



BESELER

**2016-SL
L - SEALER
INSTRUCTION MANUAL**

**CHARLES BESELER COMPANY
SHRINK PACKAGING MACHINERY DIVISION**

1600 LOWER ROAD

LINDEN, NEW JERSEY 07860

INTRODUCTION

Congratulations on the receipt of your new Beseler SL Series L-sealer. This sealer combines the best features available in shrink packaging machinery. Among them are self adjusting seal pads and a variable speed conveyor belt. This sealer has the most desired features available in packaging equipment. STRENGTH = its 11 gauge fully welded steel chassis lets you know that it'll be around a long time to serve you. RELIABILITY = Beseler's reputation to produce quality for over 30 years. LOW MAINTAINENCE = Beseler's unique self-adjusting seal pads, pressure problems are a thing of the past. This combined with numerous other features such as easy change out seal wires makes Beseler the easiest and obvious to own.

Your SL - Sealer has met Beseler's strict standards of quality prior to leaving the factory. The unit is simple to operate and requires very little maintenance. However, we at Beseler, caution you, your operating and maintenance personnel not to attempt to install, adjust or operate the L - sealer without first reading the contents of this manual. You can be assured that this machine will provide exceptional service for many years when operated properly and if appropriate care is maintained.

Upon receipt, remove the Sealer from the shipping packaging and inspect for possible damage. If any damage is noted, contact the delivery carrier immediately, regardless of the external condition of the packaging. Do nothing further until the carrier's agent has made an inspection and evaluation (if necessary) of the damage to the unit. Also, do not destroy packaging materials or boxes until the carrier's agent has examined them. If no damage is evident, proceed with the installation. If installing the machine onto the optional leg kit, (*legs are preinstalled if it was purchased as a console unit*) two people would be required. First stand the legs on the floor with the leveling bolts located at the outer corners. (The legs may lean inward slightly) Then with the help of others, lift the Sealer up and place it gently on top of the legs. With one person holding the machine stable on the legs, the other can install the three retaining bolts and washers to mount the leg. NOTE; DO NOT TIGHTEN ANY BOLTS UNTIL ALL BOLTS ARE STARTED IN THE THREADS. Once all the bolts are started, then you can lift the Sealer slightly and move the bottoms of the legs closer together until they are completely vertical. Now you can tighten the bolts the final stage and your ready to go.

SPECIFICATIONS

CURRENT _____ 120V/AC 60HZ
AMPERAGE _____ 15 AMPS

SHRINK PACKAGING BASICS

Three basic components for proper operation are required of every sealer and tunnel regardless of size, type, speed or application. Different film types require alterations to each of these components but all three are important with any type of film to achieve good seals and tight shrink.

SEALERS: PRESSURE, DWELL AND HEAT

PRESSURE

NOTE: PRESSURE IS AUTOMATICALLY ADJUSTED FOR ON BESELER SEALERS WITH SELF-LEVELING PADS. ALL OTHER MODELS HAVE ADJUSTABLE PADS. PLEASE SEE THE PAD ADJUSTMENT SECTION BELOW.

Proper pressure is the most critical component to achieving strong seals. Seal pads must be aligned perfectly to the seal head with no weak areas. Because of the nature of all sealers, they have a built-in problem making good seals. The materials used in the seal pad and seal head are all constantly degrading through normal use. Pads lose resiliency or derometer. Teflon tape burns as does transite material which backs the seal wires. Nichrome wire expands as it is heated and "saws" back and forth further degrading the pressure.

All these items are normal on any sealer and must be kept up with preventive maintenance on a regular basis. This is most often not the case in the real world of production.

WHY IS PRESSURE SO IMPORTANT? 90% of all seal problems are pressure related.

Shrink film forms a seal when the film is heated to its melting point and the liquid film pools together and cools. As the film melts the liquid tries to move away from the heat source. It rolls back; in the industry the term is "beads up", something like mercury does.

As the wire heats the top layer of film, it immediately begins to pull away before the bottom layer has melted. The top layer has direct contact with the wire while the bottom layer cannot begin to melt until the top is nearly finished beading. An area of weak pressure then does not supply the same heat to the bottom layer as it does the top. The two film sheets cannot bead together correctly and a weak spot in the seal occurs.

This low spot also creates a "pothole" for the liquid film to pool into. As the wire's heat is shut off, the melted film runs back against the wire and cools around it. Film builds up on the wire causing excessive smoke when the next cycle occurs.

Poor pressure then creates weak seals, pin holes in the seal and excessive smoke.

OPERATIONS:

Beseler L-sealers have seal wire temperature control and automatic magnetic hold down control. When the seal head is lowered to the seal pads, the magnets will turn on automatically and lock the seal head down for the proper amount of time which has been set on the magnet dwell timer. When the proper amount of time has expired, the magnets will release the seal head which raises up. The seal cycle is complete. On models with a sealer conveyor take away belt, the conveyor will automatically start and move the product away. The speed and time the belt run are also adjustable. On models without a conveyor, the operator now pushes the wrapped product into the shrink tunnel. The next product can be inserted into the film by sliding it on the stainless loading tray into the film. It and the film around it are then moved across and into the seal area. The seal head is lowered to begin the new seal cycle.

All BESELER L-sealers use centerfolded "B" wound film. Place the film roll onto the film cradle rollers with the open edge toward the front of the sealer. Thread the top sheet of film over the stainless separator tray and the bottom sheet under. Pull the sheets past the seal area and lower the seal bar until the magnets lock the head down. This will seal the leading edge of the film. The film is now ready for production.

FILM SHOULD ALWAYS LAY RELAXED ACROSS THE SEAL PADS WHEN SEALING. TENSION ON THE FILM MAY CAUSE WEAK SEALS.

Inspect the seals for strength. If the seal is weak or the film is not sealing correctly, adjust the temperature of the seal wires and magnet dwell time. Most shrink films will require settings between 1-2.5 on the magnet timer. Turn the seal wire temperature down and begin testing for good seals. Slowly increase temperature until strong seals are achieved. On most models the temperature control is on the front of the sealer main chassis. Clockwise increases temperature. Other models have the temperature control located on the seal head itself at the end of the front seal bar. To adjust temperature on these models, loosen the locking nut and turn the black knob counterclockwise slightly to increase temperature. Make adjustments in very small increments and observe the seal wires as you test seals. If temperatures are set too high, the tensioner assembly may not be able to expand far enough to keep the seal wire taut. This will cause the seal wire to "snake" and short out against the chassis or film clamps. Reduce the wire temperature and retest for strong seals. If strong seals are difficult to maintain, check the pad pressure as described in the "Pressure" section of this manual.

Finally, adjust the conveyor height or product table height so the center of the product is level with the top of the seal pads. This will place the finished seal around the middle of your product.

Conveyor models have a crank handle which raises and lowers the conveyor. M or GSM models can have either a sliding lever under the exit end of the tray or a locking knob on the front of the sealer. On these, the tray is spring loaded and should be pushed down as the knob releases. Adjust the height and lock the knob again at the proper height.

TESTING FOR PROPER SEAL PAD PRESSURE

PAPER PULL TEST:

Remove the film hold down clamps.

Loosen the lock nut and back out the heat actuator adjuster so the seal wire will not turn on when the seal head is locked down by the magnets.

Set a few seconds on the dwell timer.

Fold a sheet of paper in half and lay it across the seal pads.

Lock the head down and try to pull the paper out.

The paper should not slide out without some fair amount of effort and should nearly tear before it becomes loose.

Perform the same procedure all around the seal area noting areas which have less pressure than others.

We assume that all materials in the seal pad assembly are in good order BEFORE THE PAPER PULL TEST. Pads are not burned into, tape is in good shape.

CORRECTING PRESSURE:

Beseler seal pads are adjustable. When a pressure problem occurs along the length of one side or in a long section of one pad, this is easily corrected by moving or tilting the pad up to provide more pressure in the affected area. Loosen the locking bolts and slightly raise the pad and lock down the bolt. Retest the area. If the problem is in a small area, you can build up the affected spot by adding a strip of Teflon tape under the main strip of tape.

WATCH OUT! MAGNET ADJUSTMENT AND PAD HEIGHT MUST BE COORDINATED!

Your pressure problem may be caused by improper magnet adjustment. Raising the pad in that case will INCREASE the problem. Make sure both magnets are locking in together when the head is cycled. Sometimes it looks like they are when they are not. Put your strip of paper on top of the magnet only and cycle the seal head. Try to pull out the paper. It should not move at all on both magnets. See "Magnet Adjustment" below.

Also, be careful when adjusting the side pad in particular. Because L-sealers pivot down in an arc, if the rear of the side pad is set too high the seal head will contact it before the rest of the pads. THIS IS A COMMON MISTAKE! It causes the side seal bar to bow when the magnets are actuated and in turn causes a weak seal an inch or two down from the corner of the seal area. Also, be careful to maintain the flush fit at the corner so one pad is not higher than the other at this point.

HEAT (SEAL WIRE TEMPERATURE):

Seal wire temperature is important in obtaining good seals. Less so than pressure. You will still get good seals if temp is misadjusted but you will not get good seals if pressure is no good. Higher temperature will create a bead if pressure is not correct, but it will be a weak seal and the excessive heat will cause premature wire, pad and tape failure in addition to excessive smoke.

Gap monitor systems are the most accurate way to control seal wire temperature on an impulse sealer. Impulse means the wire is not continuously on, but rather is pulsed at the correct time and for the correct duration to achieve good seals. The amount of voltage sent through the wire is not altered, only the amount of time it is active changes with settings. Longer duration = hotter wires.

Nichrome seal wire expands at a proportional rate when voltage is passed through it. The rate is constant and therefore can be used to accurately measure the wire temperature. A gap monitor system utilizes this principle by adding a contact switch to the end of the seal wire and adjusting the temperature by changing the amount of air gap from the end of the wire to the switch (which shuts off the voltage through the wire). More air gap = more heat.

All Beseler sealers use this gap monitor system. The 1812/1611 models position the contact directly at the end of the front seal wire while all other Beseler's incorporate a "monitor assembly" inside the electrical compartment of the sealer. The monitor assembly is in effect a mini seal wire assembly which receives the same voltage as the main seal wires. It has a tensioner and contact switch also which is adjustable (opens or closes the air gap). The advantage of the internal gap monitor system is the temperature control wire is not subject to film buildup and damage as the actual seal wires are. It will last many years. Also seal wire change out is simplified because the tensioner must be released in order to install the correct length seal wire. On all Beseler's except the 1812 a cam is installed which releases the tensioner and permits easy wire changes. Temperature settings do not change throughout the process and the operator starts up right where they left off before the wire change. On 1812 models temperature must be reset.

The other important advantage to gap monitor systems is automatic compensation for the speed which the operator runs the sealer. Normally production rates will vary minute by minute which means heat buildup (residual heat) changes constantly during operation. Because the nichrome wire expands as it is heated, the gap is automatically closed proportionately with increases in residual temperature.

The range of temperature adjustment is set at the factory on internal monitor systems to prevent an operator from being able to burn up (blow out) the seal wire by turning the temperature dial fully up. This is a safety feature built in.

ADJUSTING INTERNAL MONITOR ASSEMBLIES:

An adjusting bolt and lock nut are located at the rear of the monitor wire bracket. By loosening the lock nut and turning the adjuster bolt, the entire monitor wire moves toward or away from the contract switch. This moves the range of adjustment up or down the temperature scale.

Set the dial knob to the full on position. Insure the micro switch contact (plunger) is pointed directly at the contact plate. It is possible by turning the temp adjusting knob too far in either direction to have the contact plunger pointing up or down. This can cause the plunger to slide over the top of the contact plate as it moves toward the switch. Heat will not shut off if this happens and the seal wire will burn up.

With the micro switch adjusted, turn the monitor wire adjuster bolt in to close the air gap between the switch and contact plate.

Being careful to stay clear of the seal wires, depress the heat start switch which is located at the rear of the side seal bar. There will be two or three switches. The heat switch is always the one closest to the seal bar. Depressing this switch with the power on will activate the seal wires once. Watch the brightness of the seal wires. If the wires glow bright red and begin to sag, release the switch immediately. This is the condition you are trying to prevent when adjusting the range of temp.

Turn the adjuster bolt to close up the air gap and repeat the test making adjustments until the wire gets hot but not so hot that it may break. Lock the lock nut down and retest. The range of temperature adjustment with the temp setting knob is now limited to a safe range and can be turned down and adjusted to achieve good seals.

ADJUSTING SEAL WIRE TEMPERATURE:

Always depress the heat actuator switch once before testing for seals. This preheats the wire to simulate production wire temp.

The lowest temp possible to get good seals is what you want to get to. Make a seal. If the film does not cut off, turn the heat up slightly and do another. Keep adjusting until the film cuts cleanly and seals are strong. When you get a film cut but there are angle hairs on the seal, you are just slightly too cold on your settings. Turn the knob slightly and you are at the optimum seal wire temp. Test the seals and make very minor adjustments from this position to get the best results.

That is it! You have set pressure, dwell (time) and temperature. The three components in making seals on any sealer. The next section will go through the shrink process and how to set up the tunnel for the best looking product.

MAGNET ADJUSTMENT:

Once the seal head and pads are correctly aligned, the magnets must be adjusted to supply the correct amount of down force while the seal is being made.

With the power turned off, film hold down clamps removed, lower the seal head and hold it against the seal pads. You must supply a light amount of pressure and check that no air gap between the pad and head is evident. It should be flush. If it is not, go back to the pad adjustments and correct the problem.

While holding the head down, check the magnet to magnet contact plate alignment and gap. There should be about 1/16 to 1/8 air gap between the two. When the magnets turn on, they will compress the seal pad and lock down the head. Adjust the gap and alignment with the two socket head bolts. After the gap is adjusted, turn on the power and cycle the seal head. Insure both magnets lock in together. Seal pressure checks are complete.

DWELL:

Different film types require different "cool down" time for the seal to set up before it becomes strong. The dwell timer sets this cool down period but ALSO sets automatically for time required for the seal to be made before cool dwell can start. This changes constantly during operation and is explained in detail in the heat section below. For now, you need to know it is being adjusted automatically for you regardless of what is on the timer dial. What you are setting with the magnet timer is "cool dwell."

The time you set on the magnet dwell timer is dictated by the film properties and thickness. It is always constant and will not change as long as the film type and gauge remain the same.

This is discussed fully in the "Film Basics" section later.

Shrink films will always require a set time between .5 and 2.5 on the Beseler timer dial. Most will be between 1.5 and 2.5. Once pressure is correct, experiment between these settings to find the strongest seals.

Poly films require less than .4 dwell.

In general, set Cryovac and Okura 501 dwell between 2 and 2.5. Set Clysar and most others between 1.5 and 2.

BESELER PARTS LISTING

2016SL L - SEALERS

I. COMPONENTS ON SEAL ARM ASSEMBLY

| | | |
|---|------------------------|--------------|
| 2016 SEAL ARM (HEAD)ASSEMBLY COMPLETE | | |
| 1. 2016 SEAL WIRE (SIX PACK OF WIRES) | SIDE | 10-41690-21 |
| | FRONT | 10-41690-18 |
| 2. SEAL WIRE CONNECTOR KIT | (seal wire anchor kit) | 10-60201 |
| THUMB NUT, BLACK PLASTIC (ATTACHES SEAL WIRES) | | 568-03-03 |
| SCREW, ATTACHES FRONT SEAL WIRE AT CORNER - | | 521-12-02-01 |
| WASHER, BRASS (UNDER THUMB NUT & SCREW ABOVE) | | 548-24-19 |
| BRASS SCREW—(seal wire anchor bolt mounted in tensioner) | | 524-24-71-30 |
| BRASS POST—(front anchor point on side seal wire) | | 553-44-02 |
| BRASS NUT FOR ANCHOR SCREW AND POST | | 545-24-20-30 |
| PLASTIC INSULATOR FOR BRASS POST | | 557-20-64 |
| PLASTIC WASHERS—(brass post mounting insulators) | | 548-24-13 |
| 3. GROUND STRAP (COPPER "C" PLATE AT CORNER) | | 10-41686 |
| 4. GROUNDING BLOCK—(right side anchor point of front seal wire) | | 10-36224 |
| 5. TRANSITE INSULATOR 40" LENGTHS (UNDER SEAL WIRES) | | 10-16041-18 |
| 6. RTV CEMENT (ATTACHES TRANSITE STRIP) | | 573-10-02-01 |
| 7. TENSIONER ASSMY W/CAM, STUDS,SPRINGS,MOUNT -FRONT | | 10-41211 |
| 7a TENSIONER ASSMY W/ CAM, STUDS,SPRINGS,MOUNT SIDE | | 10-41212 |
| 8. MOUNTING SHAFT FOR TENSIONER CAM & SPRING | | 10-16129 |
| 8a CAM | | 10-16048 |
| 8b CAM HANDLE | | 10-16049 |
| 8c STUD FOR SPRING MOUNTING | | 10-16145 |
| 8d SPRING, FOR TENSIONER ASSMY | | 562-70-17 |
| 8e SEAL WIRE CONNECTOR BLOCK IN TENSIONER | | 10-16047 |
| 9. THREADED ROD, HOLDS MICROSWITCH ADJUST BOLTS | | 10-36227-02 |
| 10. BOLTS, ADJUSTERS FOR MAG/SEAL WIRE MICRO SWITCHES | | 527-65-40-01 |
| 10a BEARINGS, SEAL HEAD PIVOT BEARINGS | | 560-70-06 |

FILM HOLD DOWNS

| | |
|---|-------------|
| 11. FILM HOLDDOWN, COMPLETE—FRONT | 10-41104-15 |
| 11a FILM HOLDDOWN, COMPLETE— SIDE | 10-41104- |
| 12. SHOULDER BOLTS FOR HOLDDOWNS | 10-16449 |
| 13. SPRING FOR HOLDDOWNS | 562-72-47 |
| 14. TEFLON SLEEVE MATERIAL 12" x 9 YARDS— | 573-56-64 |

CLOSER (DOOR) ASSEMBLY

| | |
|------------------------|--------------|
| CLOSER ASSEMBLY | 570-10-28 |
| BRACKET, ON SEAL HEAD | 10-16106 |
| SPRING,ASSIST | 562-70-29-01 |
| BRACKET, SPRING HOLDER | 10-40043 |

2016SL SEALER

HB-3

| | |
|--|----------------------------|
| 13. HOLEBURNER COMPLETE | HB-3 |
| 14. GLOW TIP FOR HB-3 | STANDARD TIP 10-41265-20 |
| 14a GLOW TIP | LARGER "S" TIP 10-41265-25 |
| 15. HOLE BURNER RECEPTACLE (ON SEAL ARM)- | 600-11-02 |
| 15a COVER, TOP METAL BRACKET SUPPORTS RECEPTACLE | 10-16148 |
| 15b COVER, BOTTOM METAL SHEILD FOR RECEPTACLE | 10-41326 |
| 16. THUMBWHEEL, BLACK PLASTIC KNOB ON HB-3 | 568-20-19 |
| 16a POST, HEXAGON MOUNTING POST | 10-41252 |
| 16b EXTENSION ARM, BURNER SLIDES IN THIS RACK | 10-41258 |
| 17. O-RING, HEIGHT ADJUSTER | 573-40-13 |

II. SEAL PAD ASSEMBLY COMPONENTS

| | |
|------------------------------------|--------------|
| 18. 2016 SEAL BED ASSEM | |
| 19. SEAL BED RETAINING COMPONENTS | |
| a. MACHINE SCREW | 521-64-71-02 |
| b. NYLOCK NUT | 546-57-08 |
| c. WASHER | 548-24-25 |
| d. SEAL BED SPRING | 562-72-64 |
| 20. SEAL PAD 1" FOAM 36" LENGTH | 10-50588-05 |
| 21. TEFLON TAPE 2 1/2" 9 YARD ROLL | 573-56-68 |
| 22. TEFLON TAPE 3/4" 10 YARD ROLL | 573-56-69 |
| 23. TEFLON TAPE 1/4" 36 YARD ROLL | 573-56-17-01 |

III. MAGNET ASSEMBLY COMPONENTS

| | |
|--|--|
| 25. MAGNET, 90V DC | |
| 26. BRACKET, MAGNET HOLDER | |
| 27. CONTACT PLATE (MOUNTED TO SEAL HEAD) | |

2016 SEALER

IV. CONVEYOR ASSEMBLY COMPONENTS MB MODELS

| | |
|--|----------------------|
| 33. CONVEYOR ASMBY COMPLETE | |
| 34. CONVEYOR BELT, W/ LACING & CONNECTOR ROD | 10-40243-02 |
| 35. IDLER ROLLER—(SLEEVE ONLY, REQUIRES #36 & 37) | 10-40216-02 |
| 36. IDLER ROLLER BUSHINGS—(2) | 560-67-03 |
| 37 IDLER ROLLER SHAFT | 10-40215-02 |
| 37a IDLER ROLLER ADJUSTER BOLT - L - BRACKET | FRONT 10-40226-01 |
| | REAR 10-40226-02 |
| 38. DRIVE ROLLER | SHAFT - 10-40236-02 |
| | ROLLER - 10-40220-02 |
| | ASSEMBLY 10-40241-20 |
| 39. DRIVE ROLLER BUSHING (FRONT SIDE) | 10-40235-02 |
| 40. DRIVE ROLLER BEARING (PULLEY SIDE) | 10-40235-01 |
| 41. DRIVE ROLLER SPROCKET | 10-40260 |
| 42. TIMING BELT | 562-32-06 |
| 43. MOTOR SPROCKET | 10-40274 |
| 44. MOTOR | 615-42-24 |
| 45. BRUSHES—GLEASON/AVERY INCLUDES SPRINGS—(order 2 per motor) | 640-45-07-03 |
| 46. CRANK HANDLE | 10-40133-20 |
| 47. LIFT SCREW (THREADED ROD FOR CRANK HANDLE) | 10-40238-02 |
| 48. LIFT SCREW BUSHING, BRASS | 557-07-09 |
| 49. LIFT SCREW COLLAR | 560-50-44 |
| 50. LIFT ROD, (ON SCISSOR JACK REPLACE W/LIFT SCREW AS A SET) | 10-40237 |

V. GSM MODEL PRODUCT TRAY COMPONENTS FOR MODELS WITHOUT CONVEYOR

| | |
|--|-----------|
| 51. LOADING TRAY ASSMY, W/O SPRING OR LIFT SCREW | 10-40008 |
| 52. LIFT SCREW W/PLASTIC KNOB (TRAY HEIGHT ADJUSTER) | 10-40029 |
| 53. TRAY,LOADING | 10-40028 |
| 54. BASE, FOR SLOTTED TUBE ,BOLTS TO TRAY UNDERSIDE | 10-40027 |
| 55. TUBE, SLOTTED ANGLE, BOLTS TO #54 | 10-40030 |
| 56. BOTTOM BASE THREADED, BOLTS TO SEALER CHASSIS | 10-40031 |
| 57. SPRING | 562-72-43 |

SEAL WIRE TEMP & BALANCE COMPONENTS

| | |
|---|-----------|
| 58. BALLAST WIRE—TEMP EQUALIZER JUMPER SEAL WIRE | |
| 59. TEMP CONTROL ASSEMBLY, "K-TIMER" "MONITOR" | 10-40014 |
| 60. MONITOR WIRE | 10-16457 |
| 61. CONTACT SWITCH, ADJUSTING DIAL ON FRONT PANEL | 610-18-23 |
| 62. KNOB, FOR CONTACT SWITCH | 568-30-02 |

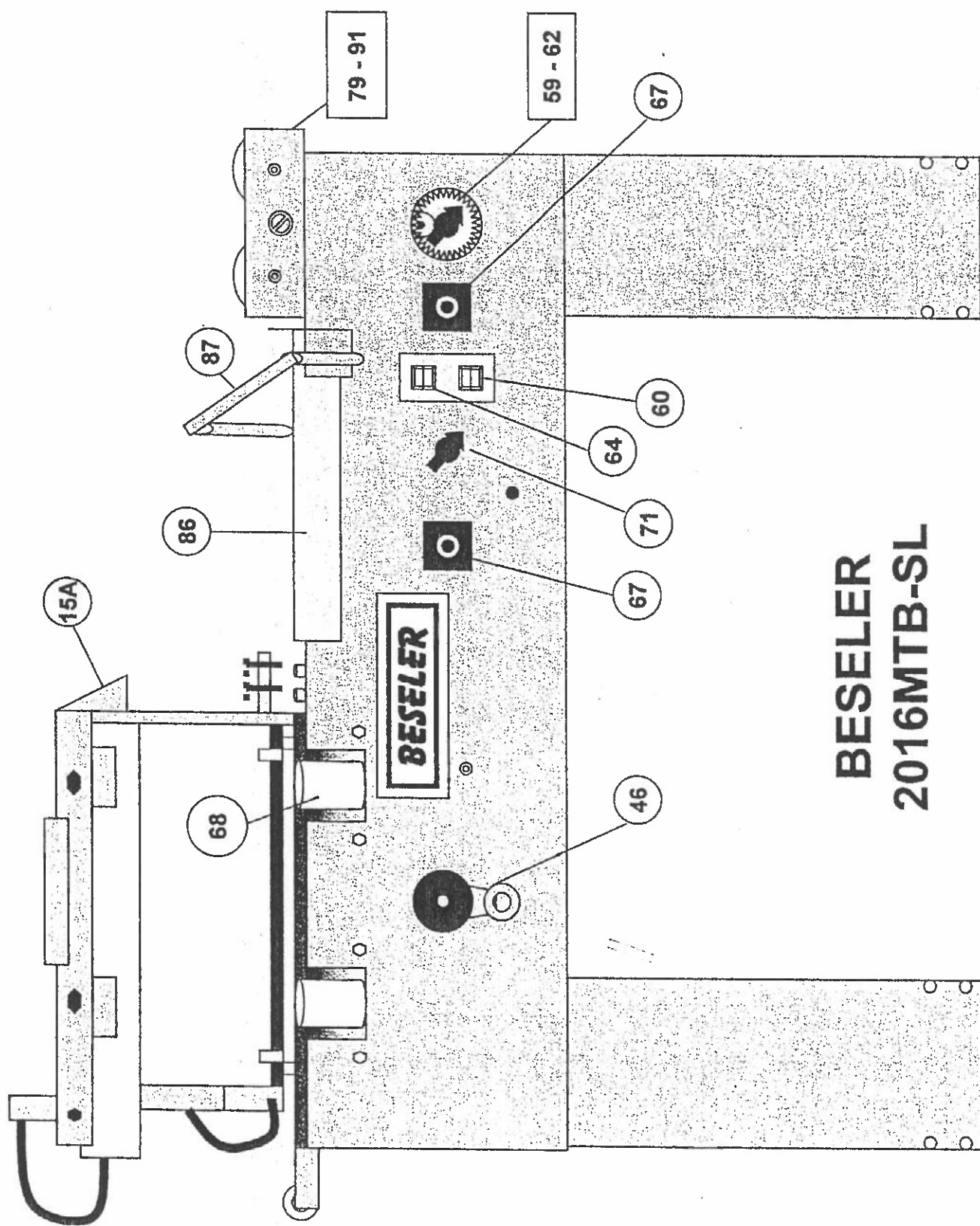
2016SL SEALER

VI. ELECTRICAL COMPONENTS

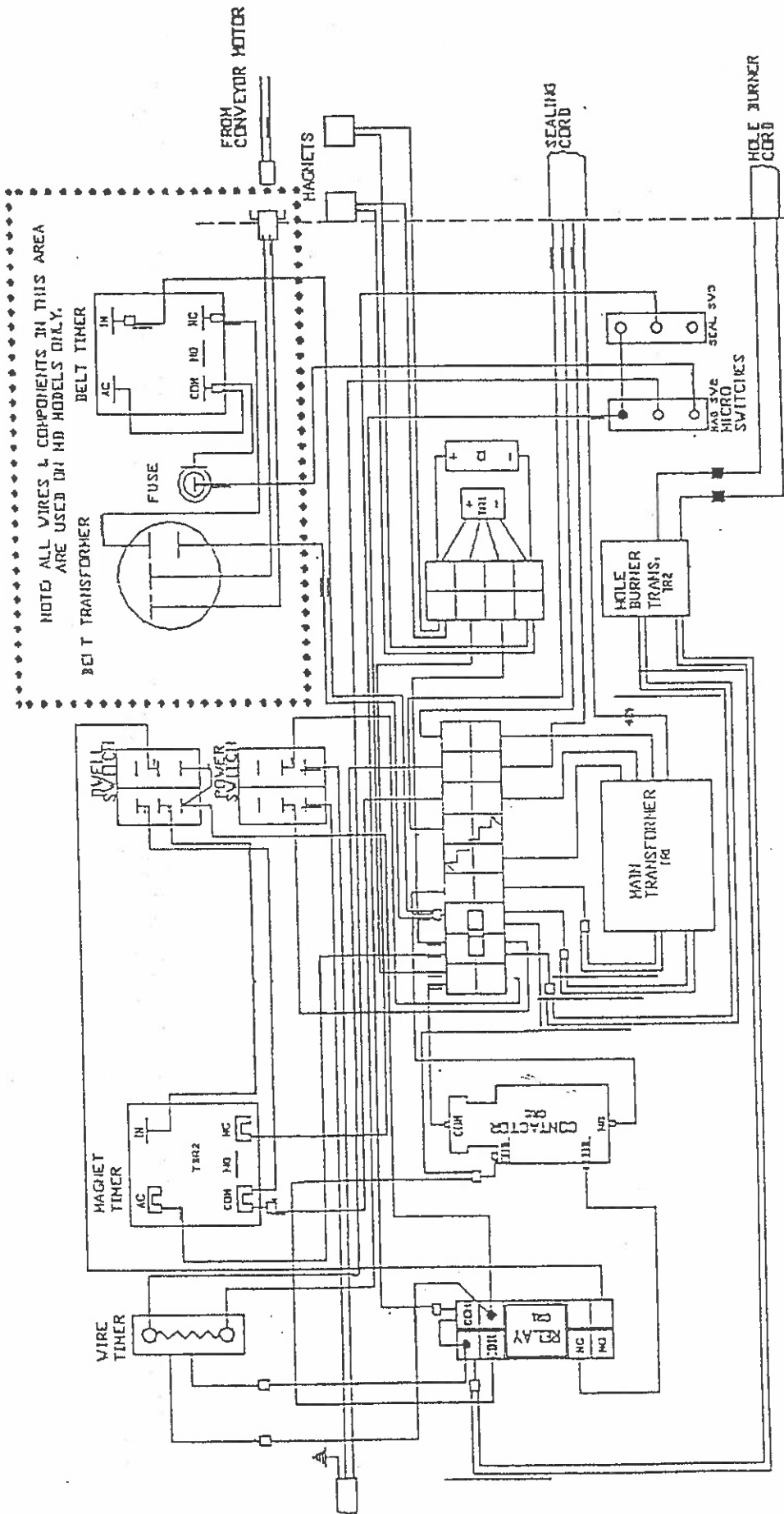
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|---|-----------------|
| 58. ACTUATOR SWITCH, SEAL, MAGNET, CONVEYOR MICROSWITCH | 610-18-22 |
| 59. MAIN POWER CORD | 605-72-43 |
| 59a MAIN SEAL HEAD WIRE LOOP FORM CHASSIS TO SEAL HEAD | 607-70-19 |
| 60. ON/OFF SWITCH | 610-14-30 |
| 61. MERCURY CONTACTOR | 610-60-14 |
| 62. TRANSFORMER, SEAL WIRES | 640-10-71 |
| 63. TRANSFORMER, HOLEBURNER | 640-10-35 |
| 64. DWELL SELECTOR SWITCH, STD/POLY | 610-14-37 |
| 65. RELAY CONTACTOR, CUBE RELAY TOP ONLY | 610-50-32 |
| 66. RELAY SOCKET, (BASE FOR CUBE) | 600-30-31 |
| 67. TIMER, CONVEYOR AND MAGNETS | 610-52-10 |
| 67a TIMER KNOB (ROUND) | 568-03-23 |
| 68. MAGNET | |
| 69. RECTIFIER, MAGNETS | 635-70-29 |
| 70. CAPACITOR, MAGNETS | 632-21-22-52-06 |
| 71. CONTROLLER, BELT SPEED | 660-40-17 |
| 72. MOTOR, CONVEYOR—90 V DC | 615-42-24 |
| 73. BRUSHES MOTOR, GLEASON/AVERY W/SPRINGS | 640-45-07-03 |
| 74 FUSE HOLDER | 10-21634 |
| 75. FUSE | 600-62-27 |
| 76. TERMINAL STRIP | 600-50-10 |
| 77. TERMINAL JUMPER | 600-54-01 |

VIII. FILM SEPERATOR /CRADLE ASSEMBLY COMPONENTS

| | |
|--|-------------|
| 78. CRADLE ASSEMBLY COMPLETE | 10-41998 |
| 79. ROLLER | 10-36458-04 |
| 80. COLLAR LOCKING, FILM POSITIONING COLLARS | 10-36466 |
| 81. BRAKE | 10-50554 |
| 82. CRADLE MOUNTING BOLTS (THUMBNUTS) | 568-20-05 |
| 83. PINWHEEL HUB ASSMY | 10-41863 |
| 84. BACKUP WHEEL | 10-50560 |
| 85. TENSIONING SPRING | 10-40086 |
| 86. SEPARATOR TABLE ASSMY—STAINLESS STEEL | 10-41767 |
| 87. FILM OPENING ROD | 10-50553-01 |
| 88. BRACKET, OPENING ROD | 10-50551 |
| 89. THUMBNUT (LOCK FOR OPENING ROD) | 568-20-05 |
| 90. PINWHEEL LOCATING COLLAR | 557-07-08 |
| 91. PINWHEEL PERF SHAFT | 10-41875 |



BESELER
2016MTB-SL



NOTE ALL WIRES & COMPONENTS IN THIS AREA ARE USED ON MB MODELS ONLY.

BELT TRANSFORMER

BELT TIMER

FUSE

IN

AC

CDM

NO

NC

IN

AC

CDM

NO

NC

IN

AC

CDM

NO

NC

IN

AC

CDM

NO

NC

IN

AC

CDM

NO

NC

IN

AC

CDM

NO

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IN

AC

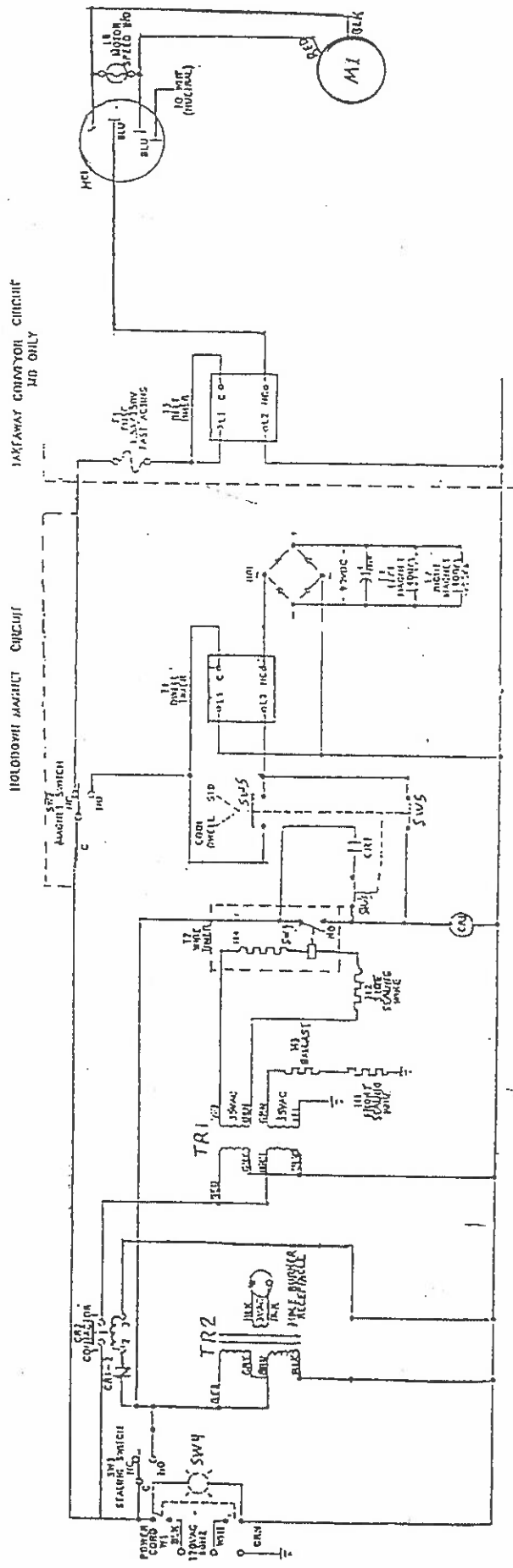
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NO

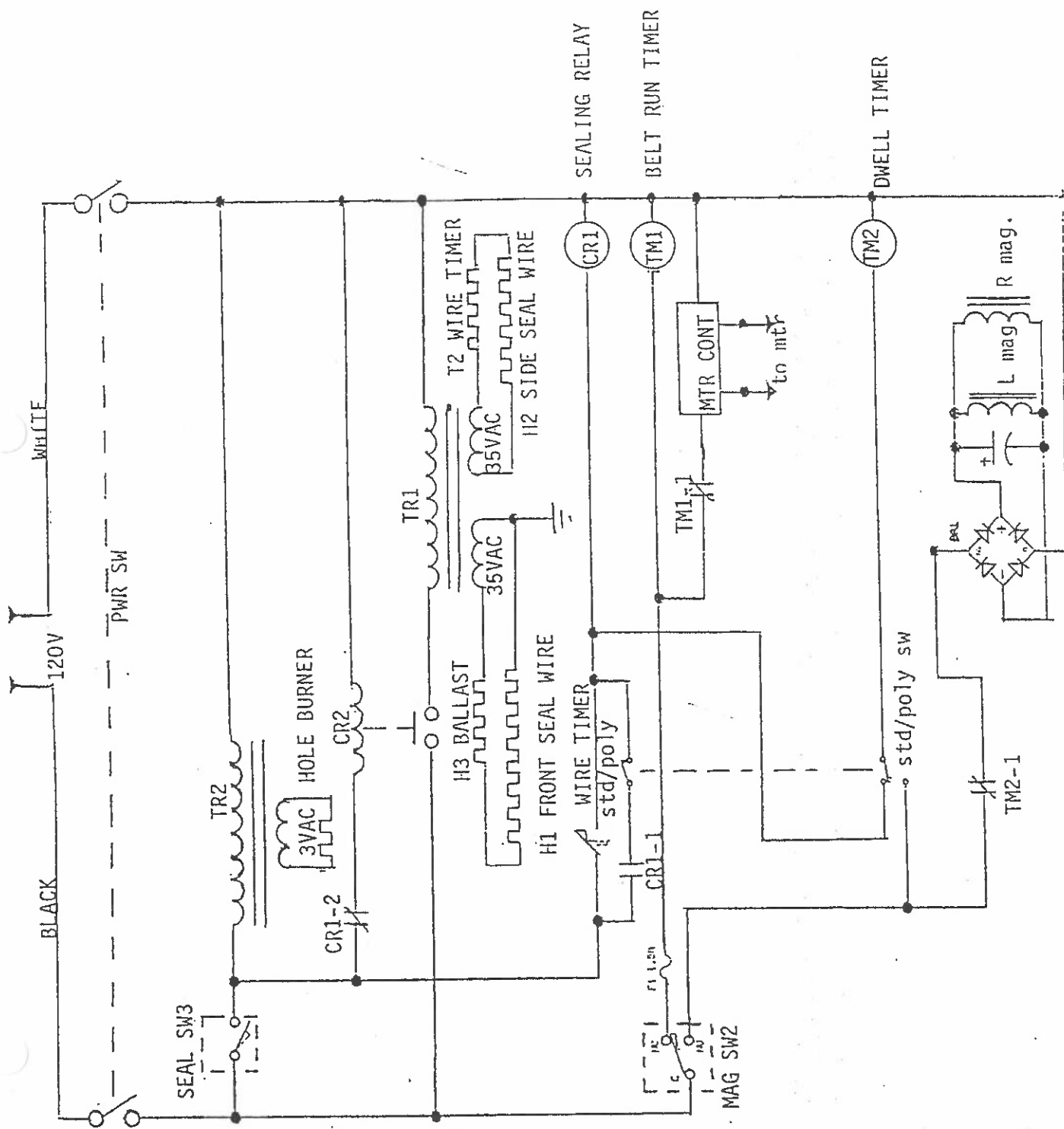
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VIEW FROM TOP AND REAR OF MACHINE

WIRING DIAGRAM
2016 DWELL SYST. MB & GSM
10-53870 BX



2016SL SERIES SCHEMATIC



2016SL-SERIES LADDER DIAGRAM

LIMITED WARRANTY

Charles Beseler Co. warrants each machine (with the exception of sealing wires, teflon tape, rubber pads and conveyor belts) to the original purchaser only, to be free from defects in materials and workmanship for a period of one year from the date of purchase from an authorized Beseler dealer.

This warranty does not apply to equipment showing evidence of accidental damage, misuse or abuse, or which has been tampered with or repaired by persons other than authorized Beseler personnel.

Beseler's sole obligation under this warranty shall be to repair or replace (at Beseler's option) the defective part of the merchandise. Returns for servicing should be made to your Beseler dealer. If it is necessary for the dealer to return the machine or part to Beseler, transportation expenses to and from Beseler are payable by the purchaser and Beseler is not responsible for damage in shipment.

The purchaser must give immediate notice to Beseler's authorized dealer from whom the product was purchased in the event the product shall be found to be defective.

THIS WARRANTY IS IN LIEU OF ALL OTHERS EXPRESSED OR IMPLIED, INCLUDING WARRANTIES AS TO FITNESS FOR USE AND OF MERCHANTABILITY except as may be mandated by statute or rule of law. Any implied warranties of fitness for use, or merchantability, that may be created by operation of law are limited to the one year warranty period. **NO LIABILITY IS ASSUMED FOR EXPENSES OR DAMAGES RESULTING FROM INTERRUPTION IN OPERATION OF EQUIPMENT OR FOR INCIDENTAL, DIRECT OR CONSEQUENTIAL DAMAGES OF ANY NATURE.** Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives the purchaser specific legal rights and you may also have other rights which vary from state to state. The purchaser may also have implied warranty rights. In the event of a problem with warranty service or performance, the purchaser may be able to go to a Small Claims Court, a State Court, or a Federal District Court.

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