the dispensing area, approximately 6-12 inches (152-305mm). See Figure 8. Replace the plastic cover over the strap dispensing section, making sure the strap guides on the cover are seated between the dispenser flanges. Hold the end of the strap that has been fed out through the machine and activate the cycle switch arm by pressing on the loop support plate. This will cause the machine to cycle. The strap will be cut, at which time it should be removed. When the loop support plate is released, a new loop will be generated.

4. Press AUTO switch once and make required adjustments as outlined under Explanation of Controls for size of loop and tension.

The Loop Plus Strapping Machine is ready for Operation.

! CAUTION

Pull loose strap release.

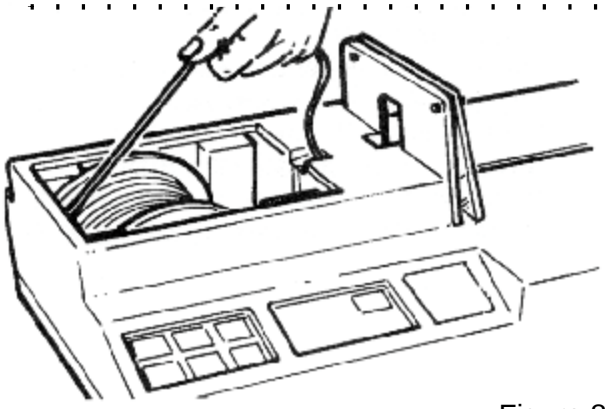


Figure 8
Generating loose Strap in the Dispenser Area

OPERATING

Before operating the Loop Plus Strapping Machine make sure there is an adequate supply of strap in the dispenser and that the power is ON. There should be a light glowing at the Power ON-OFF switch. Program machine by pressing AUTO, then the appropriate switches to achieve size of loop and level of tension required.

Place package to be strapped within the loop and press the loop support plate to the left with the package. The loop will be drawn around the package, welded, and cut free of the strap supply. Remove the strapped package by sliding it towards the right hand end and towards the front of the machine at about a 30 degree angle, as shown in Figure 9. When the strapped package is removed, the machine will automatically generate a new loop for the next strapping cycle, as seen in Figure 3.

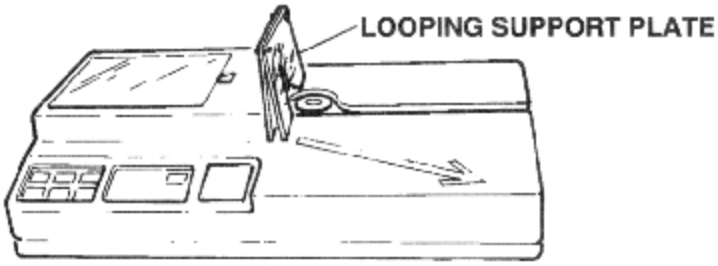


Figure 9 - Package removal Direction

PRINCIPLES OF OPERATION

MECHANICAL AND ELECTRICAL
SEQUENCE OF A STRAPPING CYCLE

The following sequence of operation will describe one complete strapping cycle. Description will begin with a loop that has been preformed and the machine, in an idle condition, is awaiting the placement of a package to be tied. The loop size and tension conditions have already been set.

1. Place the package within the loop and push it against the loop support plate to activate cycle switch (1LS).
2. With (1LS) closed, drive motor (2MTR) rotates in the tension direction, causing the strap to tension around the package until the drive motor (2MTR) stalls.
3. After 2MTR is mechanically stalled, the control cam motor (1MTR) starts to rotate.
4. Rotation of the 1MTR causes the weld pad to rise against the lower strap. The left hand end of the weld pad is sharp and the rising action severs the strap from the supply. Note that the weld pad squeezes both the upper and lower straps against the anvil. As both straps are gripped, 2MTR is turned off.
5. After the weld pad reaches its uppermost position, a lobe on the 1MTR driven switch cam closes weld switch (4LS). This starts the weld motor (3MTR) rapidly oscillating the anvil. The resultant friction between both layers of strap generates sufficient heat to create a weld between the two straps.
6. The welding operation will continue until weld switch (4LS) is opened and 3MTR is turned off by continued rotation of 1 MTR.
7. Once 3MTR is OFF, 1MTR is turned OFF. At this point, the strapping cycle is half complete. The package is removed. In doing so, the cycle start switch (1LS) is opened and the machine is ready to enter the pre-feed portion of its cycle.
8. After a short delay, the control cam motor (1MTR) begins to rotate. Strap pre-feed begins to take place. This pre-feed is a very small but important function of loop formation and occurs just before the loop is preformed. This is caused by the pre-feed microswitch which rotates the drive wheel a fraction of a revolution. This motion pushes approximately 7/8 of an inch (22mm) of strap into the strap welding area.
9. When the pre-feed operation is complete, another lobe on the control cam assembly causes the feed pad to rise and clamp the strap end beneath the anvil.
10. Then the first of two protrusions on the face of the control cam assembly contacts and releases the pawl from the bottom rocker guide in the welding head. The second protrusion contacts the top rocker guide and turns the anvil approximately 20 degrees, preforming the loop.
11. As 1MTR continues to turn, the switch cam closes 4LS to again turn on weld motor (3MTR), then closes 3LS to turn on drive motor (2MTR). At this time, the back-up wheel bracket disengages from the drive wheel, releasing the strap. (Note: 2MTR is actuated by 3LS but cannot feed strap). The input rotation of 3MTR turns the anvil 360 degrees, carrying the lead end of the strap around the anvil cover to form the initial stage of the loop. This is accomplished because 5LS is being held in the closed position. This 360 degree rotation is caused by the pawl recatching and stopping the anvil in the home position. Straps have now been positioned over one another between the anvil and the weld and feed pads. 5LS now opens to stop 3MTR, indicating a loop has been completely formed and 2LS, 3LS, and 4L5 are opened by the completion of the rotation of 1MTR.
12. The back-up wheel bracket assembly then engages the drive wheel allowing 2MTR to feed strap until the proper loop size is formed. Feed length is controlled by a timer on the P.C. board. The machine stands ready for the next strapping cycle.

PARTS REMOVAL AND REPLACEMENT

REPLACEMENT OF COMPONENTS

NOTE: This section relates to the Corrective Action column of the Troubleshooting Section, whenever replacements are required to correct a problem.

REMOVAL OF CAM MOTOR (1MTR)

(Figures 10,11,12 and 18)

Remove the strap from the welding mechanism by pressing and holding the cycle start switch (81) while pressing on the loop support plate. When the weld portion of the cycle stops, continue to hold the loop support plate and withdraw the strap from the welding head, pulling it out from the dispenser end of the machine. Release the loop support plate.

1. Before attempting to remove the cam motor, make sure that the machine is not in the home position by turning the power ON-OFF while holding the 1LS activated until the control cam (91) has advanced 15 degrees, thus causing the feed pad lever (71) to disengage. This will reduce the spring (143) pressure on the feed pad assembly and permit easier withdrawal of the motor assembly.
2. Disconnect the input power plug from the power source.
3. Remove the housing cover.

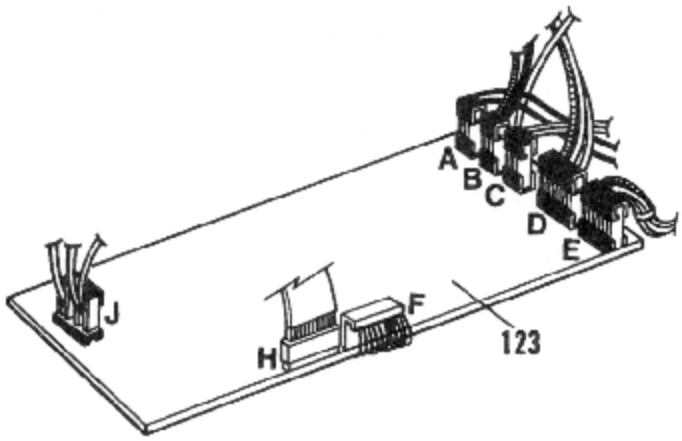


Figure 10 - Printed Circuit Board

4. Disconnect the harnesses at connectors A, B, C, D, E, and F from the printed circuit board assembly. Disconnect the ground wires from the mounting screw of the cam motor.
5. Remove the three screws (6) and the flat washers (18) used to secure the frame housing (86) to the housing base.
6. Lift the frame housing, with attached motors, from the housing base. When raising the assembly, do not lift at the motors; support and lift at the frame housing.
7. Remove the two screws (13) and nuts (4) that secure the cam housing (75) to the frame housing (86).
8. Pull back on the cam motor assembly to separate the cam motor and control and switch cams from the frame housing.
9. Tap out the roll pin (41) that secures the switch cam (80) to the control cam (91).
10. Remove the set screws (124 and 125) from the control cam (91) shaft.
11. Remove the three remaining screws and washers that secure the cam motor to the cam housing.
12. Carefully withdraw the cam motor assembly from the housing (75) and switch cam (91).

REPLACEMENT OF THE CAM MOTOR

1. Apply a coat of general purpose grease to the 2 bores of the cam housing (75), taking care not to allow grease on the cams or limit switch rollers.
2. Insert the shaft of the cam motor assembly through the first bore of the cam housing, through the switch cam and rear housing bore and into the bore of the control cam shaft.

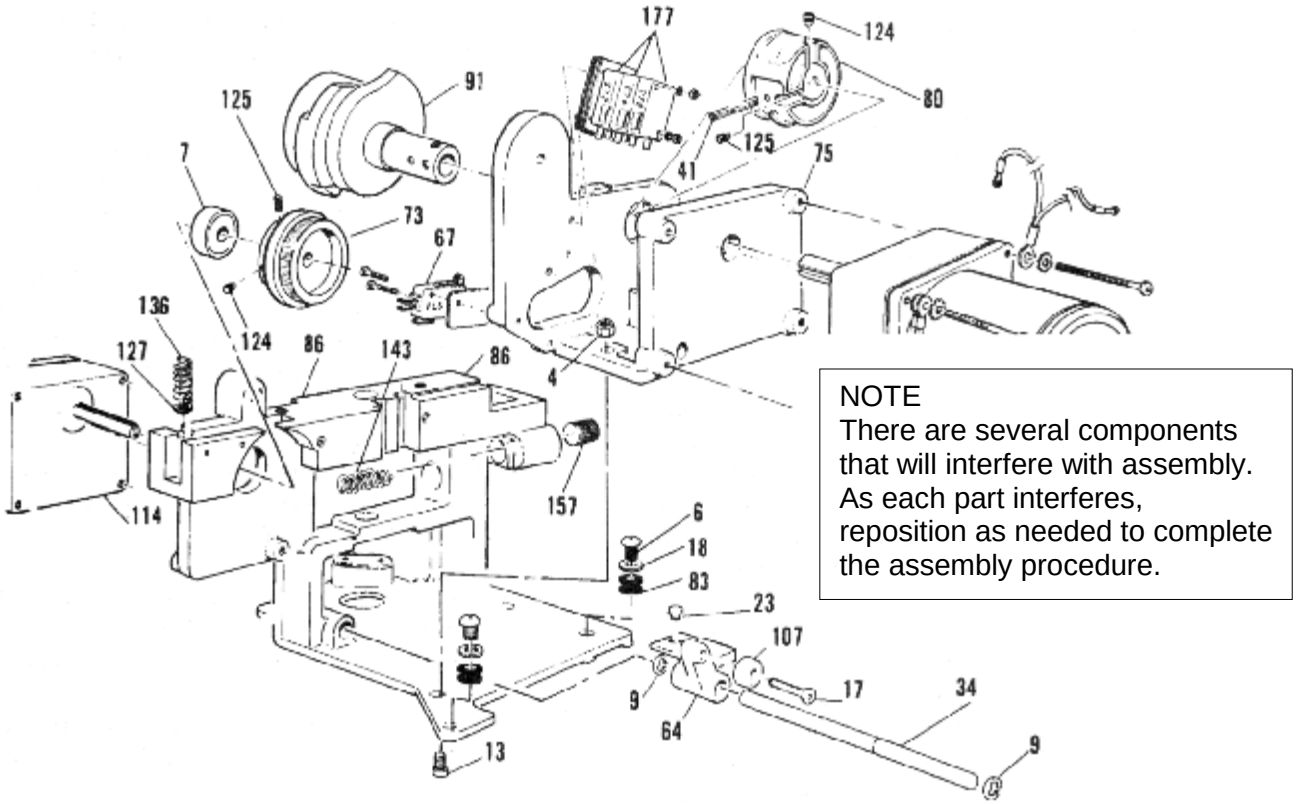


Figure 11 - Feed and Control Components

3. Insert the three screws and washers to secure the motor assembly to the cam housing.
4. Note that the hole for the dog point set screw (125) is in the same plane as the hole for the roll pin (41).
5. Align the keyway of the cam motor shaft with the hole for the dog point set screw (125) and insert the dog point screw.
6. Insert the cone point set screw (124) in the hole at right angles to the hole for item (125). Note: Apply 242 Loctite to each of the set screws and torque to 65 inch Ibs.
7. Tap in the roll pin (41).
8. Insert the cam housing into the frame. Make sure the anvil lift arm (64) is in the proper position. See note above in Figure 11.
9. Secure the cam housing to the frame housing with two screws (13) and nuts (4).
10. Lifting the assembly at the frame housing, place it over the housing base mounting holes and secure tightly with the three screws (6), and washers (18).
11. Refer to Figure 10. Reconnect the harnesses to the connectors A, B, C, D, E, and F on the micro-board assembly.
12. Connect the final screw and ground wires to the cam motor case.
13. Replace the housing cover.
14. Reconnect the electrical power.
15. Thread the strap into the machine.

REMOVAL OF FEED / TENSION MOTOR

(2MTR) (Figure 11)

To initiate removal of the feed/tension motor (114), perform steps 1 through 7 under Removal of Cam Motor (1MTR). This will provide clearance to remove the feed/tension motor.

1. Rotate the drive wheel (73), to expose the set screws (124 and 125). Loosen the set screws and remove the drive wheel.
2. Remove the four screws and washers that secure the feed/tension motor (114) to the housing frame.
3. Tap the shaft of the feed/tension motor to remove the motor from the bore of the drive wheel and housing.

REPLACEMENT OF FEED/TENSION MOTOR

1. Insert the feed/tension motor assembly and align the keyway of the motor shaft with a set screw hole on the drive wheel (73).
2. Insert the dog point set screw (125) in the hole aligned with the keyway and tighten. Apply 242 Loctite on set screw.
3. Rotate the drive wheel (73), 90 degrees. Insert the cone point set screw (124) and tighten. Apply 242 Loctite on set screw.
4. Perform steps 8 through 15, Replacement of Cam Motor.

! WARNING

This procedure requires electrical power to be on. Use care to avoid electrical shock and keep away from moving parts.

REMOVAL AND REPLACEMENT OF WELD MOTOR

(3MTR) (Figure 18)

1. Disconnect the power plug from the power source and remove the cover and strap from the machine.
2. Loosen and remove the two mounting nuts (42) that secure the welding motor to the housing.
3. Disconnect connector A from the printed circuit board.
4. Reinstall the new motor by reversing this procedure.
5. The two mounting locknuts should be torqued equally and until they are flush with the end of the motor studs.

REMOVAL OF ANVIL SHAFT / WELDING COMPONENTS

(Figures 11 and 17)

1. Perform steps 1 through 8, under the Removal of Cam Motor Section.
2. Pull out the lift arm (64) from the frame housing bore.

NOTE: Since the loop cam (92) can be placed on the anvil shaft (33) in one of two positions, 180 degrees apart, carefully note the position of the flat part of the cam (92) before removal. It must be replaced in the same orientation with the step of the cam facing up and the slot fully seated against the anvil shaft flat.

3. Loosen and remove the locknut (4) at the end of the anvil shaft (33).
4. With the removal of the lock nut (4), the loop cam (92), spacer (29), spring (36), thrust washer (39), thrust bearing (40), and thrust washer (39) will slide off the shaft and be removed.
5. Drive the roll pin (126) out of the top rocker guide (30).
6. Drive the roll pin out of the bottom rocker guide (31).
7. Lift the anvil shaft (33) from the bore of the frame housing being careful that the welding components are not damaged.

REPLACEMENT OF ANVIL SHAFT/WELDING COMPONENTS

When replacing the welding components on the anvil shaft, note the orientation of the following components:

1. The top rocker guide is placed on the anvil shaft with the punched letter "T" facing up and the protruding portion of the top rocker guide facing the cam motor.
2. The rocker arm assembly (128) and the pawl (79) are mounted on the anvil shaft in such a manner that the projection on the pawl retains the spring (140) in the rocker arm assembly.
3. The bottom rocker guide is placed on the anvil shaft with the punched letter "B" facing down and the fall-off edge of the bottom rocker guide facing the cam motor as shown.
4. The loop cam (92) is mounted on the anvil shaft with the step on the cam facing up and oriented toward the cam motor as detailed in the first note under Removal of Anvil Shaft/Welding Components.

Proceed to replace the welding component as follows:

1. Before inserting the anvil shaft, apply two drops of oil to each bore of the frame housing.
2. Install the welding components in the reverse order of removal.
3. Pack the thrust bearing (40) with grease before installing.
4. Perform steps 8 through 15, under the Replacement of Cam Motor Section.

REMOVAL OF FEED PAD LEVER SPRING

(Figure 18)

A broken feed pad lever spring (143) may cause the machine to form incomplete loops. To replace the feed pad lever spring, proceed as follows:

1. Remove the two nuts (42) used to secure the 3MTR motor (112) to the housing.
2. Withdraw the motor (112).
3. Loosen the set screw (157).
4. Remove the spring (143).

REPLACEMENT OF FEED PAD LEVER SPRING

1. Before inserting the new spring (143), apply a coating of general purpose grease on the end of the spring that contacts the feed pad lever (71).
2. Insert the spring.
3. Apply 242 Loctite to the set screw (157) and tighten until it is flush with the frame and then give it 1 1/4 more turns.
4. Reinstall the weld motor (112) following the reverse procedure of removal.

REMOVAL OF BACK-UP WHEEL BRACKET AND PIN

(Figure 13)

A chattering back-up wheel during the feed and tension cycle indicates a broken back-up wheel bracket pin. To remove the back-up wheel bracket, proceed as follows:

1. Turn OFF power, then remove the cover and strap from the machine.
2. Remove the cam bracket (131) by removing the shoulder bolt (102).
3. Detach the E-ring (11) and remove the stop roller (28) from the back-up bracket.
4. Remove the strap feed insert (65) by removing the mounting hardware.
5. Rotate the back-up bracket assembly (104) 90 degrees and remove from the housing.

REPLACEMENT OF BACK-UP WHEEL BRACKET

1. The steps to replace the back-up bracket are the reverse of the removal steps.
2. Pack bearings (119) with grease before putting the back-up bracket assembly (104) back into the frame through the bearings.
3. When assembling, add a thin film of general purpose grease between the frame housing and the back-up wheel bracket.
4. If the spring (136) was removed, add grease where it seats in the frame housing pocket and replace any shims (127) removed from under spring.
5. Rotate the back-up bracket assembly (104) 90 degrees and reinstall the top roller, E-ring and strap feed insert.
6. Replace the cam bracket assembly.
7. Replace the cover and reconnect the electrical power.

ADJUSTMENTS AND CLEARANCES

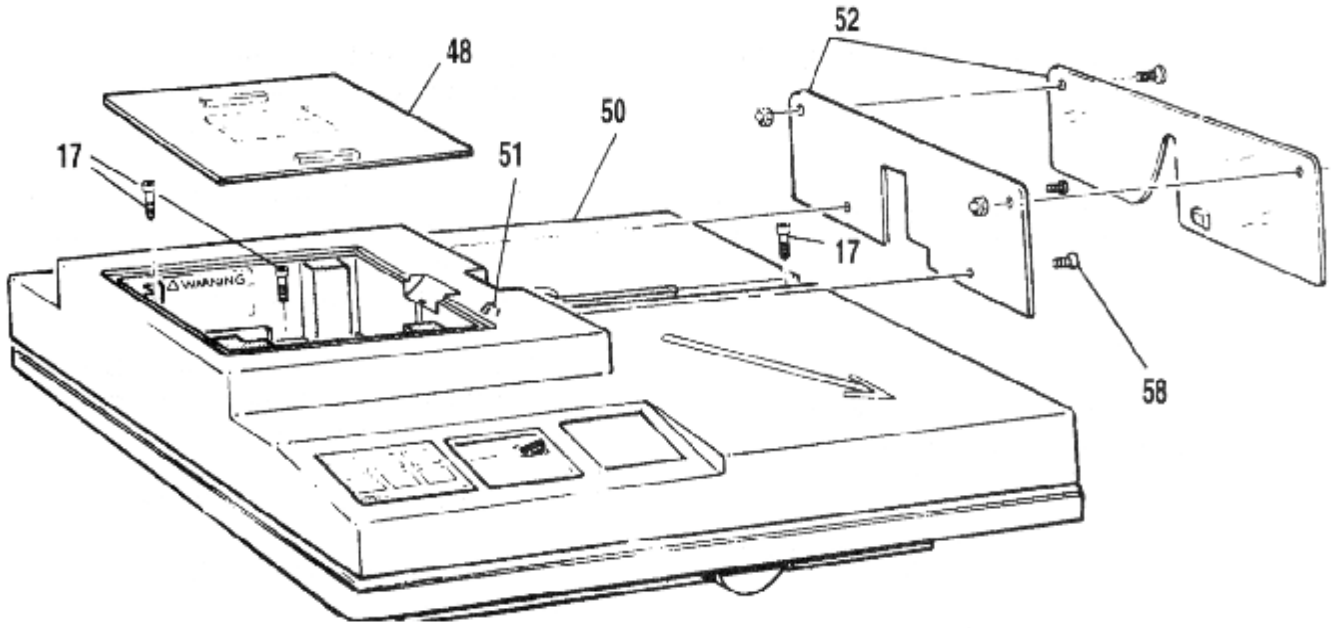


Figure 12 - External Components

! WARNING

A portion of this procedure requires electrical power to be connected and machine turned ON. Take care to avoid electrical shock and moving parts.
Keep hands and loose articles away from moving machinery when making this adjustment.

ADJUSTMENTS FOR INVERTED LOOP MECHANISM

(Figures 11,12, and 13)

Since all components are factory adjusted, readjustment should only be necessary if the loop should fold repeatedly and completely beneath the anvil. If this condition occurs, the following inspection and adjustment is indicated:

1. Remove dispenser cover (48).
2. Turn power ON by pushing the power ON-OFF rocker switch to the right.
3. Loosen and remove the housing cover mounting screws (17) and lift the cover (50) from the machine.
4. With the right hand, press and hold the cycle start switch (81) until the weld portion of the cycle is complete. Place left hand on rocker switch, ready to turn power OFF. Release the cycle start switch and closely watch the control cam (91, see Figure 11). When the high point of the front lobe of the control cam makes contact with the cam bracket roller bearing (107), turn power OFF.

5. At this point, the end of the back-up wheel bracket should be pushed low enough to raise the front end of the bracket (104) to allow the strap to freely pass through the welding head without causing the back-up wheel roller bearing (107) to rotate. Press down on the back- up wheel bracket (104). There should be some over travel left in the bracket. If an adjustment is indicated, follow the steps below:

   A. Loosen the M8 x 32 socket head cap screw (141) that retains the eccentric pin (151) to the cam bracket (131).

   B. With a 13mm open end wrench, turn the eccentric pin so that the eccentric is advanced downward to increase the gap, or upward to decrease the gap.

   C. Securely tighten the M8 x 32 socket head cap screw.

6. Turn the power ON.

7. Because the weld motor will turn on when power is connected, immediately press and release the cycle start switch. This will bring the welding head into home position.

8. Run one cycle in AUTO to observe loop formation.

9. Press RESET button. Press and hold cycle start switch. When weld portion of cycle is complete, pull strap from welding head at the dispenser end of the machine. Release the cycle start switch and allow the welding head to return to home position.

10. Replace and secure housing cover.

11. Re-load strap into the welding head and replace the dispenser cover.

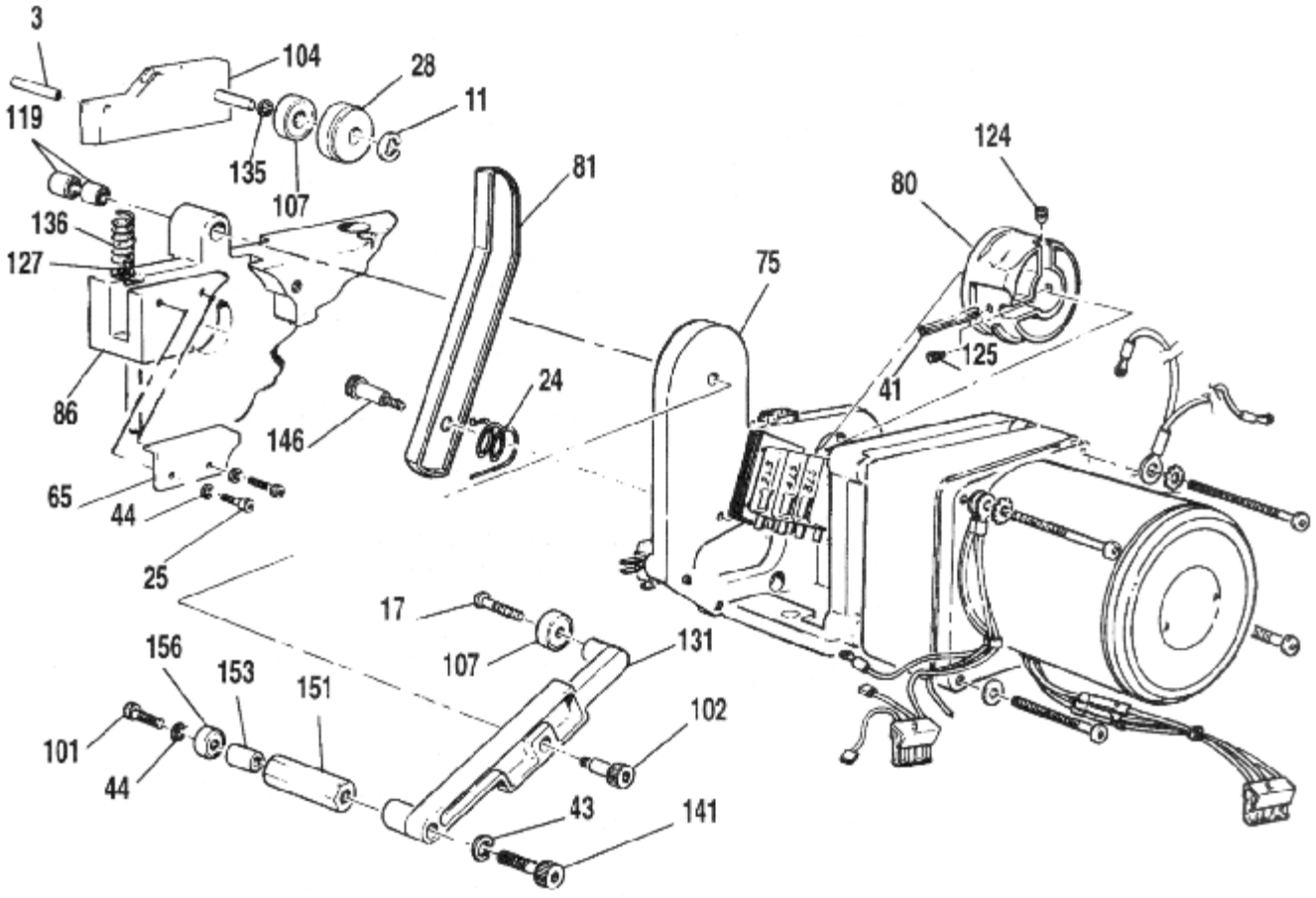


Figure 13 - Feed and Control Components

RETURNING MACHINE TO HOME POSITION

(Figure 14)

! CAUTION

Disconnect power to machine when machine is in home position ONLY. Failure to do this may result in machine continually cycling when power is restored.

The home position can be determined by observing that the set screw hole in the switch cam, viewed with the cover off, is facing straight up and all three limit switches are free of the lobes on this cam. If this is not the case, turn power ON and press and release the cycle start switch. In most instances, the machine will then return and rest in the proper position. On occasion, the cycle start switch must be held in the closed position while the power switch is turned OFF then ON. When the cycle start switch is released, the machine will home.

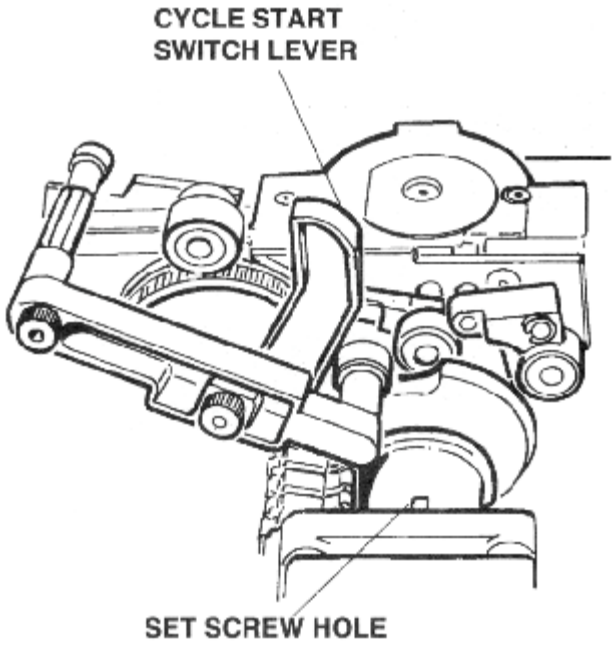


Figure 14 - Home Position

REMOVING JAMMED STRAP FROM HEAD

If for some reason strap jams in the feeding mechanism, it can usually be removed by:

1. Turning power OFF.
2. Removing dispenser cover.
3. Pulling back on strap.
4. Cutting off damaged end and rethreading.

If the jam is severe, then the following steps must be taken:

1. Turn power OFF.
2. Remove dispenser cover.
3. Cut strap from coil, leaving a tail of about 12 inches (300mm) in the machine.
4. Remove the top cover of machine.
5. Press down on the back-up wheel bracket (104) while pulling the jammed strap back through the machine. If these steps fail, then proceed further.
6. Remove anvil from welding head.
7. Remove anvil cover.
8. Press down on back-up wheel while pulling jammed strap from machine.
9. Reassemble machine, following Anvil Cover adjustment details provided in the Maintenance Section, and rethread.

NOTE: At times it may also be required to remove the strap feed insert (65) as seen in Figure 13.

BACK-UP WHEEL BRACKET

(Figure 15)

Tension on the back-up wheel bracket (104) should be adjusted to the following value:

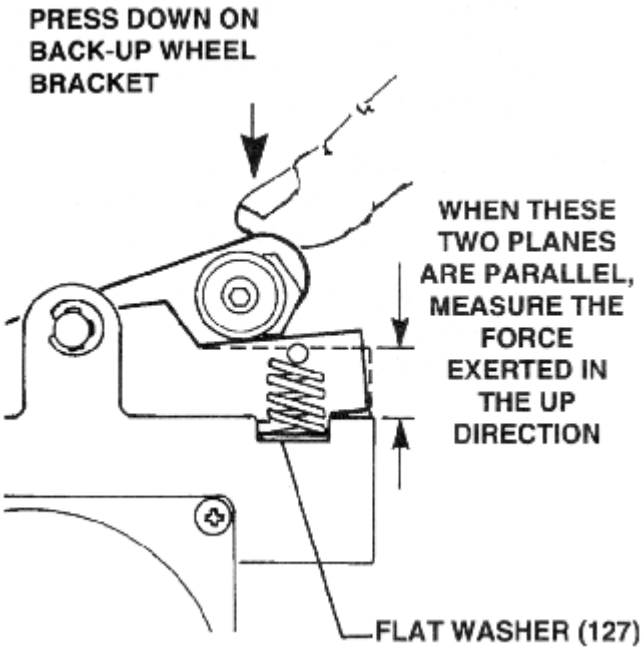


Figure 15 - BACK-UP Wheel Bracket Pressure Adjustment Detail

When the two planes indicated in Figure 15 are parallel, the force exerted in the up direction by the spring (136) should measure 10 - 11 lbs. (45 - 49.5N). Adjust the force as needed by adding or removing flat washers (127) beneath the spring.

ANVIL / ANVIL COVER

(Figure 16)

There must be a specified clearance between the anvil teeth and the top of the anvil cover. If for some reason the clearance between these two parts does not fall within the specified range, contact your Sales Representative.

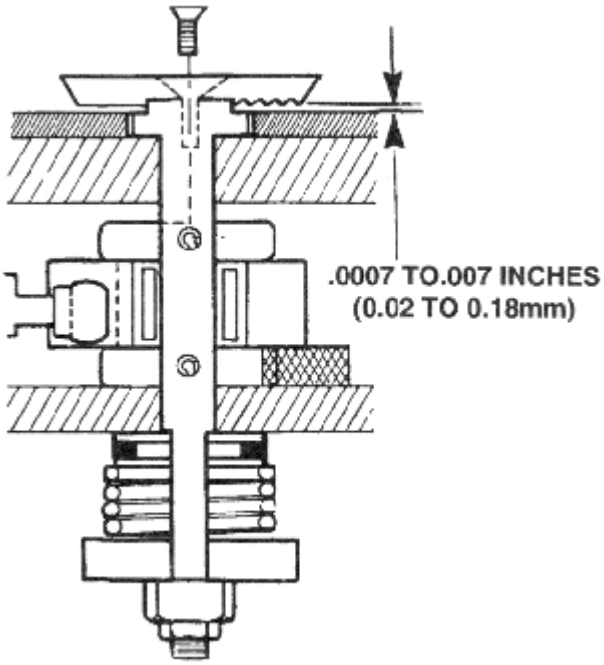


Figure 16 - Anvil / Anvil Cover Clearance Details

MAINTENANCE

CLEANING AND LUBRICATION

Lubricate the machine in the areas noted in the figure below and at the stated intervals:
ANVIL SHAFT (Figure 17)

Lubricate every 15,000 cycles. Proceed as follows:

1. Detach the anvil (116) by removing the mounting screw (19).
2. Before adding oil, make sure the oil ports are clean. Remove debris accumulation with a thin wire from hole in anvil shaft slot.
3. Using only SAE 5 or 10 weight oil #262742, apply 3-4 drops to the center threaded hole and one drop to the offset hole; both holes are on top of the anvil shaft.
4. Before reinstalling the anvil, clean any oil from the mounting screw (19) and the threads in the mounting hole of the anvil.
5. Replace the anvil and secure with the mounting screw torqued to a value of 125 in. lbs. (14NM) minimum.

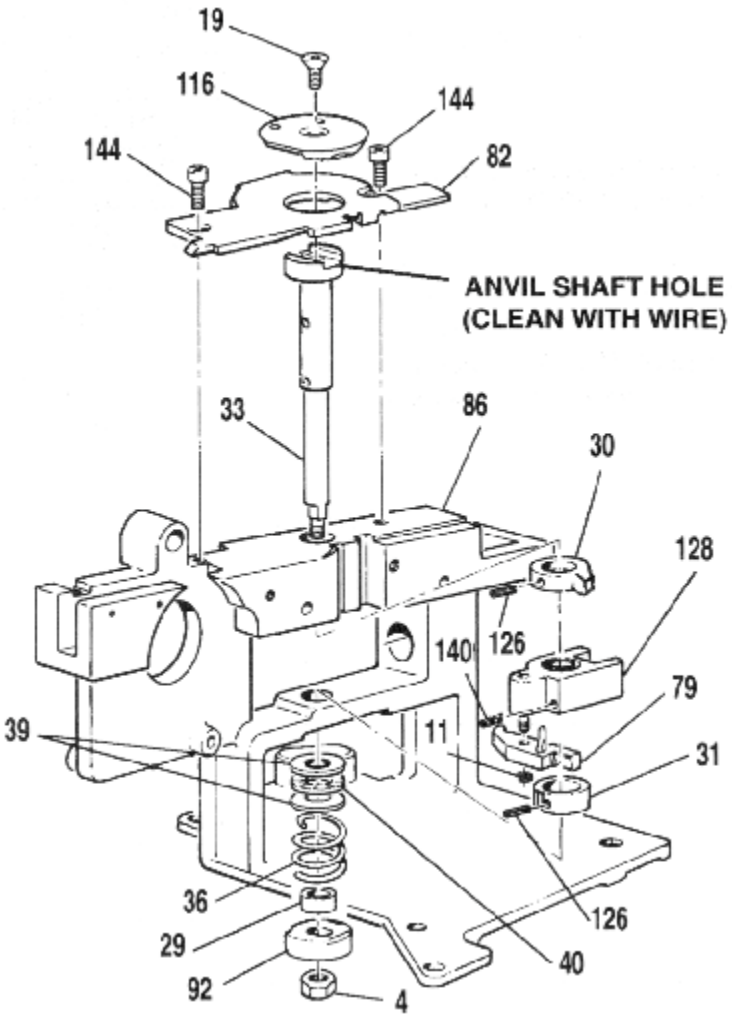


Figure 17 - Welding Components

WELDING COMPONENTS

(Figures 17 and 18)

General purpose grease is to be applied to the following components every 45,000 cycles:

Roller sleeve (118)
Two needle bearings (84)
Eccentric shaft (117)
Weld pad lever pivot shaft (35)
Feed pad lever pivot shaft (35)

To gain access to these components, proceed as follows:

1. Remove the two nuts (42) securing the motor (112) to the housing.
2. Withdraw the motor (112).
3. Remove the two mounting screws (106) that secure the thrust bearing (78) to the casting.
4. Remove the thrust bearing (78) and the eccentric shaft (117).
5. Manually rotate the rocker (128) clockwise and remove the roller sleeve (118).
6. Remove the set screw (157) to relieve spring pressure on the feed pad lever (71).
7. Remove the E-ring (45) that retains the feed pad lever on the pivot shaft (35).
8. Remove the feed pad lever.
9. Remove the E-ring that retains the weld pad lever (70) to the pivot shaft (35).
10. Remove the weld pad lever from the housing by pushing the pivot shaft back through the housing.

NOTE: If strap debris has impeded the movement of the feed and weld pads, remove the two side plate retaining screws (10 and 144), spring (69), and torsion spring mandrel (68). Detach the side plate (74) from the housing then thoroughly clean the pads, the spacer, the shims in between the pads, and the slots in the frame in which they fit.

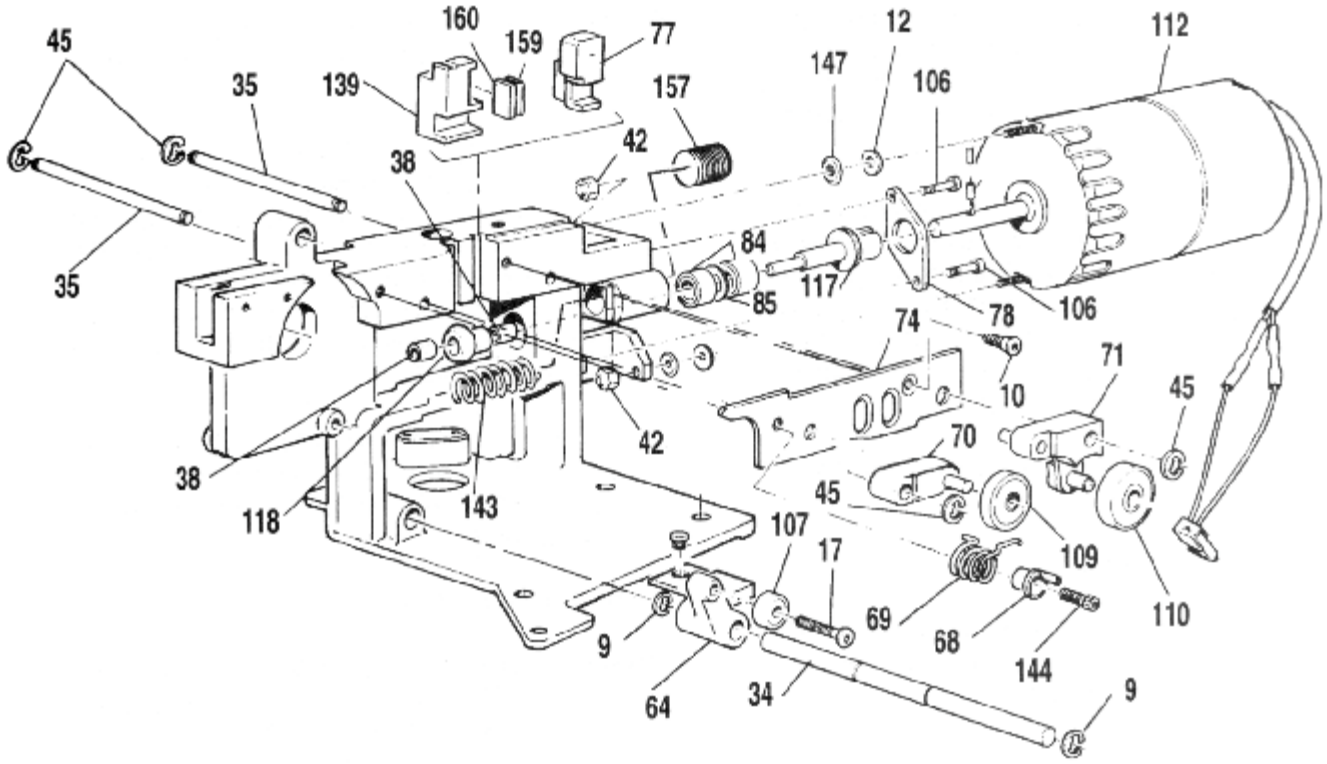


Figure 18 - Welding Components

WELD AND FEED PAD REPLACEMENT

Closely inspect the weld pad (139) and the feed pad (77) for wear or damage. If necessary, remove and replace parts. Refer to NOTE #2 for shimming specifications before reassembling. Apply a film of grease to the slots in the frame housing, and reinstall the weld pad, shims, and the feed pad.

REASSEMBLY

Reassembly procedure is the reverse of the disassembly sequence. A light weight grease should be applied to the components during the reassembly.

1. Apply a thin film of grease to the pivot shaft (35) of the feed pad lever (71) and weld pad lever (70) assemblies.
2. Apply grease to the face of the feed pad lever spring (143) where it touches the feed pad lever. Apply 242 Loctite to the set screw (157) then tighten it until it is flush with the frame then give it 1 1/2 to 2 more turns.

NOTE #1: When installing the weld motor the nuts (42) should be tightened simultaneously and torqued equally, flush to the nuts so that the motor shaft does not touch the eccentric shaft (117).

NOTE #2: Be sure that the spacer and all the shims have been included and reinstalled in their proper position to insure the proper clearance between weld pad and feed pad; .0007 to .002" (0.015 to 0.05mm) before adding grease. Be sure no grease is present on the top of the pads. Clean thoroughly.

ROLLER SLEEVE AND BEARING

(Figures 17 and 18)

1. Pack the bearings (38) with grease.
2. After assembling roller sleeve into the rocker (128), pack grease between the roller sleeve and the rocker.

! CAUTION

Do not allow grease to be present on any part of the lock clutch (128).

BEARINGS AND ECCENTRIC SHAFT

(Figure 18)

1. Repack bearings (84) with grease.
2. Apply grease to the eccentric shaft (117).

PERIODIC CLEANING

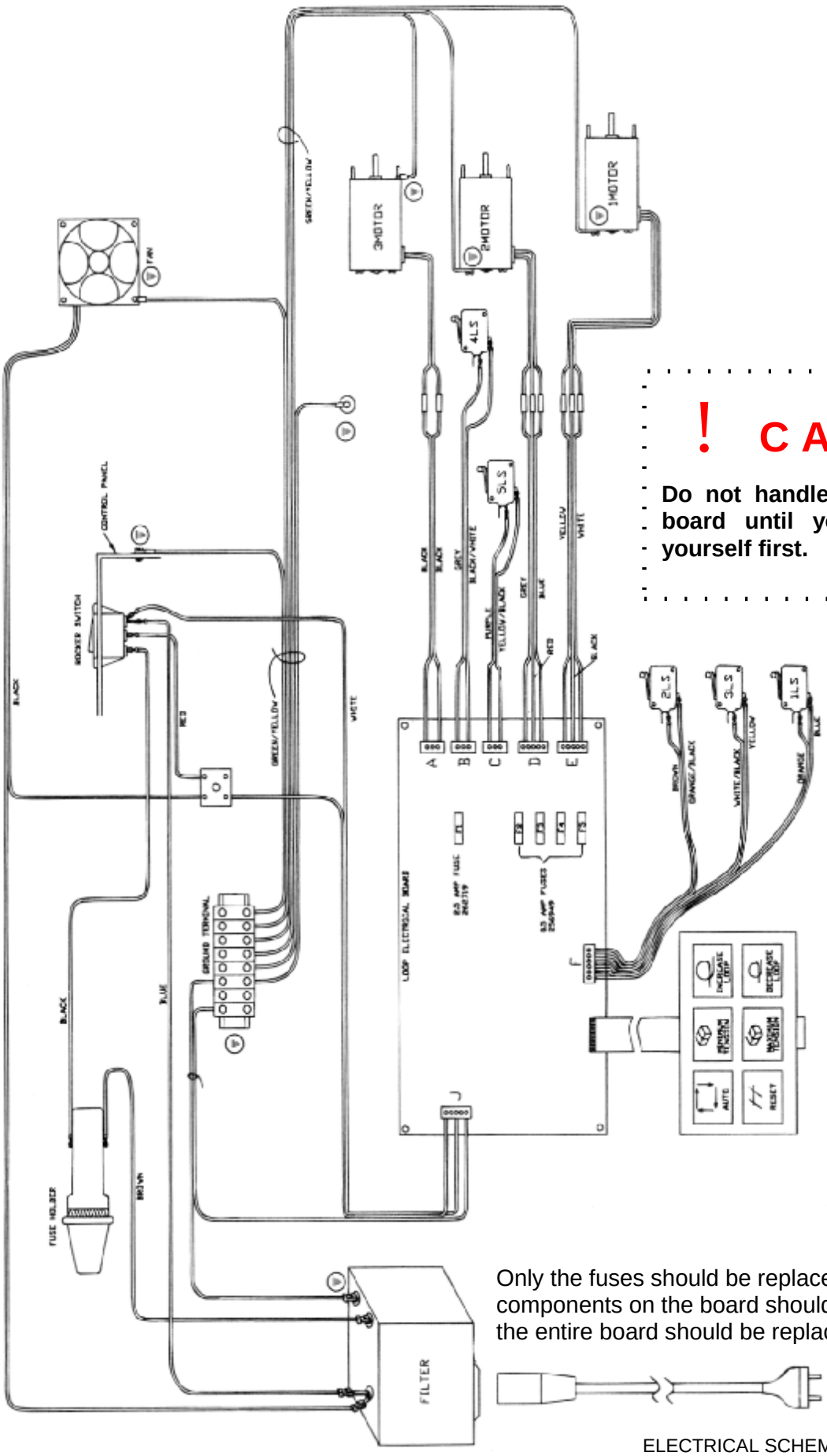
WELDING HEAD (Figures 17 and 18)

Periodically remove strap debris from welding head. Remove strap, unplug machine and remove cover. Proceed as follows:

1. Remove the screw (19) and lift off anvil (116).
2. Loosen and remove the two mounting screw (144) from the anvil cover.
3. Lift off the anvil cover (82).
4. Clean out all the debris, being careful to keep the oil holes of the anvil shaft clear of dirt.
5. Reinstall the anvil cover by pulling it forward until it contacts the side plate (74). Make sure that the front edge of the anvil cover is precisely parallel with the side plate and while pushing the anvil cover to the left, secure the mounting screw, tightening them to 50 in. lbs. (5.7NM) torque, minimum.
6. Install the anvil and torque the mounting screw to 125 in. lbs. (14 NM) minimum. Reinstall cover and strap per previous procedures.

HOUSING BASE (Figure 11)

Remove strap, unplug power and remove the top cover. Periodically vacuum strap dust from base to prevent contamination of microswitches (57 and 67).

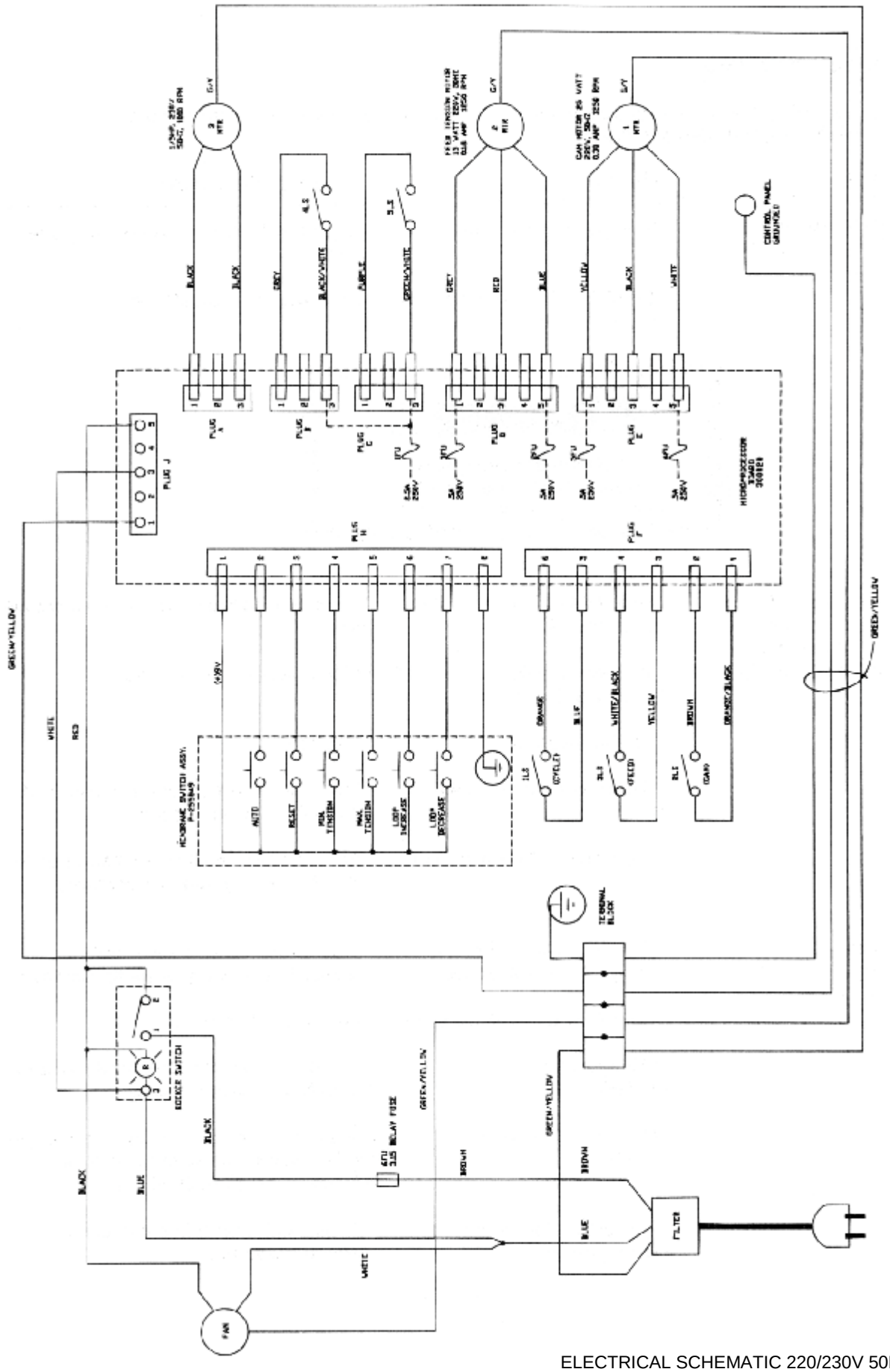


! CAUTION

Do not handle the printed circuit board until you have grounded yourself first.

Only the fuses should be replaced. If components on the board should fail, then the entire board should be replaced.

ELECTRICAL SCHEMATIC 220/230V 50Hz 261215



ELECTRICAL SCHEMATIC 220/230V 50Hz 150981

TROUBLESHOOTING

If component replacement is indicated in the corrective action column, make reference to Parts Removal and Replacement Section.

Symptom	Cause	Corrective Action
1. Rocker switch will not turn ON when actuated.	Main power fuse is blown.	Replace with fuse of same rating and size.
	Improper pin connections on rocker switch.	Make proper connections.
	! DANGER , **If machine is plugged in, power is at rocker switch even though switch is not ON.**	
2. Machine will not cycle when switch arm is actuated. (Figures 19 and 26)	A blown fuse(s) at 1MTR on circuit board.	Replace with fuse(s) of same rating and size.
	Improper connections of 1LS, 2LS, or 3LS or F.	Make proper connections.
	1LS inoperative.	Replace 1 LS.
	Microprocessor in endless loop.	Turn rocker switch OFF for 3 seconds, then ON to reset program.
	Tactile switch malfunctioning.	Replace if any switch is closed due to "bubble" being in down position.
3. Machine will continuously cycle. (Figure 26)	2LS or 3LS are not being energized by switch cam.	Adjust mounting of limit switches properly by moving closer to switch cam.
	Tactile switches inoperative.	Replace tactile switch.
	Microprocessor is in an endless loop.	Turn rocker switch OFF for 3 seconds, then ON to reset program.
	Machine not in HOME position.	Actuate cycle start switch by pressing on loop support plate and release. Machine should HOME itself.
	2LS or 3LS inoperative or wiring is loose.	Replace 2LS or 3LS and make sure wiring is secure.

Symptom	Cause	Corrective Action
4. Feed/tension motor 2MTR will not run. (Figures 10,19,20, and 25)	Blown fuse at 2MTR on circuit board.	Replace with fuse of same rating and size.
	Improper wire connections on 2MTR (letter "D") wire harness.	Repair or reconnect bad connections.
	Tactile switch malfunctioning.	Reconnect or replace tactile switch if required.
	Capacitor(s) on circuit board defective.	Replace circuit board.
	Thermal protector may be open.	Allow motor to cool for minimum of 1 hour.
	Feed/tension motor 2MTR is inoperative.	Replace feed/tension motor 2MTR.
	Strap is jammed.	Clear strap from machine.
5. Control cam motor 1MTR, will not run. (Figures 10, 19, 20 and 26)	Blown fuse(s) at 1MTR on circuit board.	Replace with fuse of same rating and size.
	Improper connections on 1MTR motor harness E, connection F, 2LS harness.	Reconnect or repair bad connections.
	Thermal protector may be open.	Allow machine to cool for minimum of 1 hour.
	Cam motor 1MTR inoperative.	Replace cam motor 1MTR.
6. Weld motor 3MTR will not run. (Figures 10,19,20, 23, 25 & 26)	Blown fuse at 3MTR on circuit board.	Replace with fuse of same rating and size.
	Improper wire connections on harness, connection A.	Reconnect, or repair connections on harness connection A.
	Inoperative microswitch or bad connections on 4LS or 5LS.	Replace microswitch or reconnect.
	Weld motor 3MTR inoperative.	Replace weld motor 3MTR.
7. Loud knocking noise when feed pad (77) rises against the anvil cover (82). (Figs. 23, 24 & 26)	Loose set screws (124 and 125) on control cam shaft (91).	Tighten set screws to 50 in. lbs. (5.7NM). Secure with 242 Loctite. NOTE: Be sure dog point set screw (125) is inside key way on 1MTR gear head shaft, making sure the control cam is seated in the furthest back position.

Symptom	Cause	Corrective Action
8. No strap cut-off (Figures 23 and 24)	Loose anvil cover (82).	Properly align anvil cover, tighten and torque properly.
	Dirt build-up around weld pad (139), and feed pad (77).	Remove anvil cover, side plate, weld pad lever, feed pad lever, 3MTR, weld pad and feed pad. Clean all dirt from parts. Add grease and reassemble. Watch for shims when assembling.
	Dull or chipped cutter on weld pad (139).	Replace weld pad.
	Excessive clearance between weld and feed pad.	Add shims (159) to weld pad to obtain clearance between feed/weld pad of .0007 to .002 inches (0.015 to 0.05mm).
	Weld pad not rising.	Check for proper assembly of weld pad lever and associated parts. Check for bearing (109) moving out. Replace weld pad lever assembly if necessary.
9. No loop forms or strap feeds straight through the machine. (Figures 23, 25 and 26)	Loose anvil cover (82).	Tighten anvil cover.
	Improper strap pre-feed.	See Symptom #16.
	Broken feed pad lever spring (143) or inadequate pressure on feed pad (77).	Replace spring. Set feed pad spring set screw (157) 1 1/4 turns in from flush.
	Loose anvil.	Tighten anvil.
	Sheared roll pins in 3MTR.	Replace roll pins.
	Weld motor will not run.	See Symptom #6.
	Dirt build-up around anvil shaft (33), anvil cover (82), anvil (116) feed and weld pads (77 and 139).	Clean dirt build-up from components.
	Top rocker guide (30) is improperly installed.	Follow instructions for replacing welding head anvil shaft assembly.
10. Machine forms incomplete loop. (Figures 23 & 24)	5LS (57) not being energized, or not closing.	Check connections on 5LS. Replace 5LS.
	Loose anvil or anvil cover (116 and 82).	Tighten as needed.
	Improper strap pre-feed.	See Symptom #16.
	Broken feed pad lever spring (143) or inadequate pressure on feed pad (77).	Replace spring. Set feed pad spring set screw (157) 1 1/4 turns in from flush.

Symptom	Cause	Corrective Action
11. Strap folds under anvil after loop is formed. (Figures 23 and 24)	Loose anvil shaft assembly.	Check and tighten locknut (4).
	Inverted loop mechanism mal-adjusted.	See inverted Loop Mechanism Adjustment.
	Dirt build-up in strap feed chamber.	Remove anvil (116), anvil cover (82), and strap feed insert (65). Clean all dirt from these parts and the frame housing (86). Reassemble.
	Weld pad not falling far or soon enough.	Clean and lubricate. Check spring (69) placement. Replace if broken.
	Machine is in reset. Not providing slack strap in dispenser area.	Put machine in auto.
12. Strap feeds around the drive wheel (73), when feeding strap into the machine. (Figures 24 and 25)	Obstruction in strap feed chamber between the anvil cover (82), and frame (86.).	Remove anvil and anvil cover and clean out obstruction. Replace anvil/anvil cover and torque screws.
	Strap curl down.	Induce slight upward curl to strap.
13. Machine will not feed strap. (Figure 25)	Obstruction in strap feed chamber.	See Symptom #12.
	No spring tension on back-up wheel bracket (104).	Check tension spring (136). Replace if necessary.
	Feed/tension motor 2MTR will not run.	See Symptom #4.
	Machine not in home position.	Re-home machine.
	Machine in reset mode and no slack strap in dispensing area.	Provide slack strap in dispensing area or run in auto mode.
	Strap caught around spool.	Look in strap dispenser area for strap caught around spool. Clean.
	Dispenser cover not properly seated or missing.	Properly seat or install dispenser cover.

Symptom	Cause	Corrective Action
14. Strap milling. (Figure 25)	Low tension on tension spring (136).	Replace tension spring or add washers (127). Do not exceed 3 washers.
	Worn drive wheel teeth (73).	Replace drive wheel.
15. Weld motor runs slowly. (Figure 25)	3MTR is incorrectly mounted.	Remount 3MTR so its shaft does not interfere with the eccentric shaft (117). Tighten locknuts (42) with equal torque only until locknuts are flush with the end of the motor studs. The eccentric shaft should be able to turn with your fingers. It will be slightly harder to turn when strap is under the anvil.
	Motor is worn.	Replace motor.
	Anvil shaft and/or eccentric shaft dirty or dry.	Clean and/or lubricate.
16. Poor strap pre-feed. (Figures 25 and 26)	Loose control cam on 1MTR gear head shaft.	See Symptom #7.
	Knurled portion of feed wheel is worn smooth.	Rough up knurled part of feed wheel with coarse emery cloth.
17. Strap jams. (Figure 25)	Excessive camber in strap.	Inspect and cut off cambered strap. Rethread.
	Spikes on edges of strap, see sides of coils.	Inspect and cut off damaged strap. Rethread.
	Loose drive wheel (73).	Tighten drive wheel set screws (124 and 125). Note: Dog point set screw (125) should be in keyway on 2MTR gear head shaft.
	Lead end of strap is caught in strap feed chamber.	See Removing Jammed Strap From Head.
18. Unusual sound when welding. (Figures 23 and 24)	Clutch slippage. Note: You can see this when welding and forming a loop because the anvil (116) will oscillate erratically. Also, 5LS arm may be bent.	Replace rocker clutch assembly (128) and/or 5LS (57).
	3MTR is incorrectly mounted.	See Symptom #15.

Symptom	Cause	Corrective Action
19. Non-weld or poor weld. (Figures 23 and 24)	Clearance between anvil and anvil cover exceeds limits (0.02 to 0.18mm) (0.0007 to 0.007 in.) due to debris between anvil and anvil shaft or the head of the anvil shaft and the frame housing.	Remove anvil and clean. Stop the machine at the point in the cycle where the anvil shaft is lifted and remove debris.
	Anvil or weld pad teeth worn.	Replace anvil or weld pad.
	Anvil shaft assembly loose or broken spring (36).	Tighten and/or replace loose, worn or broken parts.
	4LS limit switch set too far from cam or is inoperative.	Move 4LS closer to switch cam. Replace 4LS if inoperative.
20. Anvil not stopping in home position. (Figure 24)	Pawl (31) and/or spring (140) broken or weak.	Replace pawl and/or spring.
	Bottom rocker guide (31) installed improperly.	Follow instructions for replacement of rocker guide.
21. Bundle cannot be removed from machine. (Figure 25)	Anvil lift arm bearing (107) loose or has fallen off.	Tighten bearing using 242 Loctite on mounting screw (17).
	Stop pin (23) fell out during maintenance.	Reinstall stop pin.
	Anvil lift arm (64) is broken.	Replace anvil lift arm.
22. Weld motor runs continually upon completion of cycle.	Control cam has drifted slightly past home position due to incorrect setting of switches.	Move bank of switches slightly farther away from the control cam. NOTE: If the switches are moved too far away from the control cam the cam motor may run continually.
23. Pre-feed is too short or too long (Figure 25)	Set screw (125) is out of adjustment in relationship to pre-feed microswitch. (88) Refer to Addendum (A) in the back of the manual.	Adjust set screw on switch cam (80) for 7/8" pre-feed length. Tighten to shorten pre-feed; loosen to lengthen. A fraction of a turn is all that's necessary. If adjustment is not accomplished by this procedure, the bracket (189) holding the micros witch may be moved left or right .02" for more adjustment. Then repeat set screw adjustment as needed.

RECOMMENDED SPARE PARTS LIST

Kit 151136 LOOP PLUS

Key	Qty.	Part No.	Description
-	1	262719	Fuse 2.5A
-	1	256949	Fuse 0.5 A
-	1	262723	Allen Wrench
-	1	262742	Oil Bottle 1/2 Ounce
-	1	262714	Roll Pin 2 x 16 mm
-	1	262713	Roll Pin 3.5 x 16 mm
11	1	162396	E-Ring 6 mm
19	1	010036	Flat Socket Head Screw M6 x 16
69	1	262739	Torsion Spring
136	1	256955	Compression Spring
143	1	262782	Compression Spring
144	2	262722	Screw M5 x 16, low type

Exception CE Spare Parts List

158	1	300068	Fuse T 3.15A
177	1	300062	Limit Switch

Notes

SPARE PARTS LIST

Key	Qty.	Part No.	Description
003	1	005458	Roll Pin 5 x 22 mm
004	3	005467	Lock Nut
006	3	010034	Button Head Screw
007	1	262715	Bearing
009	2	162372	E-Ring 8 mm
010	1	162384	Screw M5 x 12
011	2	162396	E-Ring 6 mm
012	2	187667	Washer
013	2	162403	Screw M8 x 25
015	2	151101	Screw 6-32 x 1/2
016	2	164971	Screw
017	5	165366	Screw
018	3	006746	Washer
019	1	010036	Flat Socket Head Screw
020	5	174364	Nut
021	1	168607	Nameplate
022	1	269085	Instruction Label
023	1	008838	Stop Pin
024	1	262729	Torsion Spring
025	2	170325	Screw M4 x 10
028	1	188549	Stop Roller
029	1	262781	Spacer
030	1	188552	Top Rocker Guide
031	1	188553	Bottom Rocker Guide
033	1	188568	Anvil Shaft
034	1	188574	Anvil Lift Shaft
035	2	188575	Pivot Shaft
036	1	262783	Anvil Shaft Spring
038	2	250303	Needle Bearing
039	2	250307	Thrust Washer
040	1	250308	Thrust Bearing
041	1	250309	Roll Pin 5 x 40 mm
042	2	091363	Flexloc Nut
043	1	162381	Lock Washer 8 mm
044	6	162382	Split Lock Washer 4 mm
045	4	250321	E-Ring 7 mm
046	11	162383	Screw M4 x 8
048	1	251590	Housing Lid
049	1	255587	Housing and Base assembly
050	1	151113	Housing Cover assembly
052	1	262785	Support Plate assembly
054	1	251596	Spool Shaft
055	1	251597	Spool Cover
056	2	253250	Screw M3 x 8
064	1	256907	Anvil Lift Arm
065	1	256910	Strap feed Insert
067	1	256989	Switch Omron
068	1	262738	Mandrel (Torsion Spring)

! WARNING

All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect a tool's operation and present a safety hazard.

Key	Qty.	Part No.	Description
069	1	262739	Torsion Spring
070	1	256922	Weld Pad Lever
071	1	256923	Feed Pad Lever
072	2	292037	Screw
073	1	256926	Drive Wheel
074	1	256927	Side Plate
075	1	256928	Cam Housing
077	1	256932	Feed Pad
078	1	256933	Thrust Bearing
079	1	256934	Pawl
080	1	256939	Switch Cam
081	1	256940	Switch Arm
082	1	256941	Anvil Cover
083	3	256942	Grommet
084	2	256943	Roller Bearing
085	1	256944	Bearing Spacer
086	1	256945	Frame Housing
088	1	292036	Pre-feed Microswitch
090	1	265774	Control Panel assembly
091	1	256958	Control Cam
092	1	256959	Loop Cam
094	1	151042	Wire Harness B
095	1	151043	Wire Harness C
096	1	151044	Wire Harness F
097	1	256965	Information Sign, 230V
098	2	256967	Warning Sign
100	4	162568	Lock Washer
101	1	256970	Screw M4 x 25
102	1	164956	Shoulder Bolt
104	1	256973	BACK-UP Wheel Bracket
105	2	256974	Screw M3 x 45
106	2	010028	Screw M5 x 12
107	3	256976	Bearing 626 ZZ
112	1	151242	Weld Motor #3 230V
113	1	256912	Cam Gear Motor 230V
114	1	256911	Drive Gear Motor 230V
116	1	256988	Anvil
117	1	256990	Eccentric Shaft
118	1	256991	Roller Sleeve
119	2	256992	Needle Roller Bearing
121	1	150936	Power Cord 230V
123	1	300020	Micro Board assembly 230V
124	2	181251	Screw M6 x 10
125	2	251331	Screw M6 x 12
126	2	251837	Roll Pin 4 x 22 mm
127	2	171570	Washer 4 mm
128	1	262709	Rocker Clutch assembly
131	1	256938	Cam Bracket
135	1	256950	Spacer, dia 6
136	1	256955	Compression Spring

! WARNING

All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect a tool's operation and present a safety hazard.

Key	Qty.	Part No.	Description
137	1	256957	Pad
139	1	256995	Weld Pad
140	1	256996	Spring
141	1	181233	Screw M8 x 32
143	1	262782	Compression Spring
144	3	262722	Screw M5 x 16, low type
146	1	262705	Screw M5 x 10
147	2	262706	O-Ring
148	1	263101	Strap Containment Front Left
149	1	263102	Strap Containment Front Right
150	2	263331	Strap Containment Front
151	1	262703	Eccentric Pin
152	1	264720	Caution Sign
153	1	256969	Spacer
156	1	256947	Bearing 634 ZZ
157	1	256948	Screw M16 x 16, flat point
158	1	262708	Fuse 3A
159	1	262724	Spacer
160	2	262725	Shim
161	1	151222	Ground busbar assembly
162	2	262765	External Lock Washer, M3
163	2	262766	External Lock Washer, M5
164	3	261213	Lock Washer
166	5	262764	Switch Spacer
168	1	262758	Fuse Holder
169	1	151218	Wire Harness J
170	1	262789	External Lock Washer, 12.7
176	1	150993	Switch Bracket
177	4	151070	Limit Switch 5LS
178	4	183980	Plain Washer
179	2	251261	Screw M3 x 16
180	1	150935	Line Filter
181	1	151228	Fan assembly 230V
183	1	151201	Information Sign, Voltage
184	1	151038	Information Sign, Ground
185	1	151220	Wire Harness Ground
186	1	151221	European Sign Kit
187	1	151226	"GS" Sticker
188	2	151243	Screw M3 x 30
189	1	292038	Pre-Feed Microswitch Bracket assembly

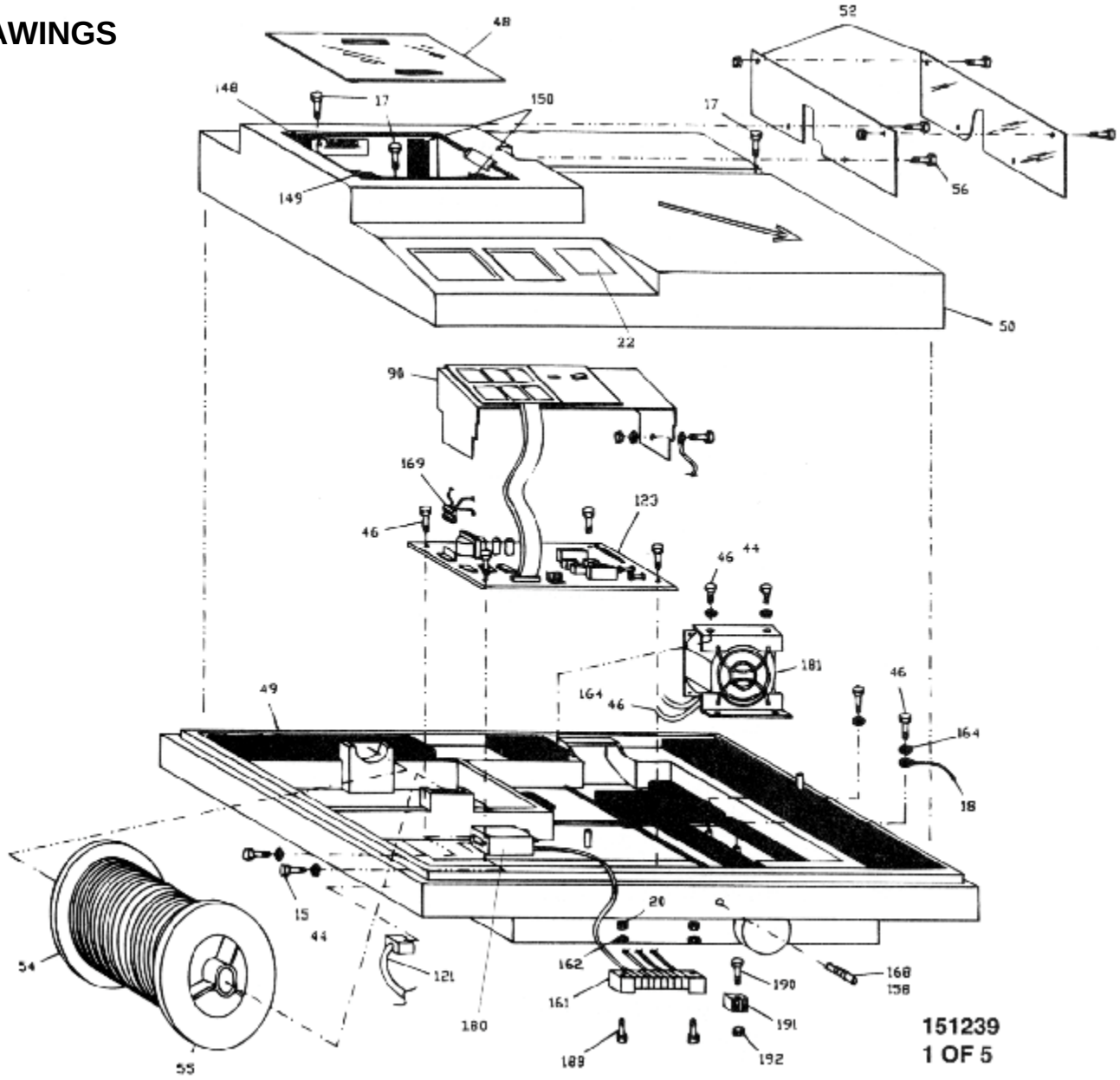
! WARNING

All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect a tool's operation and present a safety hazard.

Exception CE Spare Parts List

158	1	300068	Fuse, T 3.15A
168	1	300063	Fuse Holder
177	4	300062	Limit Switch
187	1	300078	"CE" Sticker
190	1	300066	Machine Screw
191	1	300065	Terminal Block
192	1	300067	Lock Nut

DRAWINGS



ASSEMBLY (90) COMPONENTS

Switch, ON-OFF	262760
Switch, Tactile	255849
Switch, Bracket	265772
Nameplate	151227

! CAUTION

To avoid static electrical charge to PC board (123) ground yourself before handling.

REF: Nameplate and warning sign assembly instructions P-263355

Figure 21

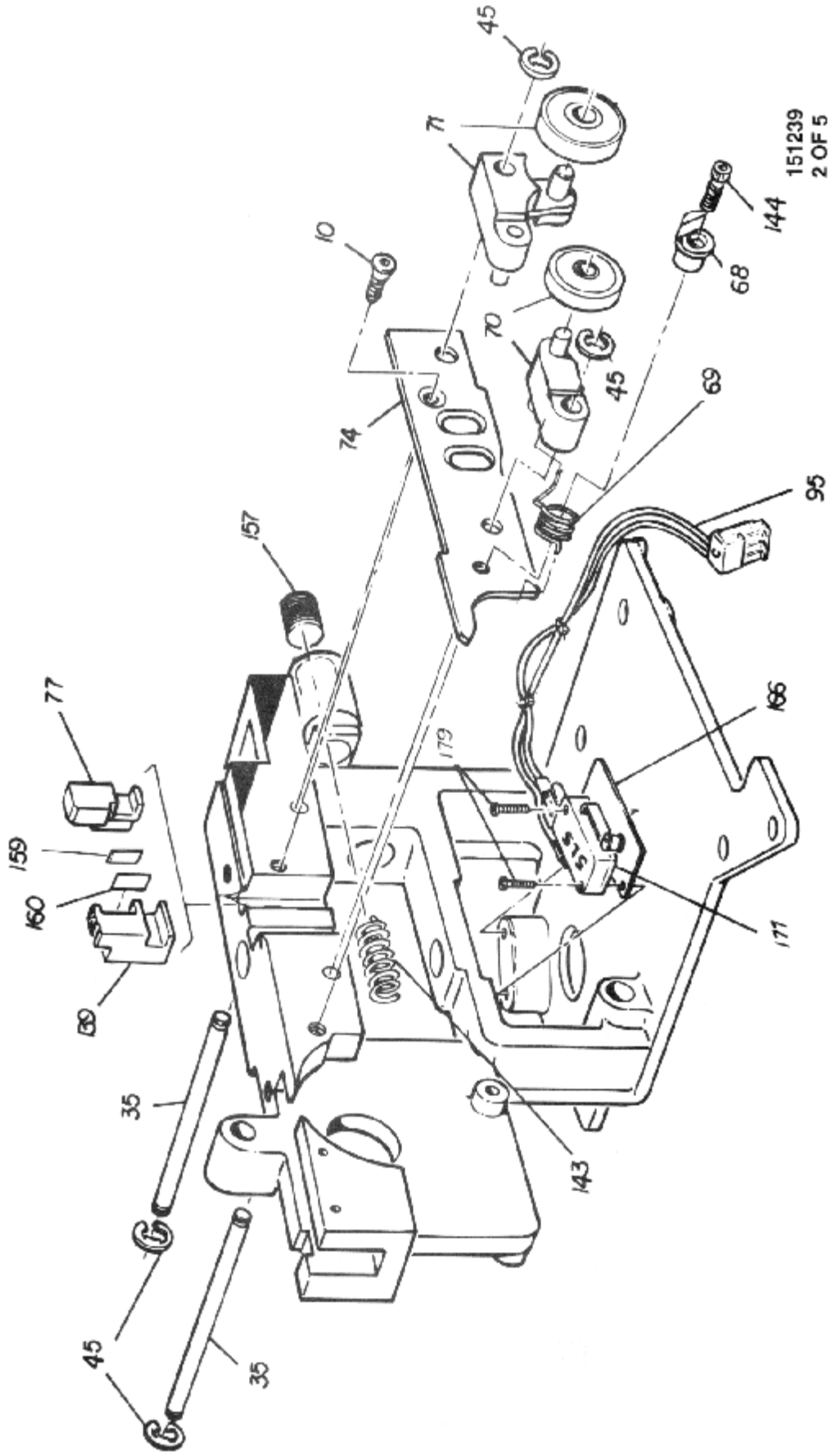

151239
2 OF 5
45
71
10
144
68
70
45
69
74
95
157
77
179
166
159
160
80
171
35
143
45
35

Figure 22

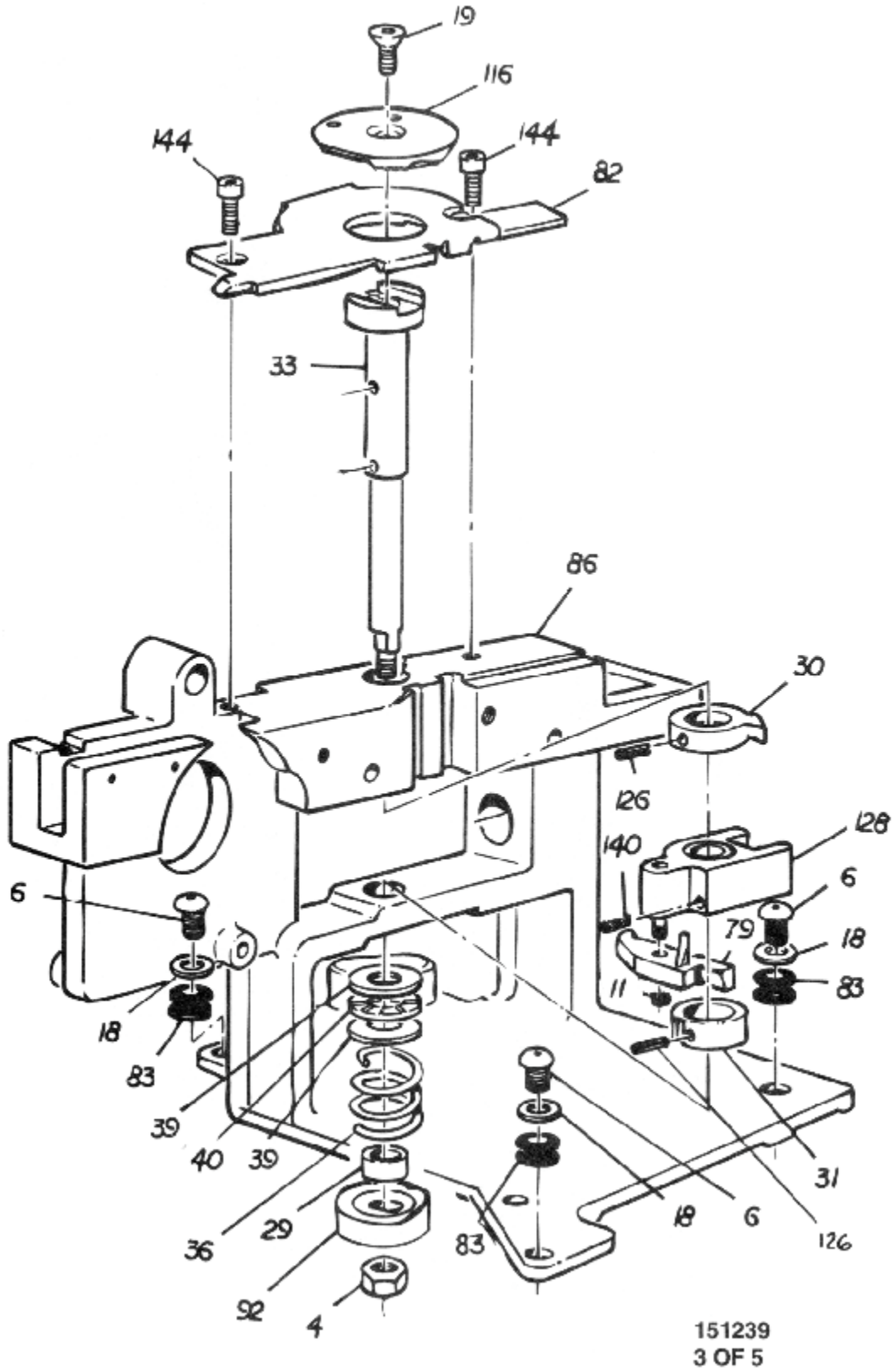
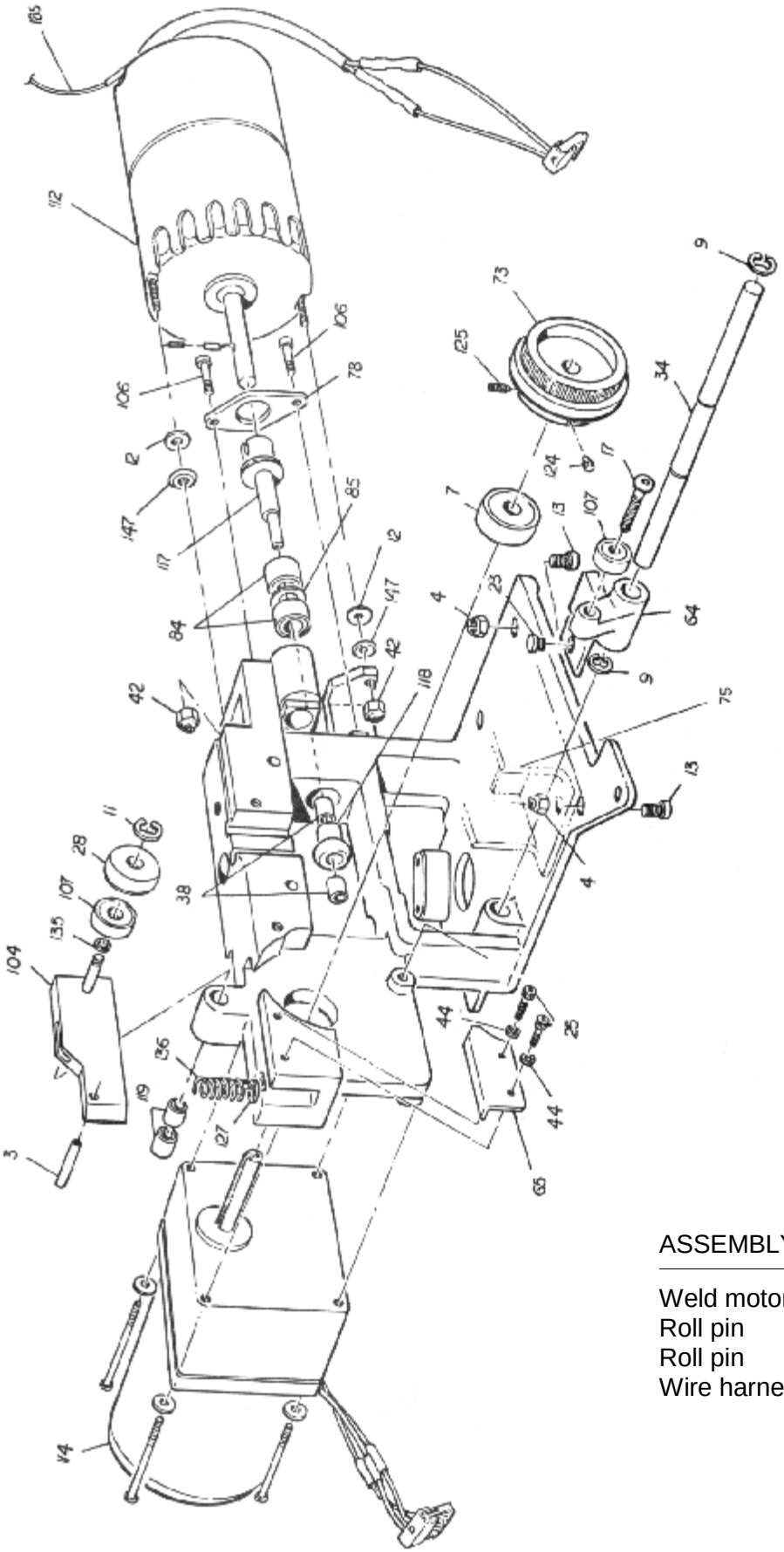

19
116
144
144
82
33
86
30
126
128
140
6
6
79
18
11
83
18
83
39
40
39
31
18
6
126
36
29
83
92
4
151239
3 OF 5

Figure 23



ASSEMBLY (112) COMPONENTS

Weld motor	151148
Roll pin	262713
Roll pin	262714
Wire harness A	256977

Figure 24

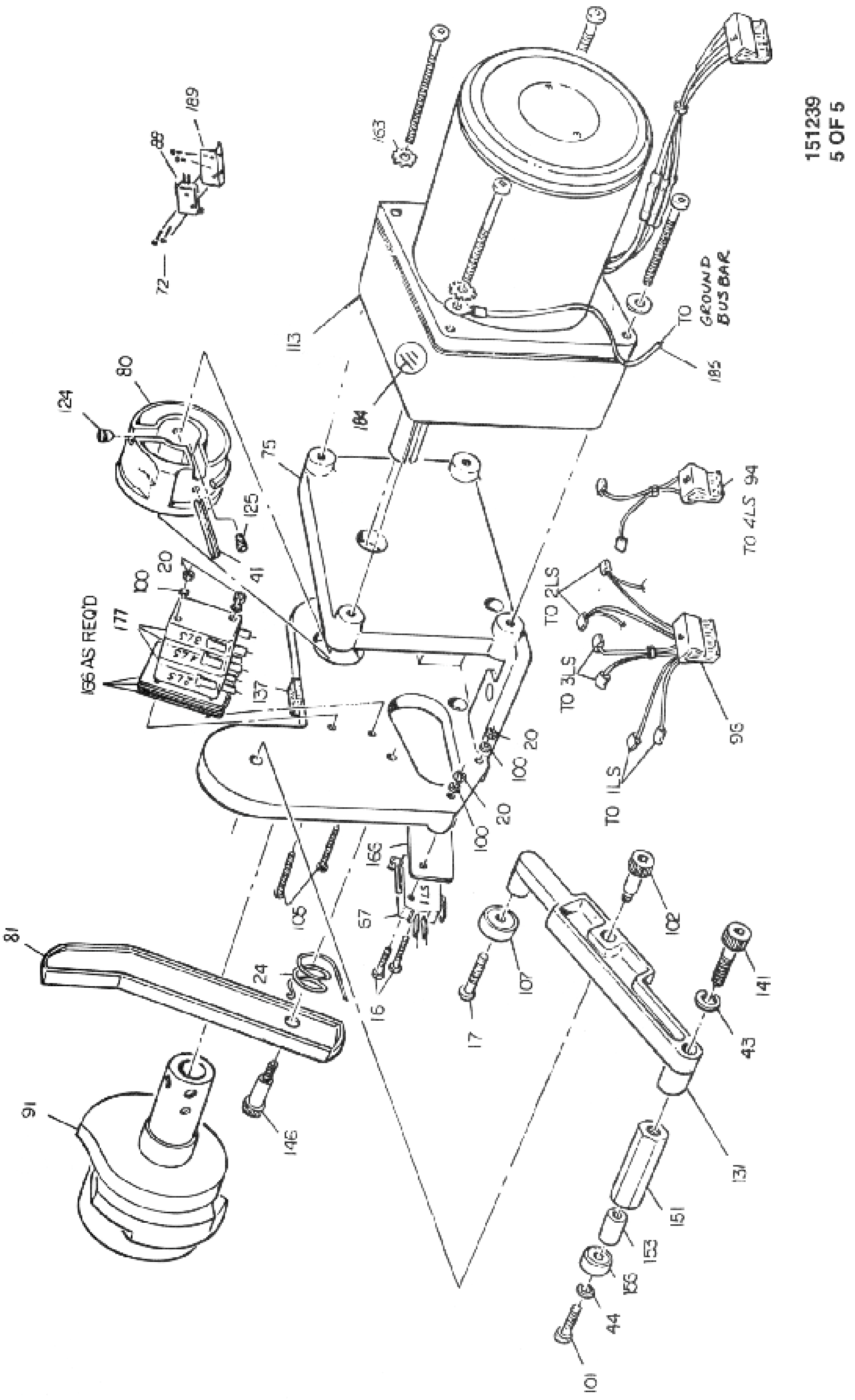

151239
5 OF 5
TO GROUND BUS BAR
TO 4LS
TO 2LS
TO 3LS
TO 1LS
136 AS REQ'D

Figure 25

LOOP PLUS SIGN PLACEMENT

Key	Qty.	English Part No.	European Part No.	Description
21	1	168607		Nameplate
22	1	269085	286219	Instruction sign
90A	1	255849	286218	Membrane tactile switch
90B	1	151227		Nameplate
97	1	256965		Fuse value sign
98	2	256967	262746	Warning sign
152	2	264720	262748	Caution sign
183	1	151201		Voltage information sign
187	1	151226		GS sign
187	1	300078		CE sign

European signs are available in Kit 151221 and will be affixed in Europe.

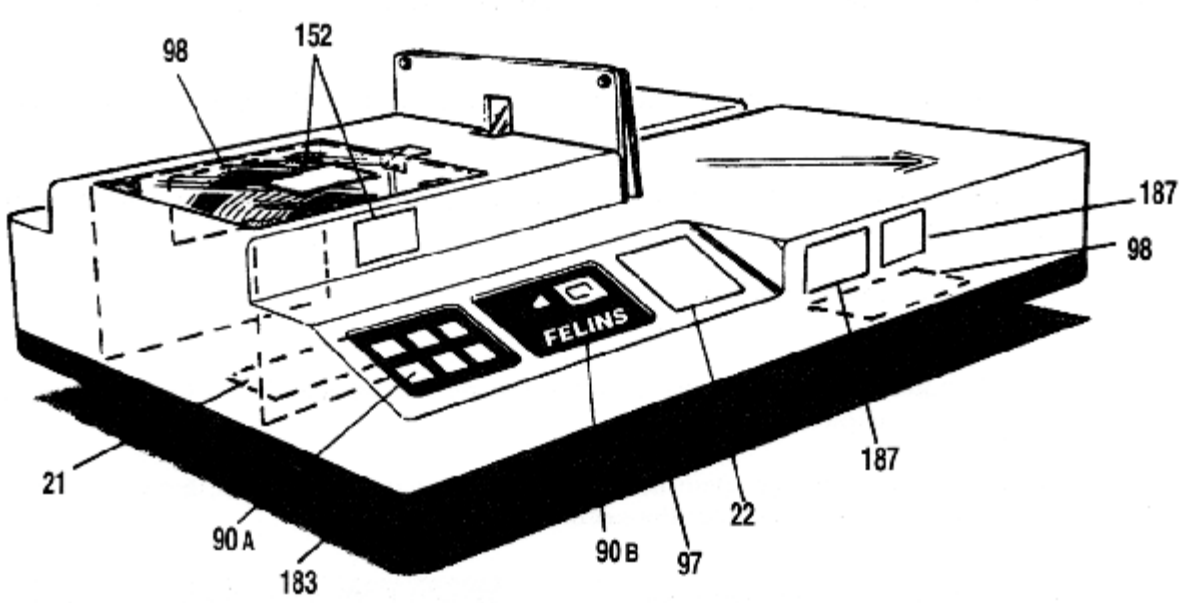


Figure 26 - Sign Placement, LOOP PLUS

With the introduction of our new Control Board (220 V/50 Hz, Part #300020) the way in which Loop Strap is Pre-feed into position for forming a Loop has been simplified. The adjustment for altering the length of the Pre-feed Tab is now easily accomplished at the Control Panel following the instructions in Addendum A.

ADDENDUM A

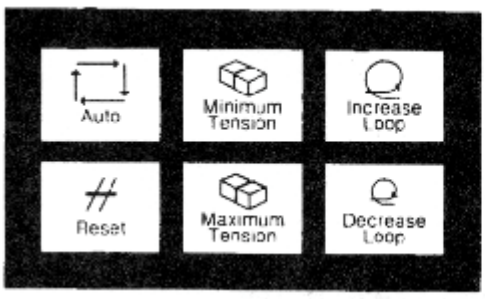
PREFEED LENGTH ADJUSTMENT

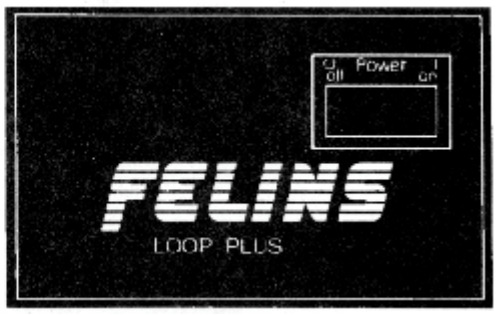
Pre-feed length is factory set. It may be adjusted as follows by using the control panel located on the front of the machine.

1. Turn the machine power OFF. Press and while holding the RESET switch on turn the power ON. Release reset switch.
2. Turn the machine power OFF.
3. Press both the MINIMUM and MAXIMUM TENSION switches. Turn the machine power on while both switches are pressed. A clicking sound should be heard. After clicking sound is heard, release tension switches. PREFEED LENGTH may now be adjusted.
4. Repeatedly press INCREASE LOOP to increase pre-feed length.
5. Repeatedly press DECREASE LOOP to decrease pre-feed length.
6. If the feed motor runs while pressing either switch, you are not in the correct mode. Repeat all instructions.
7. 16 presses of the proper switch will increase or decrease the pre-feed length approximately 6 mm (1/4").
8. When you have completed inputting desired actuations, press RESET to program the new pre-feed length into the board.
9. Set the Loop size and desired tension and resume operations.

You must now cycle machine at least twice to view new pre-feed tab length. If further adjustment is necessary, repeat entire procedure.

NOTE: Any change in loop settings such as minimum, or maximum tension, increase or decrease loop, reset or auto, will be saved only after the second complete cycle.





Operator's Control Panel