

MASTER
THE ATWOOD
SCALE - O - MATIC
DOUGH DIVIDER

MODEL: S300

OPERATIONS AND SAFETY
MANUAL

INCLUDING PARTS CATALOG
AND MAINTENANCE INSTRUCTIONS

MODEL No. _____

SERIAL No. _____



CAUTION:

DO NOT OPERATE, CLEAN OR SERVICE THIS MACHINE BEFORE YOU READ THIS MANUAL, AND ARE FAMILIAR WITH THE SAFETY INSTRUCTIONS IN THIS MANUAL AND THOSE ON THE LABELS ON THE MACHINE. KEEP THIS MANUAL AND OTHER MATERIALS DELIVERED WITH THE MACHINE, ACCESSIBLE TO THE OPERATORS FOR EASY REFERENCE DURING USE.



IF YOU SHOULD HAVE ANY (?)
QUESTIONS ABOUT GUARDS OR
PLACEMENT CALL (708) 841-0959
or visit our web site.

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OWNERS RESPONSIBILITY

NOTE:

THE PARTS AND EQUIPMENT DESCRIBED IN THIS MANUAL MAY BE COVERED BY ONE OR MORE U.S. AND FOREIGN PENDING PATENTS.



TO MAINTAIN MACHINE AND USER SAFETY, THE RESPONSIBILITY OF THE OWNER IS TO READ AND FOLLOW THESE INSTRUCTIONS AND TO ENSURE THAT ALL OPERATORS UNDERSTAND AND FOLLOW THESE AND OTHER SAFETY INSTRUCTIONS IN THIS MANUAL.

- FOLLOW ALL INSTALLATION INSTRUCTIONS.
- MAKE SURE INSTALLATION CONFORMS TO ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES, RULES AND REGULATIONS SUCH AS STATE AND FEDERAL OSHA REGULATIONS AND ELECTRICAL CODES.
- CAREFULLY CHECK THE UNIT FOR CORRECT INITIAL FUNCTION.
- READ AND FOLLOW THE SAFETY INSTRUCTIONS. KEEP THEM READILY AVAILABLE FOR MACHINE OPERATORS.
- MAKE CERTAIN ALL OPERATORS ARE PROPERLY TRAINED, KNOW HOW TO SAFELY AND CORRECTLY OPERATE THE UNIT AND ARE PROPERLY SUPERVISED.
- ALLOW UNIT OPERATION ONLY WITH ALL PARTS INCLUDING SAFETY EQUIPMENT, IN PLACE AND OPERATING SAFELY.
- CAREFULLY INSPECT THE UNIT ON A REGULAR BASIS AND PERFORM ALL MAINTENANCE AS REQUIRED.
- SERVICE AND MAINTAIN THE UNIT ONLY WITH AUTHORIZED OR APPROVED REPLACEMENT PARTS.
- KEEP ALL INSTRUCTIONS PERMANENTLY WITH THE UNIT ALONG WITH ALL DECALS AND WARNING LABELS ON THE UNIT CLEAN AND VISIBLE.

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IMPORTANT:

A.M. MANUFACTURING Co. RESERVES THE RIGHT TO MAKE CHANGES IN DESIGN, SPECIFICATIONS OR MANUFACTURING TO IMPROVE THEIR PRODUCTS WITHOUT NOTICE AND WITHOUT OBLIGATION TO CHANGE OR IMPROVE PREVIOUSLY BUILT PRODUCTS INCLUDING MANUALS AND CATALOGS.

ONLY USE FACTORY SUPPLIED REPLACEMENT PARTS TO MAINTAIN MACHINE SAFETY, PERFORMANCE AND SANITARY CONDITIONS. USE OF NON-APPROVED PARTS MAY VOID MANUFACTURERS WARRANTY.

KNOW YOUR UNIT. COMPARE DIAGRAMS IN THIS MANUAL WITH THE UNIT BEFORE STARTING SERVICE, TO OBTAIN MAXIMUM SAFETY AND PERFORMANCE.

TO ORDER REPLACEMENT PARTS:
TURN TO PAGE 39 OF THIS MANUAL.



WARNING:

THIS MANUAL CONTAINS CRITICAL SAFETY INSTRUCTIONS. READ AND FOLLOW THEM CAREFULLY. FAILURE TO FOLLOW WARNING AND INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY. THE OWNER IS RESPONSIBLE FOR MAINTAINING THE UNIT, ITS INSTRUCTIONS AND DECALS FOR OPERATION REFERENCE. FOR ADDITIONAL COPIES CONTACT A.M. MANUFACTURING: (800)342-6744.

OPERATIONS AND SAFETY MANUAL

INCLUDING PARTS CATALOG

**READ AND FAMILIARIZE YOURSELF WITH THIS MANUAL BEFORE OPERATING THIS MACHINE
FOLLOW INSTRUCTIONS DURING USE**

INTRODUCTION

THE SCALE-O-MATIC MODEL – S300 DOUGH DIVIDER IS DESIGNED TO GIVE YOU OPTIMUM TIME AND LABOR SAVING SERVICE WITH A SPEED OF APPROXIMATELY 2000 PIECES PER HOUR. THE S300 CAN ACCURATELY SCALE FROM 1 oz. TO $32 \pm \frac{1}{4}$ oz. WITH THE PROPER ATTACHMENTS. NEW AND CURRENT EMPLOYEES CAN BE TAUGHT TO OPERATE THIS MACHINE EFFICIENTLY AND SAFELY IN A SHORT PERIOD OF TIME. WE URGE YOU TO STUDY THIS OPERATION AND SAFETY MANUAL FOR FULL BENEFITS....

CAUTION:



ALL OPERATORS MUST BE FULLY TRAINED AND INSTRUCTED IN SAFETY PROCEDURES BEFORE BEGINNING PRODUCTION.

SPECIFICATIONS

HOPPER CAPACITY	100 lbs.
PRODUCTION RATE	EXTENDED HOPPER (140 lbs. CAPACITY) 2000 PIECES PER HOUR
HEIGHT	58"
LENGTH	64"
WIDTH	24"
SHIPPING WEIGHT DIVIDER	1000 lbs. 3 PHASE, 2 H.P. MOTOR (STANDARD) SINGLE PHASE, 1½ H.P. MOTOR DOUBLE SHEAVE BELT DRIVE 1 PHASE, 1/4 H.P. MOTOR
SMALL CONVEYOR ROUNDER SCREW	3 PHASE, 1 H.P. MOTOR (STANDARD) SINGLE PHASE, ¾ H.P. MOTOR
RECIPROCAL MOTION MECHANICAL DIVIDER AUTOMATIC SPRING PRESSURE, SELF ADJUSTABLE	
EXTRA DIVIDER CUPS AVAILABLE AS OPTIONAL EQUIPMENT.	
	NO. 1 DIVIDING CUP 1 TO 2 oz. NO. 2 DIVIDING CUP 2 TO 4 oz. NO. 3 DIVIDING CUP 4 TO 10 oz NO. 5 DIVIDING CUP 10 TO 32 oz
VOLTAGES:	3 PHASE, 208 - 230 VOLTS (STANDARD) 3 PHASE, 380 – 480 VOLTS SINGLE PHASE, 208/220 VOLT (OPTIONAL) VARIABLE SPEED DIVIDER (OPTIONAL)

INSTALLATION INSTRUCTIONS

LOCATION:

SELECT LOCATION CAREFULLY. THE AREA SHOULD PROVIDE THE OPERATOR WITH ENOUGH SPACE TO USE THE EQUIPMENT IN A SAFE MANNER. THE FLOOR AREA SELECTED SHOULD BE EASY TO CLEAN AND SHOULD BE FREE OF OIL, GREASE, ETC. AVOID AREAS WHERE BYSTANDERS AND CUSTOMERS MAY BE PRESENT.



CAUTION

PROPER UNIT INSTALLATION IS NECESSARY FOR SAFE AND EFFICIENT OPERATION. PROPER INSTALLATION ALSO HELPS PROTECT THE UNIT FROM DAMAGE AND MAKES SERVICE EASIER.

SAFETY

THIS MACHINE IS DESIGNED TO PROVIDE FOR SAFE OPERATION IF NORMAL OPERATING PROCEDURES AND SAFETY MESSAGES LOCATED ON THE MACHINE AND IN THIS MANUAL ARE FOLLOWED.



THIS IS A SAFETY ALERT SYMBOL. YOU WILL FIND IT ON VARIOUS SAFETY LABELS ON THE MACHINE AND IT WILL ALSO APPEAR IN THIS MANUAL WHEREVER SAFETY MESSAGES ARE GIVEN.

GET FAMILIAR WITH SIGNAL WORDS:

CAUTION, WARNING & DANGER

CAUTION:

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY. IT MAY ALSO BE USED TO ALERT AGAINST UNSAFE PRACTICES.

WARNING:

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

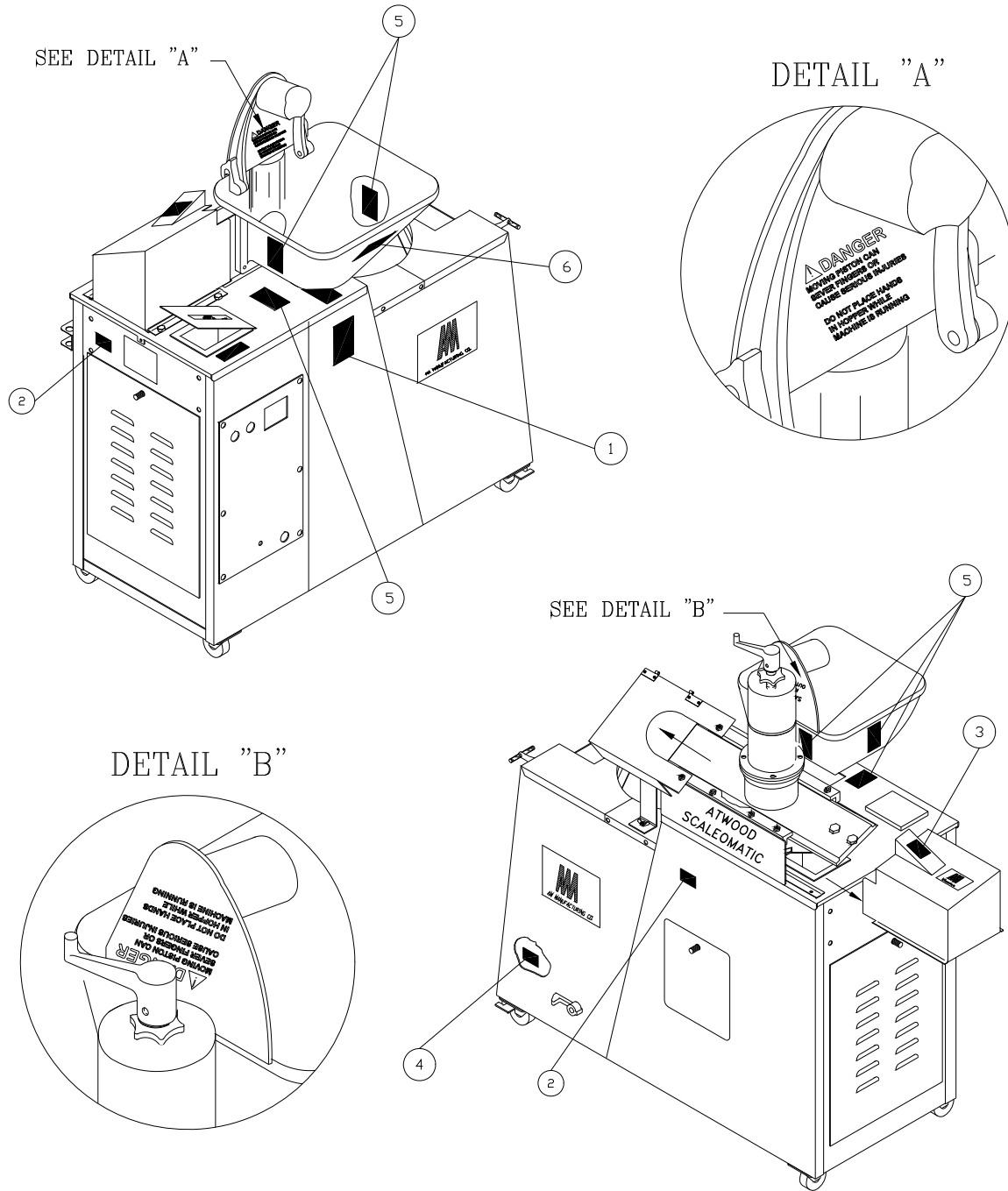
DANGER:

INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY. THIS SIGNAL WORD IS TO BE LIMITED TO THE MOST EXTREME SITUATIONS.

NOTE:

A NOTE PROVIDES KEY INFORMATION TO MAKE PROCEDURES EASIER AND CLEARER.

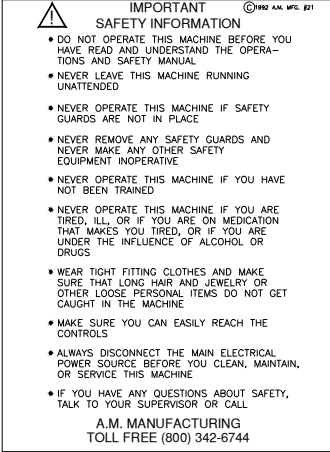
TYPICAL WARNING LOCATIONS



WARNING LABELS

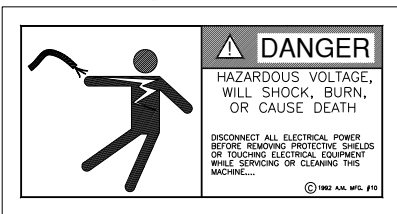
TYPICALLY FOUND ON THE SCALE-O-MATIC MODEL: S300

PART NO. AM MFG. #21



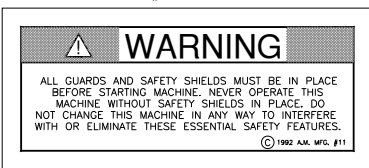
- ① MAIN FRAME CABINET
 (RIGHT SIDE OF CONTROL PANEL)

PART NO. AM MFG. #10



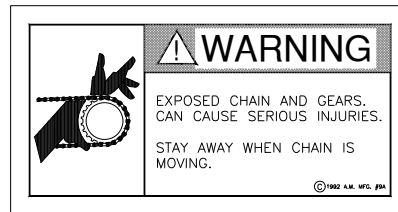
- ② – REAR PANEL OF DIVIDER CABINET
 – CABINET (PISTON ENTRY SIDE)
 – UNDER OIL RESERVOIR

PART NO. AM MFG. #11



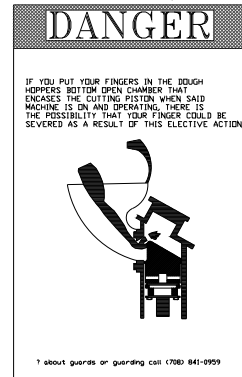
- ③ – ROCKER ARM COVER
 – IDLER PULLEY GUARD
 – CHAIN GUARD

PART NO. AM MFG. #24

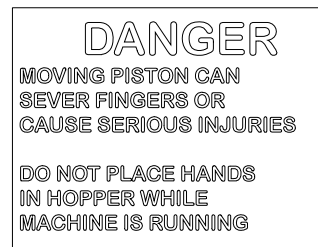


- ④ – FRONT SIDE HINGED COVER
 – INSIDE FRONT SIDE WALL OF ROUNDER CABINET

PART NO. AM MFG. #27



- ⑥ – ALL (4) SIDES OF DOUGH HOPPER
 – TOP COVER



- ⑥ – FRONT OF HOPPER
 – BACK & FRONT OF HOPPER COVER

NOTE:

MACHINE DESIGN AND SPECIFICATIONS MAY VARY. ACTUAL LABEL DESIGN AND PLACEMENT SUBJECT TO CHANGE WITHOUT NOTICE AND MAY VARY FROM THIS ILLUSTRATION.



CAUTION:

IF ANY SAFETY LABELS ARE MISSING, THEY MUST BE REPLACED! CONTACT YOUR DEALER OR A.M. MFG. FOR REPLACEMENT.

SAFETY RULES



IMPORTANT:

READ AND FOLLOW THESE SAFETY RULES. THEY ARE FOR YOUR PROTECTION AND THE PROTECTION OF THOSE WORKING WITH YOU.

- DO NOT OPERATE THIS MACHINE BEFORE YOU READ AND UNDERSTAND THE OPERATIONS AND SAFETY MANUAL.
- FOLLOW ALL INSTRUCTIONS DURING USE OF THIS MACHINE.
- LEAVE ALL GUARDS IN PLACE. INSTALL ALL GUARDS IF THEY WERE REMOVED FOR CLEANING, MAINTENANCE, REPAIR OR OTHER REASONS.
- NEVER OPERATE THE MACHINE IF YOU HAVE NOT BEEN TRAINED TO OPERATE THE MACHINE PROPERLY.
- NEVER OPERATE THE MACHINE IF YOU ARE TIRED, ILL, ON MEDICATION, OR UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.
- WEAR TIGHT FITTING CLOTHES. MAKE SURE THAT LONG HAIR, JEWELRY, OR LOOSE PERSONAL ITEMS ARE SECURED SO THEY CANNOT GET CAUGHT IN THE MACHINE. THIS CAN LEAD TO SERIOUS INJURIES.
- MAKE SURE YOU CAN EASILY REACH ALL CONTROLS. IF NOT, A STABLE AND SAFE ELEVATED PLATFORM OR OTHER WORK-AID MUST BE PROVIDED.
- ALWAYS DISCONNECT THE MAIN ELECTRICAL POWER SOURCE BEFORE CLEANING, IF MAINTENANCE OR SERVICE IS PERFORMED, OR IF THE MACHINE IS OUT OF SERVICE.
- NEVER CLEAN CONVEYOR BELTS ON MACHINE, ALWAYS REMOVE BELT FROM MACHINE TO CLEAN OR SERVICE.
- NEVER LEAVE THIS MACHINE RUNNING UNATTENDED.
- GUARDS ARE INTERLOCKED; MACHINE WILL NOT OPERATE WITHOUT GUARDS IN PLACE.

IMPORTANT:

IF YOU HAVE ANY QUESTIONS ABOUT THESE SAFETY RULES, SEE YOUR SUPERVISOR OR CALL A.M. MANUFACTURING Co. TOLL FREE: (800)342-6744

OPERATING INSTRUCTIONS



WARNING:

UNIT MUST BE PROPERLY OPERATED AND MAINTAINED TO PREVENT MACHINE DAMAGE OR PERSONAL INJURY. REVIEW INSTRUCTIONS WITH ALL EMPLOYEES BEFORE USE.



CAUTION:

BEFORE BEGINNING START - UP, READ ALL INSTRUCTIONS AND FAMILIARIZE YOURSELF WITH THE LOCATIONS OF ALL CONTROLS. KNOW HOW TO SHUT DOWN THE UNIT IMMEDIATELY IN CASE OF TROUBLE. MAKE CERTAIN ALL PERSONNEL NOT INVOLVED IN THE START - UP ARE SAFELY AWAY FROM THE MACHINE BEFORE ANY SYSTEMS ARE STARTED...

I. PRELIMINARY START-UP PROCEDURE

- A. REMOVE PACKING, PACKING SLIPS, DOCUMENTS AND OTHER OBSTRUCTIONS FROM HOPPER.
- B. MAKE SURE MACHINE IS ON A FLAT SURFACE
- C. MOVE MACHINE INTO POSITION & LOCK CASTERS.
- D. PLUG POWER CORD INTO PROPER RECEPTACLE. / PROPER GROUNDING IS NECESSARY TO PREVENT ANYTYPE OF ELECTROSTATIC PHENOMENA.
- E. REMOVE SMALL INSPECTION DOOR.
- F. PUSH DIVIDER START BUTTON AND TEST BUTTON SIMULTANEOUSLY AND HOLD.
- G. CHECK ROTATION OF DIVIDER BY LOOKING THROUGH SMALL INSPECTION DOOR. LARGE GEAR SHOULD BE TURNING (C.W.) CLOCK-WISE.
- H. IF THE GEAR IS TURNING IN THE (C.C.W.) COUNTER- CLOCK WISE DIRECTION, CONSULT A PROPERLY TRAINED ELECTRICIAN.
- I. IF ROTATION IS CORRECT, YOU ARE READY TO CONTINUE ON WITH THESE PROCEDURES.
- J. RE-INSTALL SMALL INSPECTION DOOR.
- K. CHECK POWER SUPPLY TO ROUNDER AND DISCHARGE CONVEYOR BY FLIPPING THE SWITCH LABELED "ROUNDER" ON THE CONTROL PANEL. THE ROUNDING DRUM SHOULD BE TURNING IN A (C.C.W.) ROTATION, AND THE DISCHARGE CONVEYOR SHOULD BE RUNNING FORWARD, OUT FROM MACHINE.

II. OPERATION OF DIVIDER

- A. FILL THE OIL RESERVOIR WITH LIGHTWEIGHT MINERAL OIL. BE SURE TO CLEAN ANY OIL SPILL AROUND MACHINE. THESE SURFACES BECOME SLIPPERY.
- B. WITH THE SQUIRT BOTTLE SUPPLIED, APPLY A SMALL AMOUNT OF MINERAL OIL TO THE INSIDE SIDES OF THE DOUGH HOPPER.
- C. OPEN THE VALVE LOCATED ON THE TOP GIB BAR APPROXIMATELY 1/8 OF A TURN.
- D. REMOVE BACK CABINET DOOR.
- E. OPEN THE CYLINDER VALVE APPROXIMATELY 1/8 OF A TURN. THIS VALVE IS LOCATED ON THE OIL PUMP OF THE REAR DOOR.
- F. REINSTALL THE BACK CABINET DOOR.
- G. FILL THE HOPPER WITH DOUGH. BY LOADING DOUGH @ 20 lbs. PIECES. DO NOT LIFT MORE THAN 20 lbs. PIECES. THIS COULD CAUSE SERIOUS LOWER BACK INJURY.
- H. SET HOPPER COVER ON TOP OF DOUGH
- I. SWITCH CONVEYOR TO THE ON POSITION.
- J. SWITCH ROUNDER TO THE ON POSITION.
- K. PRESS DIVIDER BUTTON.
- L. HOPPER SHOULD BE OILED EVERY TIME YOU PLACE NEW DOUGH IN IT.



CAUTION

PISTON WILL MOVE AFTER POWER IS TURNED OFF OR DISCONNECTED.

III. DIVIDING THE DOUGH

- A. DOUGH IS PORTIONED IN THE CUP LOCATED ON THE DIVIDER SLIDE.
- B. TO ADJUST THE WEIGHT, STOP MACHINE.
- C. BY TURNING THE HANDLE IN A COUNTER CLOCKWISE MOTION, THE DOUGH WEIGHT WILL INCREASE. THE DOWN (CLOCKWISE) MOTION DECREASES THE DOUGH WEIGHT.
- D. FIND YOUR DESIRED DOUGH WEIGHT BY WEIGHING THE DOUGH PIECE.
- E. ONCE YOU HAVE ACHIEVED THIS, ADJUST THE LOCKING STAR KNOB (529MS-2D) TO THE TOP OF THE MEASURING CUP TO KEEP SCALING ACCURATE.

DIVIDER CLEANING PROCEDURES

**THESE PROCEDURES ARE VERY IMPORTANT TO MAINTAIN
PRODUCT QUALITY AND MACHINE PERFORMANCE.**

ALL A.M. MANUFACTURING MACHINES ARE TESTED WITH DOUGH DURING THE IN-HOUSE RUN-IN AND QUALITY AUDIT PROCEDURE. ALTHOUGH THE MACHINE HAS BEEN CLEANED, SOME EVIDENCE OF DOUGH ON AND IN THE MACHINE MAY BE DETECTED. THIS IS NORMAL. ALL PARTS IN CONTACT WITH DOUGH SHOULD BE WASHED THOROUGHLY AFTER USE, USING A MILD SOAP AND WATER SOLUTION. DISASSEMBLY OF THIS MACHINE FOR CLEANING IS OUTLINED BELOW AND ILLUSTRATED FOR YOUR CONVENIENCE. INSTRUCTIONS IN MANUAL INDICATE THE NEED FOR REGULAR INSPECTIONS & CLEANING TO PREVENT INFESTATION.

I. DIVIDER

- A. DANGER: SHUT OFF ALL ELECTRICAL POWER**
- B. REMOVE COVER OVER DRIVE END OF SLIDE**
- C. LOOSEN FOUR (4) SOCKET SCREWS AT TOP OF CUP; TWIST AND REMOVE CUP.**
- D. REMOVE INSERT. (IF APPLICABLE)**
- E. REMOVE TWO (2) END BOLTS AT DRIVE END OF SLIDE.**
- F. LOOSEN EIGHT (8) HEX HEAD NUTS AT TOP OF GIB BARS AND REMOVE SLIDE.**
- G. REMOVE GIB BARS.**
- H. REMOVE PISTON BY – INSERTING CRANK IN PINION GEAR ON SIDE OF CABINET THEN:**
 - 1. LOOSEN TWO (2) SCREWS ON THE SIDE OF SPRING ASSEMBLY AND SLIDE TO RIGHT.**
 - 2. REMOVE UPPER PIN AND CRANK ASSEMBLY THROUGH ONE (1) ROTATION, THUS SEPARATING THE SHAFT.**
 - 3. PUT LOWER PIN IN UPPER HOLE AND ROTATE UNIT UNTIL PISTON COMES OUT OF THE CYLINDER.**
 - 4. REMOVE PISTON AND CLEAN.**
 - 5. REMOVE SEAL SCRAPER RING AND “O” RING ON FACING OF CYLINDER AND CLEAN.**
 - 6. CLEAN ALL DOUGH RESIDUE OFF OF FACING AND INNER CYLINDER. MAKE SURE YOU CLEAN OUT THE OIL HOLE. (CHECK VALVE)**
- I. REPLACE PISTON BY:**
 - 1. MAKING SURE PISTON IS IN EXTENDED POSITION w/ PIN IN UPPER HOLE.**
 - 2. PUT PISTON IN CYLINDER – GUIDING SHAFT INTO THE SPRING ASSEMBLY.**
 - 3. TAKE OTHER PIN AND PUT IT THROUGH SPRING ASSEMBLY AND LOWER SHAFT HOLE.**
 - 4. ROTATE CRANK UNTIL UPPER PIN IS VISIBLE AND REMOVE.**
 - 5. TURN CRANK UNTIL SHAFT COLLAPSES AND TWO (2) UPPER HOLES MEET, INSERT PIN AND PUSH SLIDE OVER AND TIGHTEN ALLEN SCREWS.**
 - 6. BE SURE PISTON IS COLLAPSED BY MAKING ONE FULL ROTATION NOTING THAT PISTON DOES NOT COME ABOVE UPPER CYLINDER.**
- J. REPLACE GIB BARS & SLIDE AND ATTACH TWO (2) END BOLTS TIGHTLY.**
- K. TIGHTEN THE EIGHT (8) HEX HEAD NUTS ON THE GIB BARS.**
- L. REPLACE INSERT AND MEASURING CUP, RE-TIGHTEN FOUR (4) SOCKET HEAD SCREWS.**
- M. PUT SAFETY COVER BACK OVER DRIVE END OF SLIDE.**
- N. REMOVE HAND CRANK FATER ASSEMBLY.**



PRACTICE SAFETY FIRST:

ALWAYS DISCONNECT ELECTRICAL SERVICE WHEN CLEANING OR MAINTAINING THIS MACHINE, THUS AVOIDING CHANCE OF SERIOUS INJURIES. MACHINES ARE NOT DANGEROUS IF COMMON SENSE IS APPLIED AND THE INSTRUCTIONS ARE CAREFULLY FOLLOWED. THINK AND PRACTICE SAFETY FIRST.

ROUNDER CLEANING PROCEDURES

**THESE PROCEDURES ARE VERY IMPORTANT TO MAINTAIN
PRODUCT QUALITY AND MACHINE PERFORMANCE.**

II. ROUNDER

- A. **DANGER: SHUT OFF ALL ELECTRICAL POWER.**
- B. OPEN AND TILT FRONT OF ROUNDER
- C. LIFT HANDLE ON SMALL INSPECTION DOOR SIDE.
- D. TILT ROUNDER ASSEMBLY FORWARD.
- E. REMOVE FUNNEL (PART NO. R116RA).
- F. REMOVE ROUNDER SCREW (PART NO. R122RA)
 1. **DO NOT** DROP OR SET DOWN ON SCREW STEM (THIS CAN MUSHROOM THE STEM SO THAT THE SCREW WILL NOT RE-ENTER BASE). IT IS RECOMMENDED THAT THE SCREW BE LAID ON ITS SIDE. **BEWARE NOT** TO BUMP THE OUTER EDGE (WHICH IS NICKEL COATED) AS THIS CAN CAUSE FLAKING OF THE NICKEL.
 2. THE SCREW SHOULD BE CLEANED WITH WARM WATER AND A NON-ABRASIVE PAD. REMOVE ALL DRIED DOUGH FROM THE EDGE AND ROUNDING SURFACE WITH A PLASTIC SCRAPER IF NEEDED. DRY COMPLETELY.
 3. **DO NOT** PLACE IN AN AUTOMATIC DISHWASHER
- A. REMOVE DRUM (PART NO. R117RA)
 1. TAKE THE DRUM OUT OF THE MACHINE: **DO NOT** LAY DRUM ON ITS SIDE (THIS CAN CAUSE WARPING OF THE DRUM, WHICH WILL NOT ALLOW THE DRUM AND SCREW TO FIT TOGETHER). IT IS RECOMMENDED THAT THE DRUM BE STOOD ON END.
 2. THE DRUM SHOULD BE CLEANED WITH WARM WATER (WATER TEMP. SHOULD NOT EXCEED 190°F) AND A NON-ABRASIVE PAD (PLASTIC BRISTLE BRUSH RECOMMENDED). REMOVE ALL DRIED DOUGH FROM THE GROOVED AND INNER SURFACE OF THE DRUM. DRY COMPLETELY.
 3. **DO NOT** PLACE IN AN AUTOMATIC DISHWASHER (THIS, TOO, CAN CAUSE WARPING OF THE DRUM WHICH WOULD NOT ALLOW THE DRUM AND SCREW TO FIT TOGETHER).
- A. REMOVE PLASTIC SEAL RING (PART NO. 141RA).
- B. REMOVE EXCESS DOUGH FROM ROUNDER BASE.
- C. REASSEMBLY IS REVERSE OF DISASSEMBLY.
- D. MAKE SURE TO REPLACE PLASTIC SEAL RING.
- E. SLIP THE DRUM OVER THE ROUNDER BASE SO THAT THE DRIVE SLOTS ARE LOCKED OVER THE DRIVE PINS IN THE ROUNDER BASE.
- F. CARE SHOULD BE TAKEN TO SEE THAT THE EXIT RAMP ON THE SCREW IS FACING DISCHARGE END OF MACHINE.
- G. TILT ROUNDER ASSEMBLY BACKWARD AND LOCK IN PLACE.
- H. WIPE EXCESS DOUGH FROM CONVEYOR BELT AND AREA AROUND ROUNDER.

II. NOTES

ALL PARTS AND AREAS MENTIONED MUST BE CLEANED EVERY DAY.

IF UNABLE TO REMOVE ROUNDER SCREW:

- A. PLUG MACHINE IN, TURN MACHINE ON.
- B. ADD A SMALL AMOUNT OF WARM WATER TO CONTACT AREA BETWEEN SCREW AND DRUM.
- C. AFTER DOUGH SOFTENS, TURN OFF ROUNDER.
- D. UNPLUG MACHINE.
- E. REMOVE ROUNDER SCREW.



PRACTICE SAFETY FIRST.

ALWAYS DISCONNECT ELECTRICAL SERVICE WHEN CLEANING OR MAINTAINING THIS MACHINE, THUS AVOIDING CHANCE OF SERIOUS INJURIES. MACHINES ARE NOT DANGEROUS IF COMMON SENSE IS APPLIED AND THE INSTRUCTIONS ARE CAREFULLY FOLLOWED. THINK AND PRACTICE SAFETY FIRST.

GUIDE TO CLEANING



DANGER:

ALWAYS DISCONNECT ELECTRICAL SERVICE WHEN CLEANING, MAINTAINING OR REPAIRING THIS MACHINE...

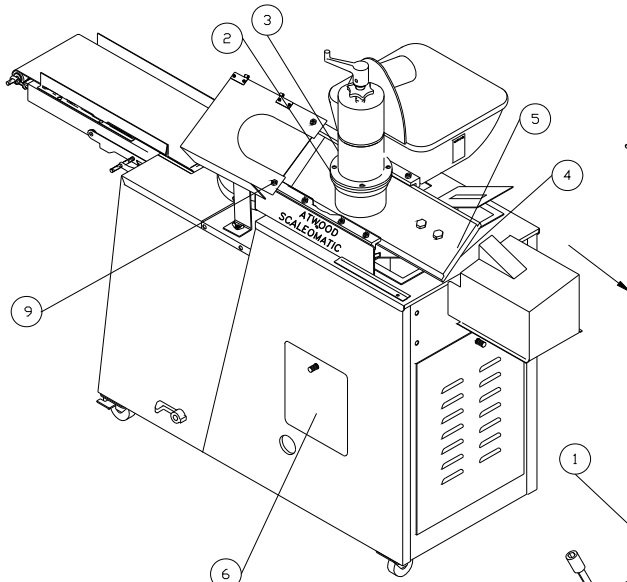


FIGURE 1

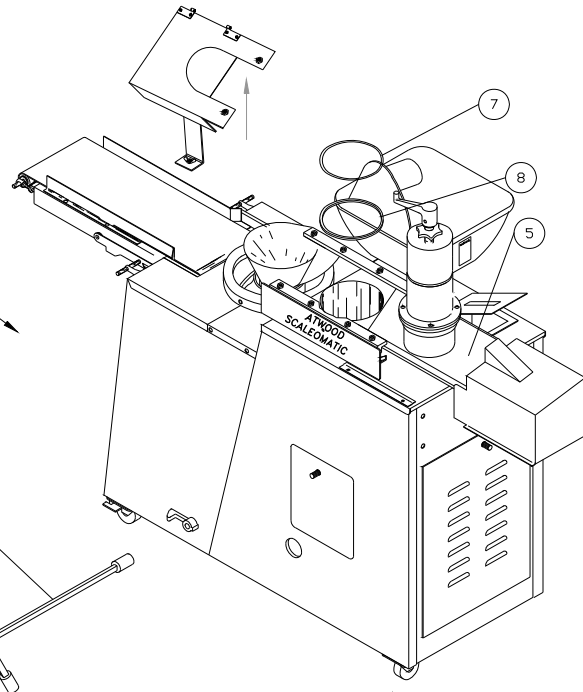


FIGURE 2

STEP 1

USING A ALLEN WRENCH, LOOSEN SOCKET HEAD SCREWS (2) AND LIFT OFF DIVIDER PLUNGER (MEASURING CUP) (3). WHEN A #2 OR #3 MEASURING CUP IS IMPLYED ON DIVIDER, THE DIVIDER CYLINDER MUST ALSO BE REMOVED FROM SLIDE FOR CLEANING.

STEP 2

LOOSEN EIGHT HEX HEAD BOLTS AT TOP OF GIB BARS. USING WRENCH (1) REMOVE TWO HEX HEAD SCREWS (4) AND PUSH DIVIDER SLIDE (5) REARWARD TO EXPOSE CYLINDER OPENING.

STEP 3

REMOVE CABINET DOOR (6).

STEP 4

WITH CYLINDER OPENING EXPOSED, REMOVE SEAL SCRAPER RING (7) AND RUBBER "O" RING (8). CLEAN ALL EXPOSED SURFACES INCLUDING "O" RING GROOVE AND DIVIDING SLIDE OF ACCUMULATED DOUGH, OIL, ETC. WIPE EXCESS DOUGH FROM TOP AND INTERIOR OF CYLINDER.

STEP 5

WIPE EXCESS DOUGH FROM INSIDE OF DOUGH HOPPER.

NOTE:

NEVER USE METAL EDGED SCRAPER FOR CLEANING ANY PART. USE OF SUCH TOOLS CAN RESULT IN DAMAGE.

SCALE - O - MATIC NAME PLATE

THIS PLATE HAS A 2-CHANNEL GROOVE THAT CATCHES EXCESS OIL AND DRAINS INTO DRIP PAN AT THE BOTTOM OF THE MACHINE. THIS PLATE SHOULD BE REMOVED BY LOOSENING AND REMOVING A SMALL ALLEN SCREW IN THE CENTER OF THE PLATE. CLEAN PLATE, AND CHECK PLASTIC DRAIN LINE TO SEE THAT IT IS CLEAN AND FREE OF ANY SEDIMENT SO OIL CAN DRAIN PROPERLY. DRIP PAN AT BOTTOM OF MACHINE SHOULD BE EMPTIED EVERY DAY.

GUIDE TO CLEANING

STEP 5

LOOSEN SOCKET SCREWS (9) ENOUGH TO SLIDE PIN LOCK BRACKET (10) EXPOSING LOCK PIN (11). REMOVE PIN (11).

STEP 6

INSERT CRANK HANDLE (12) THROUGH HOLE IN CABINET AND ENGAGE WITH PINION SHAFT. CRANK ONE COMPLETE TURN COUNTER CLOCK-WISE THUS EXTENDING PISTON ROD UNTIL HOLE (14) IS IN LINE WITH UPPER HOLE IN ROD (13).

STEP 7

PLACE PIN (11) INTO HOLE (14) TEMPORARILY. NOW REMOVE PIN (15), CONTINUE TO CRANK UNTIL PISTON (16) EMERGES FROM THE TOP OF THE CYLINDER. LIFT OUT CAREFULLY BY HAND. THOROUGHLY CLEAN PISTON AND CYLINDER TO REMOVE ALL ACCUMULATED DOUGH WITH A MILD SOAP AND WASTER SOLUTION. DRY THOROUGHLY AND COAT ALL SURFACES WITH A LIGHT COATING OF DIVIDER OIL. TO REASSEMBLE, REVERSE STEPS 1 THROUGH 7.

WHEN CLEANING OR ADJUSTING PISTON, DO NOT OVER TIGHTEN ADJUSTING NUTS. THIS WILL OVER SPREAD YOUR PLASTIC PISTON RING AND WILL CAUSE EXCESSIVE WEAR, AND IT WILL ALSO BE HARD TO REPLACE PISTON BACK INTO THE CYLINDER. THIS COULD RESULT IN THE CUTTING OF YOUR PISTON RING WHICH WOULD DESTROY YOUR PISTON RING.

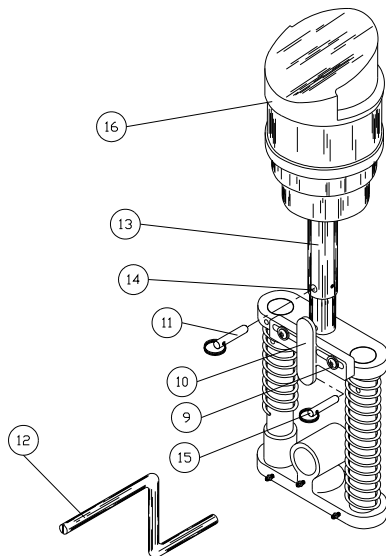


FIGURE 3

IMPORTANT: WHEN RE-ASSEMBLING, DO NOT OVER TIGHTEN ANY OF THE SCREWS, AS THIS TENDS TO STRIP THREADS CAUSING PROBLEMS IN THE FUTURE. BE SURE RING ON PIN (11) OF FIGURE 3 IS SECURELY FASTENED OVER LATCH (10). THIS WILL PREVENT LATCH FROM MOVING, SHOULD THE SOCKET HEAD SCREWS (9) LOOSEN DURING OPERATION.

! DANGER:

ALWAYS DISCONNECT ELECTRICAL POWER SOURCE WHEN CLEANING, MAINTAINING OR REPAIRING THIS MACHINE....

REPLACEMENT OF PISTON RING

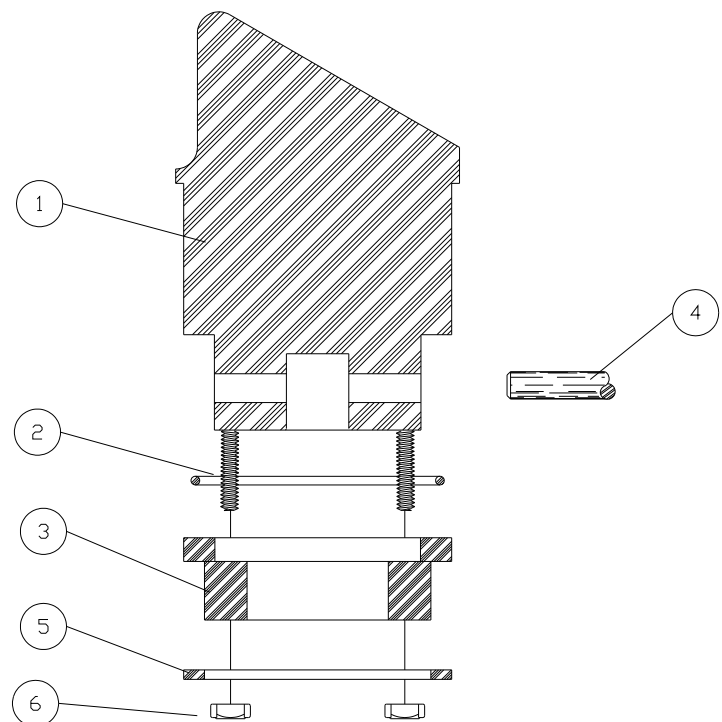


FIGURE 4

TO DISMANTLE PISTON IN FIGURE 4, REMOVE THE SIX HEX NUTS (6), SLIP RING (5) DOWN AND OFF, THEN WITH SLIGHT PRESSURE, PUSH PISTON RING (3) OFF PISTON, REMOVE WRIST PIN (4) AND RUBBER "O" RING (2). WHEN REASSEMBLING THE PISTON, A VERY IMPORTANT STEP IS TO MAKE SURE THE SIX NUTS (6) ARE NOT OVERLY TIGHTENED, MERELY SNUG. AS THE RING WEARS OVER A PERIOD OF TIME, CONTINUE TO SNUG UP THE SIX NUTS. THIS PROCEDURE WILL NOT ONLY PROVIDE LONG LIFE TO THE PISTON RING BUT WILL MAINTAIN FULL VACUUM.

GUIDE TO CLEANING

STEP 1

REMOVE DIVIDER SLIDE GUARD USING T-HANDLE PROVIDED TO LOOSEN THE FRONT TWO NUTS ON GIB BARS (1).

TO OPEN AND TILT FRONT OF ROUNDER, GRASP BOTH T-HANDLES (PART NO. 646CA3) AND TURN BOTH OUTWARD (2). THIS RELEASED THE FRONT OF THE CABINET.

LOCATE THE SWIVEL LOCKING HANDLE (PART NO. R149RA). (3) LIFT THIS HANDLE TO THE UPWARD POSITION WHILE HOLDING THE ROUNDER DRUM FOR STABILITY. NOW TILT THE ROUNDER ASSEMBLY FORWARD (4).

REMOVE FUNNEL (PART NO R116RA) (5).

REMOVE ROUNDER SCREW (SLOWLY) PART NO. R122RA) (6).

REMOVE DRUM (PART NO. R117RA) (7).

REMOVE PLASTIC SEAL RING (PART NO. R141RA) (8).

CLEAN THE FOUR (4) PARTS WITH WARM SOAPY WATER. DO NOT USE ANY HARD ABRASIVE CLEANING MATERIALS.

REMOVE EXCESS DOUGH FROM ROUNDER BASE INSIDE OF MACHINE.

REASSEMBLY IS IN REVERSE OF DISASSEMBLY. MAKE SURE TO REPLACE PLASTIC SEAL RING FIRST, SLIP THE DRUM OVER THE ROUNDER BASE SO THAT THE DRIVE SLOTS ARE LOCKED OVER THE DRIVE PINS IN THE ROUNDER BASE.

CARE SHOULD BE TAKEN TO SEE THAT THE EXIT RAMP ON THE SCREW IS FACING THE DISCHARGE END OF THE MACHINE.

NOTE:

WHEN CLEANING THE ROUNDER DRUM, THE WATER TEMPERATURE

MUST NOT EXCEED 190°

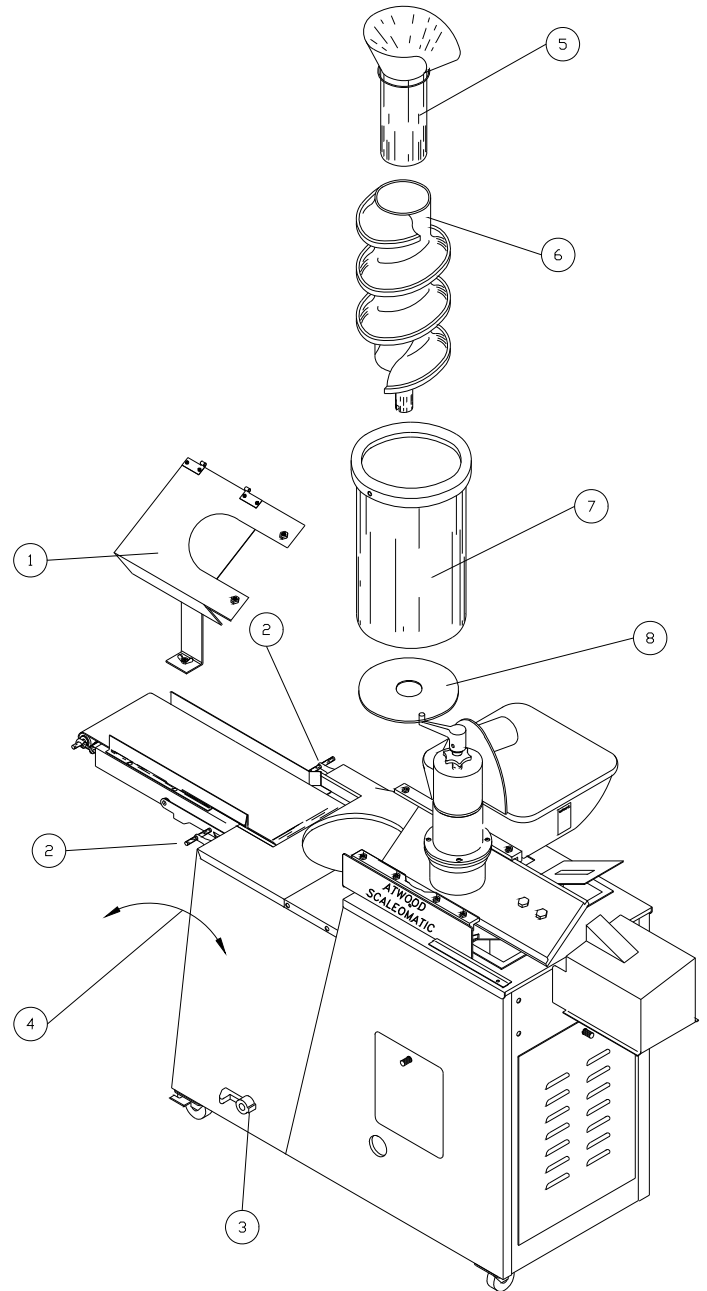


FIGURE 5

GUIDE TO GENERAL MAINTENANCE

READ AND FOLLOW MAINTENANCE INSTRUCTIONS BELOW TO HELP KEEP THE UNIT IN GOOD OPERATING CONDITION. REFER TO OTHER MATERIALS RECEIVED WITH THE UNIT AND TO SERVICE BULLETINS FROM THE MANUFACTURER FOR ADDITIONAL INSTRUCTIONS FOR PROPER MAINTENANCE AND SERVICE. REGULAR INSPECTIONS AND PROPER MAINTENANCE ARE ESSENTIAL TO HELP PREVENT ACCIDENTS AND INJURIES.



PRACTICE SAFETY FIRST:

ALWAYS DISCONNECT ELECTRICAL SERVICE WHEN CLEANING OR MAINTAINING THIS MACHINE, THUS AVOIDING CHANCE OF SERIOUS INJURIES. MACHINES ARE NOT DANGEROUS IF COMMON SENSE IS APPLIED AND THE INSTRUCTIONS ARE CAREFULLY FOLLOWED. THINK AND PRACTICE SAFETY FIRST...



WARNING:

BEFORE MAKING ANY INSPECTION, ADJUSTMENT OR REPAIR, BE CERTAIN POWER SOURCE IS DISCONNECTED AND ALL MOVING PARTS ARE BLOCKED OUT TO PREVENT INJURY. WEAR PROTECTIVE CLOTHING.

- A. ALL WORKING SURFACES SHOULD BE CLEANED REGULARLY.
- B. THE TABLE TOP AND OTHER WORKING SURFACES SHOULD BE CLEANED REGULARLY.
- C. MAKE SURE THAT ALL FASTENERS ARE TIGHTENED SECURELY.
- D. MAKE CERTAIN THAT ALL GUARDS AND COVERS ARE IN PLACE.
- E. CHECK FOR WORN, DAMAGED OR MISSING PARTS INCLUDING BELTS, SAFETY GUARDS AND PROTECTIVE COVERS.
- F. ON A DAILY BASIS, INSPECT THE UNIT AND CHECK TO BE CERTAIN THAT ALL SYSTEMS ARE OPERATING NORMALLY. DETAILED INSPECTION AND TESTING PROCEDURES ARE SPECIFIED FOR VARIOUS COMPONENTS AT REGULAR INTERVALS. SET UP A CHART AND ASSIGN RESPONSIBILITY FOR THESE ITEMS.



CAUTION:

REPLACE ANY DAMAGED OR MISSING SAFETY LABELS. THEY ARE AVAILABLE FROM THE MANUFACTURER.

MAINTENANCE FOR THE SCALE-O-MATIC S400 ALWAYS BEGINS WITH KEEPING THE MACHINE CLEAN. PROPER CLEANING PROCEDURES CAN BE FOUND ON PAGES 9 - 11 OF THIS MANUAL. STANDARD LONG TERM MAINTENANCE CONSISTS OF LUBRICATING MAIN WEAR POINTS OF THE MACHINE WITH AN ALL-PURPOSE LITHIUM BASE GREASE. A GREASE GUN WITH A FLEXIBLE HOSE IS NEEDED.

ALL RECOMMENDATIONS FOR MAINTENANCE, BASED ON A 7 DAY, 8 HOUR PER DAY WORK SCHEDULE.



THERE ARE (5) GREASE FITTINGS LOCATED ON THE ROCKER ARM AND DIVIDER FRAME, (FIG. 1). THESE FITTINGS SHOULD BE LUBRICATED ONCE A WEEK FOR OPTIMUM BEARING LIFE.

FOLLOW NORMAL CLEANING AND MAINTENANCE PROCEDURES OUTLINED IN THIS MANUAL. FOR FURTHER ASSISTANCE CONTACT THE A.M. MFG. SERVICE DEPARTMENT AT (800) 342-6744...

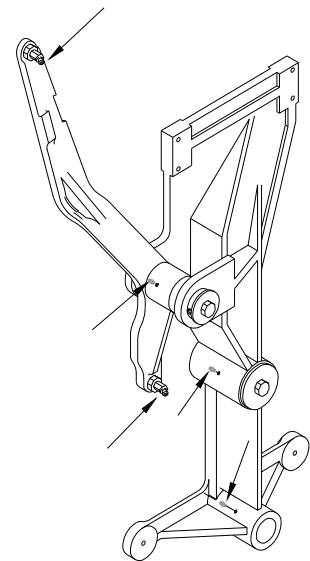


FIGURE 1

GUIDE TO GENERAL MAINTENANCE



DANGER:

ALWAYS DISCONNECT ELECTRICAL SERVICE WHEN CLEANING, MAINTAINING OR REPAIRING THIS MACHINE...

THE PISTON AND SPRING LOAD ASSEMBLY HAVE A TOTAL OF (4) GREASE FITTINGS, (FIG. 2). THREE (3) OF THESE FITTINGS ARE FOUND ON THE LOWER CASTING OF THE SPRING LOAD. APPLY A SMALL AMOUNT OF GREASE TO THESE FITTINGS ONCE A WEEK. THE SAME PROCEDURE SHOULD BE FOLLOWED FOR THE GREASE FITTING UNDER THE PISTON, (FIG. 4). THIS FITTING IS LOCATED ON THE TOP OF THE OUTSIDE CONNECTING ROD, (PART NO. 322PY).

NOTE:

THIS FITTING CAN ONLY BE REACHED WITH A FLEXIBLE HOSE GREASE GUN OR BY REMOVING THE PISTON.

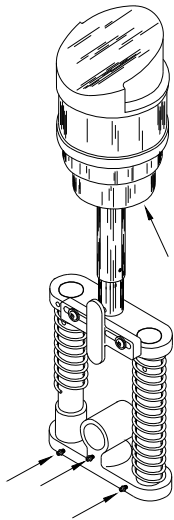


FIGURE 2

YOU MAY FIND UPON INSPECTION OF THE PISTON THAT THE DOUGH HAS SEEPED INTO THE CUP. THIS IS A NORMAL OCCURRENCE AFTER MODERATE PRODUCTION. TO KEEP THE RUBBER "O" RING FROM PREMATURELY DETERIORATING, STRETCHING OR BREAKING, INSPECT AND CLEAN EVERY (4) WEEKS IN THE FOLLOWING MANNER, (FIG. 3). DISASSEMBLE THE PISTON BY REMOVING THE HEX NUTS ON THE BASE OF THE PISTON ASSEMBLY. REMOVE THE STEEL WASHER (PART NO. 302PY) AND PLASTIC PISTON RING (PART NO. 323PY). CAREFULLY CLEAN EXCESS DOUGH FROM THE PISTON AND "O" RING. REASSEMBLE THE PISTON BEING CAREFUL NOT TO OVERTIGHTEN THE PISTON RING.

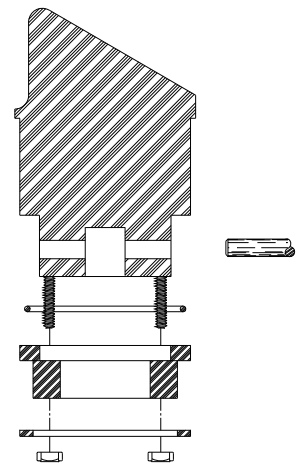
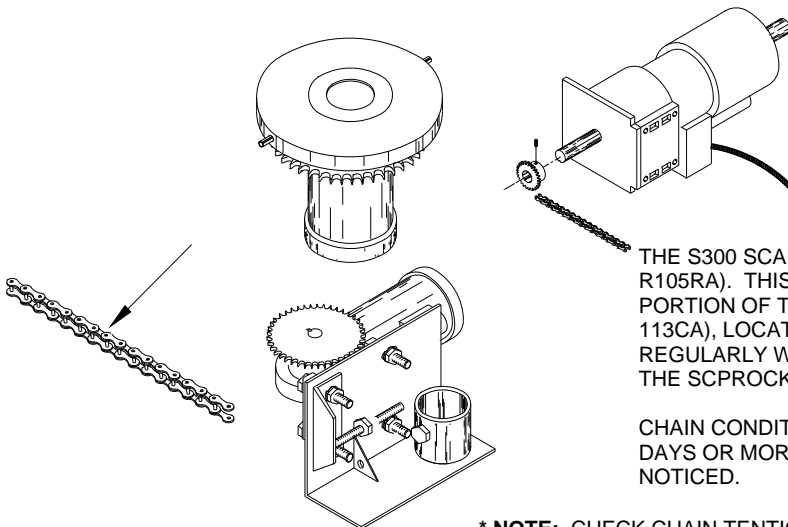


FIGURE 3



THE S300 SCALE-O-MATIC HAS A SINGLE DRIVE CHAIN (PART NO. R105RA). THIS PART IS LOCATED AT THE BASE OF THE ROUNDER PORTION OF THE CABINET. ALSO THE CONVEYOR CHAIN (PART NO. 113CA), LOCATED BY THE CONVEYOR MOTOR MUST BE OILED REGULARLY WITH A LIGHT WEIGHT MACHINE OIL TO PROLONG LIFE OF THE SCROCKETS, AS WELL AS THE CHAIN.

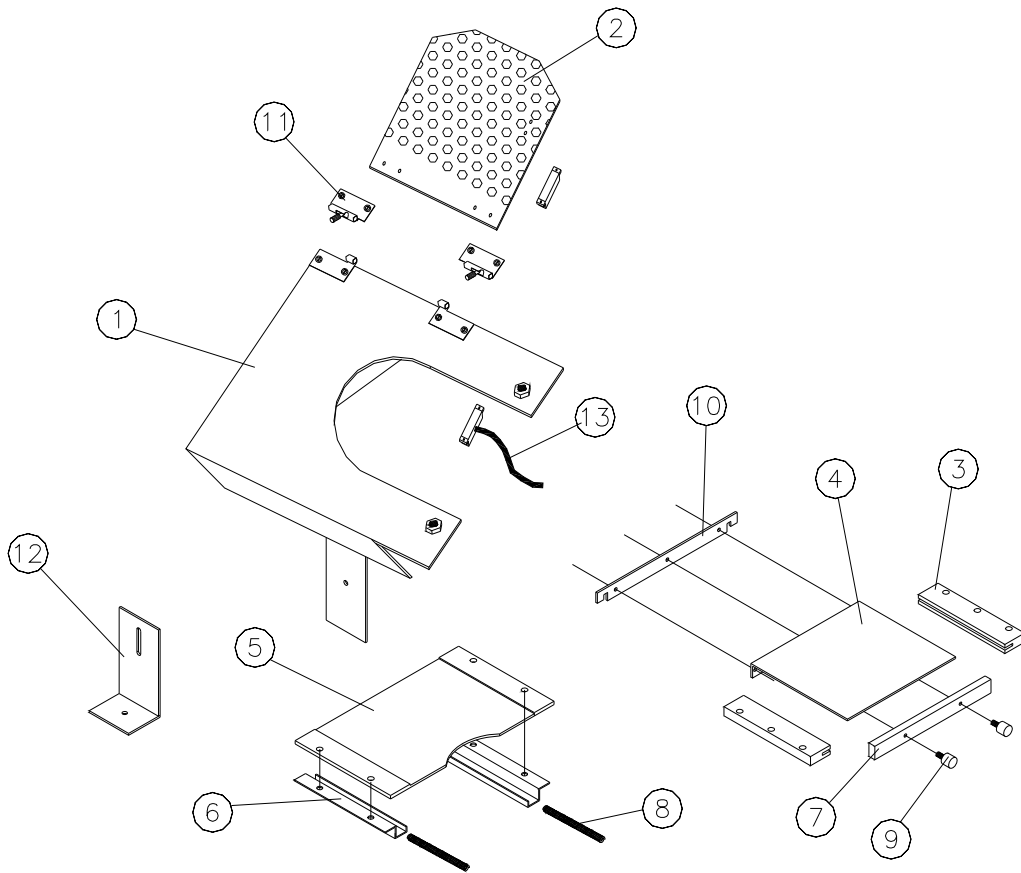
CHAIN CONDITION AND TENSION SHOULD BE CHECKED EVERY 60 DAYS OR MORE FREQUENTLY IF EXCESS NOISE OR VIBRATION IS NOTICED.

*** NOTE:** CHECK CHAIN TENTION WITH CONVEYOR IN DOWNWARD POSITION.

FOLLOWING NORMAL CLEANING AND MAINTENANCE PROCEDURES OUTLINED IN THIS MANUAL. FOR FURTHER ASSISTANCE CONTACT THE A.M. MFG. SERVICE DEPARTMENT AT (800) 342-6744...

NOTE: THESE INSTRUCTIONS WILL HELP YOU SERVICE THE UNIT. INSTRUCTIONS ARE FOR A PERSON WITH SOME MECHANICAL ABILITY AND TRAINING. NO ATTEMPT HAS BEEN MADE TO DESCRIBE ALL BASIC STEPS, FOR EXAMPLE, HOW TO LOOSEN OR TIGHTEN FASTENERS. ALSO, BASIC PROCEDURES LIKE HOW TO CYCLE SYSTEMS AND CHECK OPERATION OF THE EQUIPMENT ARE NOT DESCRIBED SINCE THEY ARE KNOWN TO ANYONE WHO DOES MECHANICAL AND SERVICE WORK. DO NOT ATTEMPT TO PERFORM WORK BEYOND YOUR ABILITY OR AT WHICH YOU HAVE NO EXPERIENCE. IF YOU NEED ASSISTANCE, CALL AN AUTHORIZED SERVICE CENTER OR CONTACT A.M. MANUFACTURING AT (800) 342-6744.

DIVIDER SLIDE GUARD

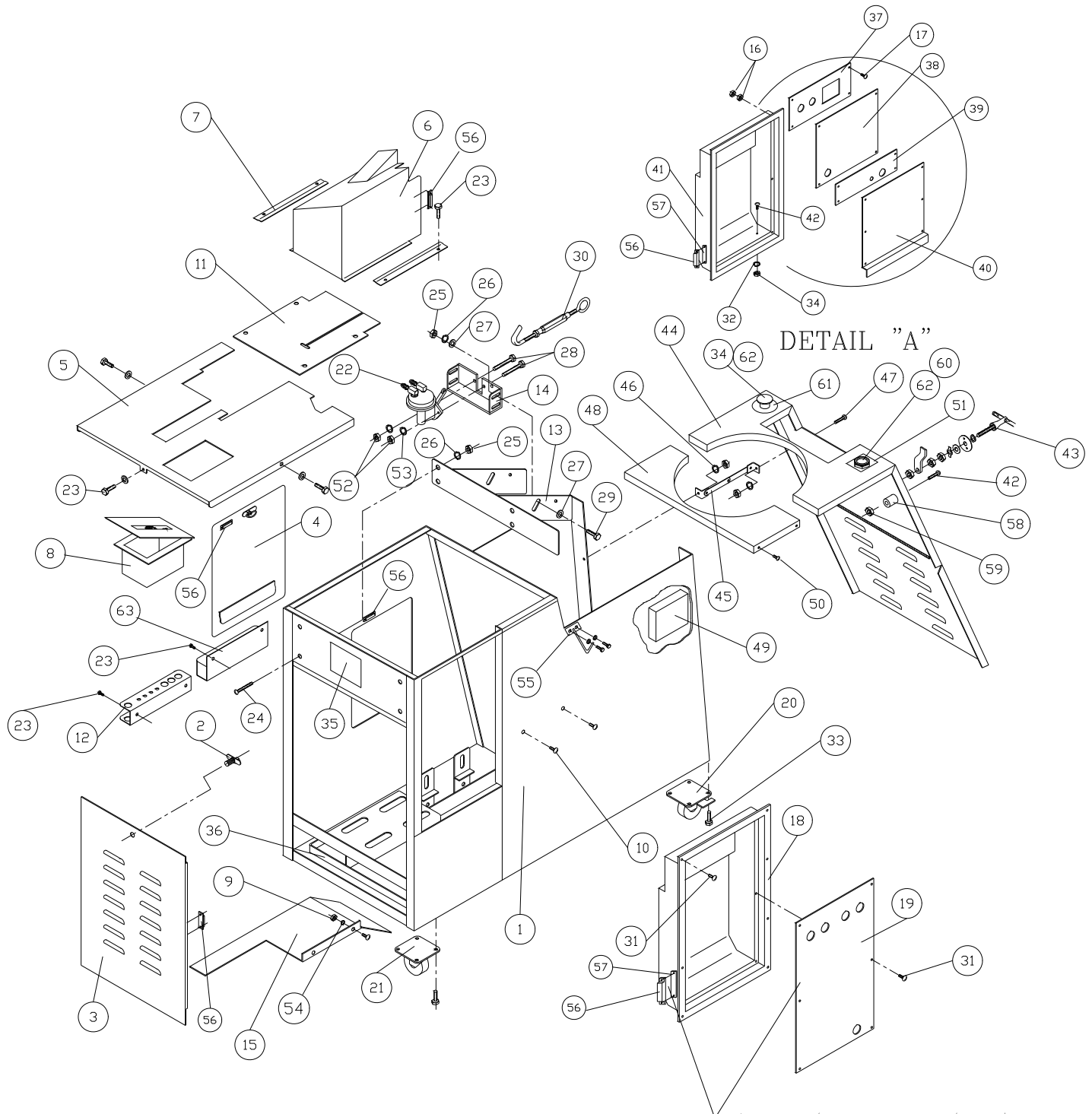


ITEM	PART NO.	DESCRIPTION	NO. REQ'D
1	11828	GUARD CAGE	1
2	11827	GUARD CAGE DOOR	1
3	11824	GUARD SLIDE TRACK	2
4	11823	GUARD SLIDE	1
5	11826	GUARD SLIDE SPACER	1
6	11825	SPRING RETAINER	2
7	11829	GUARD SLIDE BLOCK	1
8	11830	SPRINGS	2
9	11832	BUMPERS	2
10	12114	GUARD SLIDE ADAPTER	1
11	11831	HINGES	2
12	11877	GUARD BRACE #2	1
13	EL-0253	INTERLOCK SWITCH	1
14	F0400FW	FLAT WASHER	7
15	F0400LW	LOCK WASHER	7
16	F0400LN	LOCK NUT w/ NYLON INSERT	6
17	F0400WN	WING NUT	1
18	F9626PH	6-32 PAN HEAD SCREW	8

NOTE:

GUARD CAN BE PURCHASED AS A COMPLETE UNIT.
 PART #: 11836

CABINET ASSEMBLY



CABINET ASSEMBLY

ITEM	PART No.	DESCRIPTION	No. REQ'D
1	11934	CABINET	1
2	646CA1	DOOR LOCK LATCH w/2 POP RIVETS	2
3	CA602A	615CA REAR DOOR (INSPECTION) w/646CA1 HARDWARE	1
4	11810A	11810 FRONT DOOR PISTON DRIVE w/646CA1 HARDWARE	1
5	602CA	TOP COVER	1
6	641CA	ROCKER ARM SAFETY COVER	1
7	640CA	ROCKER ARM COVER TRACK	2
8	604CA	OIL BOX AND COVER ASSEMBLY	1
		INCLUDES:	
		1 - 604CA-1 OIL BOX COVER	
		1 - 604CA-2 OIL BOX	
		1 - 713OS STAINER w/ INSERT - FILTER ADAPTER	
		1 - AM TAG #OM DIVIDER OIL TAG	
9	F0400NC	NUT	2
10	F0402TH	BOLT	2
11	641CA1	ROCKER ARM COVER GASKET	1
12	638CA	TOOL HOLDER	1
13	605CA1	PUMP BRACKET (LARGE)	1
14	605CA2	PUMP BRACKET (SMALL)	1
15	643CD	"V" BELT GUARD	1
16	F9700NF	NUT	6
17	F9901PH	SCREW	18
18	617CA6	ELECTRICAL ENCLOSURE	1
19	SS116	ELECTRICAL COVER PANEL	1
20	621CA1	SWIVEL CASTER (LOCKING)	2
21	621CA2	SWIVEL CASTER	4
22	7000S	OIL PUMP ASSEMBLY	1
		INCLUDES:	
		1 - 1440S BEARING	
		1 - F0403SH SOCKET HEAD CAP SCREW	
		1 - F0400LN LOCK NUT	
23	F0402HH	BOLT	11
24	F0503CB	BOLT	4
25	F0500NC	NUT	6
26	F0500LW	LOCK WASHER	6
27	F0500FW	FLAT WASHER	8
28	F0606HH	BOLT	2
29	F0504HH	BOLT	4
30	654CA	TURN BUCKLE	1
31	F9901PH	SCREW	14
32	F9900LW	LOCK WASHER	2
33	F0404ST	BOLT	16
34	SS185	STOP BUTTON	1
35	19904	ELECTRICAL PLATE	1
36	19905	OIL PAN (FOR DOUGH)	1
37	617CA4	PUSH BUTTON COVER PANEL	1
38	617CA3	ELECTRICAL ACCESS PANEL (UPPER)	1
39	617CA2	ELECTRICAL ACCESS PANEL (LOWER)	1
40	617CA1	ELECTRICAL COVER PANEL	1
41	617CA5	ELECTRICAL ENCLOSURE	1
42	F9902TH	SCREW	3
43	646CA3	DOOR LOCK "T" HANDLE ASSEMBLY	2
44	652ca	ROUNDER COVER - FRONT HINGED	1
45	666CA	FRONT COVER HINGED	1
46	F0400LW	LOCK WASHER	10
47	F0402TH	BOLT	1
48	651CA	ROUNDER COVER BACK SIDE	1
49	BBT22	COVER FOR INTERLOCK SWITCH	1
50	F9902RH	SCREW	4
51	SS126	CYCLE STOP NAME PLATE	1
52	F0600NC	NUT	2
53	F0600LW	LOCK WASHER	2
54	F0400LW	LOCK WASHER	2
55	12059	SAFETY GUARD HOOK	1
56	SS240	MAGNETIC REED SWITCH	3
57	SS240	REED SWITCH MOUNT	1
58	103RC	SPACER	1
59	F9900NC	NUT	1
60	SS184R	PUSHBUTTON w/ RED BUTTON COVER	1
61	SS425	EMERGENCY STOP NAMEPLATE	1
62	400038	N.C. CONTACT BLOCK	2
63	11866	NUT BOX	1



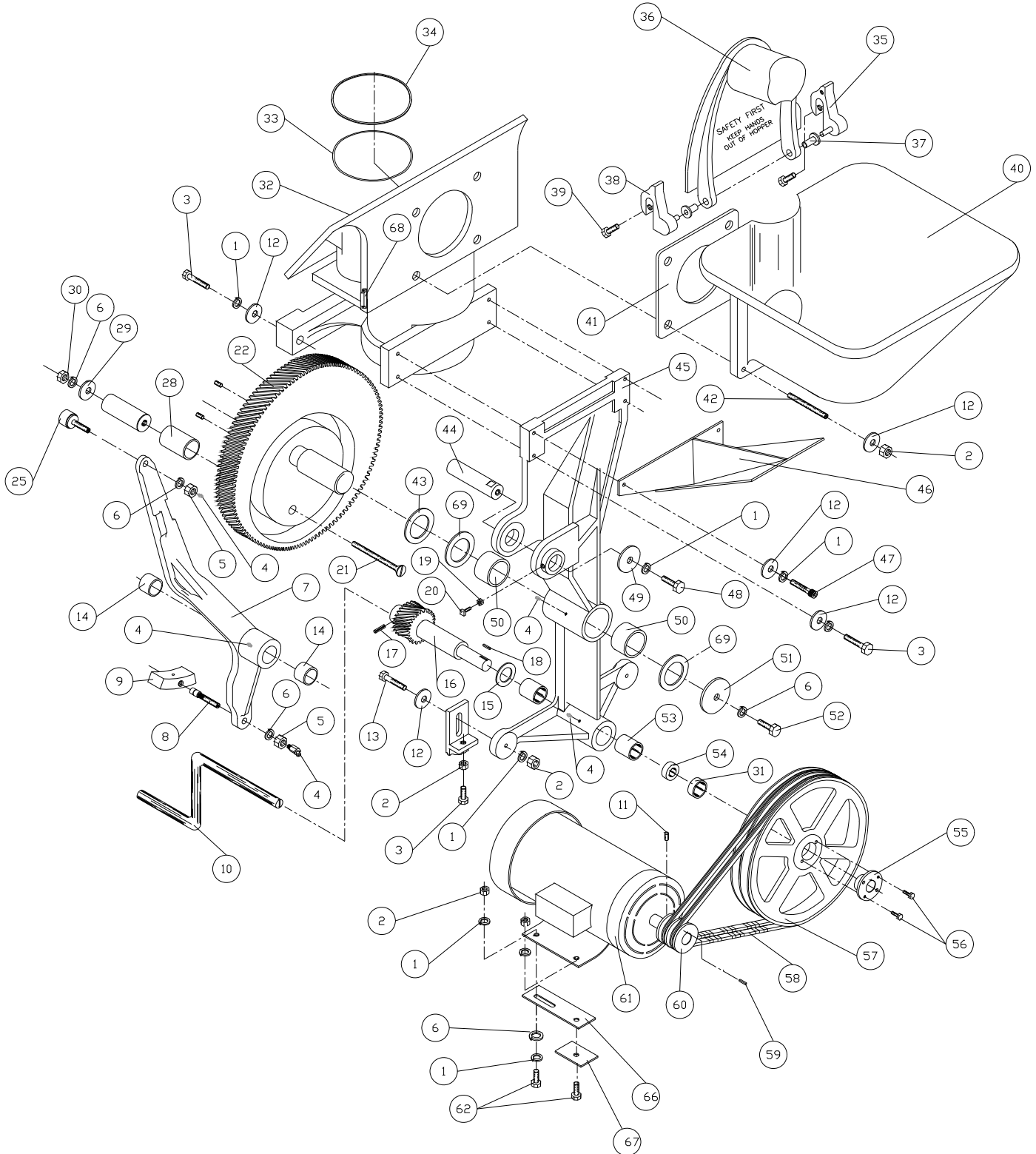
IMPORTANT:

KNOW YOUR UNIT. COMPARE DIAGRAMS IN THIS MANUAL WITH THE UNIT BEFORE STARTING SERVICE TO OBTAIN MAXIMUM SAFETY AND PERFORMANCE.

NOTE:

GUARDS ARE INTERLOCKED, MACHINE WILL NOT OPERATE WITHOUT GUARDS IN PLACE.

CYLINDER AND DRIVE ASSEMBLY



CYLINDER AND DRIVE ASSEMBLY

ITEM	PART No.	DESCRIPTION	No. REQ'D	ITEM	PART No.	DESCRIPTION	No. REQ'D
1	F0600LW	LOCKWASHER	13	39	461CD	BOLTS FOR HINGES (PLASTIC)	2
2	F0600HN	NUT	12	40	445CD	DOUGH HOPPER	1
3	F0608HH	BOLT	2	41	449CD	HOPPER GASKET	1
4	3038-B	GREASE FITTING	5	42	FF0607SD	STUD	4
5	F0800NF	NUT	2	43	411CD	SPACER WASHER	1
6	F0800LW	LOCKWASHER	4	44	412CD	CAM ARM PIN	1
7	AS0110CD	ROCKER ARM COMPLETE INCLUDES: 1 - 412CD CAM ARM PIN 2 - 422CD BEARINGS 1 - 427CD CAM ROLLER w/ WASHER, NUT AND GREASE FITTING 1 - 448CD CAM TRACK SHOE 1 - 452CD SHOE BOLT w/ WASHER, NUT AND GREASE FITTING	1	45	S0109CD	MAIN DRIVE FRAME INCLUDES: 2 - 437CD PINION SHAFT BEARING 2 - 440CD MAIN FRAM BEARING (NEEDLE BEARING) 2 - 3038-B GREASE FITTING	1
8	A452CD	SHOE BOLT ASSEMBLY	1	46	462CD	MOTOR MOUNT	1
9	448CD	CAM TRACK SHOE	1	47	F0609SH	BOLT	1
10	426CD	HAND CRANK	1	48	F0604HH	BOLT	1
11	F0501SS	SET SCREW	1	49	442CD	WASHER, 1-3/4 x 3/8	1
12	F0600FW	FLAT WASHER	12	50	440CD	MAIN FRAME BEARING (SEE NOTES BEFORE ORDERING)	2
13	F0607HH	BOLT	2	51	439CD	WASHER 3 x 9/16	2
14	422CD	ROCKER ARM BEARING	2	52	F0804HH	BOLT	1
15	416CD	WASHER SPACER	1	53	437CD	PINION SHAFT BEARINGS	2
16	415CDH	DRIVE SHAFT & PINION - HELIX / CURVED TEETH (NEW MACHINES) INCLUDES: 1 - F0404KY KEY 1 - F0305RP ROLL PIN DRIVE SHAFT & PINION STRAIGHT TEETH(OLD MACHINES)	1	54	465CD	BEARING	1
17	F0305RP	ROLL PIN	1	55	436CD	HUB-PULLEY w/KEY	1
18	F0404KY	KEY w/ 415CD (NOT SOLD ALONE)	1	56	F0404HH	BOLT	2
19	F0500NC	NUT	1	57	435CD2	DRIVE PULLEY (SINGLE GROOVE)	1
20	F0506SQ	BOLT	1	58	435CDA	DRIVE PULLEY (DOUBLE GROOVE)	1
21	F0819FH	BOLT	1	59	435CDV	DRIVE PULLEY (BARIABLE GROOVE)	1
22	S0113CD	MAIN DRIVE GEAR INCLUDES: 1 - SCREW 1 - 406CD SHAFT YOKE PIN 1 - NUT 1 - SPRING 1 - 409CD SHAFT 1 - CRANK PIN SCREW 1 - LOCK WASHER 1 - FLAT WASHER 1 - 312PY BEARING	1	60	434CD-V	"V" BELT (VARIABLE)	1
25	427CD	CAM ROLLER	1	61	434CD49	"V" BELT (49")	1
26	F0603SS	SET SCREW	2	62	434CD56	"V" BELT (56")	1
28	312PY	DRIVE BEARING	1	59	F0304Y	KEY 3/16"	1
29	459CD	WASHER	1	60	458CD	MOTOR PULLEY (SINGLE GROOVE)	1
30	F0800NC	NUT	1	61	458CDD	MOTOR PULLEY (DOUBLE GROOVE)	1
31	464CD	SPACER	1	62	458CDV	MOTOR PULLEY (VARIABLE)	1
32	AS0107CD	CYLINDER INCLUDES: 1 - 708S CHECK VALVE 8 - F0500CN NUTS 8 - F0508SD STUDS	1	63	SS263	ELECTRIC MOTOR (SINGLE PHASE)	1
33	402CD	CYLINDER SLIDE "O" RING	1	64	SS265	ELECTRIC MOTOR (3 PHASE)	1
34	401CD	SEAL SCRAPER RING	1	65	SS264	ELECTRIC MOTOR (VARIABLE)	1
35	456CD	CLAMP, COVER, L.H. HINGE	1	66	15265	ELECTRIC MOTOR (380Vac / 50Hz)	1
36	454CD	HOPPER COVER	1	67	F0505HH	BOLT	4
	CD400A	COMPLETE HOPPER COVER ASSEMBLY w/ 1 - 454CD HOPPER COVER 1 - 455CD RIGHT HINGE 1 - 456CD LEFT HINGE 2 - 460CD INSULATORS 2 - 461CD BOLTS	1	68	462CD	MOTOR MOUNT	1
37	460CD	INSULATORS	2	69	644CA	MOTOR SPACER	2
38	455CD	CLAMP, COVER, R.H. HINGE	1	65	643CA	MOTOR SHIM	2
				67	F0400LW	LOCK WASHER	2
				68	SS240	MAGNETIC REED SWITCH	1
				69	440CDS	OIL SEAL (RETAINERS)	2

NOTE:

REPLACEMENT PART NO'S FOR ITEM NO. (50):

IF YOUR MACHINE SERIAL # HAS A LETTER IN IT ORDER:

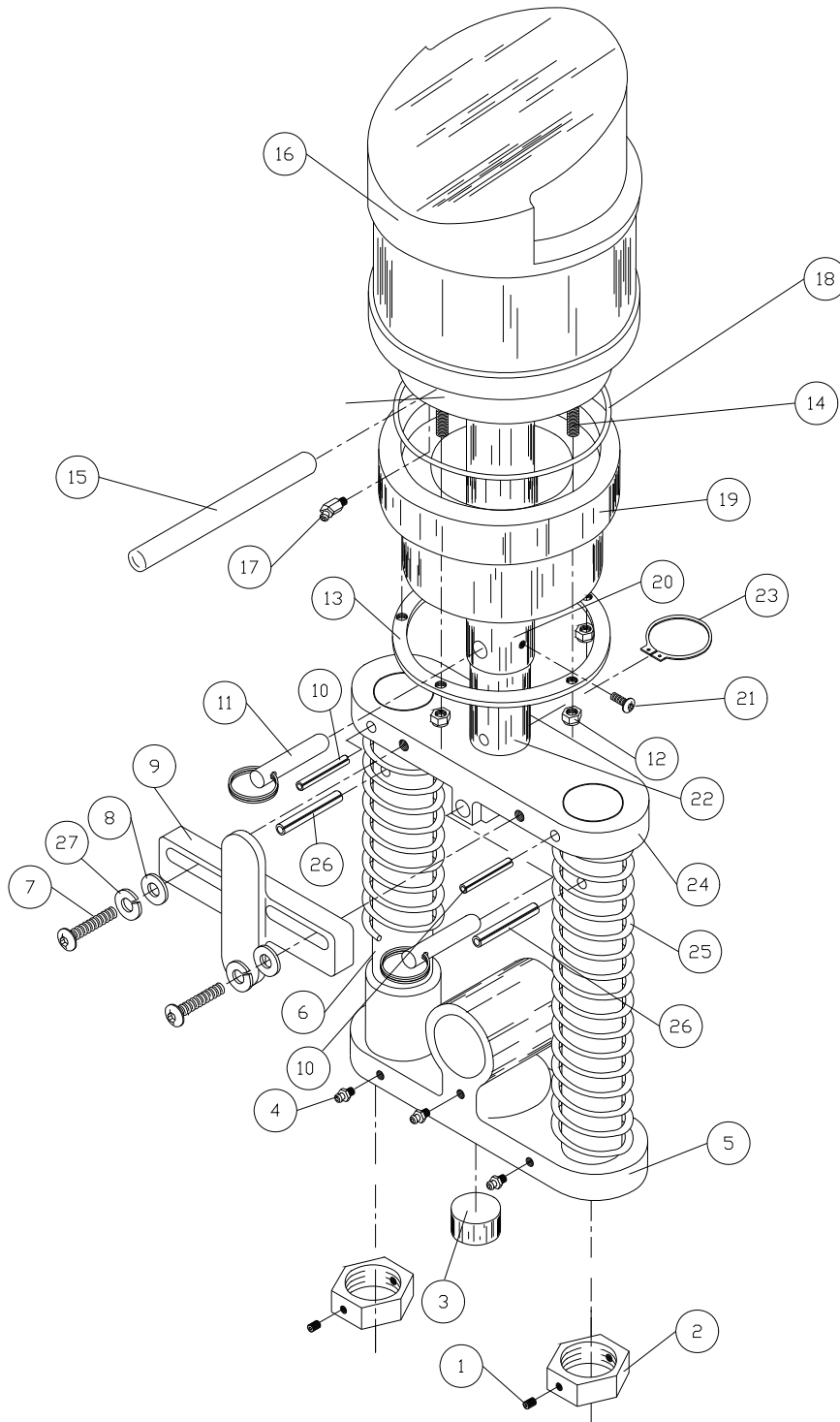
440CD1 = 2-3/8" O.D.

IF YOUR MACHINE SERIAL # DOES NOT HAVE A LETTER IN IT ORDER:

440CD2 = 2-1/4" O.D.

OPTIONAL EQUIPMENT FOR PART NO. (445CD)
 PART NO. (445CDE) EXTENDED HOPPER

PISTON - CONNECTING ROD & SPRING ASSEMBLY



PISTON - CONNECTING ROD & SPRING ASSEMBLY

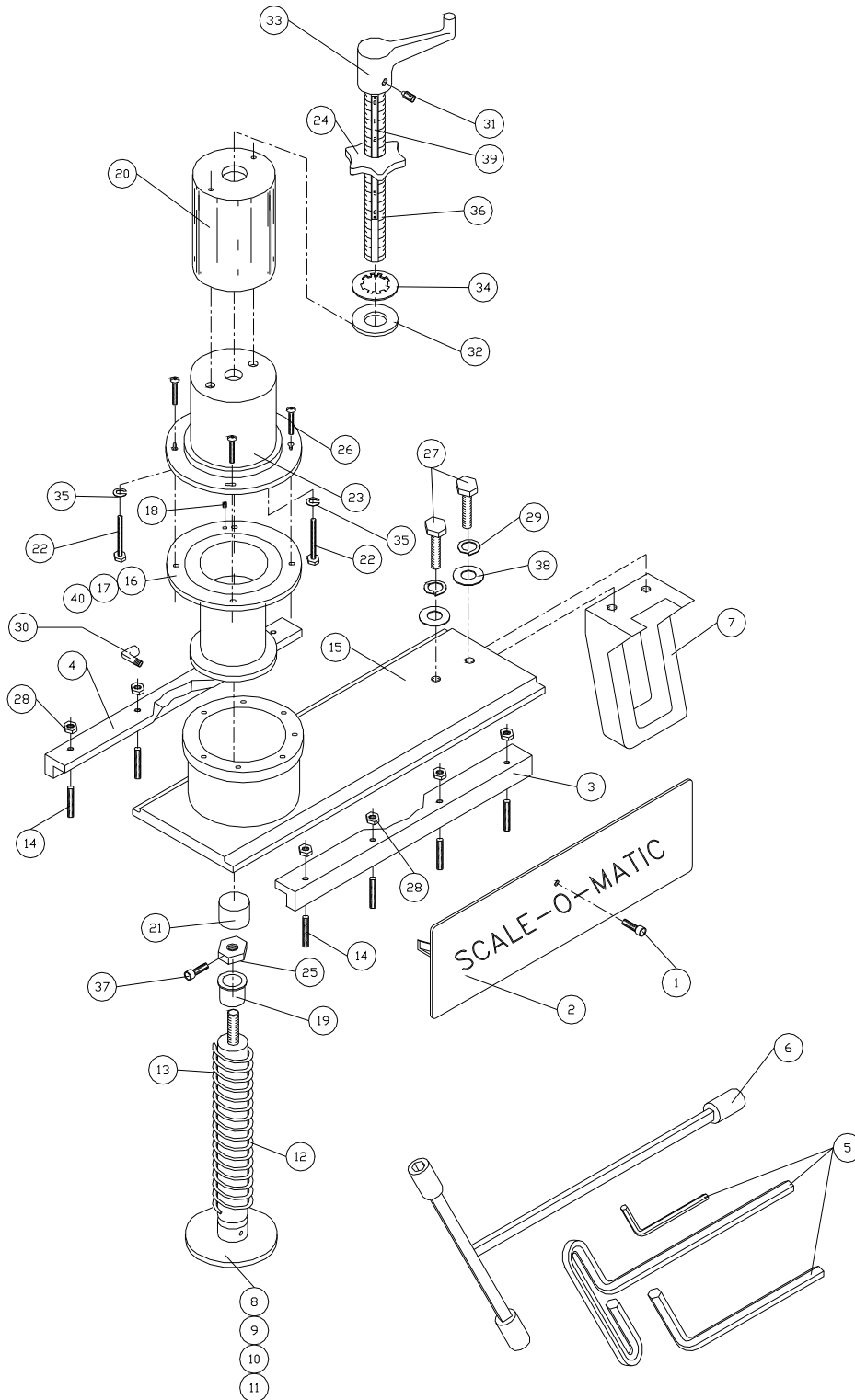
<u>ITE</u>	<u>PART No.</u>	<u>DESCRIPTION</u>	<u>No. REQ'D</u>
<u>M</u>			
1	F0401SS	SET SCREW	2
2	315PY	SPRING LOCK NUT	2
3	313PY	EXPANSION PLUG	1
4	3038-B	GREASE FITTING	3
5	310PY	LOWER CASTING & BUSHING ASSEMBLY	1
		INCLUDES: 3 - 3038-B GREASE FITTINGS 1 - 313PY EXPANSION PLUG	
6	309PY	SPRING GUIDE BARS (NOT SOLD SEPARATELY) SOLD w/ B317PY ONLY	2
7	F0404SB	BOLT	2
8	F0400FW	FLAT WASHER	2
9	306PY	LOCK CONNECTING PIN	1
10	F0408RP	ROLL PIN ¼ DIA. X 2.0" LG.	2
11	304PY	CONNECTING ROD PIN	2
12	F0400LN	LOCK NUT	6
13	302PY	PISTON RING WASHER	1
14	F0416HS	HANGER SCREW	6
15	301PY	WRIST PIN	1
16	300PYA	PLASTIC PISTON ASSEMBLY	1
		INCLUDES: 6 - F0400LN LOCK NUTS 1 - 301PY WRIST PIN 1 - 302PY PISTON RING WASHER 1 - 323PY PISTON RING / CUP ONLY 1 - 324PY O RING	
	OR		
	300PY1	PLATIC PISTON (ONLY)	1
17	3053-B	GREASE FITTING	1
18	324PY	PISTON 'O' RING	1
19	323PY	PISTON RING / CUP ONLY	1
20	322PY	OUTSIDE CONNECTING ROD	1
21	F0401SB	SOCKET BUTTON HEAD SCREW	1
22	319PY	INSIDE CONNECTING ROD	1
23	318PY	TRU ARC RETAINER WASHER	1
24	317PY	UPPER SPRING CASTING ASSEMBLY	1
		INCLUDES: 2 - F0406RP SPRING PINS 2 - 309PY SPRING GUIDE BARS 2 - F0408RP SPRING PINS	
25	316PY	COMPRESSION SPRING	2
26	F0406RP	ROLL PIN ¼ DIA. X 2.0" LG.	2
27	F0406LW	LOCK WASHER	2

ASSEMBLY PART #'S

A504PY CONNECTING ROD ASSEMBLY
 INCLUDES:
 1 - 318PY TRU ARC RETAINER WASHER
 1 - 319PY INSIDE CONNECTING ROD
 1 - 322PY OUTSIDE CONNECTIONG ROD
 1 - F0401SB SOCKET BUTTON HEAD SCREW

A503AY SPRING LOAD ASSEMBLY
 2 - 306PY LOCK CONNECTING PIN
 3 - 3038-B GREASE FITTING
 1 - 310PY LOWER CASTING & BUSHING
 1 - 313PY EXPANSION PLUG
 2 - 316PY COMPRESSION SPRING
 1 - 317PY UPPER SPRING CASTING ASSEMBLY
 2 - 315PY SPRING LOCK NUT
 HARDWARE

MEASURING CUP & DIVIDER SLIDE



MEASURING CUP & DIVIDER SLIDE

ITEM	PART No.	DESCRIPTION	No. REQ'D	ITEM	PART No.	DESCRIPTION	No. REQ'D
1	F0404SH	SOCKET HEAD BOLT	1	12	516MSL	PLUNGER SPRING (LIGHT)	1
2	518MS	NAME PLATE & OIL RETURN	1			FOR 1" & 2" PLUNGER	
3	507MS/B	GIB BAR (LOWER)	1	13	516MSH	PLUNGER SPRING (HEAVY)	1
4	507MS/B	GIB BAR (UPPER) w/ 1 - 724OS 90° STREET ELBOW	1			FOR 3" & 5" PLUNGER	
5	530MSW	WRENCHES 1/8", 1/16" AND 5/32" T-HANDLE	1 SET	14	F0508SD	STUD	8
6	542MSW	T WRENCH	1	15	511MS	DIVIDER SLIDE	1
7	517MS	CAM ARM SLIDE w/ F0607HH SCREWS	1 UNIT	16	509MSS	DIVIDER CYLINDER 2"	1
	517MS/H	CAM ARM SLIDE w/ F0605HH HEAVY SCREWS	1 UNIT	17	510MS	DIVIDER CYLINDER 3"	1
8	513MS-1	1" PLUNGER INCLUDES: 1 - F0304RP ROLL PIN 1 - 515MS PLUNGER SHAFT	1 UNIT	18	F0401SS	SET SCREW	4
	513MS-1S	1" PLUNGER w/ SPRING INCLUDES: 1 - F0304RP ROLL PIN 1 - 515MS PLUNGER SHAFT 1 - 516MSL PLUNGER SPRING (LIGHT)	1 UNIT	19	539MSP	PLASTIC BUSHING	1
9	513MS-2	2" PLUNGER INCLUDES: 1 - F0304RP ROLL PIN 1 - 515MS PLUNGER SHAFT	1 UNIT	20	529MS-2	STOP COVER	1
	513MS-2S	2" PLUNGER w/ SPRING INCLUDES: 1 - F0304RP ROLL PIN 1 - 515MS PLUNGER SHAFT 1 - 516MSL PLUNGER SPRING (LIGHT)	1 UNIT	21	529MS-2E	PLASTIC STOP PLUG	1
10	513MS-3	3" PLUNGER INCLUDES: 1 - F0304RP ROLL PIN 1 - 515MS PLUNGER SHAFT	1 UNIT	22	F0416HH	BOLT	2
	513MS-3S	3" PLUNGER w/ SPRING INCLUDES: 1 - F0304RP ROLL PIN 1 - 515MS PLUNGER SHAFT 1 - 516MSH PLUNGER SPRING (HEAVY)	1 UNIT	23	503MS	PLUNGER GUIDE HOUSING	1
11	513MS-5	5" PLUNGER INCLUDES: 1 - F0304RP ROLL PIN 1 - 515MS PLUNGER SHAFT	1 UNIT	24	529MS-2D	STAR KNOB	1
	513MS-5S	5" PLUNGER w/ SPRING INCLUDES: 1 - F0304RP ROLL PIN 1 - 515MS PLUNGER SHAFT 1 - 516MSH PLUNGER SPRING (HEAVY)	1 UNIT	25	531MS	SLOTTED HEX NUT	2
				26	F0404SB	SOCKET HEAD BOLT	4
				27	F0607HH	HEX HEAD BOLT	2
				28	F0500HNC	HEX NUT	8
				29	F0600LW	LOCK WASHER	2
				30	724OS	STREET ELBOW 90°	1
				31	F0502SSDP	SET SCREW w/ FULL DOG POINT	1
				32	F1200WF	WASHER	1
				33	529MS-2F	ADJUSTABLE HANDLE	1
				34	F1200RW	RETAINING WASHER	1
				35	531MS	SLOTTED HEX NUT	1
				36	529MS-2C	STOP COVER	1
				37	F0403SH	SOCKET HEAD BOLT 3/4" LONG	1
				38	F0600HFW	FLAT WASHER	2
				39	AM TAG #60	MESURING CUP SCALE	1
				40	512MS	DIVIDER CYLINDER 1"	1

INDIVIDUAL MEASURING CUP ASSEMBLIES

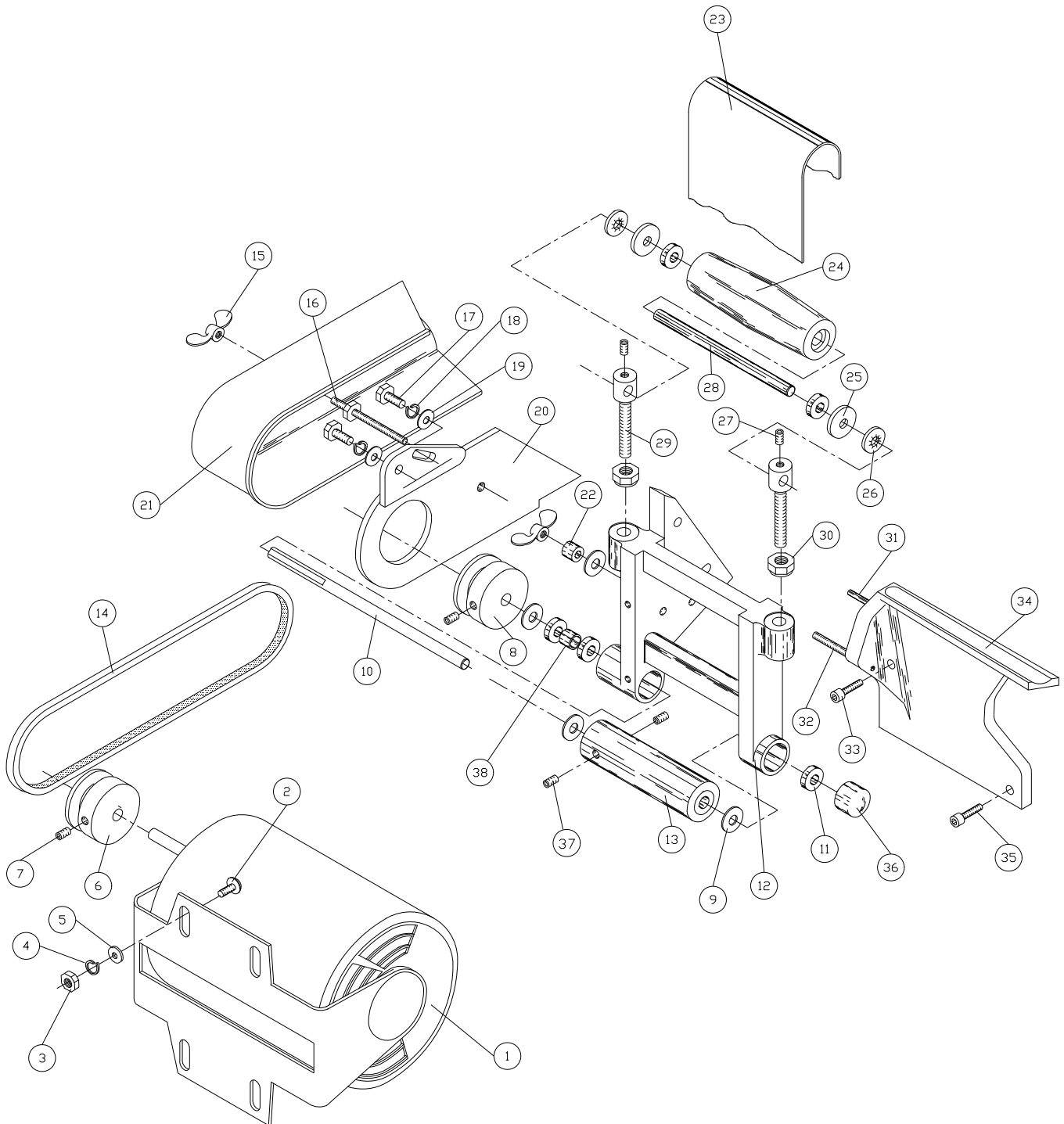
- AMS1 - FOR 1oz. TO 2oz. PIECES**
- AMS2 - FOR 2oz. TO 4oz. PIECES**
- AMS3 - FOR 4oz. TO 10 oz. PIECES**
- AMS5 - FOR 10oz. TO 32oz. PIECES**

NOTE:

PART NO. A501MS (COMPLETE STOP COVER ASSEMBLY AVAILABLE TO REPLACE OLD STYLE STOP COVERS).

PART NO. 521MS (SLIDE WEAR STRIPS FOR OLDER MACHINES – SEE PAGE 33).

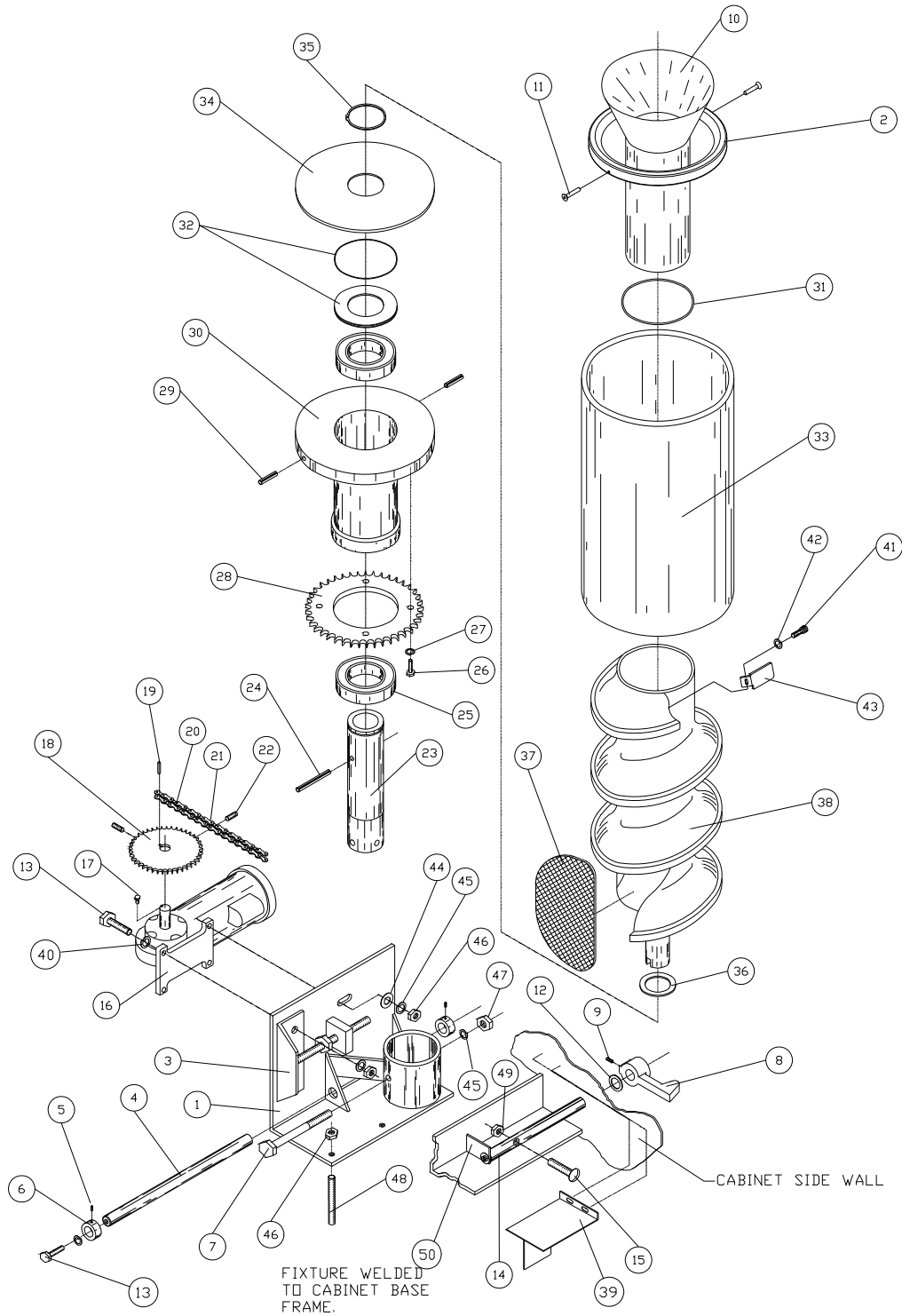
SMALL TAKE-OFF CONVEYOR



SMALL TAKE-UP CONVEYOR

<u>ITE</u> <u>M</u>	<u>PART No.</u>	<u>DESCRIPTION</u>	<u>No. REQ'D</u>
1	SS266	¼ H.P. MOTOR(208-240Vac / 60Hz) INCLUDES: PIG TAIL FOR MOTOR	1
	15264	1/3 H.P. MOTOR (380Vac / 50HZ) INCLUDES: PIG TAIL FOR MOTOR	
2	F0503CB	BOLT	4
3	F0500NC	NUT	4
4	F0500LW	LOCK WASHER	4
5	F0500FW	FLAT WASHER	4
6	638SC	MOTOR PULLEY	1
7	F0401SS	SET SCREW	4
8	616SC	SMALL BELT PULLEY (3/8")	1
9	F0800WF	FIBER WASHER	3
10	618SC	DRIVE SHAFT (3/8")	1
11	603SCA	BALL BEARING (3/8")	5
12	620SC	CONVEYOR BRACKET	1
		(NOT SOLD SEPARATELY, SEE SC601A)	
	A620SC	CONVEYOR BARCKET ASSEMBLY DOES NOT INCLUDE PART #: 621SC	1
13	619SC	LOWER ROLLER ASSEMBLY w/ SET SCREWS	1
14	609SCB	"V" BELT (28")	1
15	F0400WN	WING NUT	2
16	F0412SD	STUD	1
	F0400NC	NUT	1
17	F0426HH	BOLT	2
18	F0400LW	LOCK WASHER	2
19	F0400FW	FLAT WASHER	2
20	610SC	COVER SUPPORT	1
21	608SC	COVER-BELT	1
22	642SC	SPACER	1
23	605SC	SMALL CONVEYOR BELT	1
24	A604SC	TOP ROLLER 93/8") w/ SHAFT & TWO (2) BEARINGS	1
25	F0400NW	NYLON WASHER	2
26	F0400RW	RETAINING WASHER	2
27	F0401SS	SET SCREW	1
28	602SC	ROLLER SHAFT (3/8")	1
29	600SC	SUPPORT ROLLER	2
30	F0600LN	NUT	2
31	F0405RP	ROL PIN	1
32	F0406SD	STUD	1
33	F0404SH	BOLT	1
34	621SC	CONVEYOR SUPPORT BRACKET	1
35	F0403SH	BOLT	1
36	627SC	CAP – BEARING	1
37	F0503SS	SET SCREW	2
38	617SC	SPACER	1

ROUNDER ASSEMBLY



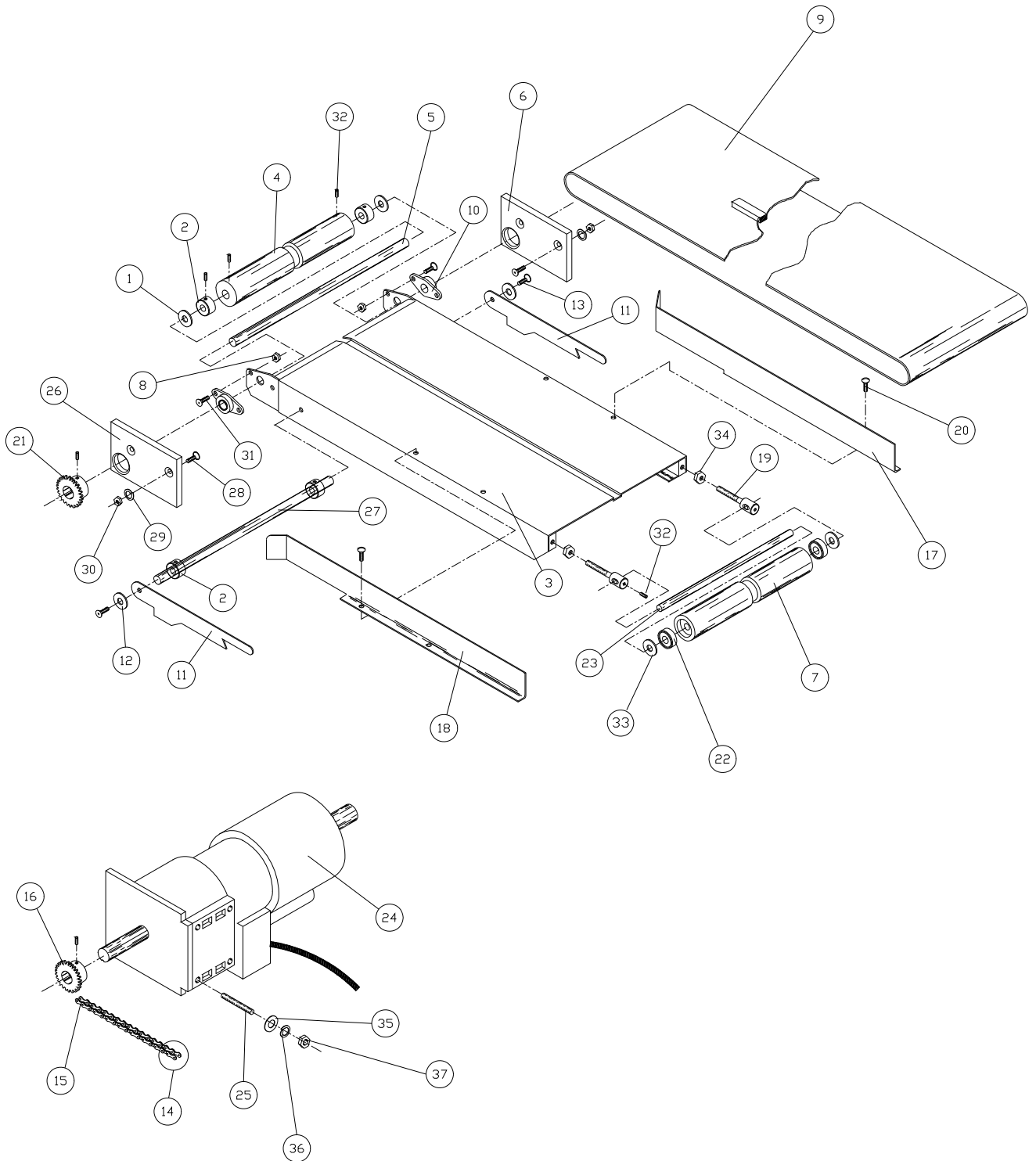
ROUNDER ASSEMBLY

<u>ITE</u>	<u>PART No.</u>	<u>DESCRIPTION</u>	<u>No. REQ'D</u>
<u>M</u>			
1	SR139RA	PIVOT BASE	1
2	R115RA	RING	1
3	R144RA	MOTOR ADJUSTING BRACKET	1
4	R146RA	SWIVEL SHAFT	1
5	F0501SS	SET SCREW	2
6	R147RA	COLLAR ¾" I.D.	2
7	F0618HH	BOLT	1
8	R149RA	SWIVEL LOCKING HANDLE	1
9	F0602SS	SET SCREW w/ DOG POINT	1
10	SR135RA	FUNNEL (TEFLON COATED)	1
11	F0404FSH	SCREW	2
12	F0800NW	FIBER WASHER	1
13	F0606HH	BOLT	5
14	R148RA	SWIVEL LOCKING ASSEMBLY (1 – SHAFT, 2 – F0600FW, 1 – F0607SS, 1 – F0600LN)	1
15	F0608CB	CARRIAGE BOLT w/ SLOTTED END	1
16	SS255	GEAR MOTOR ¾ H.P. (SINGLE PHASE) (STANDARD MACHINE)	1
	SS256	GEAR MOTOR 1 H.P. (THREE PHASE)	
	14028	MOTOR 1H.P. (380Vac / 50Hz) – GEARBOX SOLD SEPARATELY – SEE #52	
17	133RA	BREATHER	1
18	R103RA	SPROCKET (27T)	1
19	F0404KY	KEY (1/4")	1
20	R105RA	DRIVE TRAIN (#50 UNPLATED) (31 LINKS)	1
21	R106RA	CONNECTING LINK (#50 UNPLATED)	1
22	F0525CPSS	SET SCREW 5/16-18 x 3/8" LONG	2
23	R108RA-S	SPINDLE	1
24	F0612RP	3/8" x 3" LONG ROLL PIN	1
25	R135RA	BEARING	2
26	F0504HH	BOLT	4
27	F0500LW	LOCK WASHER	4
28	R109RA	SPROCKET (45T)	1
29	R107RA	DRIVE PIN (3/8" DIA. X 1-3/4" LONG)	2
30	R108RA-B	ROUNDER BASE	1
31	R143RA	"O" RING	1
32	R134RA	PLASTIC INSERT w/ "O" RING	1
33	R117RA	DRUM	1
34	R141RA	PLASTIC SEAL RING	1
35	R145RA	SNAP RING	1
36	R142RA	RUBBER WASHER	1
37	R124RA-F	FACING (OBSOLETE ON NEW MACHINES AS OF 5/1/02)	1
38	R122RA	ROUNDER SCREW	1
39	SR141RA	PIVOT BASE GUARD ASSEMBLY	2
40	F0600LW	LOCK WASHER	1
41	F0403SH	SOCKET HEAD BOLT	1
42	F0400FW	FLAT WASHER	1
43	R121RA	EXIT RAMP	1
44	F0600FW	FLAT WASHER	5
45	F0600LW	LOCK WASHER	5
46	F0600NC	NUT	6
47	F0800NC	NUT	4
48	F0607SD	STUD	2
49	F0600LN	LOCK NUT	1
50	R150RA	FOOT PEDAL POST	1
51	F0600LW	LOCK WASHER	4
52	12081	GEARBOX (380Vac / 50Hz) MACHINES ONLY	1

NOTE:

THE ROUNDER SCREW IS SUBJECT TO ABUSE. CARE MUST BE TAKEN IN HANDLING WHEN NOT IN USE WITH MACHINE. LAY ROUNDER DOWN FLAT ON GROUND CAREFULLY.

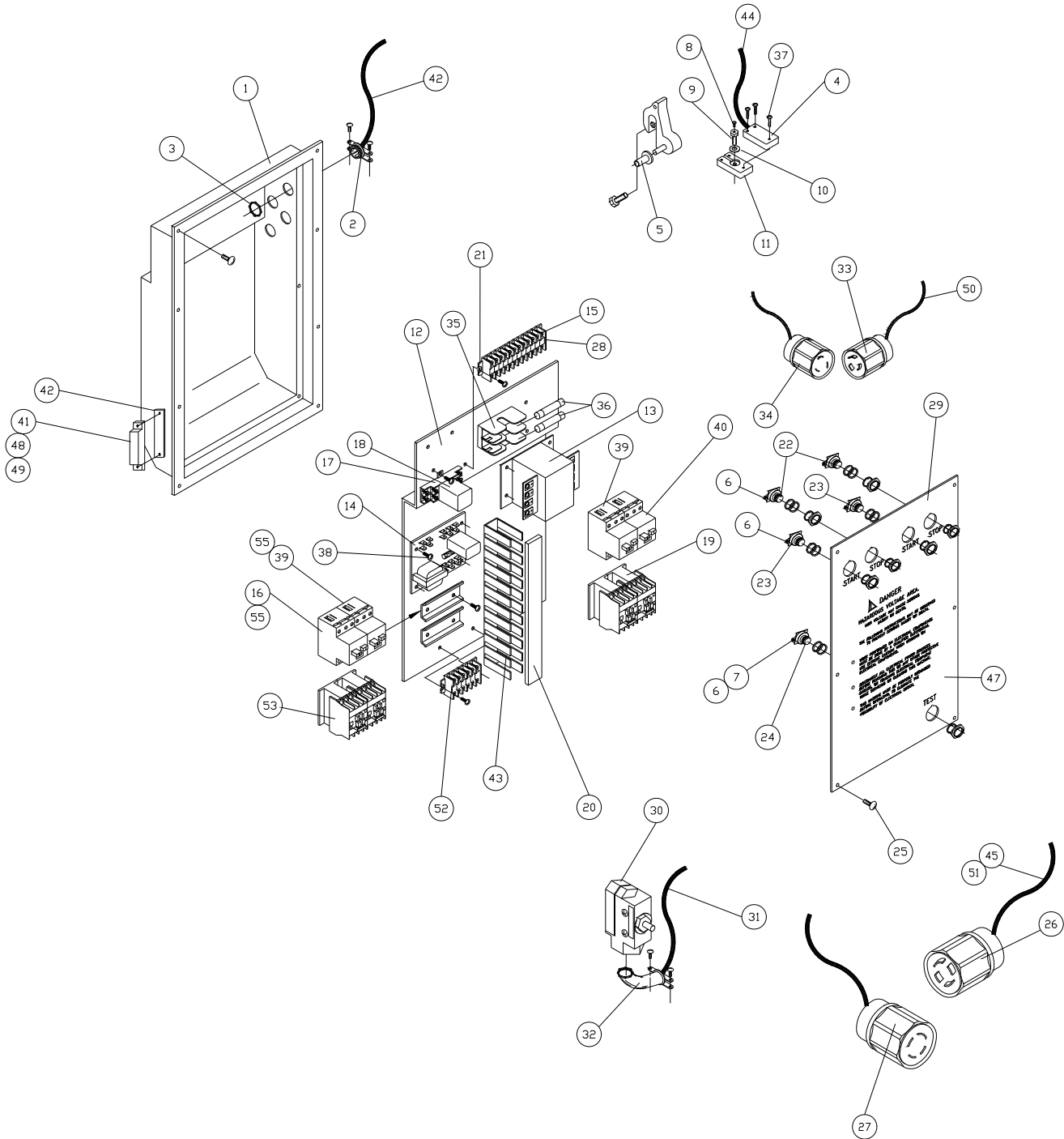
CONVEYOR ASSEMBLY (STANDARD)



CONVEYOR ASSEMBLY

ITEM	PART NO.	DESCRIPTION	NO. REQ'D
1	F0800NW	NYLON WASHER	2
2	119CA	½" LOCKING COLLAR	4
3	118CA	CONVEYOR FRAME	1
4	101CA	DRIVE ROLLER	1
5	115CA	DRIVE ROLLER SHAFT	1
6	11960	SIDE CONVEYOR MOUNTING BRACKET (LEFT)	1
7	A109CA	IDLER ROLLER ASSEMBLY	1
		INCLUDES:	
		1 - 109CA IDLER ROLLER	
		2 - 603SCA BALL BEARING	
8	F0400LN	¼-20 LOCK NUT	4
9	104CA	CONVEYOR BELT	1
10	102CA	SELF-ALIGNING BRONZE FLANGE BEARING	2
11	105CA	CONVEYOR ELEVATOR	2
12	F0400FW	¼-20 FLAT WASHER	2
13	F0402HH	¼-20 X ½ HEX HEAD	2
14	114CA	NO. 35 CONNECTING LINK UNIT	1
15	113CA	CHAIN NO. 35 AT 16 LINKS	1
16	112CA	MOTOR SPROCKET	1
17	106CAL	CONVEYOR GUIDE (LEFT)	1
18	106CAR	CONVEYOR GUIDE (RIGHT)	1
19	A600SC	ROLLER SUPPORT ASSEMBLY	2
20	F9702RH	8-32 ROUND HEAD SCREW	4
21	116CA	ROLLER SPROCKET	1
22	603SCA	BALL BEARING	2
23	108CA	IDLER ROLLER SHAFT	1
24	SS252	CONVEYOR MOTOR	1
25	F0504SD	SOCKET HEAD STUD	4
26	11959	SIDE CONVEYOR MOUNTING BRACKET (RIGHT)	1
27	11958	CONVEYOR ELEVATOR SHAFT	1
28	F0406SFH	¼-20 X 1.5 SOCKET FLAT HEAD	4
29	F0400LW	¼" LOCK WASHER	4
30	F0400NC	¼-20 COURSE NUT	4
31	F0402FSH	¼-20 X ½ FLAT SOCKET HEAD	4
32	F0401SS	SET SCREW	4
33	F0600NW	NYLON WASHER	2
34	F0500LN	5/16 LOCK NUT	2
35	F0500FW	5/16 FLAT WASHER	8
36	F0500LW	5/16 LOCK WASHER	4
37	F0500NC	5/16 COURSE NUT	4

ELECTRICAL/SENSOR SYSTEM



ELECTRICAL/SENSOR SYSTEM

ITEM	PART No.	DESCRIPTION	No. REQ'D
1	S617CA6	ELECTRICAL ENCLOSURE	1
2	SS100	ELECTRO LINE L-51 CONNECTOR w/ RETAINING NUT	4
3	SS101	STAIN RELIEF RETAINING NUT	1
4	SS110-1	HOPPER TERMINATOR (TOP)	1
5	SS113	COVER HINGE INSULATOR	2
6	400038	N.C. CONTACT BLOCK	5
7	400039	N.O. CONTACT BLOCK	3
8	F9700TH	#8-32 TRUSS HD. SCREW	1
9	SS112	5/16-18 x ¾ HEX BOLT	1
10	F0500FW	FLAT WASHER	1
11	SS110-2	HOPPER TERMINATOR (BOTTOM)	1
12	SS268	ELECTRICAL SUB-PANEL	1
13	SS176	CONTROL TRANSFORMER	1
14	SS179	SENSOR CONTROL UNIT	1
15	EL-0395	TERMINAL BLOCK	23
16	EL-0856	MOTOR PROTECTOR	1
17	EL-0392	AUXILIARY RELAY SOCKET	1
18	EL-0391	AUXILIARY RELAY	1
19	EL-0853	MOTOR CONTACTOR	4
20	SS182	WIRING DUCT COVER	12"
21	EL-0396	TERMINAL BLOCK END SEGMENT	2
22	EL-0409	PUSHBUTTON w/RED BUTTON COVER (STOP)	3
23	SS184	PUSHBUTTON w/GREEN BUTTON COVER (START)	2
24	EL-0410	PUSHBUTTON w/BLACK BUTTON COVER (TEST)	1
25	F0402PH	SCREW	6
26	SS159	MAIN POWER AND ROUNDER MOTOR PLUG	2
	SS155	MAIN POWER AND ROUNDER MOTOR PLUG (208-22Vac SINGLE PHASE MACHINES ONLY)	
	SS161	MAIN POWER AND ROUNDER MOTOR PLUG (380-480Vac THREE PHASE MACHINES ONLY)	
27	SS160	ROUNDER MOTOR CONNECTOR	1
	SS156	ROUNDER MOTOR CONNECTOR (208-22Vac SINGLE PHASE MACHINES ONLY)	
	SS162	ROUNDER MOTOR CONNECTOR (380-480Vac THREE PHASE MACHINES ONLY)	
28	EL-0397	TERMINAL BLOCK END BARRIER	1
29	11423	ELECTRICAL ENCLOSURE COVER PANEL	1
30	SS119	COVER INTERLOCK SWITCH	1
31	R522EC	16/3 CUT TO 16/2 WIRE	96"
32	SS103	90° ELBOW	3
33	SS153	CONVEYOR MOTOR PLUG	2
34	SS154	CONVEYOR MOTOR CONNECTOR	2
35	SS142	FUSE BLOCK (4 REQUIRED FOR 380 – 480Vac THREE PHASE MACHINES ONLY)	2
36	SS134	FUSE (2 AMP)	2
37	F9804RH	SCREW	3
38	F9602RH	SCREW	4
39	EL-0854	MOTOR PROTECTOR	2
40	EL-0859	MOTOR PROTECTOR	1
41	SS240	REED SWITCH	3
42	SS335	MOUNT	1
43	SS181	WIRE DUCT	12"
44	SS351	SENSOR CORD (18-2 - GRAY)	62"
45	SS223	12/4 MAIN POWER CORD	12'
47	TAG #37	ELECTRICAL COVER PANEL STICKER	1
48	SS241	REED SWITCH COVER	3
49	SS242	REED SWITCH SPACER	2
50	SS221	16/3 CORD	8' ¼"
51	SS225	16/4 CORD	64"
	SS220	14/3 CORD (208 – 22Vac SINGLE PHASE MACHINES ONLY)	
52	SS143	6 POINT TERMINAL BLOCK	1
53	EL-0856	DIVIDER MOTOR CONTACTOR (208 – 220Vac SINGLE PHASE MACHINES ONLY)	1
54	SS135	FUSE (5 AMP – 380-480Vac THREE PHASE MACHINES ONLY)	2
55	EL-0855	MOTOR PROTECTOR (ROUNDER MOTOR 208-220Vac SINGLE PHASE MACHINES) MOTOR PROTECTOR (DIVIDER MOTOR 380-480Vac THREE PHASE MACHINES)	1
56	EL-0226	TRANSFORMER (380-480Vac THREE PHASE MACHINES)	1
57	EL-0227	VARIABLE FREQUENCY DRIVE (208-220Vac SINGLE PHASE MACHINES ONLY) (NOT STANDARD)	1
58	EL-0228	VARIABLE FREQUENCY DRIVE (208-240Vac THREE PHASE MACHINES ONLY) (NOT STANDARD)	1
59	EL-0229	VARIABLE FREQUENCY DRIVE (380-480Vac THREE PHASE MACHINES ONLY) (NOT STANDARD)	1
60	EL-0330	VARIABLE FREQUENCY DRIVE PROGRAMMING TERMINAL (NOT STANDARD)	1

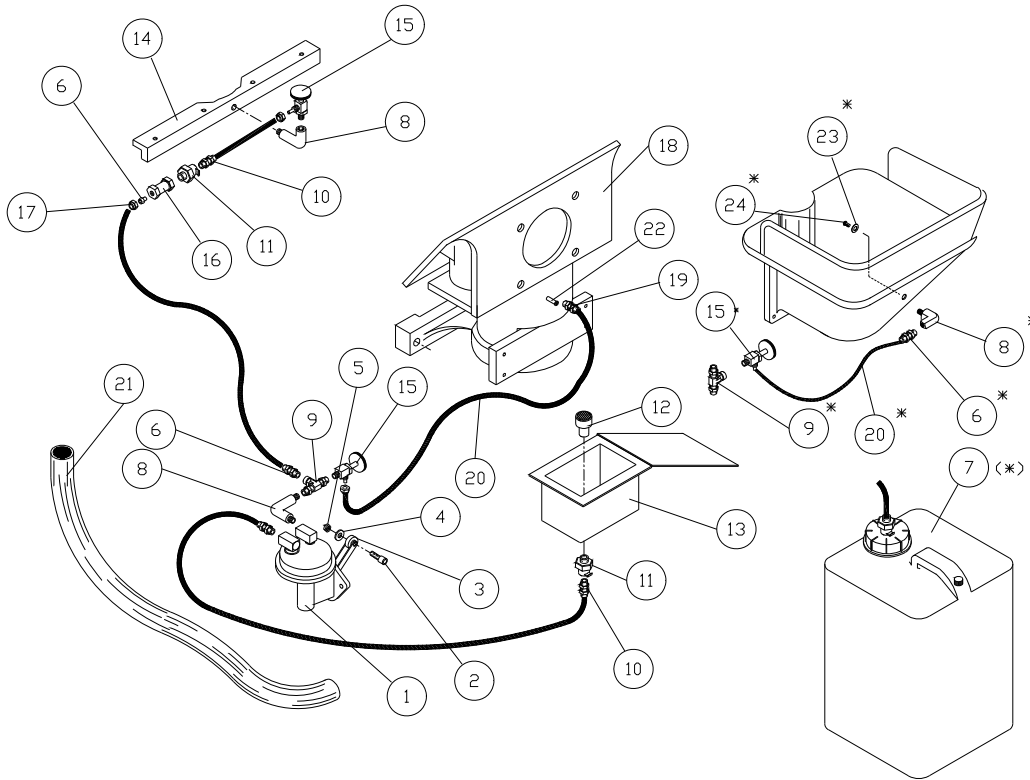
NOTE:

GUARDS ARE INTERLOCKED, MACHINE WILL NOT OPERATE WITHOUT GUARDS IN PLACE.

NOTE:

ELECTRICAL PARTS STANDARD ON ALL MACHINES UNLESS SPECIFIED.

OILING SYSTEM



ITEM	PART NO.	DESCRIPTION	NO. REQ'D
1	716OS	OIL PUMP	1
2	F0403SH	BOLT	1
3	714OS	PUMP ROLLER BEARING	1
4	F0400LW	LOCK WASHER	1
5	F0400LN	HEX LOCK NUT	1
6	722OS	MALE CONNECTOR	3
**7	732OSA	EXTERNAL OIL TANK	1
8	724OS	STREET ELBOW 90°	2
9	725OS	STREET "T"	1
10	726OS	QUICK CONNECT, MALE	2
11	727OS	QUICK CONNECT, FEMALE	3
12	713OS	STRAINER W/ INSERT - FILTER ADAPTER	1
13	604CA	OIL BOX	1
14	S507MS/B	GIB BAR	1
15	704OS	VALVE	2
16	103-B-OZ	BRASS COUPLING	1
17	709OS	PLASTIC FERRULES	10
18	S0107CD	CYLINDER	1
19	708OS	MALE CHECK VALVE	1
20	710OS	1/4" OIL SYSTEM TUBING 12 FT.	12 FT. / * 2 FT.
21	711OS	1/2" OIL DRAIN TUBING 4 FT.	4 FT.
22	721OS	BRACKETS (PAIR)	1
23	720OS	SPONGE OILER	1
24	728OS	BRASS INSERT	1
25	F0400FW	STAINLESS STEEL FLAT WASHER	1
26	741OS	PLUG	1

* INDICATES PARTS
 AVAILABLE WITH PART
 NO. 445CDE EXTENDED
 HOPPER (ONLY)

**NOTE:
 OPTIONAL EQUIPMENT

TROUBLESHOOTING



DANGER

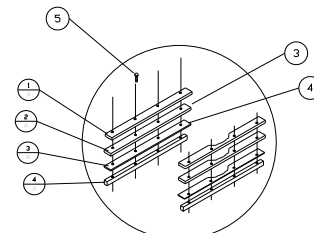
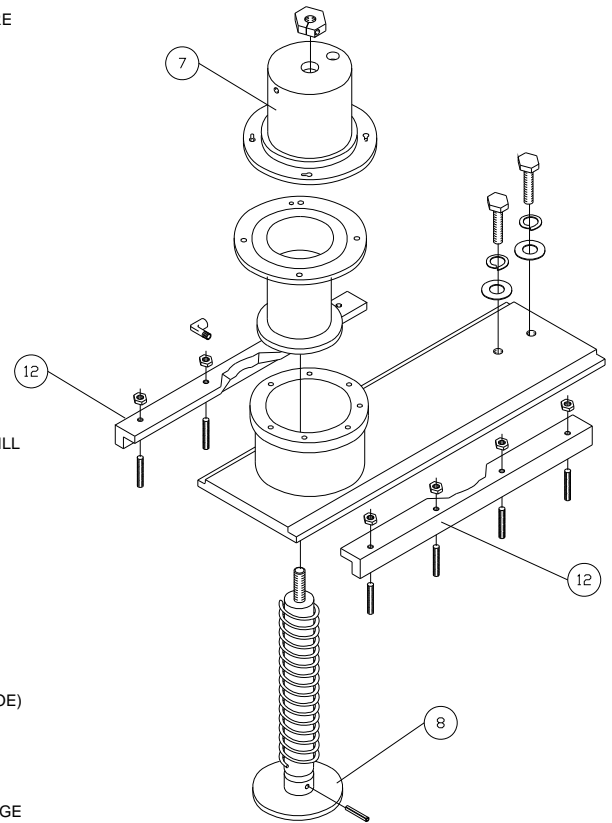
ALWAYS DISCONNECT ELECTRICAL POWER SOURCE WHEN MAINTAINING OR REPAIRING THIS MACHINE.

NOTE:

GUARDS ARE INTERLOCKED, MACHINE WILL NOT OPERATE WITHOUT GUARDS IN PLACE.

THE OPERATION OF THE SCALE - O - MATIC DEPENDS ON VACUUM, FOR TOP PERFORMANCE. THEREFORE CAN ONLY BE REALIZED IF ALL SEAL POINTS ARE IN PROPER ADJUSTMENT. THE FOLLOWING PLACES FOR POSSIBLE LOSS OF VACUUM ARE TO BE CHECKED:

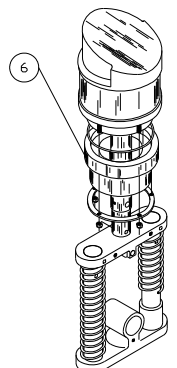
1. PART NO. S0113CD GEAR
 MAKE SURE MACHINE IS RUNNING IN THE RIGHT DIRECTION. SEE ARROW ON GEAR. GEAR MUST TURN CLOCKWISE.
2. PART NO. 402CD-NEOPRENE "O" RING
 CHECK FOR WEAR AND LOSS OF RESILIENCY.
- * 3. PART NO. 506MS-SLIDE PRESSURE STRIPS-POLYETHYLENE
 CHECK FOR LOSS OF COMPRESSIBILITY.
- * 4. PART NO. 521MS SLIDE WEAR STRIP-NYLON
 CHECK FOR WEAR.
- * 5. PART NO. 504MS GIB SCREWS
 CHECK FOR SNUGNESS
6. PART NO. 323PY PISTON RING
 CHECK FOR WEAR-REPLACE IF WORN OR SCORED.
7. PART NO. 503MS MEASURING CUP PLUNGER ROD GUIDE
 CHECK FOR WEAR AND SMOOTHNESS OF OPERATION. IF WORN PART NO. 513MS WILL BIND OR STICK.
8. PART NO. 513MS PLUNGER
 CHECK FOR CIRCUMFERENCE WEAR, REPLACE IF DOUGHS BY-PASS INTO SPRING SECTION.
9. PART NO. 434CD V-BELT DRIVE
 KEEP BELT TIGHT TO AVOID SLIPPAGE.
10. PART NO. 401CD SEAL SCRAPER RING
 CHECK FOR WEAR AND FOR STRAIGHTNESS.
11. PART NO. S0113CD GEAR
 CLEAN CAM TRACK OCCASIONALLY. OBSERVE IF PART NO. 448CD (CAM TRACK SHOE) IS WORN, ALSO CHECK FOR WEAR ON GEAR CAM TRACK.
12. PART NO. S507MS/B BRONZE GIB BAR
 CHECK GIB BARS FOR WEAR AND EXCESSIVE PLAY BETWEEN DIVIDER SLIDE.
13. PART NO. 704OS ITEM 15 OPPOSITE PAGE & PART NO. 708OS ITEM 19 OPPOSIT PAGE
 CHECK TO SEE IF CLOGGED WITH DOUGH.



DETAIL 'A'
 ASSEMBLY INSTRUCTIONS:

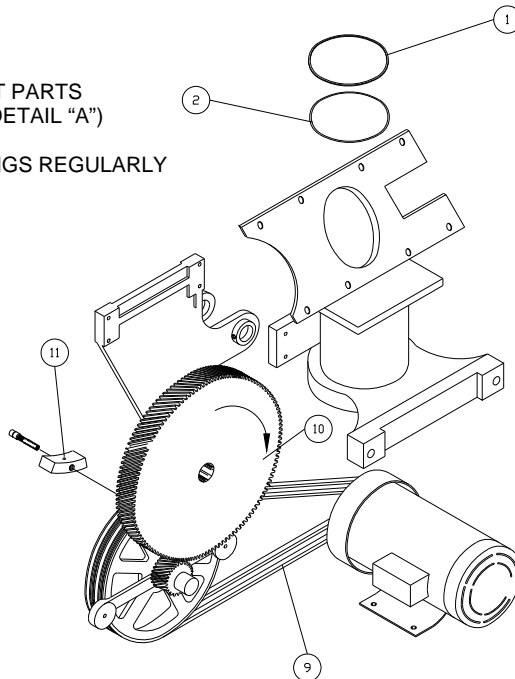
ASSEMBLY INSTRUCTIONS:

- 1A. INSERT SPACER BAR OVER GIB BAR BOLTS FIRST.
- 2A. PLACE WEAR STRIP LINER (1/32" X 13" LG.) OVER SPACER BAR.
- 3A. PLACE PLASTIC WEAR STRIP (1/4" X 13" LG.) OVER LINER.
- 4A. NOW PLACE TOP & BOTTOM GIB BARS OVER PLASTIC WEAR STRIP AND SECURE WITH HEX BOLTS.



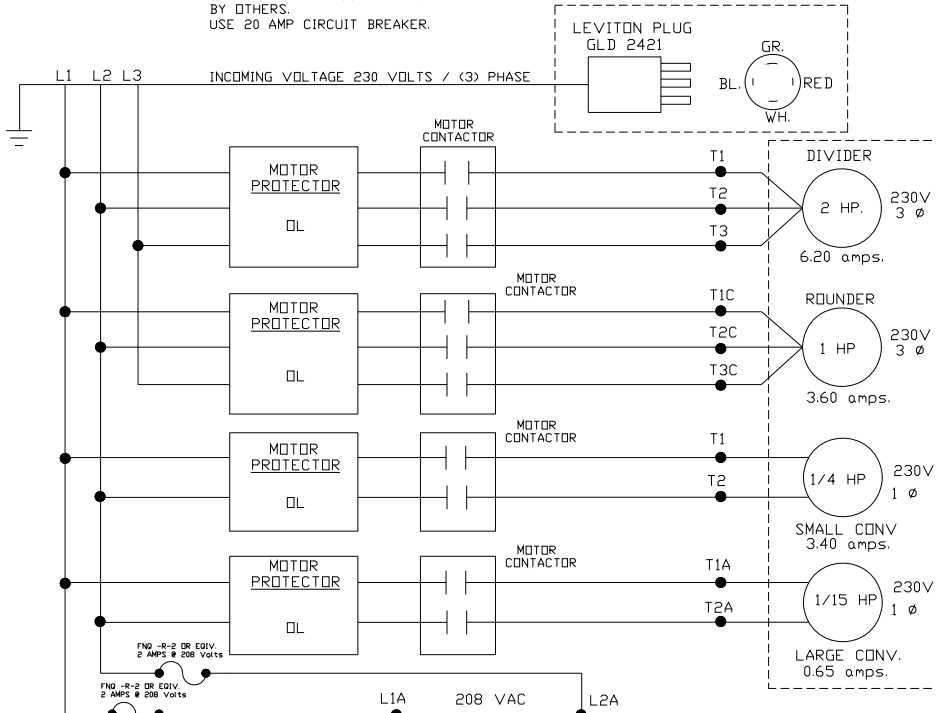
* ARE NON-CURRENT PARTS (OBSOLETE) (SEE DETAIL "A")

* * GREASE ALL FITTINGS REGULARLY

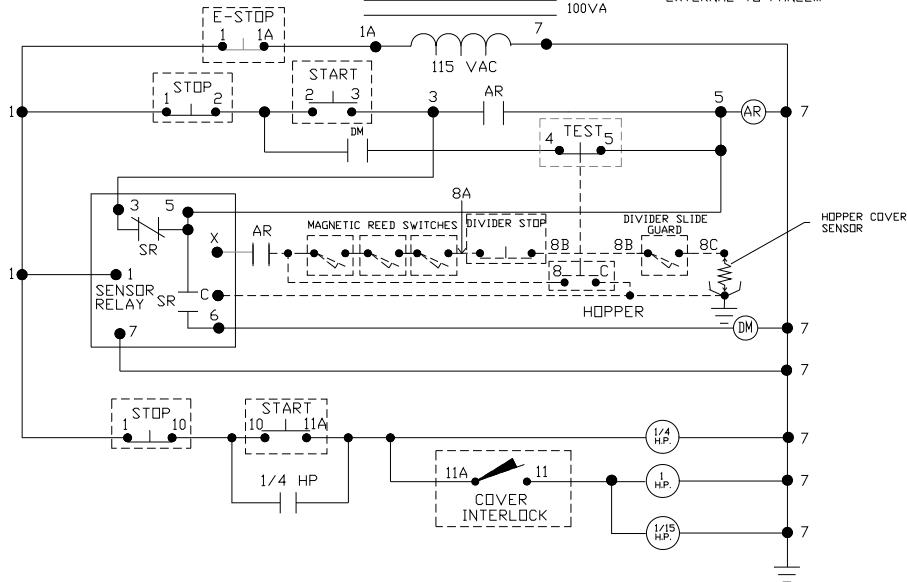


ELECTRICAL (SCHEMATIC) THREE PHASE / 208 - 230 VOLT

NOTE:
 N.T.D. FUSE DISCONNECT PROVIDED
 BY OTHERS.
 USE 20 AMP CIRCUIT BREAKER.



NOTE:
 DASHED LINES REPRESENT ITEMS
 EXTERNAL TO PANEL...

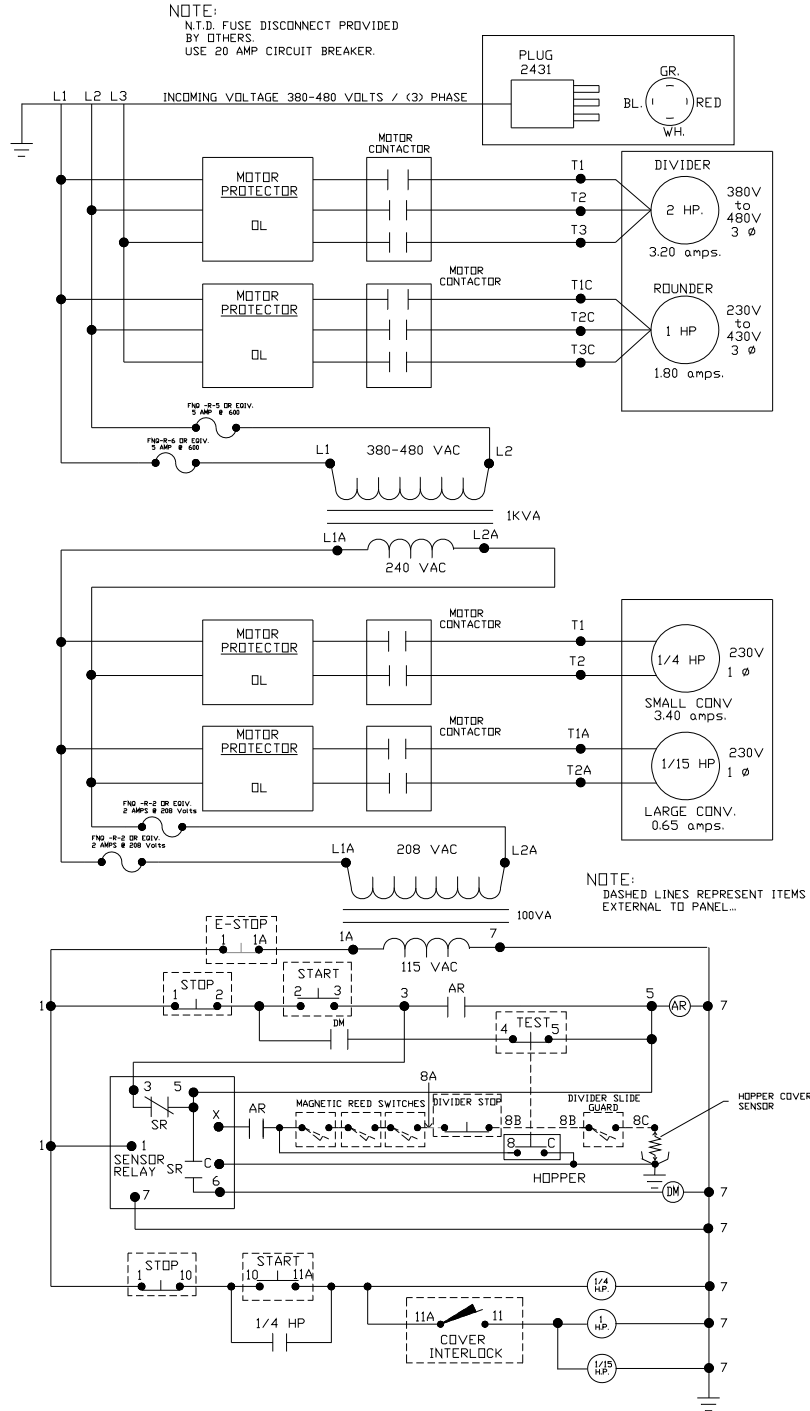


AR = AUX RELAY

SR = SENSOR RELAY

DM = DIVIDER MOTOR CONTACTOR

ELECTRICAL (SCHEMATIC) THREE PHASE / 380 - 480 VOLT

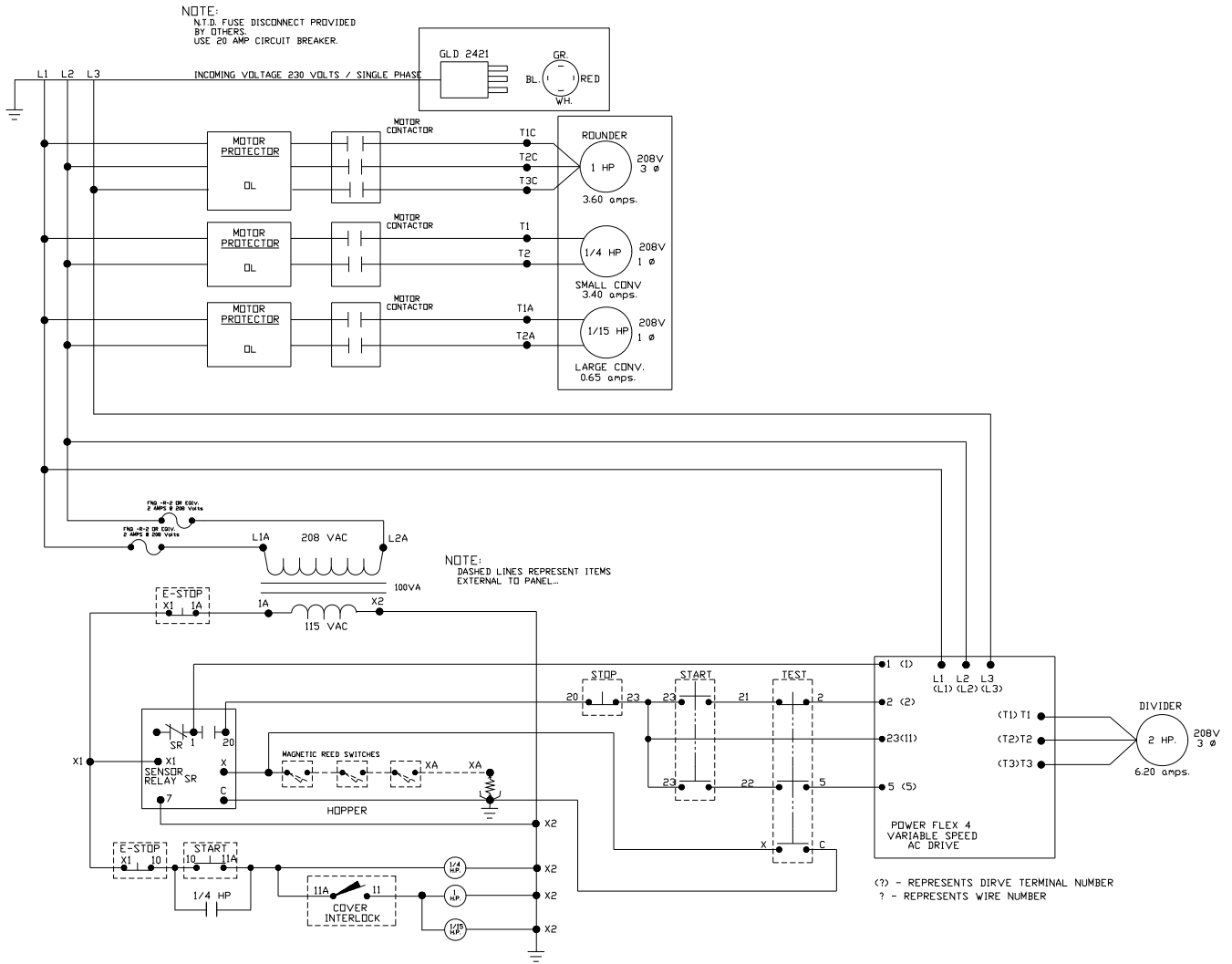


AR = AUX RELAY

SR = SENSOR RELAY

DM = DIVIDER MOTOR CONTACTOR

ELECTRICAL (SCHEMATIC) THREE PHASE / 208 - 230 VOLT - VARIABLE SPEED

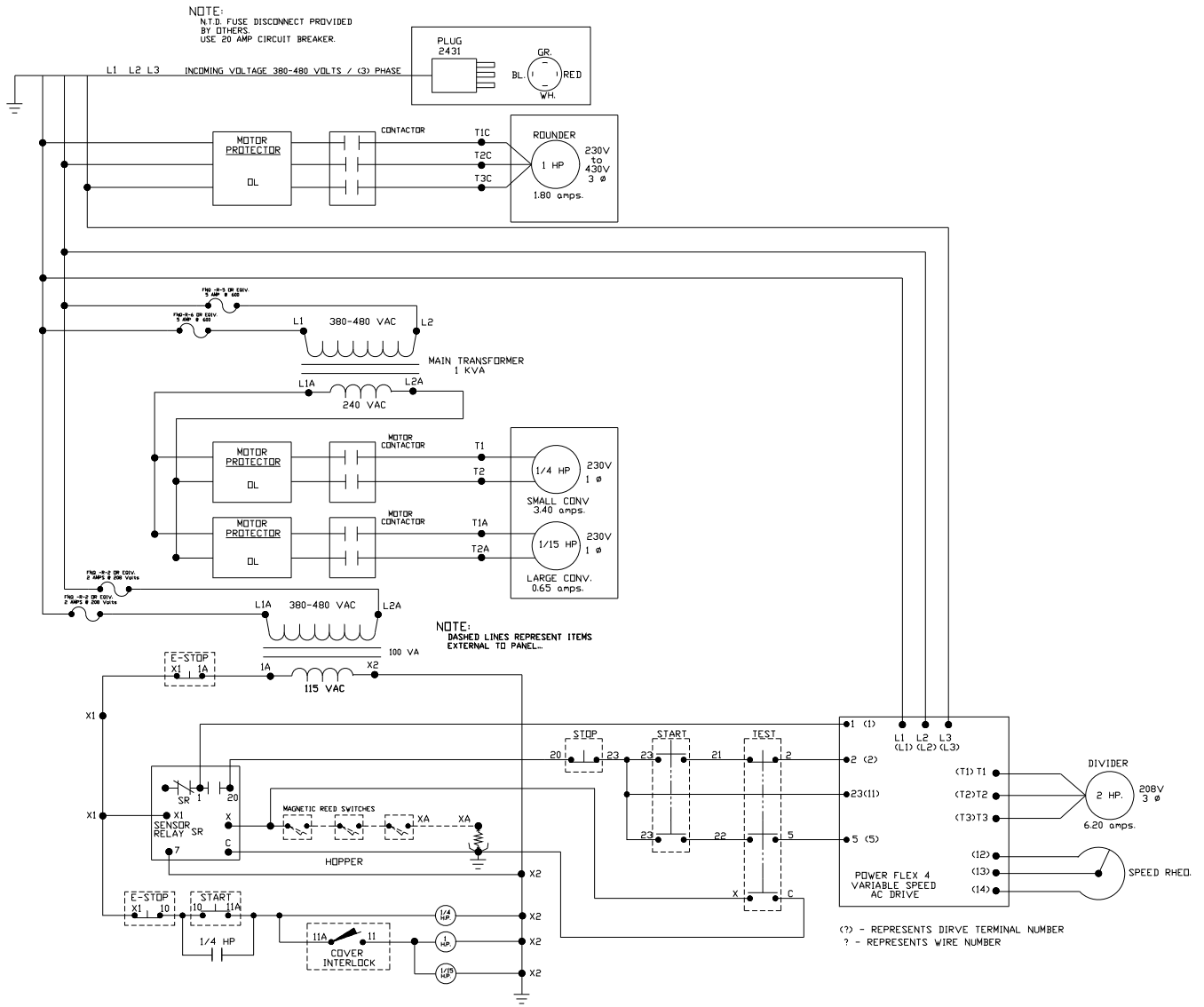


AR = AUX RELAY

SR = SENSOR RELAY

DM = DIVIDER MOTOR CONTACTOR

ELECTRICAL (SCHEMATIC) THREE PHASE / 380 - 480 VOLT - VARIABLE SPEED



AR = AUX RELAY

SR = SENSOR RELAY

DM = DIVIDER MOTOR CONTACTOR

ORDERING REPLACEMENT PARTS

IMPORTANT:

ONLY USE FACTORY SUPPLIED REPLACEMENT PARTS TO MAINTAIN MACHINE SAFETY, PERFORMANCE AND SANITARY CONDITIONS.

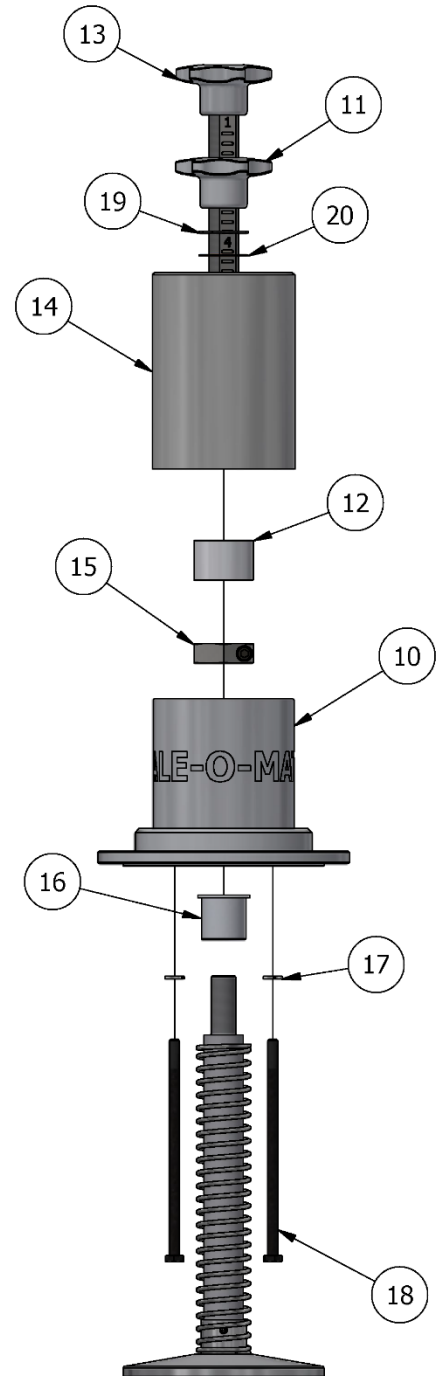
USE OF NON-APPROVED PARTS MAY VOID MANUFACTURERS WARRANTY.

TO ORDER REPLACEMENT PARTS ALWAYS:

- 1) CHECK THE MACHINE TOP IDENTIFY MISSING, DAMAGED OR NON-FUNCTIONAL PARTS INCLUDING GUARDS, WARNING LABELS AND INSTRUCTIONS.
- 2) COMPARE THE LIST WITH THE PARTS DIAGRAMS SUPPLIED.
- 3) RECORD THE COMPLETE MODEL AND SERIAL NUMBER OF THE UNIT.
- 4) CALL A.M. MANUFACTURING (800) 342-6744 AND PROVIDE ALL INFORMATION NOTED ABOVE TO EXPEDITE ORDER PROCESSING AND HELP REDUCE SHIPPING COST.
- 5) PROVIDE COMPLETE DETAILS FOR (SHIP TO) AND (BILL TO) INFORMATION. TO ASSIST PROMPT DELIVERY, SPECIFY TYPE OF CARRIER PREFERRED IN SHIPMENT.
- 6) MOST MAJOR CREDIT CARDS ACCEPTED.

Measuring Cup Assembly Parts Breakdown

ITEM	PART NO	DESCRIPTION	QTY
1	509MS	2" INSERT, DIVIDER CYLINDER	1
2	510MS	3-1/4" INSERT, DIVIDER CYLINDER	1
3	512MS	1-1/2" INSERT, DIVIDER CYLINDER	1
4	513MS-1	1 1/2" PLUNGER & SHAFT ASSEMBLY	1
5	513MS-2	2" PLUNGER & SHAFT ASSEMBLY	1
6	513MS-3	3" PLUNGER & SHAFT ASSEMBLY	1
7	513MS-5	5" PLUNGER & SHAFT ASSEMBLY	1
8	516MSH	COMPRESSION SPRING (HEAVY)	2
9	516MSL	COMPRESSION SPRING (LIGHT)	2
10	503MS	PLUNGER GUIDE HOUSING	1
11	529MS-2D	STAR KNOB 3/4-16 THUR HOLE	1
12	529MS-2E	PLASTIC STOP PLUG	1
13	529MS-2F	ADJUSTING HANDLE & STUD ASSEMBLY	1
14	529MS-2-M	PLUNGER GUIDE EXTENSION HOUSING	1
15	531MS	NUT, SLOTTED 5/8-18	1
16	539MS-P	PLASTIC BUSHING	1
17	F0400LW	LOCK WASHER, 1/4"	2
18	F0422HHCS	HEX HEAD CAP SCREW 1/4-20 X 5-1/2"	2
19	F1200RW	3/4" RETAINING WASHER	1
20	F1200WF	FIBER WASHER (3/4" I.D X 1-1/4" O.D.)	1



Individual Measuring Cup Assembly Part Numbers and Dough Weight Ranges:

PN: AMS1 1-2 OZ PN: AMS2 2-4 OZ PN: AMS3 4-10 OZ PN: AMS5 10-32 OZ

