S6161-DG-FSE-010/13401 0910-LP-000-2830

# TECHNICAL MANUAL

## OPERATION AND SERVICE MANUAL AND ILLUSTRATED PARTS BREAKDOWN FOR

# DOUGH ROLLER

## MODELS

DR-14-MIL and OPTIONAL STAND B1044-A
DR-17-MIL and OPTIONAL STAND B1044-B
DR-21-MIL and OPTIONAL STAND B1044-C
SDR-14M1-MIL and OPTIONAL STAND ZB1251-C
SDR-14M3-MIL and OPTIONAL STAND ZB1251-C
SDR-17M1-MIL and OPTIONAL STAND ZB1251-A
SDR-17M3-MIL and OPTIONAL STAND ZB1251-A
SDR-21M1-MIL and OPTIONAL STAND ZB1251-B
SDR-21M3-MIL and OPTIONAL STAND ZB1251-B

FSCM: 13401

NSN 7320-01-249-2482

CONTRACT NUMBER DLA400-87-M-G495

COLBORNE MANUFACTURING COMPANY
1879 CHESTNUT AVENUE
GLENVIEW, ILLINOIS 60025-1602



JUNE 1988

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      SDR-14M1-MIL and OPTIONAL STAND ZB1251-C
      SDR-14M3-MIL and OPTIONAL STAND ZB1251-C
      SDR-17M1-MIL and OPTIONAL STAND ZB1251-A
      SDR-17M3-MIL and OPTIONAL STAND ZB1251-A
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Robert Pluta

National Sales Manager

Colborne Manufacturing Co.
1879 Chestnut Avenue
Glenview, IL 60025-1602

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| 3-4 | Blank |
| 3-1 through 3-3 | 0 |
| 3-4 | Blank |
| 4-1 through 4-11 | 0 |

*Zero in this column indicates an original page.

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# LIST OF ILLUSTRATIONS

# SAFETY SUMMARY

## GENERAL SAFETY NOTICES.

The following general safety notices supplement the specific warnings and cautions appearing elsewhere in this manual. They are recommended precautions that must be understood and applied during operation and maintenance of the equipment covered herein. Should situations arise that are not covered in the general or specific safety precautions, the commanding officer or other authority will issue orders as deemed necessary to cover the situation.

## DO NOT REPAIR OR ADJUST ALONE.

Under no circumstances should repair or adjustment of energized equipment be attempted alone. The immediate presence of someone capable of rendering aid is required. Before making adjustments, be sure to protect against grounding. If possible, adjustments should be made with one hand, with the other hand free and clear of equipment. Even when power has been removed from equipment circuits, dangerous potentials may still exist due to retention of charges by capacitors. Circuits must be grounded and all capacitors discharged prior to attempting repairs.

## TEST EQUIPMENT.

Make certain test equipment is in good condition. If a test meter must be held, ground the case of the meter before starting measurement; do not touch live equipment or personnel working on live equipment while holding a test meter. Some types of measuring devices should not be grounded; these devices should not be held when taking measurements.

## INTERLOCKS.

Interlocks are provided for safety of personnel and equipment and should be used only for the purpose intended. They should not be battle shorted or otherwise modified except by authorized maintenance personnel. Do not depend solely upon interlocks for protection. Whenever possible, disconnect power at power distribution source.

# SECTION I
# UNCRATING AND SETUP

**1-1. UNCRATING AND SETUP.**

**1-2. FOR BENCH MACHINES AND MACHINES SHIPPED SEPARATELY FROM THEIR STANDS.**

a. Remove the top boards from the crate.

b. Remove the film or paper covering the machine.

c. Cut the straps and/or remove the bolts holding the machine to the bottom of the crate.

d. Lift the machine straight up out of the box. If preferred, the sides of the crate may be removed to gain better access to the machine.

**1-3. FOR STAND MOUNTED MACHINES SHIPPED ON THEIR STANDS.**

a. Remove the top and side boards from the crate.

b. Remove the film or paper covering the machine.

c. Remove the bolts holding the stand base to the bottom of the crate.

**1-4. FOR ALL MACHINES.**

a. Install the machine in its final position or temporarily secure it to a solid surface.

CAUTION

Do not connect power to the machine. Check to see that no power is present.

b. Remove the four shipping wires holding the scrapers in place.

c. Wipe off any dirt that may have accumulated during shipping. Use a soft cloth.

CAUTION

Never use abrasives to clean the gray rollers.

d. Check the nameplate for the correct voltage and frequency.

e. Turn the machine's power switch to "Off."

f. Plug the machine into a power source that matches the nameplate requirements.

g. Turn the power switch "On" and check for proper operation of the machine. Make sure the white plastic scrapers are in their proper positions and that the drive chain and belt are not rubbing their guards.

WARNING

Never operate the machine without all the guards in place.

Never put your hand or fingers in the dough hopper chute.

Never push dough under the guards with your fingers.

Always unplug the machine before attempting to clean it.

## SECTION II
## OPERATION

### 2-1. OPERATION.

### 2-2. MACHINE PREPARATION.

a. Make sure the dough chute and trays are dry.

b. Dust the transfer tray (39, Figure 4-1) with flour. Leave a little extra flour in the tray to dust the bottom side of the dough before it is sent through the second set of rollers.

c. Make your initial setting of the roller adjusting levers shown in Figure 2-1. Loosen the wing nut, move the handle, then tighten the wing nut. Dial numbers are for reference only.

**Figure 2-1. Setting Roller Adjusting Levers.**

### 2-3. DOUGH PREPARATION.

a. The size and shape of the dough ball affects the size and shape of the finished crust. For round pies, make the dough piece a fat sausage shape and flatten it slightly.

b. Dust the dough pieces with flour before putting them in the machine.

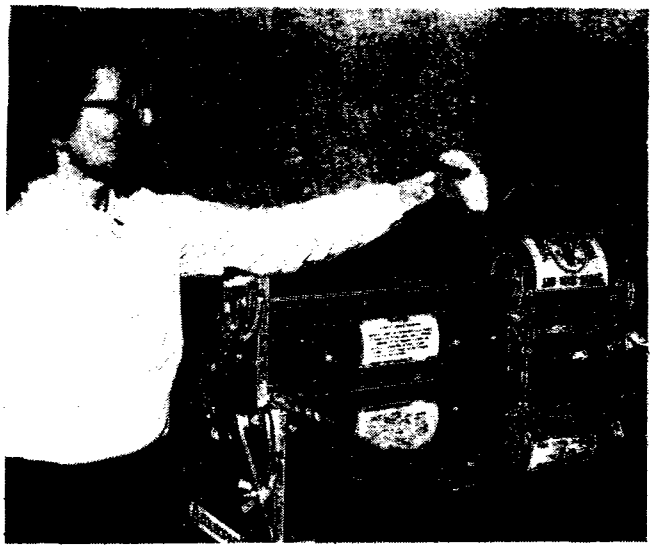

**Figure 2-2. Inserting Dough in Top Hopper Chute.**

### 2-4. MAKING A CRUST.

a. Place the dough piece in the top dough hopper chute (part of item 10) end first (Figure 2-2).

b. When the dough piece comes out in the transfer tray, it should be a little longer than the diameter of the pie and about 1/2 inch thick (Figure 2-3).

c. Dust the top of the dough with flour. There should be sufficient flour in the transfer tray to dust the bottom of the dough.

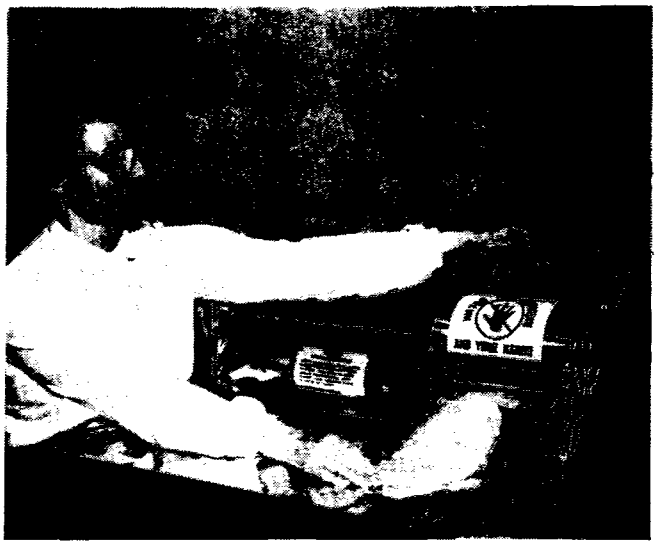

**Figure 2-3. Removing Dough Piece from Transfer Tray.**

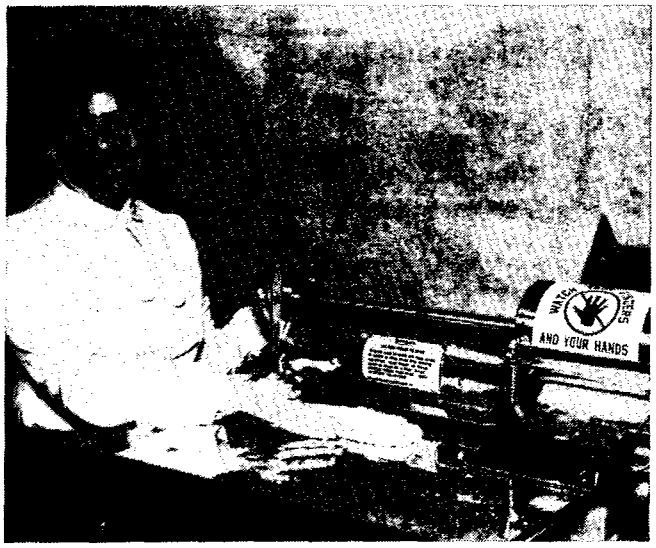


**Figure 2-4. Inserting Dough Piece Sideways for Second Pass.**

d. Turn the dough piece a quarter turn in the transfer tray and slide it sideways into the second pass rollers with the palm or the side of your hand (Figure 2-4).

WARNING

Never push the dough with the tips of your fingers.

**Figure 2-5. Removing Finished Dough.**

e. The second pass should produce a crust of the proper thickness and about round in shape. If the crust is too thin, open the lower rollers. If it is too thick, close the lower rollers. If the thickness is right but the crust is too short, make the dough piece bigger and open the upper rollers. If it is too long, make the dough piece smaller and close the upper rollers. When you get the results you want, it is a good idea to write down the setting numbers of the adjustment levers for future reference (Figure 2-5).

## 2-5. ATTACHMENTS.

## 2-6. PIE AND SWEET DOUGH ROLLER MOLDING BOARD.

a. A combination pie and sweet dough roller attachment (Figure 2-6) is used when added to the standard machine.

b. The roller is designed to roll pie crusts and sweet dough.

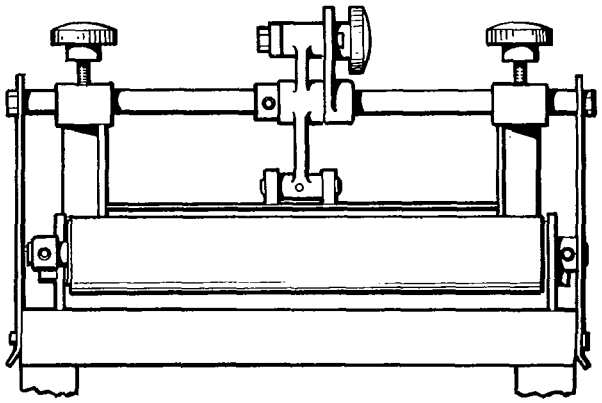

**Figure 2-6. Pie and Sweet Dough Attachment.**

## 2-7. PIE CRUST OPERATION.

a. Set the two thickness adjustment levers (Figure 2-1) for the thickness desired.

b. Place dough piece in the feed chute. Turn the dough piece 90 degrees as it comes through the first set of rollers onto the transfer plate.

c. Feed dough piece into second set of rollers. A uniformly thick pie crust will be dropped on the conveyor belt.

## 2-8. SWEET ROLL OPERATION.

a. To prepare dough for sheet bun, sweet roll, coffee cake, Danish, yeast raised donuts, and similar doughs, proceed as follows.

b. Set the thickness adjustment lever for the second set of rollers.

c. Slightly flatten the dough piece with your hands and gently feed it into the second set of rollers.

d. A perfectly rolled, uniformly thick dough sheet will be fed onto the moving conveyor belt without wrinkling or tearing.

e. From the conveyor belt, pie crust or sheeted dough pieces may be put on a work bench for final use. The conveyor is designed to fit over standard height work benches.

## 2-9. OPTIONAL MOLDER BOARD AND DRAG CHAIN.

a. The addition of an optional molder board and drag chain can be used to produce long rolls for use with hot dogs, weiners, poor boy, Italian, etc.

b. It also can be used to make white and specialty type breads.

c. To mold dough for rolls and bread, proceed as follows.

d. Put dough through first set of rollers to form an oval piece of dough.

e. The dough then enters the drag chain to form the roll and finally into the molding, sizing pressure board.

f. The thickness setting of the rollers is determined by the product size being produced. The various sizes of bread and rolls are achieved by using different changeable molding pressure boards which are available.

# SECTION III
# MAINTENANCE

## 3-1. CLEANING.

WARNING

Always turn off and disconnect power before doing any cleaning or maintenance.

NOTE

The machine should be cleaned after each use. Use a damp, soft cloth on the fixed parts of the machine.

CAUTION

Never use abrasives on gray, nylon covered rollers.

## 3-2. REMOVING SCRAPERS.

a. Remove the scrapers and scraper slides as follows. Reverse the procedures to install them.

(1) *Long top scraper and tip (24, Figure 4-1). Refer to Figure 3-1.*

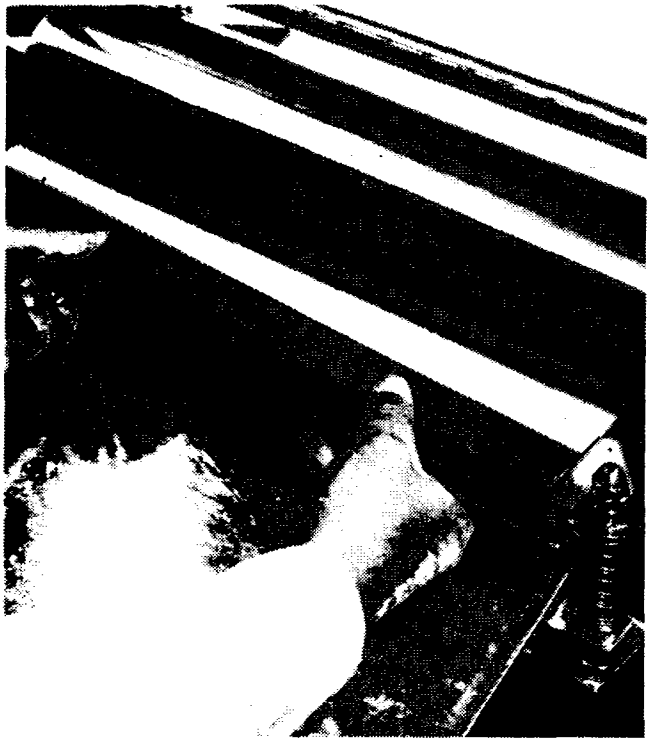

**Figure 3-1. Removing Long Top Scraper and Tip.**

(a) Grasp the scraper with both hands as shown.

(b) Press down to compress the springs and release the retainer.

(c) Shift sideways toward the drive guard (4, Figure 4-1).

(d) Swing the end opposite the guard away from the machine.

(e) Slide the scraper sideways away from the guard to free the second end. When you reinstall the scraper, make sure the long slot is toward the drive guard.

(2) *Long bottom scraper slide and tip (22, Figure 4-1). Refer to Figure 3-2.*

(a) Look under the slide before you attempt to remove it. Note the angles on the bottom of the slide that hold it in place.

(b) To remove the slide, grasp it with both hands, one on either side, and lift sharply to both compress the springs and lift the angles clear of the pins that support and retain the tray.

**Figure 3-2. Removing Long Bottom Scraper Slide and Tip.**

(c) Pull the tray toward you to remove it from the machine.

(3) *Short top scraper and tip (6, Figure 4-1). Refer to Figure 3-3.*

(a) Grasp the scraper with both hands as shown.

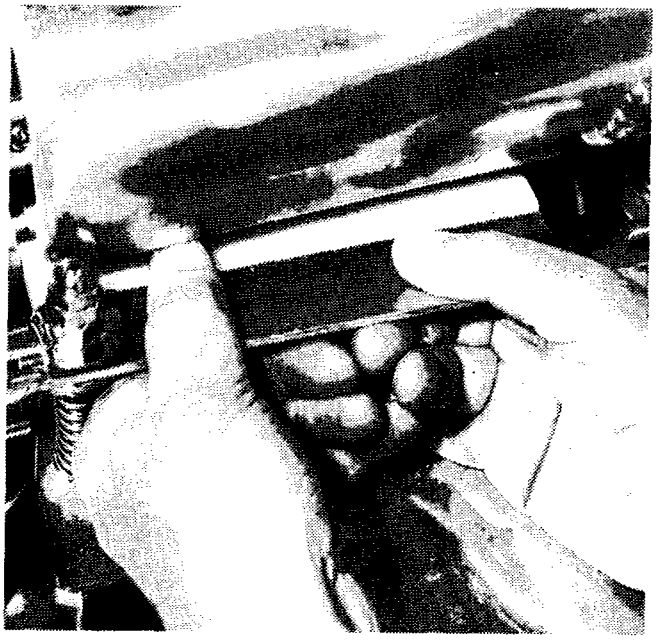

**Figure 3-3. Removing Short Top Scraper and Tip.**

(b) Press down to compress the springs and release the retainer.

(c) Shift the scraper toward the center of the machine.

(d) Swing the outboard end of the scraper away from the machine.

(e) Slide the scraper sideways away from the center of the machine to remove it. When you reinstall the scraper, make sure the long slot is toward the center of the machine.

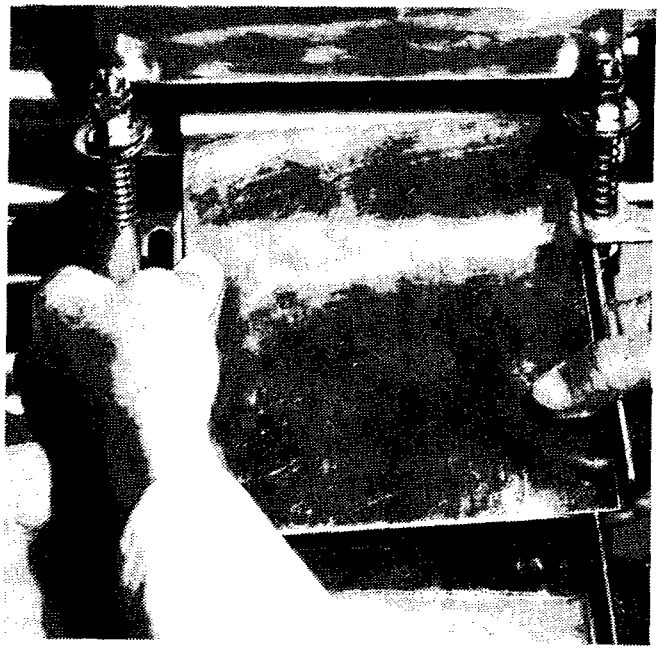

**Figure 3-4. Removing Short Bottom Scraper Slide.**

(4) *Short bottom scraper slide and tip (5, Figure 4-1). Refer to Figures 3-4 and 3-5.*

(a) Grasp the scraper with both hands as shown.

(b) Lift up sharply to compress the springs and release the retainer. At the same time, raise the end of the slide so it will clear the lip of the transfer tray.

(c) Swing the INBOARD end of the scraper TOWARD the roller.

(d) Slide the scraper sideways toward the drive guard until the inboard end of the scraper clears the stud assembly.

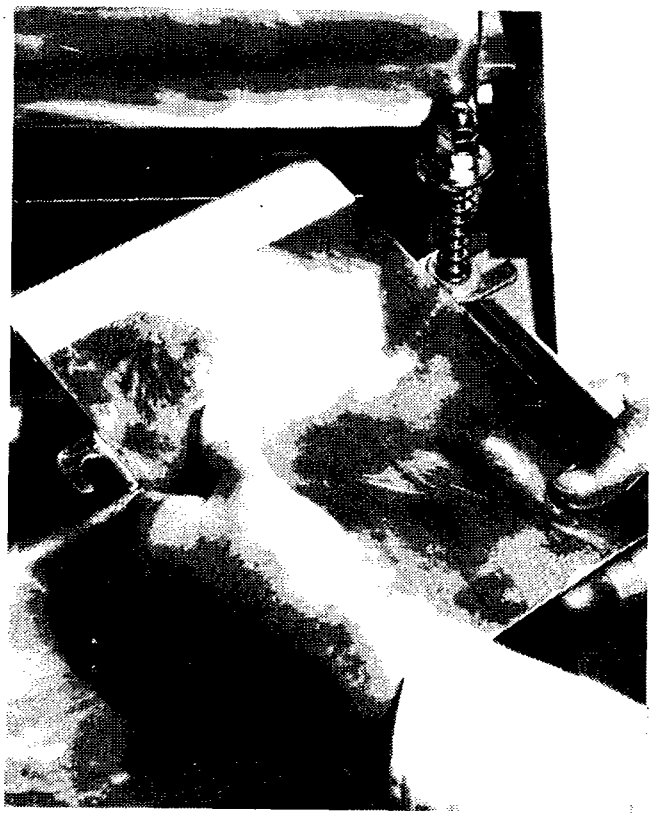

**Figure 3-5. Removing Short Bottom Scraper Slide and Tip.**

(e) Swing the inboard end of the scraper away from the roller until the scraper is in front of the stud assembly.

(f) Slide the scraper toward the center of the machine to remove it.

(g) When reinstalling the scraper, you must lift the retainer plate on the inboard stud assembly so that the hooked end of the scraper can slide under the plate and around the stud.

## 3-3. GENERAL NOTES ON DISASSEMBLY.

a. The white nylon scraper tips are easily removed from the scraper bar for cleaning by sliding them off with your fingers.

CAUTION

Do not loosen acorn nuts or the stud assemblies. They are factory set to assure proper contact of the scraper tip on the roller.

b. When removing the white scraper tip, notice position of smooth side of tip.

CAUTION

When installing the white scraper tip, make sure the smooth side of the tip (not the stepped side) will be toward the dough during operation.

## 3-4. LUBRICATION.

a. All rotating parts have sealed bearings which are permanently lubricated. The bearings do not require lubrication.

b. Add a drop or two of medium weight machine oil to the oil cup on the idler arm (11C, Figure 4-1) every 100 hours. The cup is located above the shaft of the main drive pulley and slightly under the aluminum guard and dough hopper casting (10, Figure 4-1).

# SECTION IV
# SERVICE AND PARTS

**4-1. SERVICE.**

a. Properly cared for, your Colborne dough roller will give long, trouble-free service. If spare parts are required, order them from the factory.

b. When ordering parts, always include the machine model number and serial number.

**4-2. ILLUSTRATED PARTS BREAKDOWN.**

**4-3. INTRODUCTION.**

a. The introduction consists of general information and instructions regarding the use of the Illustrated Parts Breakdown.

b. The following paragraphs describe and define the use of the parts list. Proper usage can aid the user in obtaining the correct part for his machine.

**4-4. GROUP ASSEMBLY PARTS LIST.**

a. The Group Assembly Parts List contains a breakdown of the equipment into its assemblies, subassemblies and detail parts. Each assembly listed is followed immediately by its component parts properly indented to show their relationship to the assembly. An assembly listed in column one has its detail parts listed in column two. If a detail part is in turn an assembly, its detail parts are listed in column three, etc.

b. All parts of the equipment are listed except those parts which lose their identity by being soldered, brazed, welded, riveted, swaged, cemented, potted, sealed or otherwise permanently fastened to other parts or assemblies and not subject to disassembly.

**4-5. EXPLANATION OF COLUMNS USED IN THE GROUP ASSEMBLY PARTS LIST.** The seven columns used for the listing of information in the Group Assembly Parts List are explained in the following paragraphs.

**4-6. FIGURE AND INDEX NUMBER COLUMN.** The figure and index numbers key the parts breakdown list to the applicable illustration. The number preceding the dash is the figure number of the illustration. This figure number appears at the beginning of each page of listing. The number following the dash is the index number of a part appearing in the illustration. The index numbers are arranged in sequence and generally reflect the order of disassembly.

**4-7. COLBORNE COMPANY PART NUMBER COLUMN.** This column contains the Colborne Company Parts Number. Part numbers are used to identify all parts to which Colborne assigns a part number. Exceptions to the above are parts that do not have a valid part number and parts that are not serviced as separate pieces and are available only as a part of a higher assembly. The notation "NO NUMBER" or "NSS" respectively appears in the column for these parts.

**4-8. VENDOR PART NUMBER COLUMN.** This column lists parts which are vendor parts. The number represents the part number of the actual manufacturer.

**4-9. VENDOR FSCM COLUMN.** This column lists the Federal Supply Code for Manufacturer's (FSCM) five-digit code used to identify the actual manufacturer of the part. All part numbers in the Colborne part number column have the five digit code 13401 which identifies Colborne Company.

**4-10. DESCRIPTION COLUMN.** This column identifies the parts being listed by noun name followed by modifiers when applicable. When appropriate, the column also includes descriptive data such as dimensions, material, etc. It may also include a reference to the previous listing of items labeled "REF" as explained in paragraph 4-11.

**4-11. UNITS PER ASSEMBLY COLUMN.** This column indicates the quantity of parts required for the assembly or subassembly in which that part appears. "REF" (reference) is used in this column when the part has been previously listed and illustrated, with proper quantity, and is relisted for reference purposes only. The quantities listed in this column are, in the case of assemblies, the total quantity used at the location indicated. In the case of components of assemblies, the quantities listed indicate the number of parts used in one assembly. The quantities specified are not necessarily the total used in the equipment. The designation "NSS" denotes parts not procurable as separate items and "AR" denotes that the quantity of parts used is as required.

**4-12. USABLE ON CODE COLUMN.** The following code letters are used in the column "Usable On Code" and refer to components used on various models with stated serial numbers. Parts without code letters means these parts are common to all models.

| CODE LETTER | MODEL |
|---|---|
| A | DR-14-MIL |
| B | DR-17-MIL |
| C | DR-21-MIL |
| D | SDR-14M1-MIL |
| D | SDR-14M3-MIL |
| E | SDR-17M1-MIL |
| E | SDR-17M3-MIL |
| F | SDR-21M1-MIL |
| F | SDR-21M3-MIL |

**4-13. LIST OF MANUFACTURERS CODES.** The following list is a compilation of vendor codes with names and addresses of suppliers for purchased and vendor parts listed in this publication. The Codes are in accordance with the Federal Supply Code for Manufacturers Cataloging Handbook H4-1 and are arranged in numerical order.

| Code | Vendor's Name and Address |
|---|---|
| 01599 | Reid Tool Supply Co.<br>Muskegore, ME 49444 |
| 02989 | General Electric Co.<br>Salem, VA 24153 |
| 25795 | W.W. Grainger, Inc.<br>Chicago, IL 60648 |
| 38151 | Marathon Electric Corp.<br>Wausau, WI 54402 |
| 53268 | Shatz Mfg. Co.<br>Poughkeepsie, NY 12601 |
| 61233 | Daido Corp.<br>Piscataway, NJ 08854 |
| 71176 | Browning Mfg. Div.<br>Maysville, KY 41056 |
| 96906 | Military Standards |

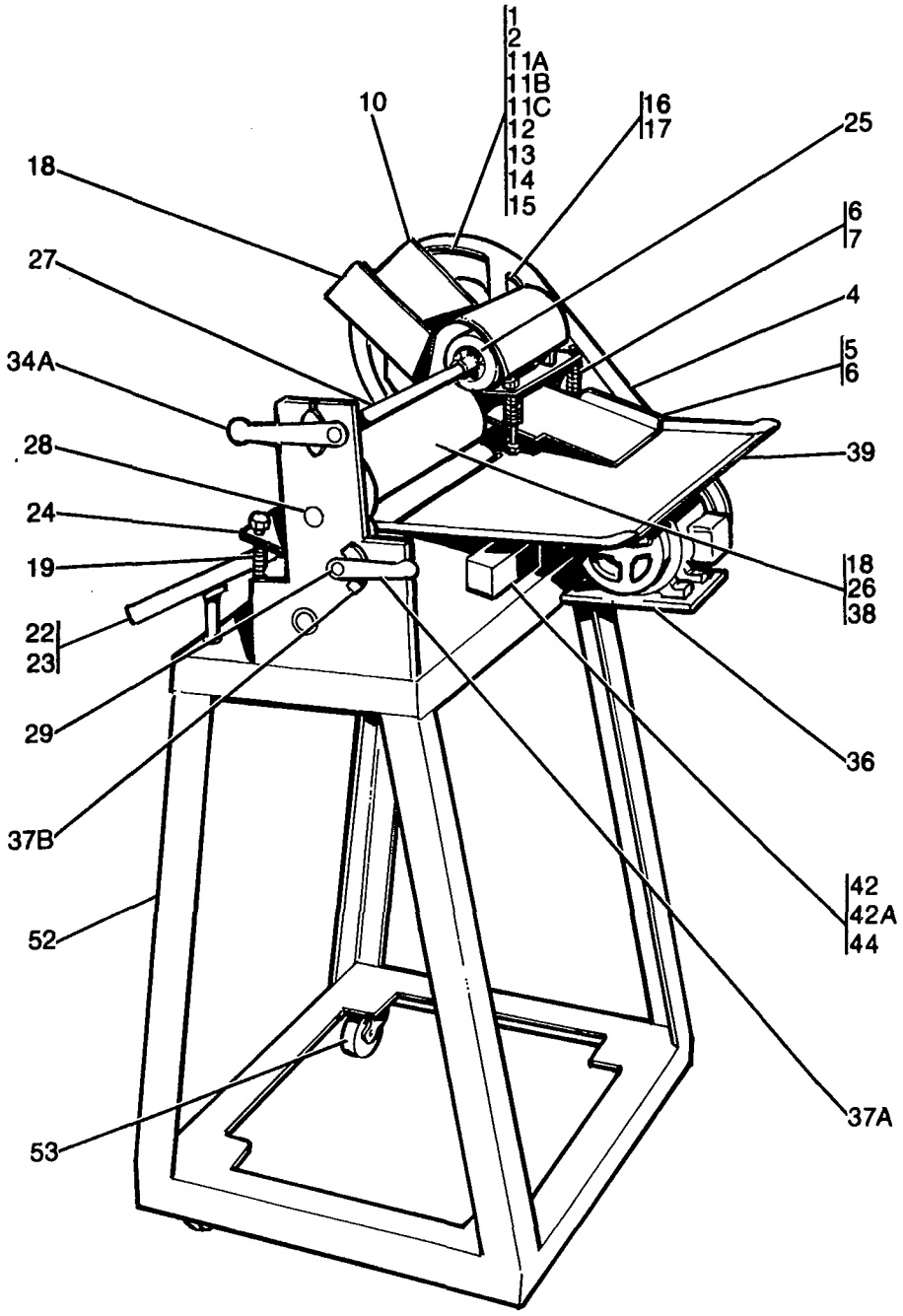


**Figure 4-1. Model DR-14-MIL, DR-17-MIL and DR-21-MIL Dough Roller (Sheet 1 of 3).**

| FIG. & INDX NO. | COLBORNE PART NO. | VENDOR PART NO. | VENDOR FSCM | DESCRIPTION | UNITS PER ASSY. | USABLE ON CODE |
|---|---|---|---|---|---|---|
| 4-1- | No Number | | | DOUGH AND PIZZA ROLLER | REF | |
| -1 | C220-15 | BK12 | 71176 | PULLEY, Driven, 12 in. OD | 1 | ABC |
| | C220-13 | BK19 | 71176 | PULLEY, Driven, 19 in. OD | 1 | DEF |
| -2 | C161-05 | | | BELT, Drive, 5L580 | 1 | ABC |
| | C161-06 | | | BELT, Drive, 5L750 | 1 | DEF |
| -3 | C220-14 | BK2.9 | 71176 | PULLEY, Drive, 2.9 in. OD | 1 | |
| -4 | B1092-1 | | | GUARD, Belt | 1 | ABC |
| | B1114 | | | GUARD, Belt | 1 | DEF |
| -5 | B1147 | | | SLIDE, Scraper, top roller | 1 | |
| -6 | B1201-A | | | TIP, Scraper, top roller | 2 | |
| -7 | B1144 | | | SCRAPER, Top roller | 1 | |
| -8 | C148-31 | | | SPRING, Top scraper | 2 | |
| -10 | B1091 | | | HOPPER, Dough feed | 1 | |
| -11A | B1031 | | | STUD, Idler roller | 1 | |
| -11B | B1029 | | | ROLLER, Idler | 1 | |
| -11C | B1028-R | | | ARM, Idler | 1 | |
| -12 | C113-01 | | | SPRING, Chain takeup | 1 | |
| -13 | C105-15 | | | RING, Retaining, idler arm | 1 | |
| -14 | B1017 | | | SPROCKET, Drive | 1 | |
| -15 | B1025 | | | BRACKET, Drive sprocket | 1 | |
| -16 | C188-22 | RC41N-72 | 61233 | CHAIN, Roller, RC41N, 72 pitches | 1 | ABC |
| | C188-24 | RC41N-88 | 61233 | CHAIN, Roller, RC41N, 88 pitches | 1 | DE |
| -17 | B1026 | | | SPROCKET, 20 teeth | 3 | |
| -18 | C117-01 | BR9940 | 53268 | BEARING | 8 | ABC |
| | C117-01 | BR9940 | 53268 | BEARING | 12 | DEF |
| -19 | C148-02 | | | SPRING, Roller | 2 | |
| -22 | B1143-AR | | | SLIDE, Scraper, bottom | 1 | ABC |
| | B1138 | | | SLIDE, Scraper, bottom | 1 | D |
| | B1139 | | | SLIDE, Scraper, bottom | 1 | E |
| | B1149 | | | SLIDE, Scraper, bottom | 1 | F |
| -23 | B1201-B | | | TIP, Scraper, bottom and center roller | 2 | AD |
| | B1201-C | | | TIP, Scraper, bottom and center roller | 2 | BE |
| | B1201-D | | | TIP, Scraper, bottom and center roller | 2 | CF |
| -24 | B1141-AR | | | SCRAPER, Center roller | 1 | ABC |
| | B1141-DR | | | SCRAPER, Center roller | 1 | D |
| | B1141-ER | | | SCRAPER, Center roller | 1 | E |
| | B1141-FR | | | SCRAPER, Center roller | 1 | F |

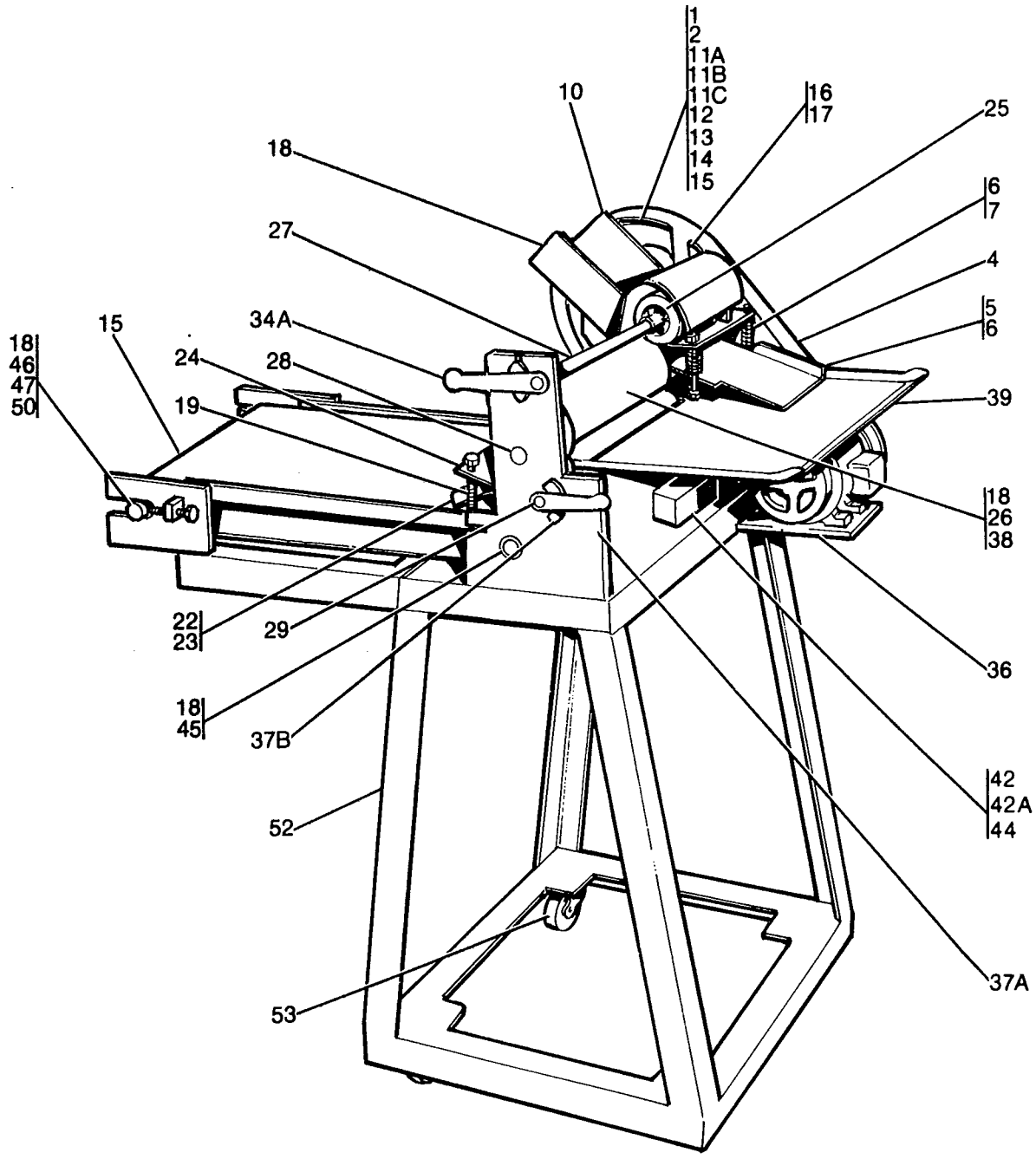


**Figure 4-1. SDR-14MI & 3-MIL, SDR-17MI & 3-MIL and SDR -21MI & 3-MIL (Sheet 2 of 3).**

| FIG. & INDX NO. | COLBORNE PART NO. | VENDOR PART NO. | VENDOR FSCM | DESCRIPTION | UNITS PER ASSY. | USABLE ON CODE |
|---|---|---|---|---|---|---|
| 4-1-25 | B1240-AN# | | | ROLLER, Nylon coated, 7 in. long | 1 | |
| -26 | B1240-BN# | | | ROLLER, Nylon coated, 21 in. long | 2 | AD |
| | B1240-CN# | | | ROLLER, Nylon coated, 24 in. long | 2 | BE |
| | B1240-DN# | | | ROLLER, Nylon coated, 28 in. long | 2 | CF |
| -27 | B1016-D | | | SHAFT, Top roller | 1 | AD |
| | B1016-E | | | SHAFT, Top roller | 1 | BE |
| | B1016-F | | | SHAFT, Top roller | 1 | CF |
| -28 | B1013-D | | | SHAFT, Center roller | 1 | AD |
| | B1013-E | | | SHAFT, Center roller | 1 | BE |
| | B1013-F | | | SHAFT, Center roller | 1 | CF |
| -29 | B1014-D | | | SHAFT, Bottom roller | 1 | AD |
| | B1014-E | | | SHAFT, Bottom roller | 1 | BE |
| | B1014-F | | | SHAFT, Bottom roller | 1 | CF |
| -34A | B1105 | | | HANDLE, Upper adjustment | 1 | |
| -34B | B1100 | | | GAUGE, Thickness, upper | 1 | |
| -36 | C134-18 | 56C17F5512 | 38151 | MOTOR, 115/208-230/60/1, 1/3 HP | 1 | AB |
| | C134-17 | 56C17F5541 | 38151 | MOTOR, 115/208-230/60/1, 1/2 HP | 1 | CDEF |
| -37A | C12-E | | | HANDLE, Lower adjustment | 1 | |
| -37B | B1101-A | | | GAUGE, Thickness, upper | 1 | |
| -38 | B1070 | | | GUARD, Center roller | 1 | AD |
| | B1071 | | | GUARD, Center roller | 1 | BE |
| | B1072 | | | GUARD, Center roller | 1 | CF |
| -39 | B1083-1 | | | TRAY, Dough | 1 | AD |
| | B1104-AD | | | TRAY, Dough | 1 | BE |
| | B1104-BR | | | TRAY, Dough | 1 | CF |
| -42 | CR101Y1 | 214510 | 02989 | SWITCH, Motor starter | 1 | |
| -42A | 7285-V | | | ENCLOSURE, Switch | 1 | |
| -44 | 1W614 | | 25795 | CORD, 3 wire, with plug | 1 | |
| -45 | B1108-1 | | | ROLLER, Conveyor drive | 1 | D |
| | B1108-2 | | | ROLLER, Conveyor drive | 1 | E |
| | B1108-3 | | | ROLLER, Conveyor drive | 1 | F |
| -46 | MS28742-A | | 96906 | ROLLER, Conveyor idler | 1 | D |
| | MS28742-B | | 96906 | ROLLER, Conveyor idler | 1 | E |
| | MS28742-C | | 96906 | ROLLER, Conveyor idler | 1 | F |
| -47 | B1126-D | | | SHAFT, Idler roller | 1 | D |
| | B1126-E | | | SHAFT, Idler roller | 1 | E |
| | B1126-A | | | SHAFT, Idler roller | 1 | F |
| -48 | B1117-AR* | | | TRAY, Belt, 30 in. conveyor (Model 1) | 1 | D |
| | B1117-DR* | | | TRAY, Belt, 42 in. conveyor (Model 3) | 1 | D |
| | B1117-BR* | | | TRAY, Belt, 30 in. conveyor (Model 1) | 1 | E |
| | B1117-ER* | | | TRAY, Belt, 42 in. conveyor (Model 3) | 1 | E |
| | B1117-CR* | | | TRAY, Belt, 30 in. conveyor (Model 1) | 1 | F |
| | B1117-FR* | | | TRAY, Belt, 42 in. conveyor (Model 3) | 1 | F |

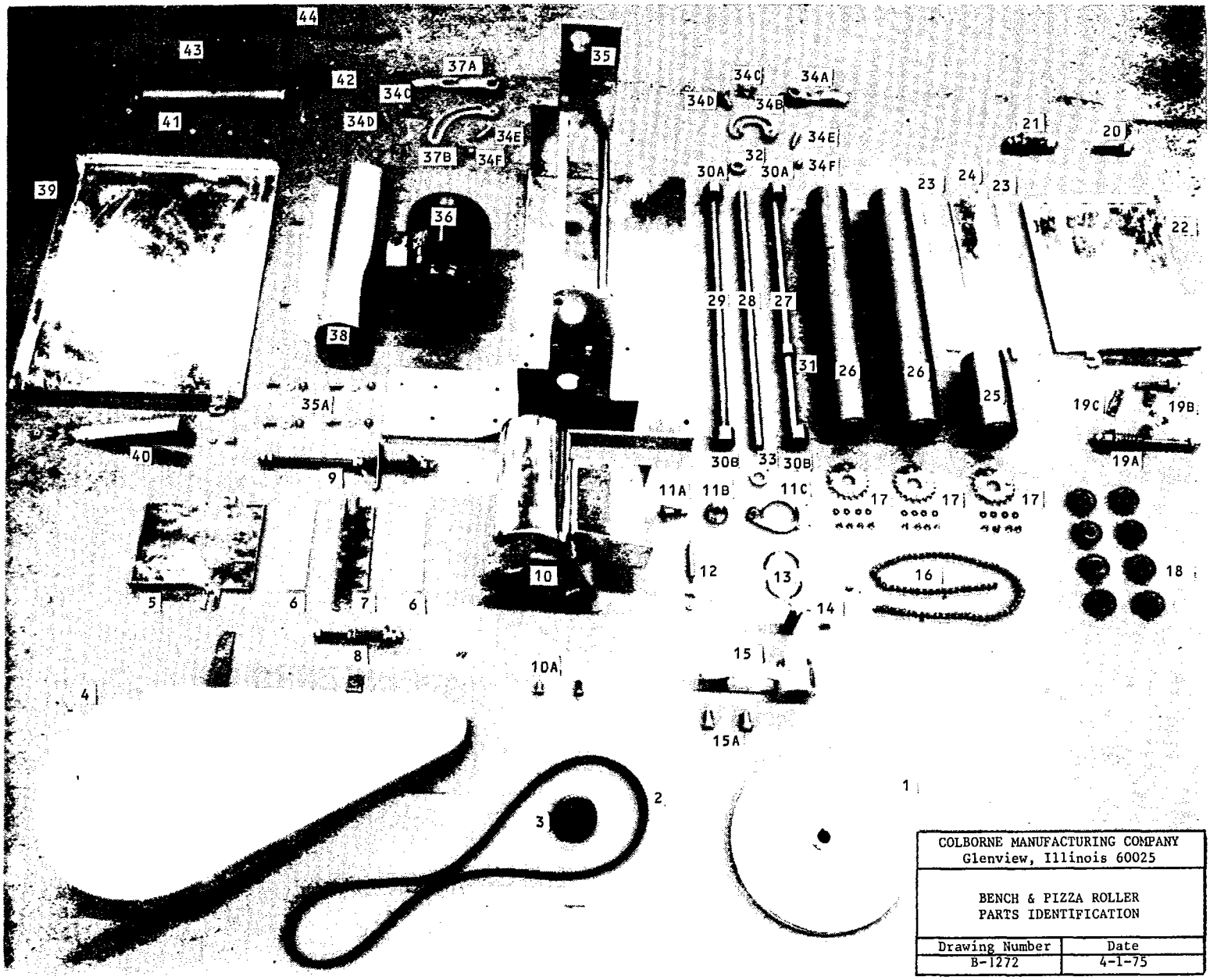


**Figure 4-1. Dough Rollers (Sheet 3 of 3).**

| FIG. & INDX NO. | COLBORNE PART NO. | VENDOR PART NO. | VENDOR FSCM | DESCRIPTION | UNITS PER ASSY. | USABLE ON CODE |
|---|---|---|---|---|---|---|
| 4-1-49 | C118-01 | | | SCREW, Adjust, belt tension | 2 | DEF |
| -50 | C121-01 | | | COLLAR | 2 | DEF |
| -51 | C114-61* | | | BELT, 30 in. conveyor (Model 1) | 1 | D |
| | C114-62* | | | BELT, 42 in. conveyor (Model 3) | 1 | D |
| | C114-59* | | | BELT, 30 in. conveyor (Model 1) | 1 | E |
| | C114-63* | | | BELT, 42 in. conveyor (Model 3) | 1 | EF |
| | C114-60* | | | BELT, 30 in. conveyor (Model 1) | 1 | F |
| -52 | B1044-A | | | STAND, Optional, order separately | 1 | A |
| | B1044-B | | | STAND, Optional, order separately | 1 | B |
| | B1044-C | | | STAND, Optional, order separately | 1 | C |
| | ZB1251-C | | | STAND, 30 in. conveyor (Model 1) | 1 | D |
| | ZB1251-J | | | STAND, 42 in. conveyor (Model 3) | 1 | D |
| | ZB1251-A | | | STAND, 30 in. conveyor (Model 1) | 1 | E |
| | ZB1251-G | | | STAND, 42 in. conveyor (Model 3) | 1 | E |
| | ZB1251-B | | | STAND, 30 in. conveyor (Model 1) | 1 | F |
| | ZB1251-H | | | STAND, 42 in. conveyor (Model 3) | 1 | F |
| -53 | C128-06 | | | WHEEL, Caster | 4 | |
| | | | | NOTE: Part numbers marked with an asterisk (*) are dual listings for both 30 in. conveyors (Model 1) and 42 in. conveyors (Model 3). Read item description to determine part required for your machine. | | |
| | | | | NOTE: Part numbers marked with # define gray nylon coated rollers. The "N" at the end of the part number stands for "nylon." Early machines used plain steel rollers. DO NOT MIX PLAIN ROLLERS WITH NYLON COATED ROLLERS. To order plain steel rollers, drop the "N" from the part number and specify "Plain Steel Roller." | | |

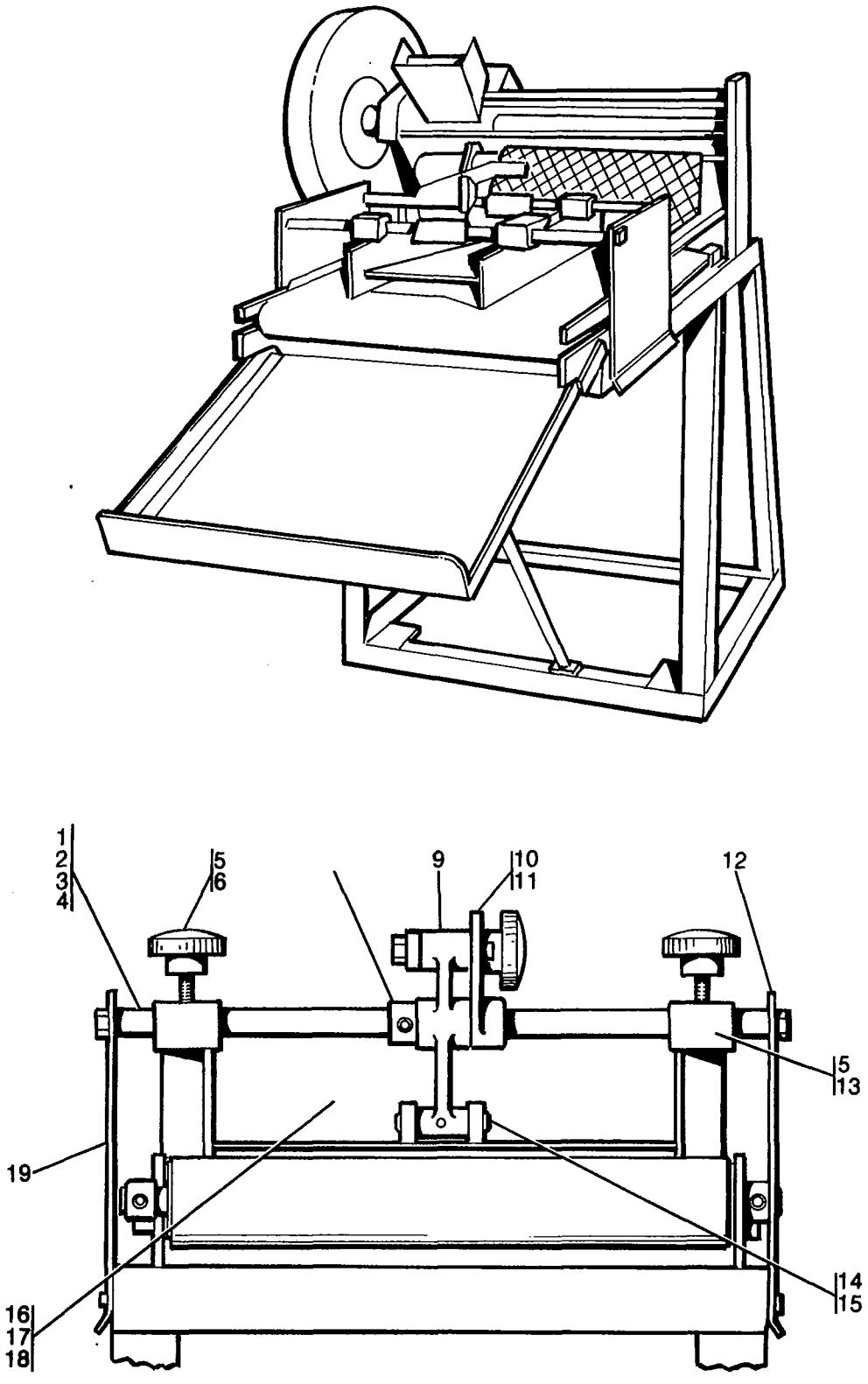


**Figure 4-2. Pie and Sweet Dough Attachment.**

| FIG. & INDX NO. | COLBORNE PART NO. | VENDOR PART NO. | VENDOR FSCM | DESCRIPTION | UNITS PER ASSY. | USABLE ON CODE |
|---|---|---|---|---|---|---|
| 4-2- | No Number | | | PIE AND SWEET DOUGH ATTACHMENT | | |
| -1 | MS28728-4 | | 96906 | SPACER, Moldboard, 14 in. machine | 2 | |
| -2 | MS28728-5 | | 96906 | SPACER, Moldboard, 17 in. machine | 2 | |
| -3 | MS28728-6 | | 96906 | SPACER, Moldboard, 21 in. machine | 2 | |
| -4 | | MS90725-107 | 96906 | SCREW, Cap hex | 4 | |
| -5 | PFK-84 | | 01599 | KNOB, Fluted | 2 | |
| -6 | MS28730-B | | 96906 | BOARD, Side, LH | 1 | |
| -7 | B1015 | | | COLLAR, Retainer | 3 | |
| -8 | COML | | | SETSCREW, Soc. hd., 3/8-16 x 3/8 lg | 3 | |
| -9 | MS28732 | | | ARM, Pressure pivot | 2 | |
| -10 | MS28731 | | | ARM, Pivot, adjusting dial | 1 | |
| -11 | COML | | | SETSCREW, Soc. hd., 5/16-18 x 3/8 lg | 1 | |
| -12 | B1222 | | | PLATE, Side, RH | 1 | |
| -13 | MS28729-B | | 96906 | BOARD, Side, RH | 1 | |
| -14 | MS28734 | | 96906 | PIN, Pressure board | 2 | |
| -15 | COML | | | SETSCREW, Soc. hd., 1/4-20 x 5/16 lg | 1 | |
| -16 | MS28735-J | | 96906 | BOARD, Molder pressure, 14 in. wd | 1 | |
| -17 | MS28735-M | | 96906 | BOARD, Molder pressure, 17 in. wd | 1 | |
| -18 | MS28735-K | | 96906 | BOARD, Molder pressure, 15 in. wd | 1 | |
| -19 | B1221 | | | PLATE, Side, LH | 1 | |

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8. GENERAL COMMENTS

9. RECOMMENDED CHANGES TO PUBLICATION

| PAGE NO. A. | PARA-GRAPH B. | LINE NO. C. | FIG. NO. D. | TABLE E. | F. RECOMMENDED CHANGES AND REASONS |
|---|---|---|---|---|---|
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