

THE ATWOOD S-251 SCALE-O-MATIC DOUGH DIVIDER

OPERATIONS AND SAFETY MANUAL

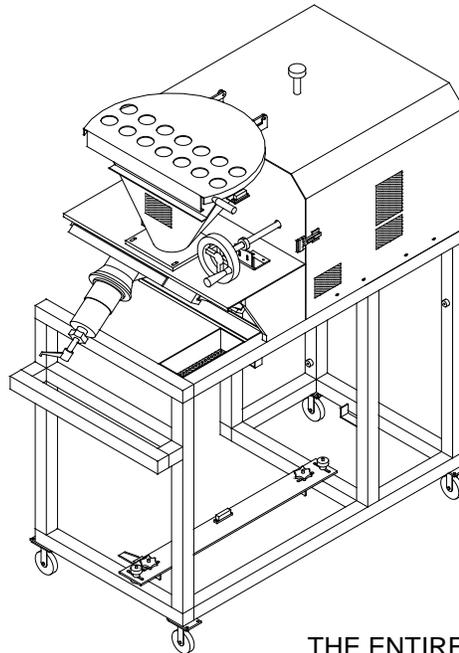
INCLUDING PARTS CATALOG
AND MAINTENANCE INSTRUCTIONS

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.

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OWNERS RESPONSIBILITIES

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:

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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 37A 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 OPERATOR 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 S251 DOUGH DIVIDER IS DESIGNED TO GIVE YOU OPTIMUM TIME AND LABOR-SAVING SERVICE WITH A SPEED OF APPROXIMATELY 2000 PIECES PER HOUR. THE S251 CAN ACCURATELY SCALE (TO +/- ¼ oz.) FROM 1 TO 32 OUNCES WITH THE PROPER ATTACHMENTS – AND WHEN COMBINED WITH A ROUNDER FROM AM'S R900 SERIES, CREATES THE S301 DOUGH DIVIDING/ROUNDING SYSTEM – SAVING EVEN MORE TIME AND COST. 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 | 75 lbs. (OPTIONAL EXTENDED HOPPER - 100 lbs. CAPACITY) |
| PRODUCTION RATE | UP TO 2000 PIECES PER HOUR |
| HEIGHT (WITH HOPPER COVER CLOSED) | 68" |
| DEPTH | 58" |
| WIDTH | 30" |
| SHIPPING WEIGHT | 700 LBS (MACHINE ONLY) 950 LBS (CRATED) |
| DIVIDER | RECIPROCAL MOTION, MECHANICAL DIVIDER WITH SELF-ADJUSTABLE, AUTOMATIC SPRING PRESSURE AND A 3 PHASE, 2 H.P. MOTOR |
| EXTRA DIVIDER CUPS AVAILABLE AS OPTIONAL EQUIPMENT. | VOLTAGES: 3 PHASE, 208 - 230 VOLTS (STANDARD) 3 PHASE, 380 – 480 VOLTS (OPTIONAL) SINGLE PHASE, 208/220 VOLT (OPTIONAL) VARIABLE SPEED DIVIDER (OPTIONAL) |
| 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 | |



CAUTION

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

SEE PAGE 7 FOR COMPLETE INSTALLATION AND START-UP INSTRUCTIONS

SAFETY

THIS MACHINE IS DESIGNED TO PROTECT THE SAFETY OF THE USER(S) 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.

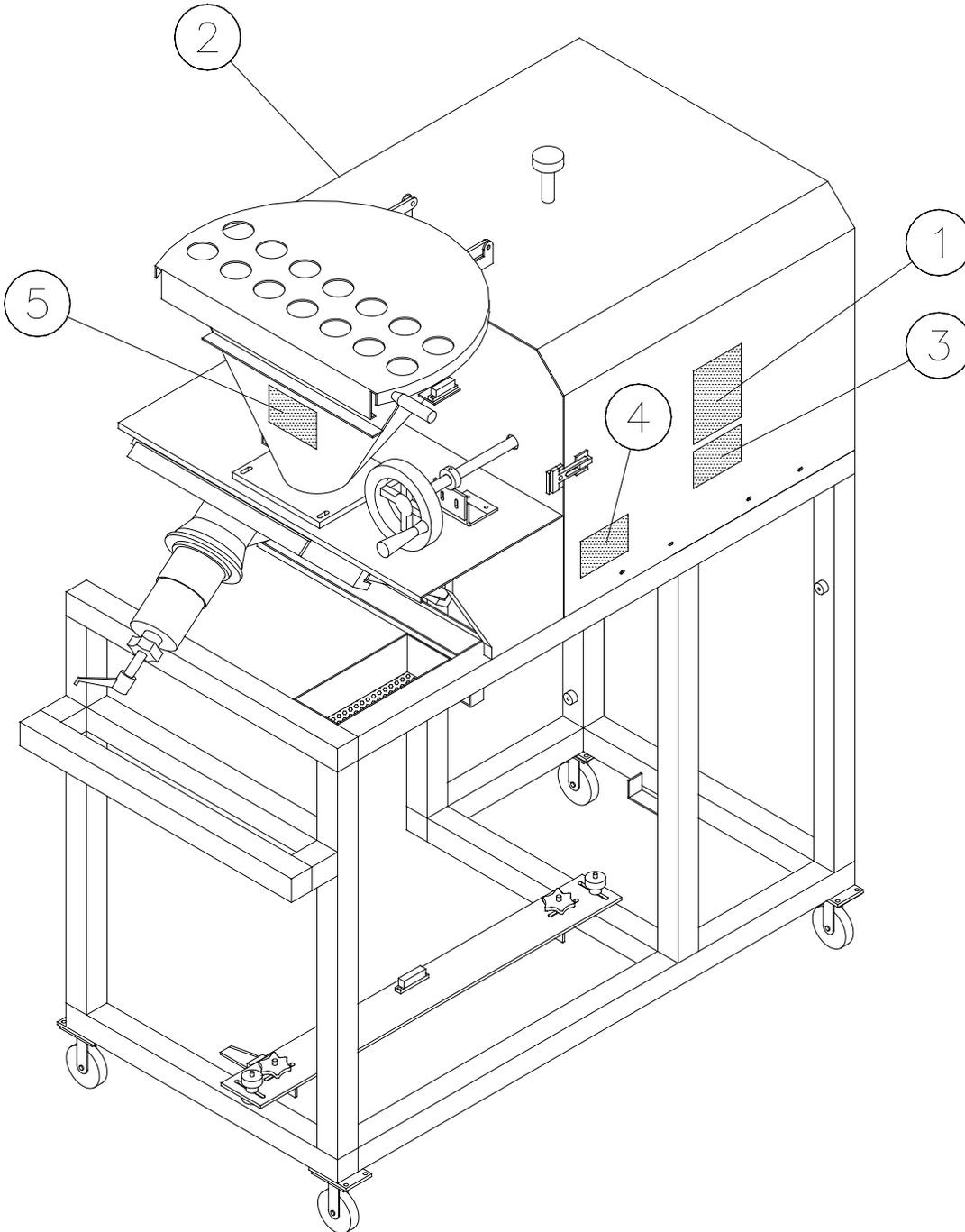
DANGER:

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: S251

2 PART NO. AM MFG. # 10

| |
|---|
|  <p>IMPORTANT SAFETY INFORMATION</p> <p><small>© 1992 A.M. MFG. # 21</small></p> <ul style="list-style-type: none"> • DO NOT OPERATE THIS MACHINE BEFORE YOU HAVE READ AND UNDERSTAND THE OPERATIONS AND SAFETY MANUAL. • NEVER LEAVE THIS MACHINE RUNNING UNATTENDED. • NEVER OPERATE THIS MACHINE IF SAFETY GUARDS ARE NOT IN PLACE. • NEVER REMOVE ANY SAFETY GUARDS AND NEVER MAKE ANY OTHER SAFETY EQUIPMENT INOPERATIVE. • NEVER OPERATE THIS MACHINE IF YOU HAVE NOT BEEN TRAINED. • NEVER OPERATE THIS MACHINE IF YOU ARE TIRED, ILL, OR IF YOU ARE ON MEDICATION THAT MAKES YOU TIRED, OR IF YOU ARE UNDER THE INFLUENCE OF ALCOHOL OR DRUGS. • WEAR TIGHT FITTING CLOTHES AND MAKE SURE THAT LONG HAIR AND JEWELRY OR OTHER LOOSE PERSONAL ITEMS DO NOT GET CAUGHT IN THE MACHINE. • MAKE SURE YOU CAN EASILY REACH THE CONTROLS. • ALWAYS DISCONNECT THE MAIN ELECTRICAL POWER SOURCE BEFORE YOU CLEAN, MAINTAIN, OR SERVICE THIS MACHINE. • IF YOU HAVE ANY QUESTIONS ABOUT SAFETY, TALK TO YOUR SUPERVISOR OR CALL <p style="text-align: center;">A.M. MANUFACTURING TOLL FREE 1-(800)-342-6744</p> |
|---|

| | |
|---|--|
|  | <p style="text-align: center;"> DANGER</p> <p style="text-align: center;">HAZARDOUS VOLTAGE, WILL SHOCK, BURN, OR CAUSE DEATH</p> <p style="font-size: small;">DISCONNECT ALL ELECTRICAL POWER BEFORE REMOVING PROTECTIVE SHIELDS OR TOUCHING ELECTRICAL EQUIPMENT WHILE SERVICING OR CLEANING THIS MACHINE...</p> <p style="text-align: right; font-size: x-small;">© 1992 AM MFG. #10</p> |
|---|--|

- ON THE ELECTRICAL CONTROL BOX

1 PART NO. AM MFG. # 21
 MACHINE HOOD –
 RIGHT AND LEFT SIDES

3 PART NO. AM MFG. # 11

| |
|---|
|  WARNING |
| <p style="font-size: x-small; text-align: center;">ALL GUARDS AND SAFETY SHIELDS MUST BE IN PLACE BEFORE STARTING MACHINE. NEVER OPERATE THIS MACHINE WITHOUT SAFETY SHIELDS IN PLACE. DO NOT CHANGE THIS MACHINE IN ANY WAY TO INTERFERE WITH OR ELIMINATE THESE ESSENTIAL SAFETY FEATURES.</p> <p style="text-align: right; font-size: x-small;">© 1992 AM MFG. #11</p> |

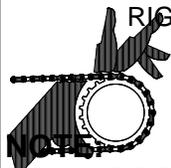
- MACHINE HOOD – RIGHT & LEFT SIDES

4 PART NO. AM MFG. # 24

5

| |
|---|
|  DANGER MOVING PISTON CAN SEVER FINGERS OR CAUSE SERIOUS INJURIES DO NOT PLACE HANDS IN HOPPER WHILE MACHINE IS RUNNING |
|---|

- FRONT OF HOPPER

| | |
|---|--|
|  | <p style="text-align: center;"> WARNING</p> <p style="text-align: center;">- MACHINE HOOD RIGHT AND LEFT SIDES EXPOSED CHAIN AND GEARS. CAN CAUSE SERIOUS INJURIES.</p> <p style="text-align: center;">STAY AWAY WHEN CHAIN IS MOVING.</p> <p style="font-size: x-small;">MACHINE DESIGN AND SPECIFICATIONS MAY VARY. ACTUAL LABEL DESIGN AND PLACEMENT SUBJECT TO CHANGE WITHOUT NOTICE AND MAY VARY FROM THIS ILLUSTRATION.</p> <p style="text-align: right; font-size: x-small;">© 1992 A.M. MFG. #24</p> |
|---|--|



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 THIS OPERATIONS AND SAFETY MANUAL.
- FOLLOW ALL INSTRUCTIONS WHILE USING THIS MACHINE.
- LEAVE ALL GUARDS IN THEIR PROPER WORKING POSITIONS (SEE PAGE 8 FOR MORE INFORMATION). RE-INSTALL ANY GUARD(S) THAT MAY HAVE BEEN 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 LEAVE THIS MACHINE RUNNING UNATTENDED.
- THE MACHINE'S DOORS AND GUARDING ARE FITTED WITH ELECTRONIC SENSORS. THE MACHINE WILL NOT OPERATE IF THE GUARDS ARE NOT IN THEIR PROPER WORKING POSITIONS.

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.

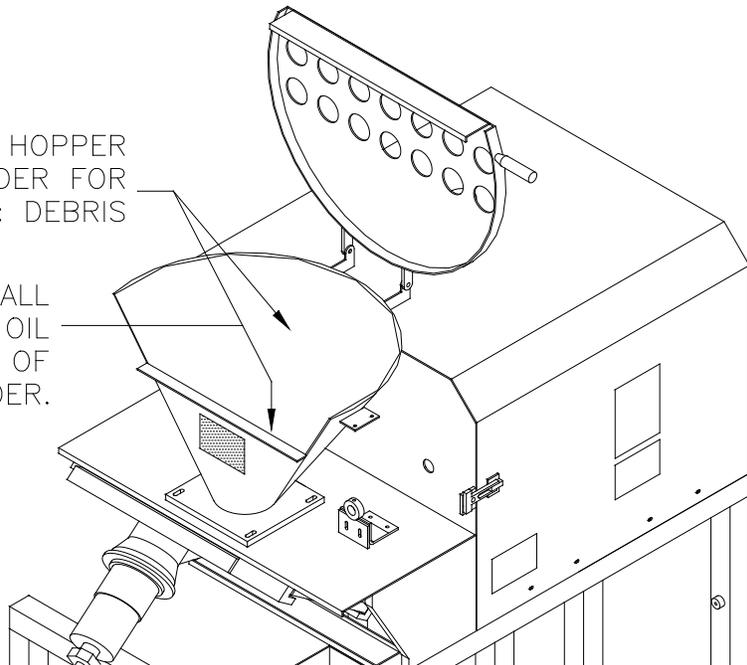
I. PRELIMINARY START-UP PROCEDURE

- A. OPEN THE CRATE AND REMOVE ALL PACKING MATERIALS, PACKING SLIPS, DOCUMENTS, AND OTHER MATERIALS. MAKE CERTAIN TO INSPECT THE INSIDE OF THE HOPPER AND CYLINDER TO ENSURE THEY ARE FREE OF ALL DEBRIS.
- B. MOVE THE MACHINE TO THE DESIRED LOCATION AND ENGAGE THE TWO LOCKING CASTERS TO KEEP THE MACHINE IN PLACE. **SELECT THE 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 CUSTOMERS AND BYSTANDERS MAY BE PRESENT.**
- C. LUBRICATE THE CYLINDER AREA BY SQUIRTING A SMALL AMOUNT OF LIGHT-WEIGHT MINERAL OIL INTO THE TOP OF THE CYLINDER.

NOTE: IT IS HIGHLY RECOMMENDED THAT MINERAL OIL BE USED TO LUBRICATE THE DIVIDER AS OVER TIME, VEGETABLE AND/OR OLIVE OIL CAUSE BUILD-UP THAT IMPEDE MACHINE MOTION. IF YOUR LOCAL DISTRIBUTOR DOES NOT OFFER MINERAL OIL, AM MANUFACTURING CAN SUPPLY YOU WITH QUALITY MINERAL OIL AT COMPETITIVE PRICES. CONTACT US AT 800-342-6744 FOR MORE INFORMATION.

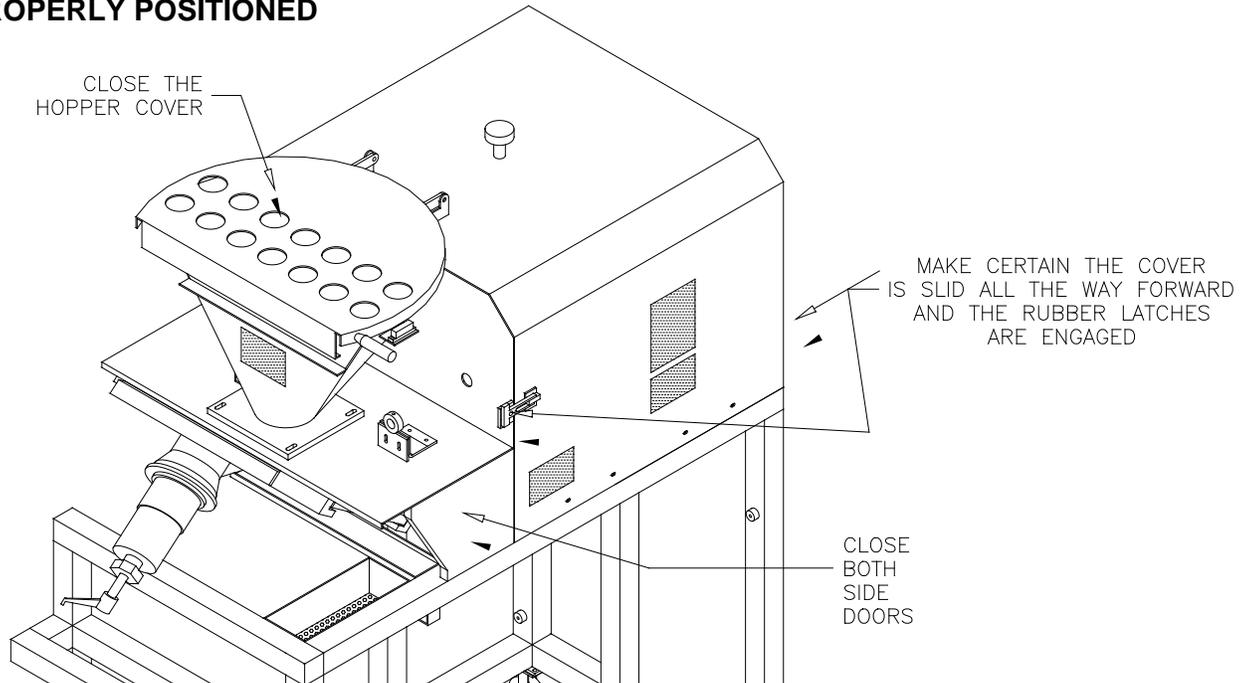
STEP A: INSPECT THE HOPPER AND CYLINDER FOR PACKING & DEBRIS

STEP C: SQUIRT A SMALL AMOUNT OF OIL INTO THE TOP OF THE CYLINDER.



- D. CLOSE THE HOPPER COVER AND MAKE CERTAIN THAT ALL GUARDING IS IN PLACE (SEE ILLUSTRATION ON THE FOLLOWING PAGE).

**WHEN OPERATING THE MACHINE
MAKE SURE THAT ALL GUARDS
ARE PROPERLY POSITIONED**

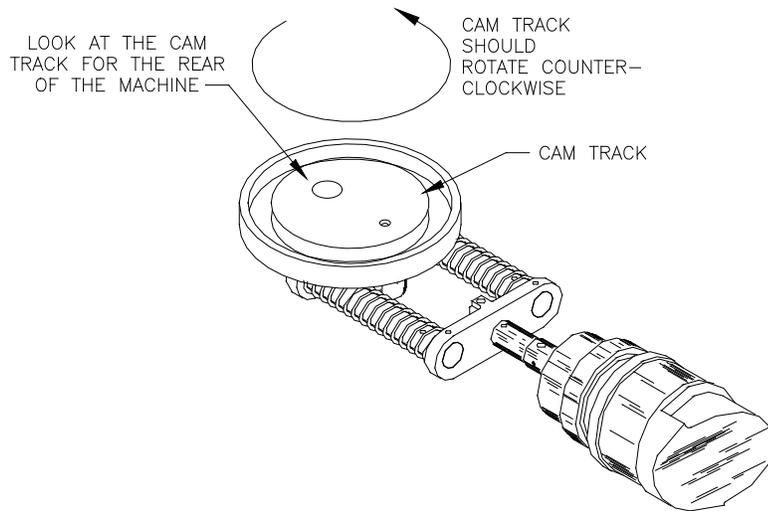


- E. PLUG THE MACHINE'S POWER CORD INTO AN APPROVED RECEPTACLE AND FLIP THE ON / OFF SWITCH TO THE ON POSITION. WHEN THE MACHINE'S POWER IS ON, THE SWITCH WILL ILLUMINATE.
- F. MAKE SURE THAT WHEN ACTIVATED, THE MOTOR OF THE S251 ROTATES IN THE PROPER DIRECTION (BASED ON THE WIRING IN YOUR FACILITY, IT MIGHT RUN IN THE OPPOSITE DIRECTION, AND THUS, HAVE TO BE RE-SET). TO DO THIS, YOU WILL NEED TO UNLATCH AND SLIDE BACK THE MACHINE COVER, THEN OBSERVE THE MOTION OF THE CAM TRACK WHEN THE MACHINE IS TESTED.

 **DANGER:**
USE EXTREME CAUTION WHEN RUNNING THE MACHINE WITH THE COVER PULLED BACK. EVEN THOUGH THE MACHINE WILL ONLY MOVE IN SHORT, CONTROLLED MOVEMENTS DURING THIS PROCEDURE, LOOSE ITEMS AND/OR ERRANT MOVEMENTS IN THE PRESS AREA CAN LEAD TO SERIOUS INJURIES. **KEEP YOUR HANDS AND ARMS AWAY FROM THE MOVING PISTON AND CAM ASSEMBLIES – MAKE SURE TO SECURE ALL LOOSE JEWELRY, LONG HAIR, OR OTHER PERSONAL ITEMS THAT MIGHT GET CAUGHT IN THE MACHINE.**

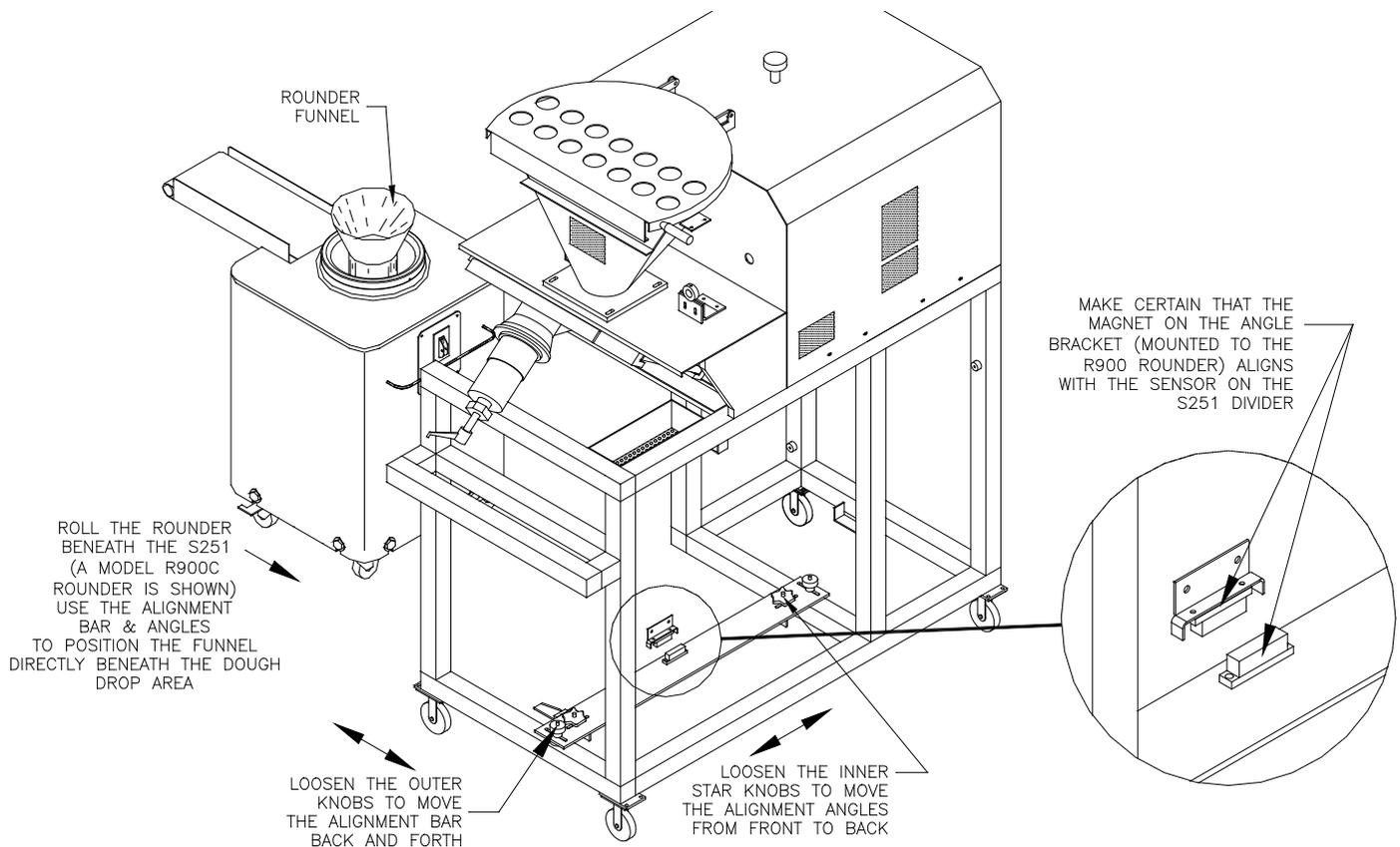
THE S251 DIVIDER CANNOT RUN WITH ITS HOOD SLID BACK, BUT IT CAN BE MADE TO PULSE FORWARD IN SMALL INCREMENTS BY UTILIZING THE BLACK *TEST* BUTTON ON THE CONTROL PANEL.

WITH THE MACHINE ON AND THE HOOD SLID BACK, PRESS THE GREEN *START* BUTTON WHILE HOLDING DOWN THE BLACK *TEST* BUTTON. OBSERVE THE MOTION OF THE CAM TRACK AS THE MECHANISM PULSES FORWARD. IF YOU ARE STANDING OVER THE MACHINE LOOKING DOWN (SEE THE ILLUSTRATION ON THE FOLLOWING PAGE), THE CAM TRACK SHOULD BE ROTATING IN THE COUNTER-CLOCKWISE DIRECTION. IF IT IS, SLIDE THE HOOD BACK INTO ITS CLOSED POSITION, LATCH IT IN PLACE, AND PROCEED TO THE NEXT STEP. IF THE CAM TRACK IS TURNING IN THE WRONG DIRECTION (CLOCKWISE), CONTACT AN AM TECHNICIAN FOR FURTHER ASSISTANCE.



THE FOLLOWING STEPS ARE FOR S301 OWNERS ONLY. IGNORE THE FOLLOWING STEP AND GO DIRECTLY TO PART II: OPERATING THE DIVIDER IF YOU DO NOT HAVE AN AM R900 ROUNDER TO GO WITH YOUR 251 DIVIDER.

- G. ROLL THE R900 ROUNDER BENEATH THE DIVIDER.
- H. USING THE ADJUSTMENT BAR AND ANGLES ON THE DIVIDER, ALIGN THE TWO DEVICES SO THE FUNNEL OF THE ROUNDER IS DIRECTLY BENEATH THE DOUGH DROP LOCATION OF THE DIVIDER (SEE ILLUSTRATION BELOW). MAKE CERTAIN THAT THE SENSOR DEVICE ON THE DIVIDER IS DIRECTLY NEXT TO THE MATCHING MAGNET AFFIXED TO THE ROUNDER.



II. OPERATION OF THE DIVIDER

- A. MAKE CERTAIN THAT ALL GUARD DOORS AND COVERS ARE CLOSED AND IN THEIR PROPER WORKING POSITIONS (SEE ILLUSTRATION ON PAGE 8).
- B. FILL THE OIL RESEVOIR WITH A LIGHT WEIGHT MINERAL OIL (SEE PAGES 32 & 33 FOR AN ILLUSTRATION OF THE OIL RESEVOIR).
- C. NEXT TO THE HOPPER (ON THE SIDE OF THE MACHINE WITH THE CONTROL BOX), YOU WILL FIND 3 ALUMINUM VALVES. LOOSEN ALL THREE BY ABOUT 1/8 OF A TURN (**DO NOT OVER-LOOSEN THE VALVES!**).
- D. LIFT OPEN THE HOPPER COVER AND COAT THE INSIDE SURFACE OF THE HOPPER (ITEM 2 ON PAGES 26 & 27) WITH A GENEROUS AMOUNT OF MINERAL OIL. AND THE FACE OF THE CYLINDER (ITEM 16 ON PAGES 30 & 31) WITH A GENEROUS AMOUNT OF MINERAL OIL.
- E. LOWER THE HOPPER COVER.
- F. COAT THE FACE OF THE CYLINDER PISTON (ITEM 16 ON PAGES 30 & 31) WITH A GENEROUS AMOUNT OF MINERAL OIL. IF THE DIVIDER SLIDE (ITEM 9 ON PAGES 28 & 29) IS OBSTRUCTING THE PISTON FACE, PLUG IN THE MACHINE, FLIP THE POWER SWITCH TO THE **ON** POSITION AND JOG THE SLIDE OUT OF THE WAY BY PRESSING THE BLACK *TEST* BUTTON AND GREEN *START* BUTTON SIMULTANEOUSLY. UPON DOING SO, THE MACHINE WILL PULSE FORWARD.

IF THE SLIDE DOES NOT MOVE FAR ENOUGH DURING THIS FIRST PULSE, PRESS BOTH BUTTONS AGAIN – AND REPEAT AS OFTEN AS NECESSARY UNTIL THE PISTON FACE IS EASILY ACCESSIBLE.



CAUTION:

MAKE SURE TO FLIP THE POWER SWITCH BACK TO THE OFF POSITION AND UNPLUG THE MACHINE'S POWER CORD BEFORE REACHING INTO THE CYLINDER TO LUBRICATE THE PISTON FACE.

- G. LIFT THE HOPPER COVER OPEN AND FILL THE HOPPER WITH DOUGH (THE MAXIMUM HOPPER CAPACITY IS 75 POUNDS. **DO NOT OVERFILL THE HOPPER! THE MACHINE WILL NOT OPERATE UNLESS THE HOPPER COVER IS COMPLETELY CLOSED.**)
- H. LOWER THE HOPPER COVER.
- I. INSPECT THE MACHINE AGAIN TO MAKE CERTAIN ALL GUARDING IS PROPERLY IN PLACE.
- J. PLUG IN THE MACHINE AND FLIP THE SWITCH TO THE **ON** POSITION.
- K. PRESS THE GREEN **START** BUTTON TO ACTIVATE THE MACHINE.

NOTE: THE INSIDE OF THE HOPPER AND THE PISTON FACE SHOULD BE COATED WITH OIL EVERY TIME NEW DOUGH IS ADDED.

III. ADJUSTING THE DIVIDER

1. DOUGH BALL SIZES
THE S251 DIVIDER WILL PRODUCE CONSISTENTLY-SIZED DOUGH PIECES BETWEEN 1 AND 32 OUNCES. TO MAKE SMALL ADJUSTMENTS TO THE DOUGH BALL WEIGHT, THE CYLINDER PLUNGER MUST BE ADJUSTED. TO MAKE LARGER ADJUSTMENTS, THE ENTIRE PISTON CUP MUST BE CHANGED.

THE TABLE ON THE FOLLOWING PAGE SHOWS THE FOUR PISTON CUP SIZES AVAILABLE – AND THE APPROXIMATE SIZE OF THE DOUGH PIECE THAT WILL BE PRODUCED BY EACH. PLEASE NOTE THAT DUE TO THE DIFFERENT FORMULATIONS AND PROCESSES USED TO MAKE DOUGH; THIS TABLE IS ONLY TO BE USED AS A GENERAL GUIDELINE. ONLY TESTING WITH YOUR

SPECIFIC PRODUCT WILL CONFIRM THE EXACT SIZES THAT CAN BE RUN WITH EACH CUP.

| DOUGH CUP SIZE | CAN PRODUCE DOUGH BALL SIZES... |
|----------------|---------------------------------|
| MICRO (1") | 1 – 2 oz |
| SMALL (2") | 2 – 4 oz |
| MEDIUM (3") | 4 – 10 oz |
| LARGE (5") | 10 – 32 oz |

TO ADJUST THE WEIGHT OF A PIECE PRODUCED BY A DOUGH CUP, BEGIN BY PRESSING THE RED **STOP** BUTTON TO SHUT DOWN THE MACHINE. THEN, LOOSEN THE STAR KNOB ON THE WEIGHT ADJUSTMENT ROD. ONCE THE ROD IS FREE TO TURN, ROTATE THE HANDLE CLOCKWISE TO DECREASE THE WEIGHT OF THE BALL PRODUCED, AND COUNTER-CLOCKWISE TO INCREASE IT. A GRADUATED SCALE IN THE MIDDLE OF THE ROD PROVIDES AN EASY REFERENCE, SO MULTIPLE SIZES CAN BE RESET REPEATEDLY.

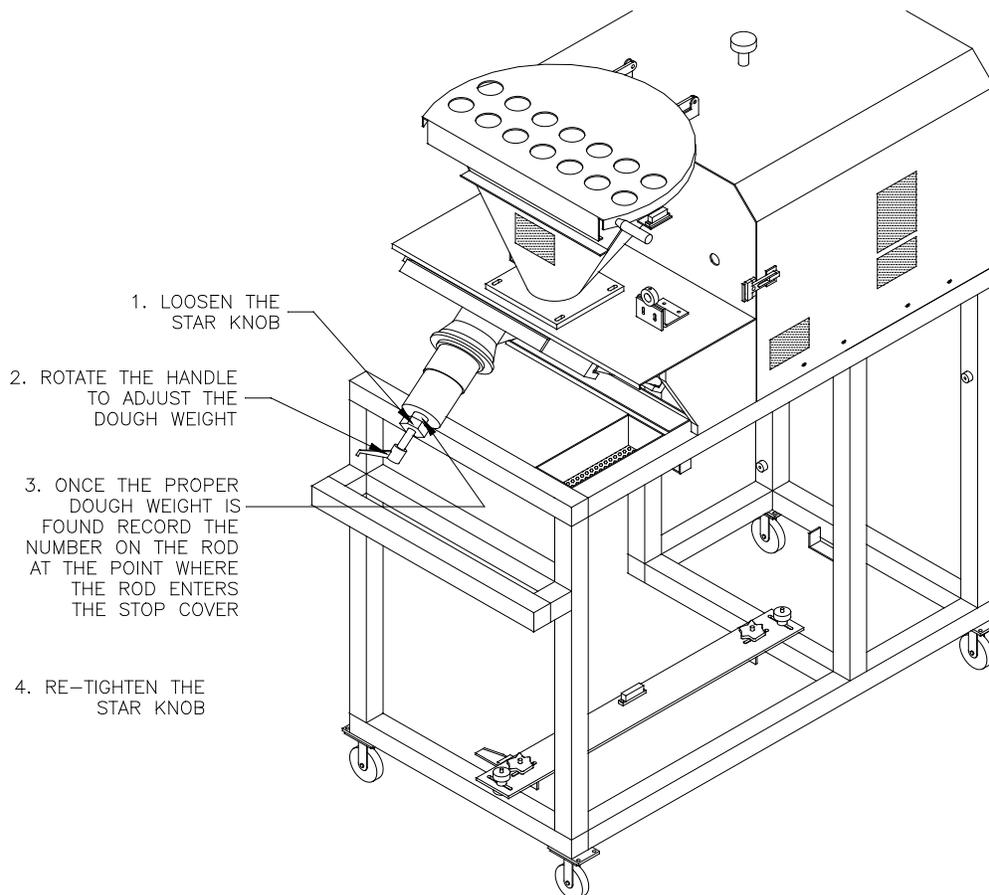
NOTE: THE NUMBERS ON THE SCALE DO NOT CORRESPOND TO THE DOUGH WEIGHTS PRODUCED. THEY MERELY PROVIDE A QUICK REFERENCE SO THE SETTING IS EASY TO REMEMBER.

ONCE THE PROPER ADJUSTMENT IS FOUND, RECORD THE SETTING ON THE SCALE AND RE-TIGHTEN THE STAR-KNOB TO LOCK IT IN PLACE.

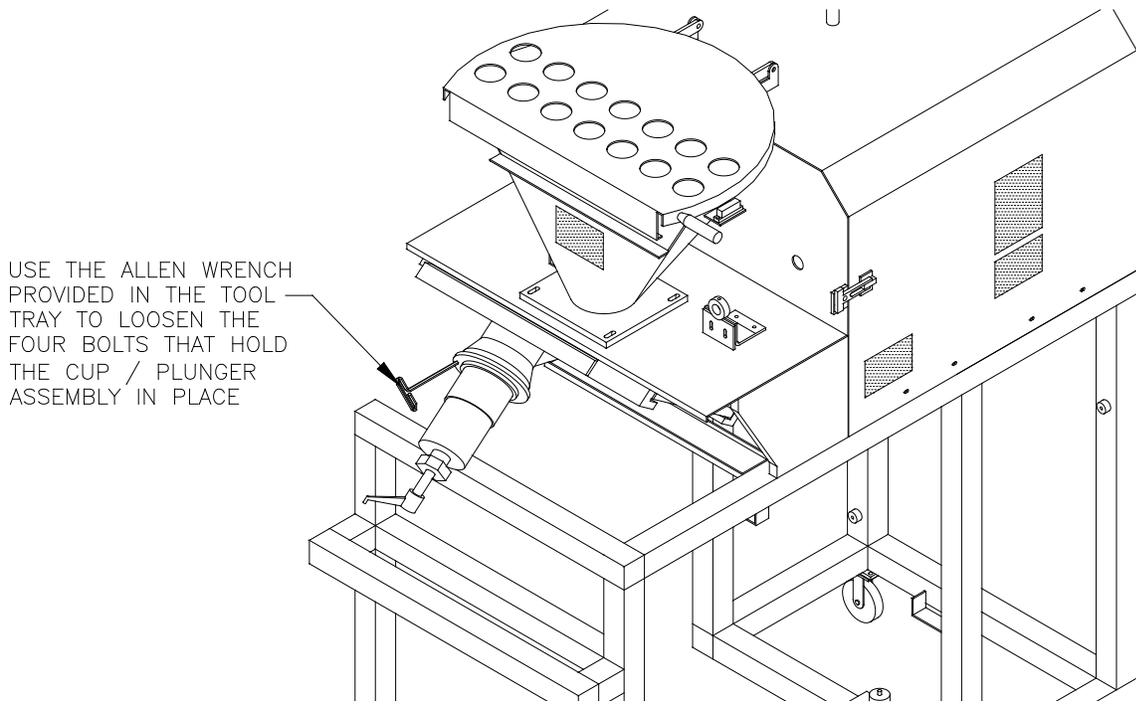


WARNING

DO NOT ATTEMPT TO ADJUST THE DOUGH WEIGHT WHILE THE MACHINE IS RUNNING



TO CHANGE A DOUGH CUP, USE THE ALLEN WRENCH PROVIDED TO LOOSEN THE FOUR BOLTS THAT HOLD THE CUP IN PLACE. THEN, SIMPLY TWIST THE CUP FREE AND PULL THE ENTIRE CUP / PLUNGER ASSEMBLY FROM THE MACHINE. INSERT THE NEW PLUNGER ASSEMBLY AND RE-AFFIX THE BOLTS.



USE THE ALLEN WRENCH PROVIDED IN THE TOOL TRAY TO LOOSEN THE FOUR BOLTS THAT HOLD THE CUP / PLUNGER ASSEMBLY IN PLACE

2. THE OIL SYSTEM

THE CYLINDER AND SLIDE MECHANISMS OF THE S251 DIVIDER ARE SUPPLIED WITH A STEADY SUPPLY OF MINERAL OIL TO KEEP THE SURFACES WELL LUBRICATED. IT IS NECESSARY TO ADJUST THE VALVES OF THE OILING SYSTEM PROPERLY, HOWEVER, SO THEY PROVIDE THE CORRECT AMOUNT OF LUBRICATION. TOO MUCH OR TOO LITTLE OIL CAN BE PROBLEMATIC –

| LOCATION | TOO MUCH OIL | TOO LITTLE OIL |
|--------------------------|--|---|
| THE CYLINDER | <ul style="list-style-type: none"> - POOR SCALING ACCURACY - DOUGH BALLS WITH TOO MUCH OIL ARE VERY DIFFICULT TO ROUND | <ul style="list-style-type: none"> - POOR SCALING ACCURACY - EXCESSIVE WEAR TO THE PISTON - A HARD KNOCKING SOUND DURING OPERATION |
| THE UPPER GIB BAR | <ul style="list-style-type: none"> - OIL WILL LEAK OVER THE FRONT OF THE MACHINE | <ul style="list-style-type: none"> - TOO MUCH FRICTION IN THE SLIDE AREA WILL CAUSE SEVERE STRAIN TO THE ROCKER ARM ASSEMBLY. |
| THE LOWER GIB BAR | <ul style="list-style-type: none"> - OIL WILL LEAK OVER THE FRONT OF THE MACHINE | <ul style="list-style-type: none"> - TOO MUCH FRICTION IN THE SLIDE AREA WILL CAUSE SEVERE STRAIN TO THE ROCKER ARM ASSEMBLY. |

AS STATED IN THE PRELIMINARY START-UP PROCEDURES, 1/8 TURN OPEN IS A GOOD STARTING POINT FOR ALL OF THE OIL VALVES. IF YOU ARE EXPERIENCING ANY OF THE ABOVE PROBLEMS, RE-ADJUST THE OIL FLOW AS REQUIRED. IF YOU NEED ADDITIONAL ASSISTANCE, CONTACT AN AM TECHNICIAN.



WARNING:

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

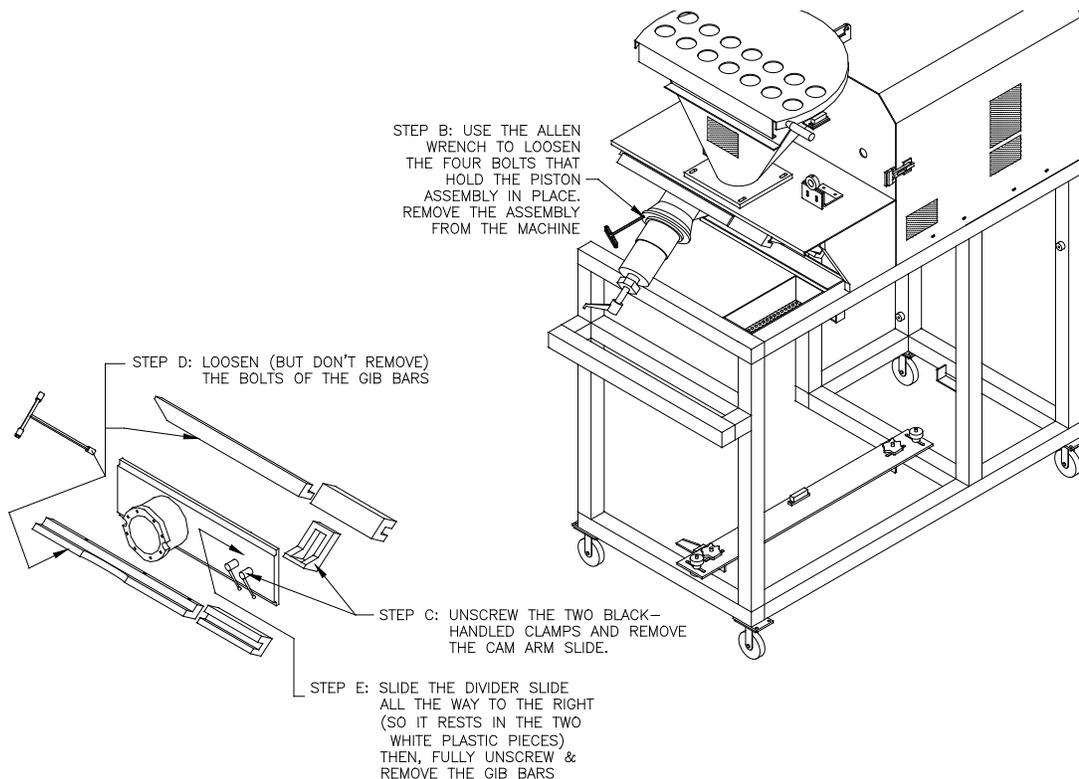
CLEANING PROCEDURES

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.

1. REMOVING & CLEANING THE DOUGH CUP ASSEMBLY, GIB BARS, DIVIDER SLIDE, & CYLINDER

- A. WITH ALL THE MACHINE DOORS CLOSED AND ALL GUARDING SECURELY BOLTED AND/OR LATCHED IN PLACE, PLUG THE MACHINE'S POWER CORD INTO THE WALL, FLIP THE POWER SWITCH TO THE *ON* POSITION, AND PRESS THE GREEN *START* AND BLACK *TEST* BUTTONS SIMULTANEOUSLY TO JOG THE DIVIDER SLIDE AND MEASURING CUP ALL THE WAY TO THE RIGHT OF ITS TRAVEL. ONCE IT IS IN POSITION, **TURN THE MACHINE OFF AND REMOVE THE ELECTRICAL CORD FROM ITS POWER SOURCE.**
- B. REMOVE THE MEASURING CUP BY LOOSENING THE FOUR BOLTS THAT HOLD IT IN PLACE . WHEN THE BOLTS ARE LOOSENED, TURN THE ASSEMBLY AND LIFT IT FROM THE MACHINE. ONCE IT HAS BEEN REMOVED, IMMEDIATELY CLEAN IT OF ANY DOUGH, OIL, AND OTHER DEBRIS. DO NOT ALLOW ANY DOUGH TO DRY ON THIS ASSEMBLY, AS DRY DOUGH IS MUCH MORE DIFFICULT TO REMOVE.
- C. REMOVE THE CAM ARM SLIDE FROM THE BACK OF THE DIVIDER SLIDE BY UNSCREWING THE BLACK, QUICK-RELEASE HANDLES WITH ONE HAND WHILE HOLDING THE ARM WITH THE OTHER HAND.



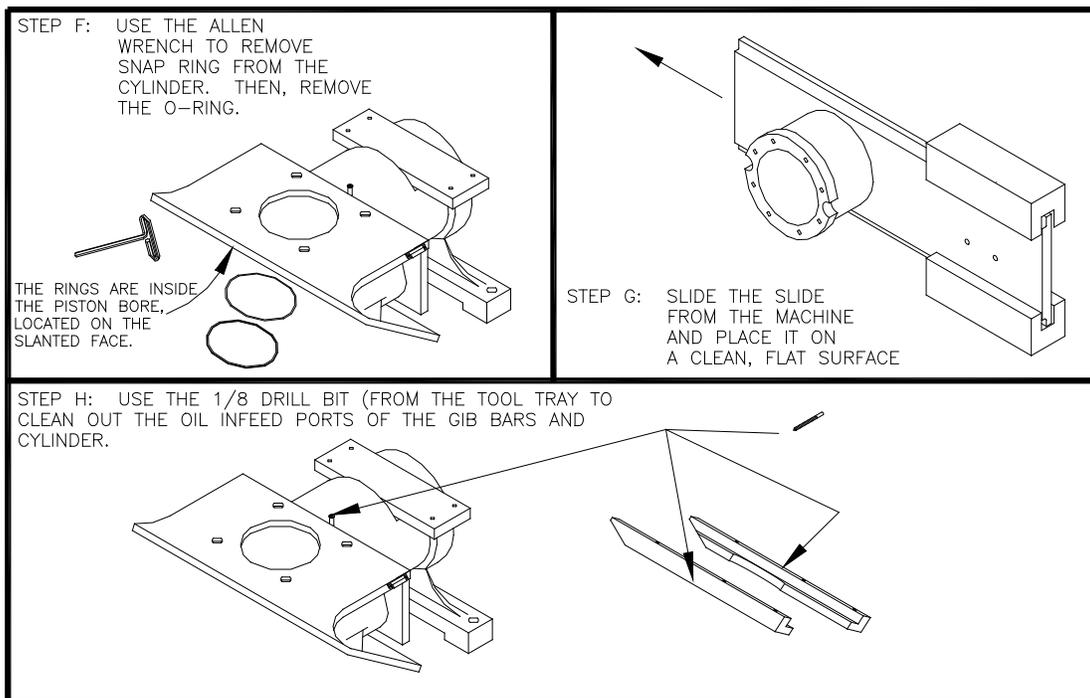
- D. ONCE THE CAM ARM HAS BEEN REMOVED, USE THE 9/16 SOCKET ON THE LONG END OF THE T-HANDLE TOOL TO LOOSEN THE 4 NUTS HOLDING THE UPPER GIB BAR IN PLACE, AND THE 3 NUTS HOLDING THE LOWER GIB BAR. **DO NOT, HOWEVER, REMOVE THE GIB BARS AT THIS TIME.**



PRACTICE SAFETY FIRST:

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

- E. SLIDE THE DIVIDER SLIDE TO THE RIGHT UNTIL IT HITS THE SLIDE STOP. THEN, WHILE HOLDING THE UPPER GIB BAR WITH ONE HAND, REMOVE THE 4 PREVIOUSLY LOOSENED NUTS AND SLIDE THE BAR OFF THE MACHINE. THEN, REMOVE THE LOWER GIB BAR IN THE SAME FASHION. IMMEDIATELY CLEAN THE BARS OF ANY DOUGH, OIL, OR OTHER DEBRIS.
- F. PLACE THE STRAIGHT PORTION OF THE ALLEN WRENCH INTO THE NOTCH ON THE RIGHT SIDE OF THE SCRAPER RING GROOVE. THEN, PICK THE METAL SCRAPER RING FROM THE FACE OF THE CYLINDER. THEN, REMOVE THE RUBBER O-RING FROM THE GROOVE IN THE SAME FASHION. WIPE BOTH PARTS CLEAN OF ANY DOUGH, OIL, OR DEBRIS.



- G. REMOVE THE DIVIDER SLIDE FROM THE WHITE PLASTIC HOLDERS BY SLIDING IT TO THE LEFT.



CAUTION:
BE SURE TO GRIP THE SLIDE FIRMLY WITH BOTH HANDS. IT WEIGHS 25 POUNDS AND CAN CAUSE INJURIES IF DROPPED.

ONCE THE SLIDE IS FREE, PLACE IT ON A LEVEL WORK SURFACE. THEN, USING THE T-HANDLE OF THE ALLEN WRENCH AS A SCRAPER, SCRAPE ANY DOUGH, OIL, AND OTHER DEBRIS FROM THE SIDE FACE, PLUNGER CUP BORE, AND GIB BAR CONTACT AREA. THEN, RETURN TO THE MACHINE AND SCRAPE THE FACE OF THE CYLINDER IN A SIMILAR FASHION.

- H. USING THE SMALL DRILL BIT LOCATED IN THE TOOL TRAY, CLEAN OUT THE OILING HOLES THAT LUBRICATE EACH GIB BAR. ALSO, INSPECT THE HOSE CONNECTION POINTS TO THE GIB BARS AND CYLINDER. IF DOUGH HAS MIGRATED UP INTO THE OIL-FEED TUBES, THEY MADE NEED TO BE DIS-CONECTED AND CLEANED OUT.



PRACTICE SAFETY FIRST:

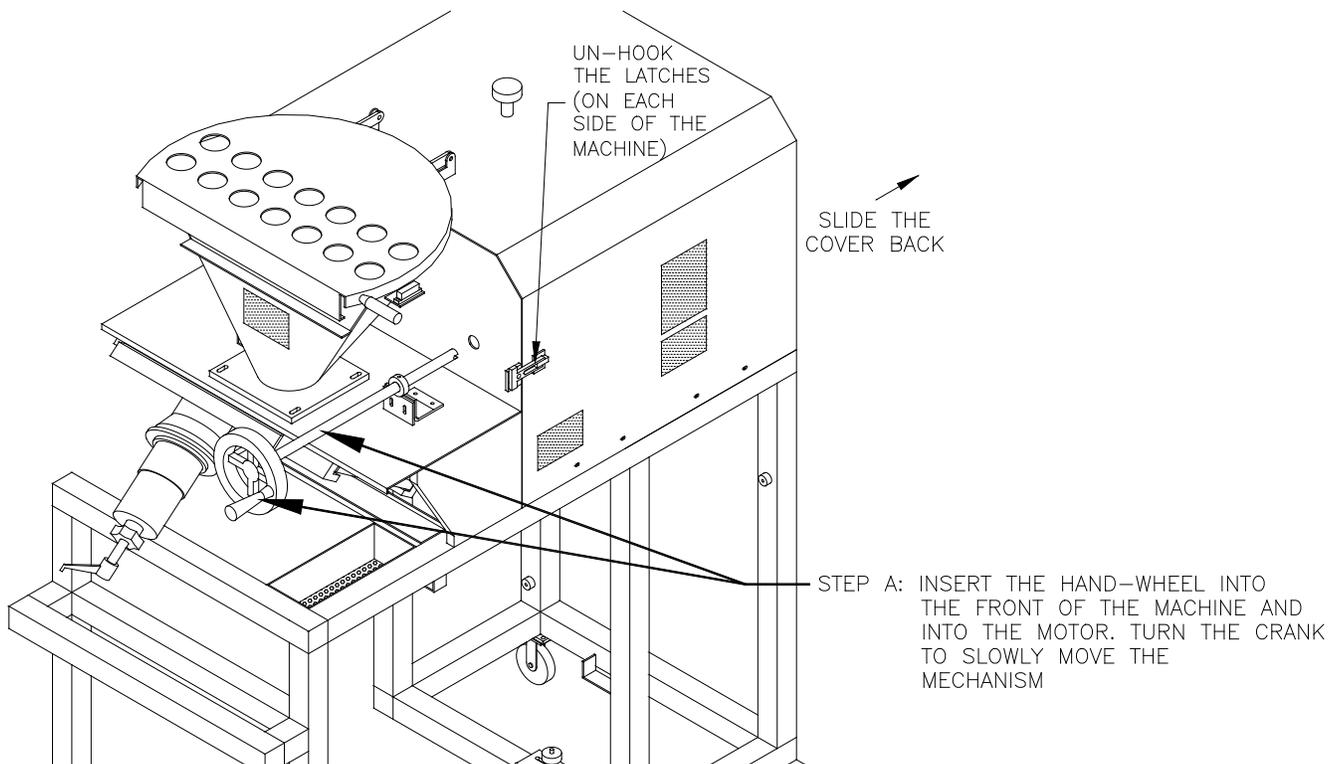
ALWAYS DISCONNECT ELECTRICAL SERVICE WHEN CLEANING OR MAINTAINING THIS MACHINE, THUS AVOIDING THE CHANCE OF SERIOUS INJURIES. MACHINES ARE NOT DANGEROUS IF COMMON SENSE IS APPLIED AND THE INSTRUCTIONS ARE CAREFULLY FOLLOWED. THINK AND PRACTICE SAFETY FIRST.

2. REMOVING & CLEANING THE PISTON

- A. BEGIN BY LOOSENING THE TWO BLACK RUBBER LATCHES THAT SECURE THE MACHINE COVER IN PLACE. ONCE BOTH LATCHES ARE LOOSE, SLIDE THE COVER BACK.

ONCE THE HOOD HAS BEEN PULLED BACK, YOU WILL SEE THE MACHINE'S DRIVE COMPONENTS. TWO STAINLESS STEEL PINS HOLD THE PISTON ROD TO THE DRIVE CAM. TO REMOVE THE PISTON, THESE PINS MUST BE REMOVED IN THE PROPER SEQUENCE. THE FOLLOWING STEPS EXPLAIN HOW THIS MUST BE DONE. IN THESE STEPS, *PIN A* IS THE PIN ON THE LEFT-HAND SIDE, AND *PIN B* IS ON THE RIGHT. SEE THE DIAGRAM ON THE FOLLOWING PAGE FOR AN ILLUSTRATION.

YOUR S251 DIVIDER HAS COME WITH A MANUAL HAND-WHEEL, WHICH ALLOWS THE OPERATOR TO TURN THE MOTOR VERY SLOWLY. INSERT THE SHAFT OF THE WHEEL THROUGH THE FRONT OF THE MACHINE AND INTO THE MOTOR. THEN, WHILE TURNING THE WHEEL WITH ONE HAND, OBSERVE THE MOTION OF THE PISTON. WHEN *PIN A* IS JUST OUTSIDE OF THE CYLINDER BORE, PULL THE PIN STRAIGHT UP TO REMOVE IT. IF THE PIN WILL NOT COME FREE, WIGGLE THE WHEEL BACK AND FORTH WHILE PULLING UPWARD.



- B. ONCE *PIN A* HAS BEEN REMOVED, TURN THE HAND-WHEEL SO THAT THE SPRING ASSEMBLY IS MOVING AWAY FROM THE CYLINDER. WHEN THE PISTON ITSELF BEGINS MOVING (WHEN THE SPRING ASSEMBLY HAS REACHED THE END OF ITS TRAVEL AND STARTS TO COME BACK) A SECOND SET OF HOLES WILL COME INTO ALIGNMENT AT THE CENTER OF THE CONNECTING ROD.

RE-INSERT *PIN A* INTO THE HOLE IN THE TOP-CENTER OF THE ROD. AS BEFORE, YOU MAY NEED TO WIGGLE THE JOG WHEEL WHILE INSERTING THE PIN.

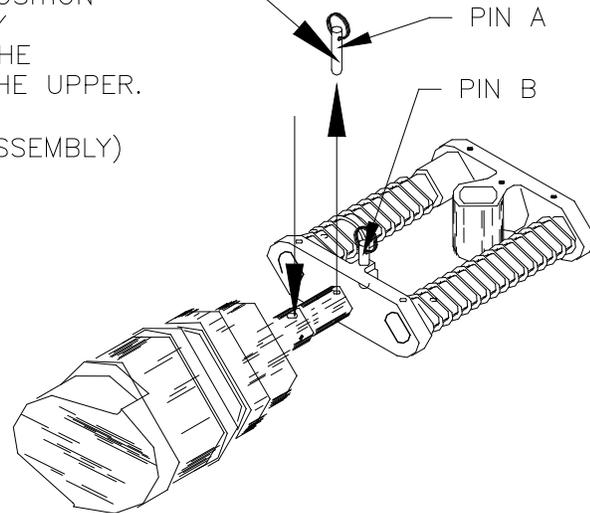


PRACTICE SAFETY FIRST:

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

STEPS A: AFTER ADJUSTING THE POSITION
& B OF THE PISTON ASSEMBLY
REMOVE THE PIN FROM THE
LOWER HOLE AND INTO THE UPPER.

(REVERSE THE ARROWS FOR RE-ASSEMBLY)



- C. TURN THE HAND-WHEEL SO THE SPRING ASSEMBLY PUSHES THE PISTON OUT THE FRONT OF THE CYLINDER AND YOU CAN EASILY PULL IT FREE OF THE MACHINE.
- D. REMOVE *PIN B* (AS WITH *PIN A*, YOU MAY HAVE TO WIGGLE THE HAND-WHEEL). THEN, PULL THE PISTON FREE AND CLEAN IT OF ALL DOUGH, OIL, AND ANY OTHER DEBRIS. THEN, AS BEFORE, USE THE T-HANDLE OF THE ALLEN WRENCH TO SCRAPE THE INSIDE OF THE CYLINDER FREE OF DEBRIS. WHEN FINISHED, WIPE THE INSIDE OF THE BORE WITH A CLEAN RAG – AS WELL AS THE CYLINDER INFEED AREA AND THE INSIDE OF THE HOPPER.

3. RE-ASSEMBLING THE MACHINE

NOTE: A LIGHT COATING OF MINERAL OIL SHOULD BE APPLIED TO THE CONTACT SURFACE OF ALL PARTS AS THEY ARE RE-ASSEMBLED – INCLUDING THE EDGES OF THE DIVIDER SLIDE, GIB BARS, PLASTIC SLIDER RAILS, AND THE INSIDE OF THE HOPPER AND CYLINDER.

- A. APPLY CLEAN MINERAL OIL TO THE O-RING OF THE PISTON. THEN, RE-INSTALL THE PISTON INTO THE MACHINE. **MAKE CERTAIN THE PISTON IS ORIENTED CORRECTLY – THE SLANTED FACE OF THE PISTON SHOULD BE FACING DOWNWARD.**
- B. REPLACE *PIN B* IN THE TOP OF THE SPRING ASSEMBLY. AS BEFORE, YOU MAY NEED TO WIGGLE THE HAND-WHEEL TO ASSIST WITH PIN INSTALLATION.
- C. TURN THE HAND-WHEEL SO THE PISTON IS PULLED INTO THE MACHINE. WHEN THE PISTON HAS BEEN PULLED IN AS FAR AS POSSIBLE, REMOVE *PIN A* FROM THE CENTER OF THE CONNECTING ROD. TURN THE JOG WHEEL AGAIN, MOVING THE SPRING ASSEMBLY TOWARD THE CYLINDER. AS SOON AS THE PISTON STOPS MOVING, YOU WILL SEE THE ORIGINAL SET OF CONNECTION HOLES COME INTO ALIGNMENT. WHEN THEY DO, RE-INSERT *PIN A* INTO THE ROD ASSEMBLY. AGAIN, YOU MAY HAVE TO WIGGLE THE HAND-WHEEL.
- D. CAREFULLY RE-INSTALL THE DIVIDER SLIDE BACK INTO THE WHITE PLASTIC GIB BARS (PER THE **STEP G** ILLUSTRATION ON PAGE 15).



PRACTICE SAFETY FIRST:

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

- E. RE-INSTALL THE O-RING AND SCRAPER RING BACK INTO THE CYLINDER (SEE *STEP F* ON PAGE 15 FOR ILLUSTRATION). THEN, WHILE HOLDING THE SCRAPER RING IN THE CYLINDER WITH ONE HAND, SLIDE THE DIVIDER SLIDE OVER TO THE LEFT UNTIL IT COVERS HALF OF THE SCRAPER RING.
- F. APPLY A LIGHT COATING OF OIL TO THE RACES OF THE GIB BARS. THEN, RE-INSTALL THE LOWER GIB BAR. YOU MAY NEED TO LIFT UP SLIGHTLY ON THE DIVIDER SLIDE TO GET THE BAR BACK IN PLACE. SECURE THE BAR BY PLACING THE NUTS ON THE STUDS – BUT DO NOT TIGHTEN THE NUTS AT THIS TIME. LUBRICATE AND RE-INSTALL THE UPPER GIB BAR AS WELL. AGAIN, DO NOT TIGHTEN THE NUTS AT THIS TIME.
- G. RE-INSTALL THE CAM ARM SLIDE – MAKING CERTAIN THAT THE CAM FOLLOWER IS PROPERLY ENGAGED IN THE SLOT OF THE CAM ARM. REPLACE THE BLACK ADJUSTMENT HANDLES. MAKE SURE BOTH ARE FITTED SNUGLY BEFORE TIGHTENING THEM IN PLACE. MAKE SURE THE HANDLES ARE BOTH POINTED DOWNWARD WHEN TIGHT.
- H. USING THE 9/16 SOCKET HEAD OF THE T-HANDLED TOOL, TIGHTEN THE NUTS OF THE UPPER AND LOWER GIB BARS. **DO NOT OVER-TIGHTEN THESE NUTS.** USE ONLY THE TOOL PROVIDED.
- I. RE-INSTALL THE MEASURING CUP. USE THE ALLEN WRENCH TO SECURE IT IN PLACE BY TIGHTENING THE FOUR BOLTS.
- J. INSPECT THE MACHINE – MAKING CERTAIN THAT ALL PARTS HAVE BEEN RE-INSTALLED, AND THAT ANY TOOLS HAVE BEEN PUT BACK IN THE TOOL TRAY. WHEN YOU HAVE COMPLETED THIS INSPECTION, SLIDE THE MAIN HOOD CLOSED AND ENGAGE THE TWO BLACK RUBBER LATCHES TO HOLD IT IN PLACE.
- K. INSERT THE MACHINE'S ELECTRICAL CORD INTO THE APPROPRIATE POWER SOURCE AND TURN THE MAIN POWER SWITCH TO THE **ON** POSITION. THEN, PRESS THE GREEN *START* BUTTON AND BLACK *TEST* BUTTON SIMULTANEOUSLY TO PULSE THE MACHINE. PRESS BOTH BUTTONS AGAIN, AND CONTINUE DOING SO UNTIL THE MACHINE HAS COMPLETED 3 FULL CYCLES.



CAUTION

THIS PRELIMINARY, *START/TEST* CHECK IS IMPORTANT. IF SOMETHING WAS RE-ASSEMBLED INCORRECTLY, OR IF SOME STEP OF THE RE-ASSEMBLY WAS FORGOTTEN, SEVERE DAMAGE TO VITAL MACHINE PARTS CAN RESULT IF THE MACHINE IS ALLOWED TO RUN FREELY. BY ACTIVATING THE MACHINE ONE PULSE AT A TIME, THE OPERATOR CAN LISTEN FOR ANY GRINDING OR OTHER NOISES THAT INDICATE OBVIOUS PROBLEMS WITHOUT LETTING THE MACHINE DAMAGE ITSELF. IF YOU HAVE ANY QUESTIONS ABOUT THIS OR ANY OTHER PROCEDURE – OR IF YOU ARE UNCERTAIN IF YOUR DIVIDER WAS RE-ASSEMBLED CORRECTLY, CONTACT AN AM TECHNICIAN FOR ASSISTANCE.

- L. IF THE MACHINE SOUNDS GOOD AND RUNS WELL, DEPRESS THE GREEN *START* BUTTON AND ALLOW IT TO RUN FOR A MINUTE. IF THE MACHINE RUNS FINE, IT IS ONCE AGAIN READY FOR PRODUCTION.

NOTE

THESE PROCEDURES HAVE BEEN EXPANDED AND DETAILED TO GIVE A NEW USER THOROUGH DIRECTIONS ON HOW TO DIS-ASSEMBLE, CLEAN, AND RE-ASSEMBLE THE S251 DIVIDER. WHEN THE MACHINE IS NEW AND THE OPERATOR IS LEARNING THESE STEPS, CLEANING THE MACHINE CAN TAKE UPWARDS OF AN HOUR. ONCE THESE STEPS ARE REPEATED AND MASTERED, HOWEVER, CLEAN-UP SHOULD TAKE ABOUT 20 MINUTES.

IF YOU HAVE ANY QUESTIONS OR CONCERNS ABOUT ANY OF THESE PROCEDURES, CONTACT AN AM TECHNICIAN FOR ASSISTANCE AT 800-342-6744.

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. THE TABLE TOP AND OTHER WORKING SURFACES SHOULD BE CLEANED REGULARLY.
- B. MAKE SURE THAT ALL FASTENERS ARE TIGHTENED SECURELY.
- C. MAKE CERTAIN THAT ALL GUARDS AND COVERS ARE IN PLACE.
- D. CHECK FOR WORN, DAMAGED OR MISSING PARTS INCLUDING BELTS, SAFETY GUARDS AND PROTECTIVE COVERS.
- E. 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 S251 ALWAYS BEGINS WITH KEEPING THE MACHINE CLEAN. PROPER CLEANING PROCEDURES CAN BE FOUND ON PAGES 14 - 18 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.

THERE ARE (4) GREASE FITTINGS LOCATED ON THE ROCKER ARM AND DIVIDER FRAME, (FIG. 1). THESE FITTINGS SHOULD BE LUBRICATED ONCE A WEEK FOR OPTIMUM BEARING LIFE.

THE DRIVE CHAIN AND SPROCKETS (SEE ITEMS 6, 7 & 8 ON PAGES 24 & 25) SHOULD BE LUBRICATED WEEKLY WITH A LIGHT-WEIGHT MACHINE OIL. TO DO THIS, APPLY A SMALL AMOUNT OF OIL TO THE CHAIN. THEN, ALLOW THE MACHINE TO RUN FOR ABOUT A MINUTE. WHILE THE MACHINE IS RUNNING, THE CHAIN WILL APPLY OIL TO THE SPROCKETS AS IT PASSES OVER THEM.

THE GROOVE OF THE CAM TRACK SHOULD BE LUBRICATED ONCE A WEEK. APPLY A GENEROUS AMOUNT OF GREASE TO THE CAM TRACK SHOE (ITEM 18 ON PAGES 24 & 25). THE SHOE WILL APPLY GREASE TO THE TRACK AS IT RUNS AROUND IT.

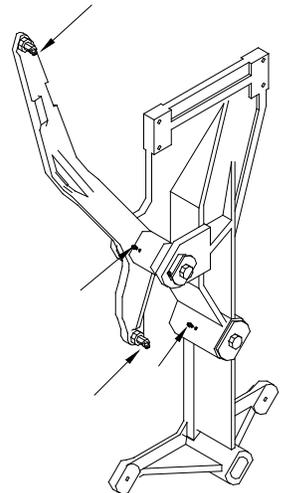


FIGURE 1

ALL RECOMMENDATIONS FOR MAINTENANCE ARE BASED ON A 7 DAY, 8 HOUR PER DAY WORK SCHEDULE. IF YOU NEED FURTHER ASSISTANCE WITH ANY OF THESE PROCEDURES, CONTACT THE AM MANUFACTURING SERVICE DEPARTMENT AT 800-342-6744.

GUIDE TO GENERAL MAINTENANCE



DANGER:

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

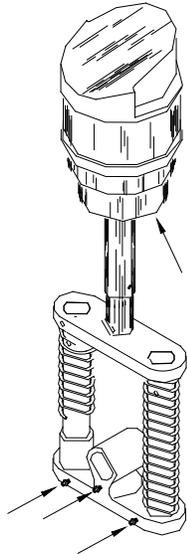


FIGURE 2

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, THIS FITTING IS LOCATED ON THE TOP OF THE OUTSIDE CONNECTING ROD, (PART NO. 322PY – SEE PAGES 30 & 31).

NOTE:

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



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.

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

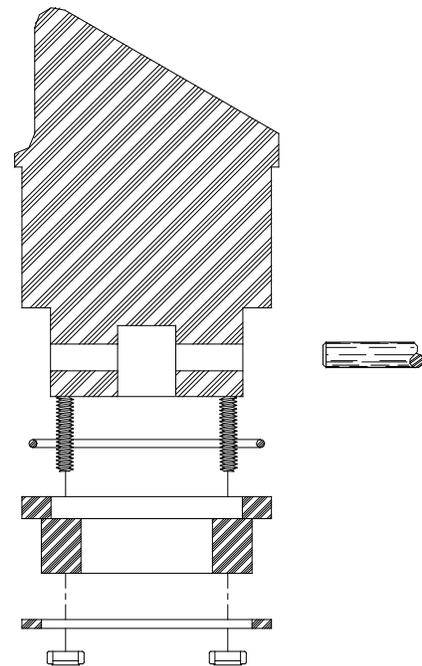


FIGURE 3

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.

TROUBLE-SHOOTING GUIDE

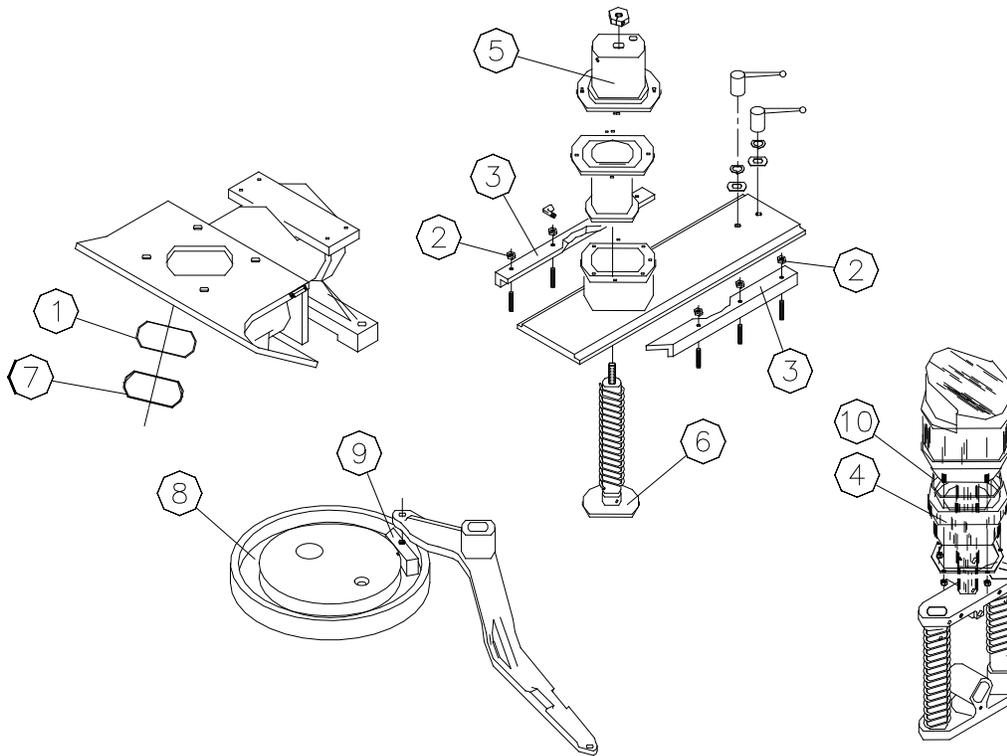


PRACTICE SAFETY FIRST:

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

THE S251 DIVIDER MUST CREATE A VACUUM IF IT IS TO PERFORM PROPERLY. THEREFORE, IT IS IMPORTANT TO MAKE CERTAIN THAT ALL OF THE DEVICE'S SEAL POINTS ARE INSTALLED AND ADJUSTED CORRECTLY. IF YOU ARE EXPERIENCING PROBLEMS WITH THE SCALING ACCURACY OF YOUR MACHINE, CHECK THE FOLLOWING LOCATIONS FOR POSSIBLE LOSS OF VACUUM - OR OTHER PROBLEMS DUE TO WEAR OR ADJUSTMENT.

1. NEOPRENE CYLINDER O-RING – OVER TIME, THIS PART WILL WEAR. ORDER A REPLACEMENT IF NECESSARY.
2. GIB BAR SCREWS – THE ADJUSTMENT OF THESE SCREWS IS CRITICAL FOR PROPER MACHINE PERFORMANCE. THE SCREWS HOLDING ON BOTH THE UPPER AND LOWER GIB BARS SHOULD BE SNUG SO THEY HOLD THE SLIDE FIRMLY IN PLACE – BUT NOT TOO TIGHT, OR THEY WILL INHIBIT ITS MOVEMENT. A GOOD RULE OF THUMB IS THAT THE NUTS SHOULD BE PUT ON FINGER TIGHT, THEN USING THE T-WRENCH, TIGHTENED NO MORE THAN 1/8 OF A TURN FURTHER.
3. THE GIB BARS – OVER TIME, THE GIB BARS WILL WEAR, ALLOWING EXCESSIVE SPACE BETWEEN THE DIVIDER SLIDE AND THE BARS. ORDER REPLACEMENTS IF NECESSARY.
4. THE PISTON RING – OVER TIME, THIS PART WILL WEAR. ORDER A REPLACEMENT IF NECESSARY.
5. MEASURING CUP PLUNGER ROD GUIDE – OVER TIME, THIS PART WILL WEAR. IF WORN, THE PLUNGER WILL HAVE A TENDENCY TO BIND OR STICK, THUS PRODUCING ERRATIC SCALING OF THE DOUGH BALLS. ORDER A REPLACEMENT IF NECESSARY.



TROUBLESHOOTING

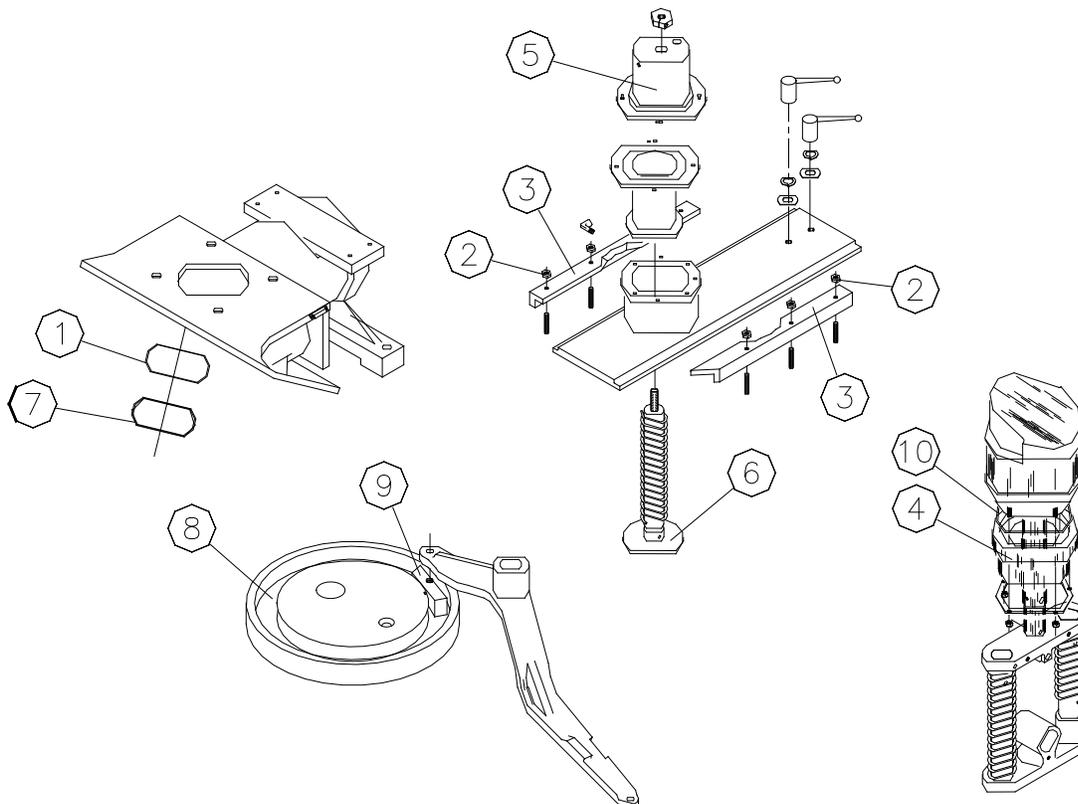


PRACTICE SAFETY FIRST:

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

6. THE PLUNGER – OVER TIME, THE OUTER EDGE OF THE PLUNGER WILL WEAR, ALLOWING DOUGH TO PASS INTO THE SPRING AREA. ORDER A REPLACEMENT IF NECESSARY.
7. THE SEAL SCRAPER RING – MAKE CERTAIN THAT THE SCRAPER RING IS POSITIONED CORRECTLY INSIDE THE CYLINDER.
8. CAM TRACK – CHECK FOR OBSTRUCTIONS IN THE CAM TRACK THAT MAY PREVENT THE ROCKER ARM FROM MOVING CORRECTLY. KEEP THE TRACK WELL LUBRICATED.
9. THE CAM TRACK SHOE – OVER TIME, THIS BRONZE SHOE CAN BECOME SUFFICIENTLY DIRTY OR WORN SO THAT THE MOTION OF THE ROCKER ARM WILL BE AFFECTED. CLEAN OR REPLACE THE SHOE IF NECESSARY.
10. PISTON NEOPRENE O-RING – OVER TIME, THIS PART WILL WEAR. ORDER A REPLACEMENT IF NECESSARY.

**SEE THE PARTS CATALOG FOR SPECIFIC PART NUMBERS
AND ORDERING INFORMATION**

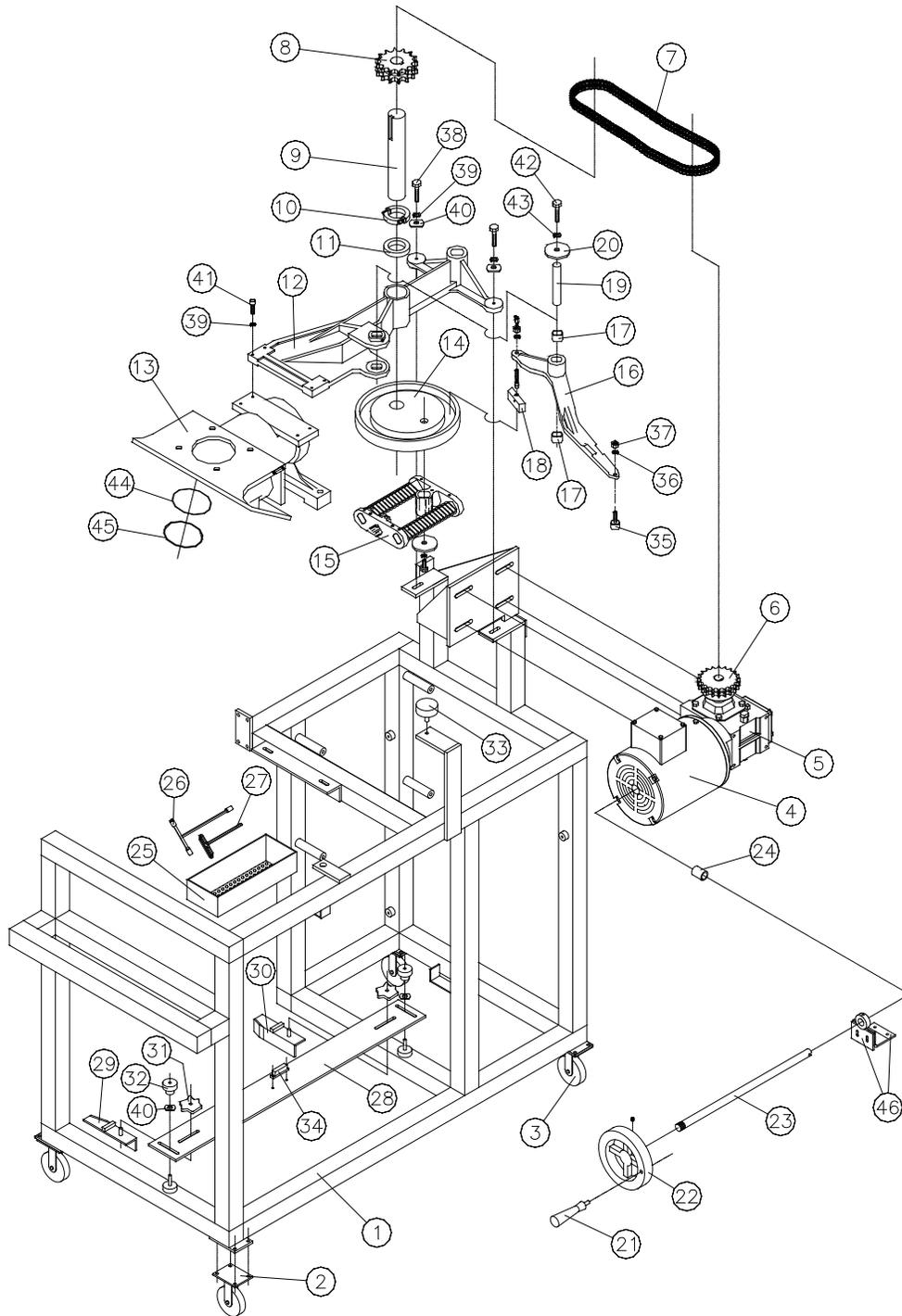


PARTS CATALOG



ELECTRICAL INFORMATION

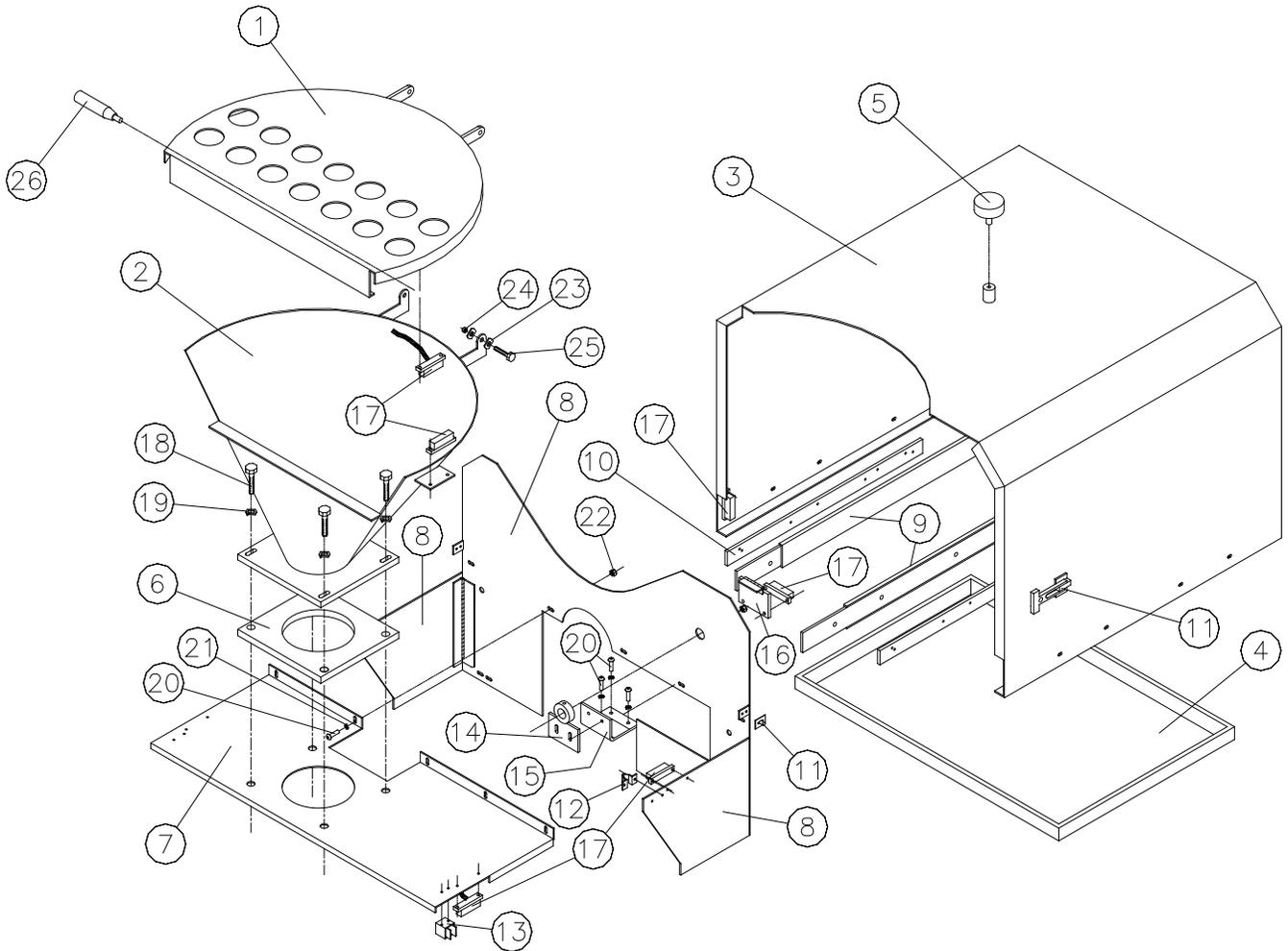
FRAME, CYLINDER & DRIVE ASSEMBLY



FRAME, CYLINDER & DRIVE ASSEMBLY

| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u> | <u>NO. REQ'D</u> |
|-------------|-----------------|---|------------------|
| 1 | 12647 | FRAME ASSEMBLY | 1 |
| 2 | 621CA1 | LOCKING CASTER WHEEL | 2 |
| 3 | 621CA2 | FREE CASTER | 2 |
| 4 | 13078 | DRIVE MOTOR | 1 |
| 5 | 13079 | GEAR REDUCER | 1 |
| 6 | 13076 | GEARBOX SPROCKET | 1 |
| 7 | 15106 | DRIVE CHAIN (38 Links & 1 Master Link) | 1 |
| 8 | 13077 | CAM SPROCKET | 1 |
| 9 | 13074 | CAM TRACK SHAFT | 1 |
| 10 | 13278 | CAM TRACK SHAFT BEARING PACK | 1 |
| 11 | 13179 | CAM TRACK SHAFT THRUST PLATE | 1 |
| 12 | SO109CD | DRIVE FRAME | 1 |
| 13 | SO107CD | CYLINDER | 1 |
| 14 | 13075 | CAM TRACK | 1 |
| 15 | SEE ASSEMBLY | PISTON-CONNECTING ROD & SPRING ASSEMBLY | * |
| 16 | SO110CD | ROCKER ARM | 1 |
| 17 | 422CD | ROCKER ARM BUSHING | 2 |
| 18 | 448CD | CAM TRACK SHOE | 1 |
| 19 | 412CD | CAM ARM PIN | 1 |
| 20 | 439CD | WASHER | 1 |
| 21 | 13859 | MOTOR CRANK HANDLE | 1 |
| 22 | 13858 | MOTOR CRANK WHEEL | 1 |
| 23 | 13860 | MOTOR CRANK SHAFT | 1 |
| 24 | 13151 | MOTOR CRANK COUPLER | 1 |
| 25 | 13120 | TOOL TRAY | 1 |
| 26 | 542MSW | T-WRENCH | 1 |
| 27 | 530MSW | ALLEN WRENCH (5/32") | 1 |
| 28 | 13202 | R900 ROUNDER ALIGNMENT BAR | 1 |
| 29 | 13201 | R900 ROUNDER ALIGNMENT ANGLE – FRONT | 1 |
| 30 | 13200 | R900 ROUNDER ALIGNMENT ANGLE – REAR | 1 |
| 31 | 19398 | STAR KNOB | 2 |
| 32 | 13238 | ALIGNMENT BAR KNOB | 2 |
| 33 | 11665 | MOTOR SUPPORT PAD | 1 |
| 34 | EL-1308 | MAGNETIC SENSOR | 1 |
| 35 | 427CD | CAM ROLLER | 1 |
| 36 | F0800FW | FLAT WASHER | 1 |
| 37 | F0800NF | NUT | 1 |
| 38 | F0607HH | HEX-HEAD BOLT | 2 |
| 39 | F0600LW | LOCK WASHER | 6 |
| 40 | F0600FW | FLAT WASHER | 4 |
| 41 | F0609SH | SOCKET-HEAD BOLT | 4 |
| 42 | F0804HH | HEX-HEAD BOLT | 1 |
| 43 | F0800LW | LOCK WASHER | 1 |
| 44 | 402CD | CYLINDER SLIDE "O" RING | 1 |
| 45 | 401CD | SEAL SCRAPER RING | 1 |

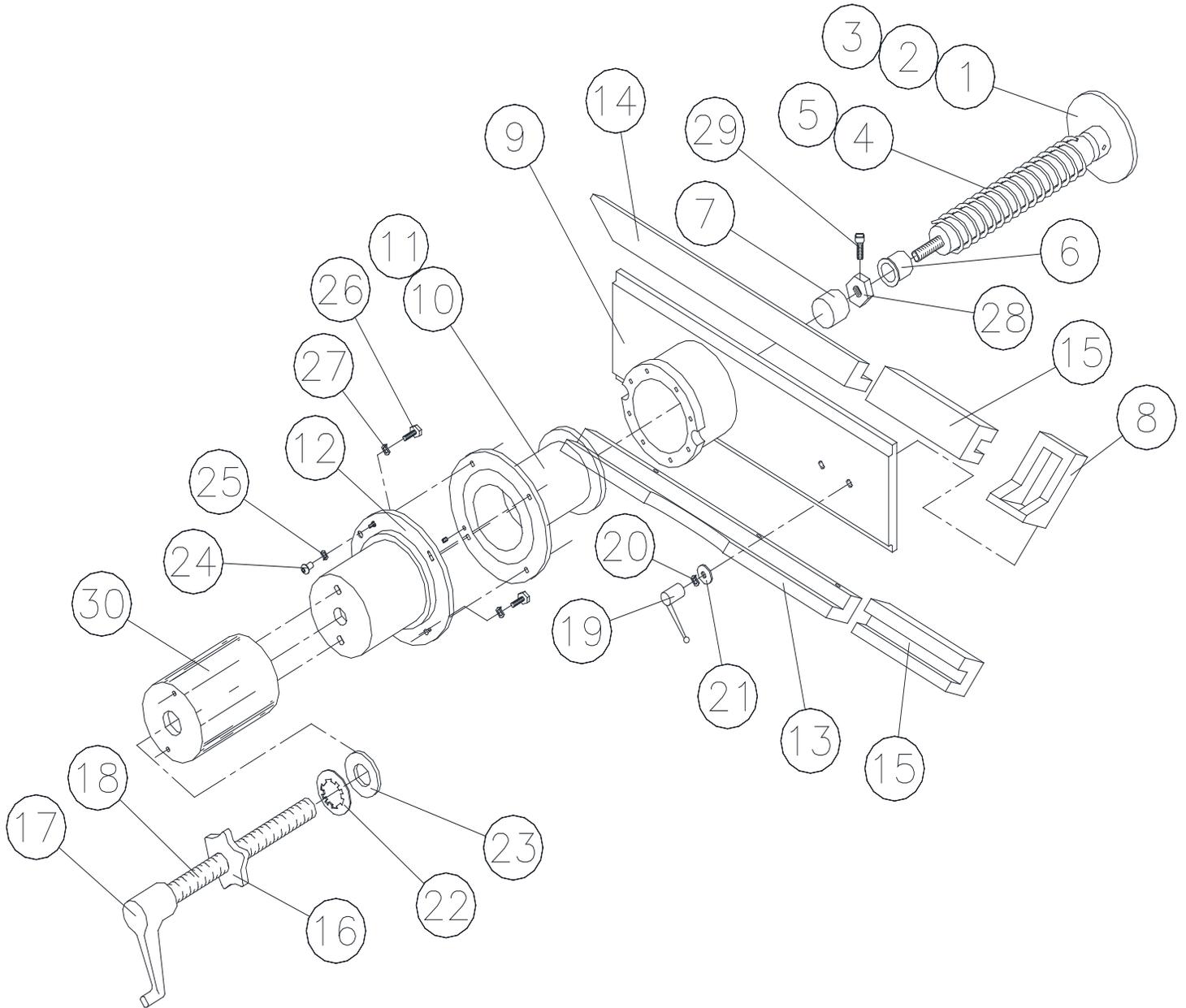
HOPPER & GUARDING ASSEMBLY



HOPPER & GUARDING ASSEMBLY

| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u> | <u>NO. REQ'D</u> |
|-------------|-----------------|--|------------------|
| 1 | 13206 | HOPPER COVER | 1 |
| 2 | 13232 | DOUGH HOPPER | 1 |
| 3 | 13127 | MACHINE COVER | 1 |
| 4 | 19905 | OIL CATCH PAN | 1 |
| 5 | 11655 | HOPPER COVER PAD | 1 |
| 6 | 449CD | HOPPER GASKET | 1 |
| 7 | 13105 | DIVIDER AREA UPPER GUARD | 1 |
| 8 | 13104 | DIVIDER AREA REAR GUARD / SIDE DOOR ASSEMBLY | 1 |
| 9 | 12780 | MACHINE COVER SLIDE | 1 SET |
| 10 | 14591 | MACHINE COVER SLIDE MOUNTING BAR | 2 |
| 11 | 13176 | MACHINE COVER LATCH AND CATCH | 2 |
| 12 | K122LS | DIVIDER AREA SIDE GUARD CATCH | 2 |
| 13 | K122LS | DIVIDER AREA SIDE GUARD LATCH | 2 |
| 14 | 13989 | MOTOR HAND CRANK SUPPORT COLLAR | 1 |
| 15 | 13990 | MOTOR HAND CRANK SUPPORT COLLAR MOUNT | 1 |
| 16 | 13862 | MOTOR HAND CRANK DROP GUARD | 1 |
| 17 | EL-1308 | MAGNETIC SENSOR (2 PIECES) | 5 |
| 18 | F0607HH | HEX-HEAD BOLT | 4 |
| 19 | F0600LW | LOCK WASHER | 4 |
| 20 | F0403BH | BUTTON-HEAD BOLT | 9 |
| 21 | F0400LW | LOCK WASHER | 9 |
| 22 | F0400CN | NUT | 9 |
| 23 | F0500FW | FLAT WASHER | 4 |
| 24 | F0500LN | LOCK NUT | 2 |
| 25 | F0505HH | HEX-HEAD BOLT | 2 |
| 26 | 11467 | HOPPER COVER HANDLE | 1 |

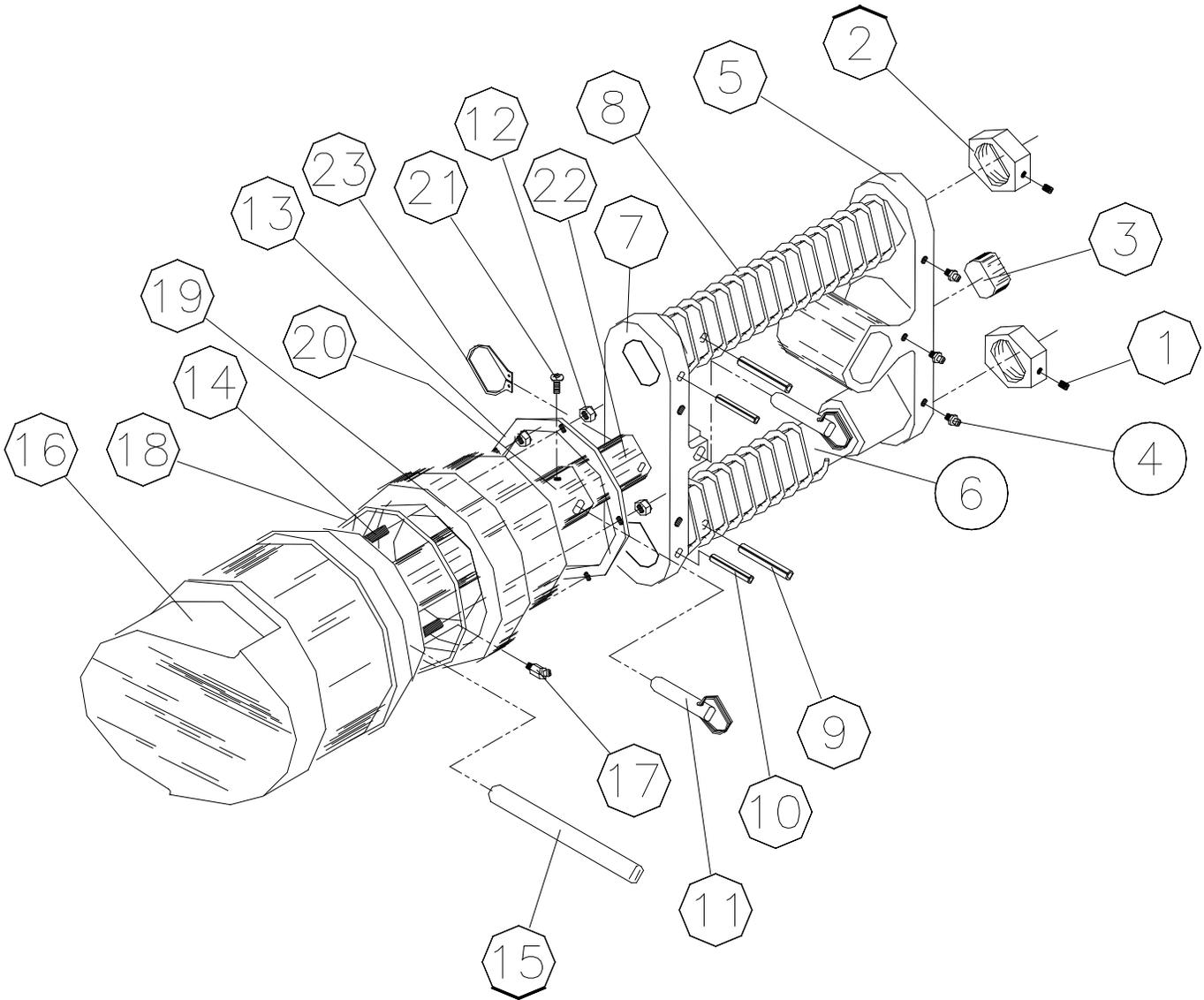
MEASURING CUP & DIVIDING SLIDE ASSEMBLY



MEASURING CUP & DIVIDING SLIDE ASSEMBLY

| ITEM | PART NO. | DESCRIPTION | NO. REQ'D |
|------|------------|---|-----------|
| 1 | 513MS-2 | 2" PLUNGER w/ 1-F0304RP – ROLL PIN w/ 1-515MS - PLUNGER SHAFT | 1 UNIT |
| 2 | 513MS-3 | 3" PLUNGER w/ 1-F0304RP – ROLL PIN w/ 1-515MS - PLUNGER SHAFT | 1 UNIT |
| 3 | 513MS-5 | 5" PLUNGER w/ 1-F0304RP – ROLL PIN w/ 1-515MS - PLUNGER SHAFT | 1 UNIT |
| 4 | 516MSL | LIGHT PLUNGER SPRING (USED FOR 2" PLUNGER UNITS) | 1 |
| 5 | 516MSH | HEAVY PLUNGER SPRING (USED FOR 3" & 5" PLUNGER UNITS) | 1 |
| 6 | S539MSP | PLASTIC BUSHING | 1 |
| 7 | 529MS-2E | PLASTIC STOP PLUG | 1 |
| 8 | 517MS | CAM ARM SLIDE | 1 |
| 9 | 13225 | DIVIDER SLIDE | 1 |
| 10 | S509MS | DIVIDER CYLINDER (FOR 2" UNITS) | 1 |
| 11 | S510MS | DIVIDER CYLINDER (FOR 3" UNITS) | 1 |
| 12 | S503MS | PLUNGER GUIDE HOUSING w/ 1-S543MS THREADED INSERT | 1 |
| 13 | 13223 | LOWER GIB BAR | 1 |
| 14 | 507MS/B | UPPER GIB BAR | 1 |
| 15 | 13081 | GIB BAR CLEANING POSITION SUPPORT BLOCK | 2 |
| 16 | 529MS-2D | STAR ADJUSTMENT KNOB | 1 |
| 17 | 529MS-2F | ADJUSTMENT HANDLE | 1 |
| 18 | 529MS-2C | ADJUSTMENT STUD | 1 |
| 19 | 13239 | SLIDE MOUNTING HANDLE | 2 |
| 20 | F0600LW | LOCK WASHER | 2 |
| 21 | F0600FW | FLAT WASHER | 2 |
| 22 | F1200RW | RETAINING WASHER | 1 |
| 23 | F1200WF | WASHER | 1 |
| 24 | F0403BH | BUTTON-HEAD BOLT | 8 |
| 25 | F0502SS/DP | DOG-POINT SET SCREW | 1 |
| 26 | 531MS | SLOTTED HEX NUT | 1 |
| 27 | F0403SH | SOCKET-HEAD BOLT | 1 |
| 28 | 531-MS | NUT, SLOTTED 5/8-18 | 1 |
| 29 | F0403SH | SCREW, SOCKET HEAD 1/4-20 X 3/4"LG | 1 |
| 30 | 529MS-2 | PLUNGER GUIDE EXTENSION HOUSING | 1 |

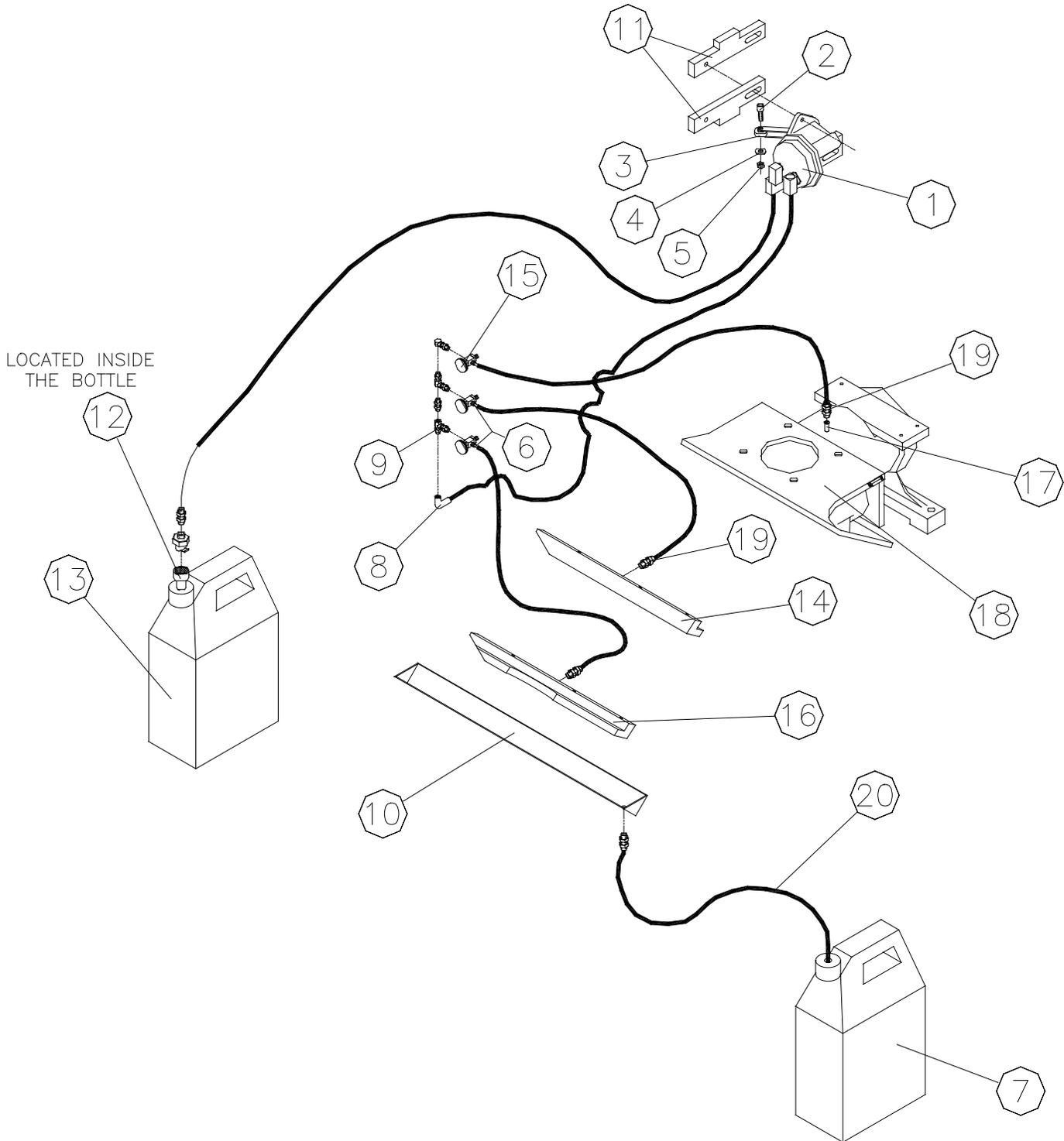
PISTON-CONNECTING ROD & SPRING ASSEMBLY



PISTON-CONNECTING ROD & SPRING ASSEMBLY

| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u> | <u>NO. REQ'D</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 w/ 3-3038-B GREASE FITTINGS 1-313PY EXPANSION PLUG | 1 |
| 6 | 309PY | SPRING GUIDE BARS (NOT SOLD SEPARATELY) SOLD w/B317PY ONLY | 2 |
| 7 | 317PY | UPPER SPRING CASTING w/ 2-F0406RP SPRING PINS 2-309PY SPRING GUIDE BARS 2-F0408RP SPRING PINS | 1 |
| 8 | 316PYB | COMPRESSION SPRING | 2 |
| 9 | F0406RP | ROLL PIN 1/4 DIA. X 2.0" LG. | 2 |
| 10 | F0408RP | ROLL PIN 1/4 DIA. X 2.0" LG. | 2 |
| 11 | 13094 | 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 | 300PY | PLASTIC PISTON ASSEMBLY w/ 6-F0400LN LOCK NUTS, 1-301PY WRIST PIN 1-302PY PISTON RING WASHER 1-323PY PISTON RING ONLY 1-324PY O RING | 1 |
| 17 | 3053-B | GREASE FITTING | 1 |
| 18 | 324PY | PISTON O RING | 1 |
| 19 | 323PY | PISTON RING 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 |

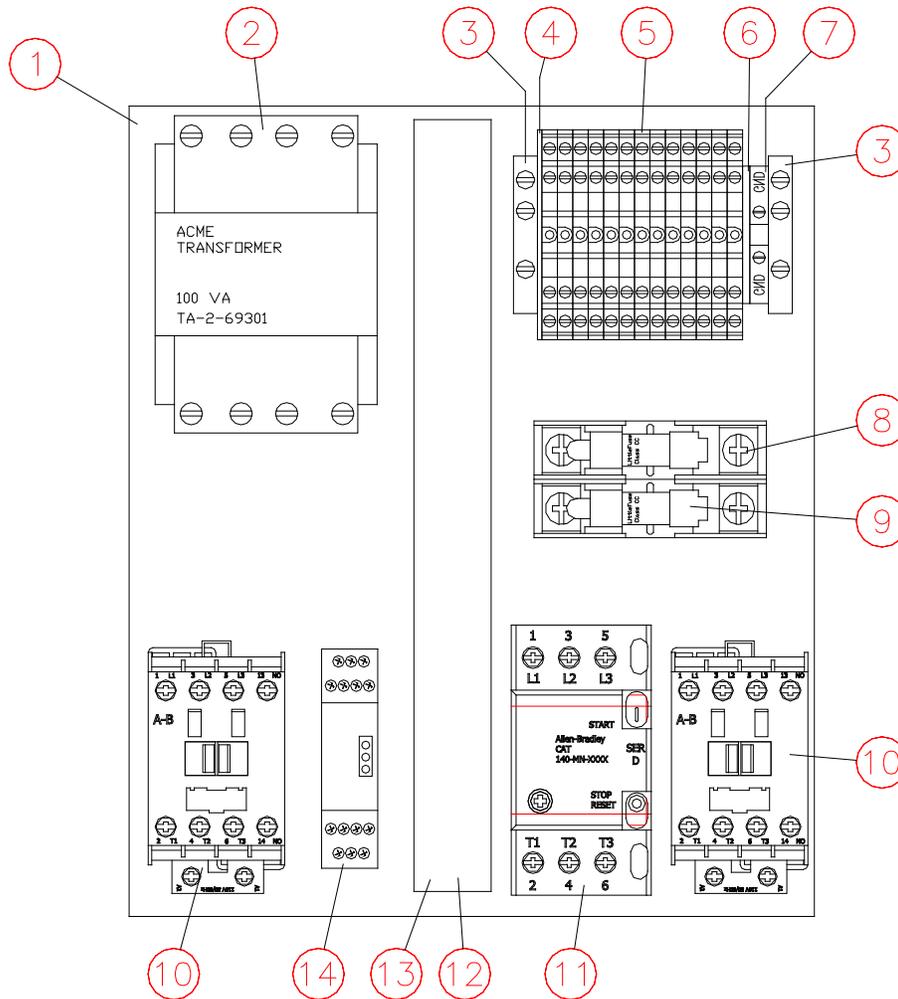
OILING SYSTEM



OILING SYSTEM

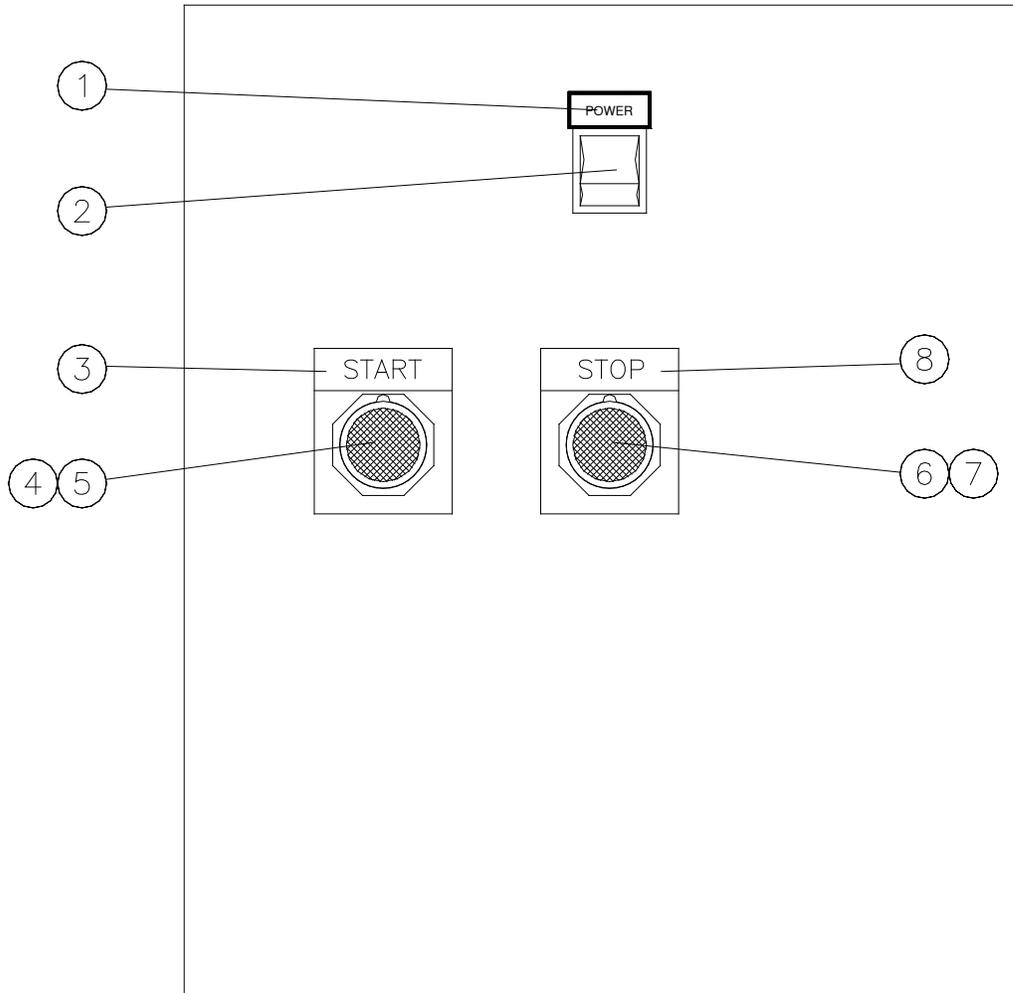
| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u> | <u>NO. REQ'D</u> |
|-------------|----------------------|--|------------------|
| 1 | 716OS | OIL PUMP | 1 |
| 2 | F0403SH | BOLT | 1 |
| 3 | 714OS | PUMP ROLLER BEARING | 1 |
| 4 | F0400FW | FLAT WASHER | 1 |
| 5 | F0400LN | LOCK NUT | 1 |
| 6 | 722OS | MALE CONNECTOR | 4 |
| 7 | 13222 | OIL COLLECTION BOTTLE | 1 |
| 8 | 724OS | 90° STREET ELBOW | 1 |
| 9 | 725OS | STREET T FITTING | 2 |
| 10 | 14563 | OIL DRIP PAN | 1 |
| 11 | 13097 | OIL PUMP ADJUSTMENT BRACKET | 2 |
| 12 | 713OS | STRAINER WITH INSERT – FILTER ADAPTER | 1 |
| 13 | 13222 | OIL RESEVOIR | 1 |
| 14 | SEE PAGES 28 & 29 | UPPER GIB BAR (SEE MEASURING CUP & DIVIDING SLIDE ASSEMBLY FOR PART NUMBER INFORMATION) | * |
| 15 | 704OS | VALVE | 3 |
| 16 | SEE PAGES 28 & 29 | LOWER GIB BAR (SEE MEASURING CUP & DIVIDING SLIDE ASSEMBLY FOR PART NUMBER INFORMATION) | * |
| 17 | 728OS | BRASS INSERT | 1 |
| 18 | SO107CD | CYLINDER | 1 |
| 19 | 708OS | MALE CHECK VALVE | 3 |
| 20 | 11774 | ¼" OIL SYSTEM TUBING – CUT TO LENGTH | 5 |

ELECTRICAL COMPONENTS



| ITEM | PART NO. | DESCRIPTION | NO. REQ'D. |
|------|----------|-----------------------------------|------------|
| 1 | EL-0660 | ELECTRICAL PANEL | 1 |
| 2 | SS176 | TRANSFORMER | 1 |
| 3 | EL-0396 | TERMINAL BLOCK END STOP | 2 |
| 4 | EL-0427 | DOUBLE TERMINAL BLOCK END BARRIER | 1 |
| 5 | EL-0426 | DOUBLE TERMINAL BLOCK | 13 |
| 6 | EL-0436 | GROUND TERMINAL BLOCK END BARRIER | 1 |
| 7 | EL-0394 | GROUND TERMINAL BLOCK | 1 |
| 8 | SS142 | FUSE BLOCK | 2 |
| 9 | SS134 | 2 AMP FUSE | 2 |
| 10 | EL-0853 | MOTOR CONTACTOR | 2 |
| 11 | EL-0855 | MANUAL MOTOR STARTER | 1 |
| 12 | SS182 | WIRE DUCT | 1 |
| 13 | SS181 | WIRE DUCT COVER | 1 |
| 14 | EL-1307 | SAFETY RELAY | 1 |

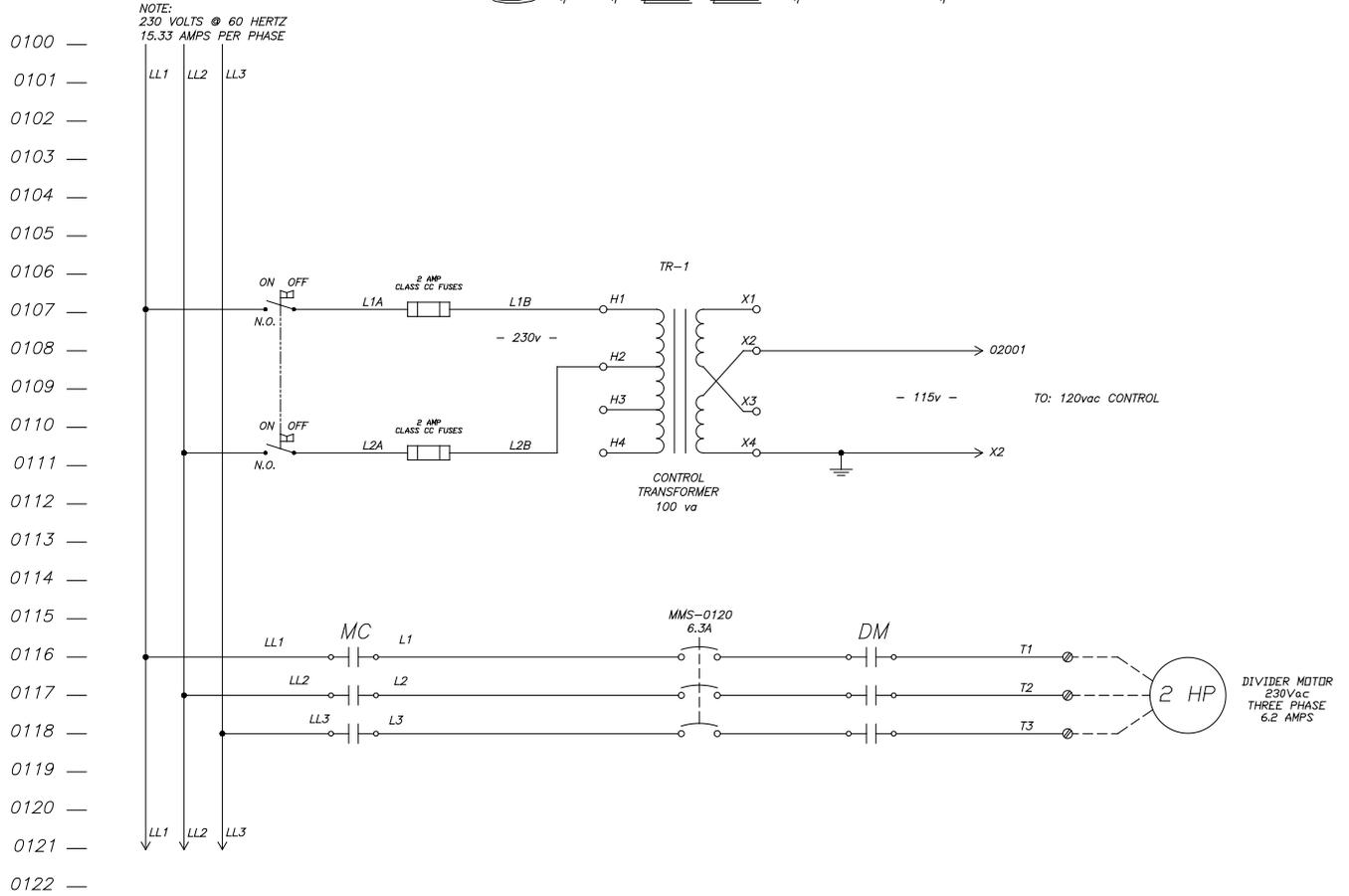
ELECTRICAL COMPONENTS



| ITEM | PART NO. | DESCRIPTION | NO. REQ'D. |
|------|------------|---------------------|------------|
| 1 | AM TAG #55 | POWER ON LABEL | 1 |
| 2 | EL-0433 | POWER ON/OFF SWITCH | 1 |
| 3 | SS121 | START LABEL | 1 |
| 4 | SS184 | PUSHBUTTON (GREEN) | 1 |
| 5 | 400038 | N.O. CONTACT BLOCK | 1 |
| 6 | EL-0409 | PUSHBUTTON (RED) | 1 |
| 7 | 400039 | N.C. CONTACT BLOCK | 1 |
| 8 | SS122 | STOP LABEL | 1 |

ELECTRICAL SCHEMATIC LINE SCHEMATIC (208-230VAC)

— SHEET 1 —

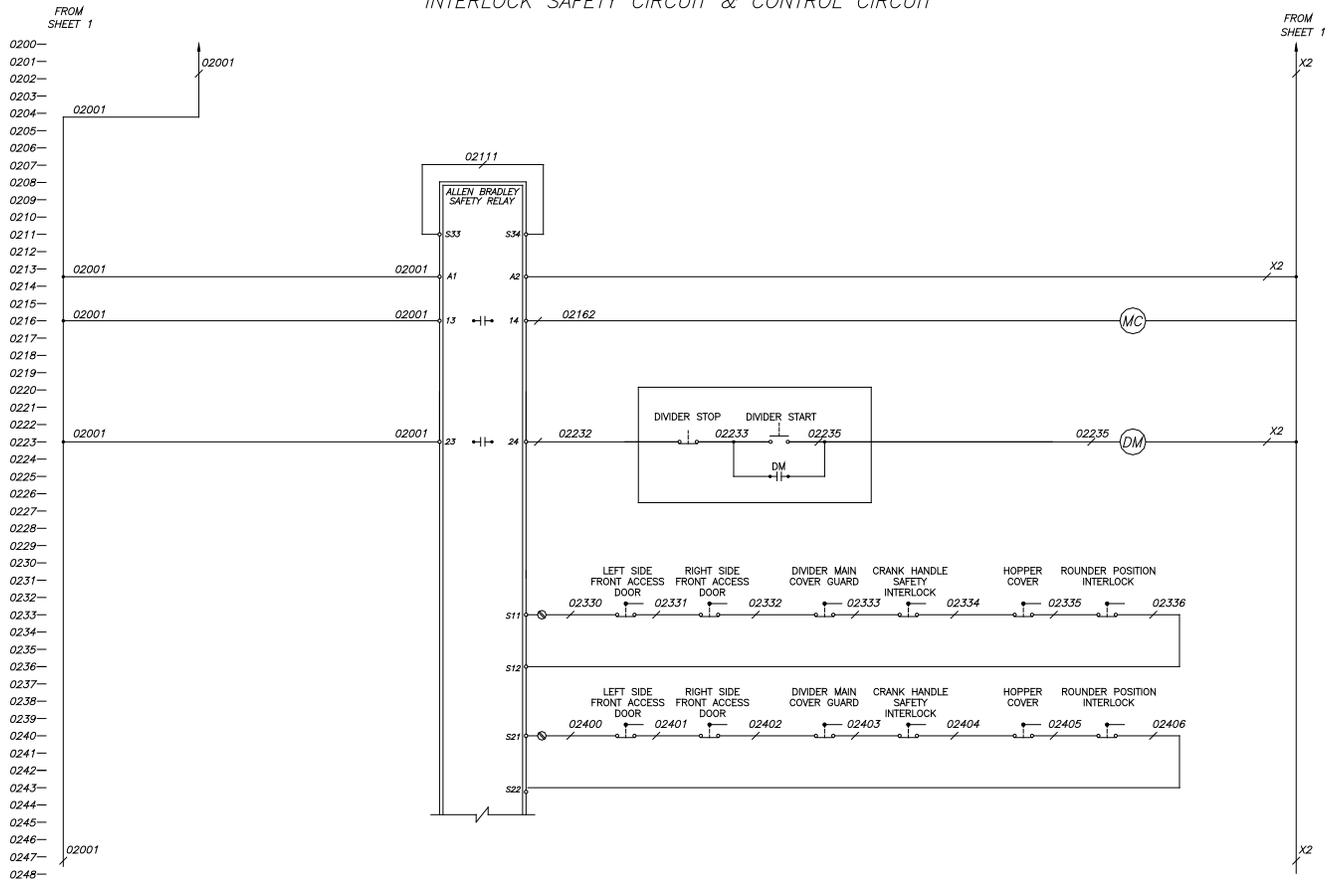


ELECTRICAL SCHEMATIC CONTROL SCHEMATIC

— SHEET 2 —

AB SAFETY RELAY

"INTERLOCK SAFETY CIRCUIT & CONTROL CIRCUIT"



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 MANUFACTURES WARRANTY.

TO ORDER REPLACEMENT PARTS ALWAYS:

- 1) CHECK THE MACHINE TO 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) ALL MAJOR CREDIT CARDS ACCEPTED.

