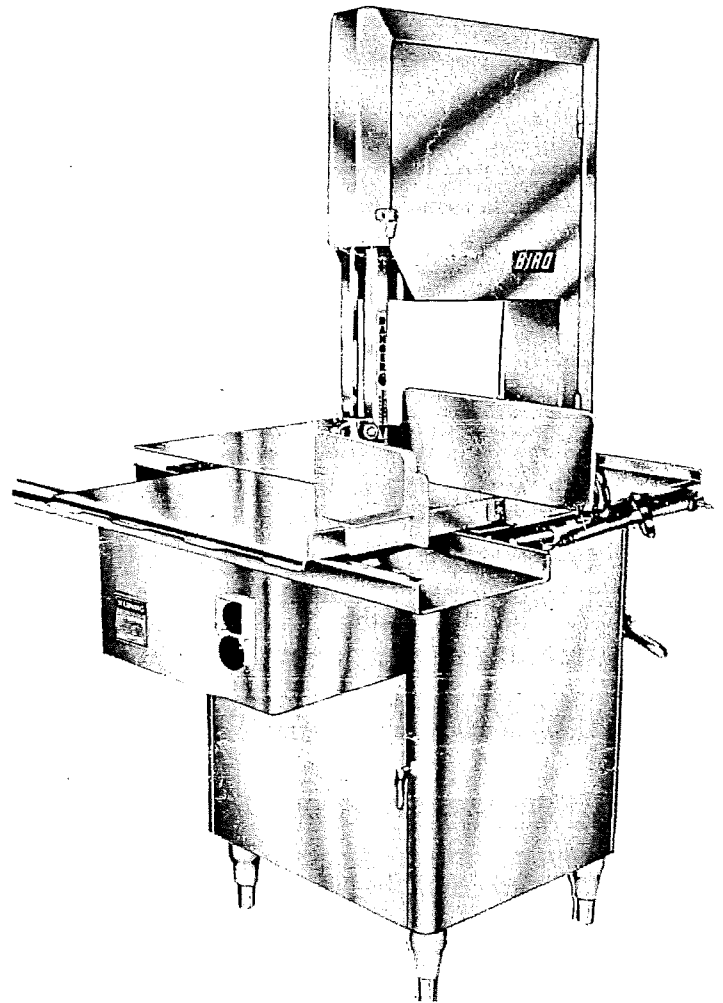
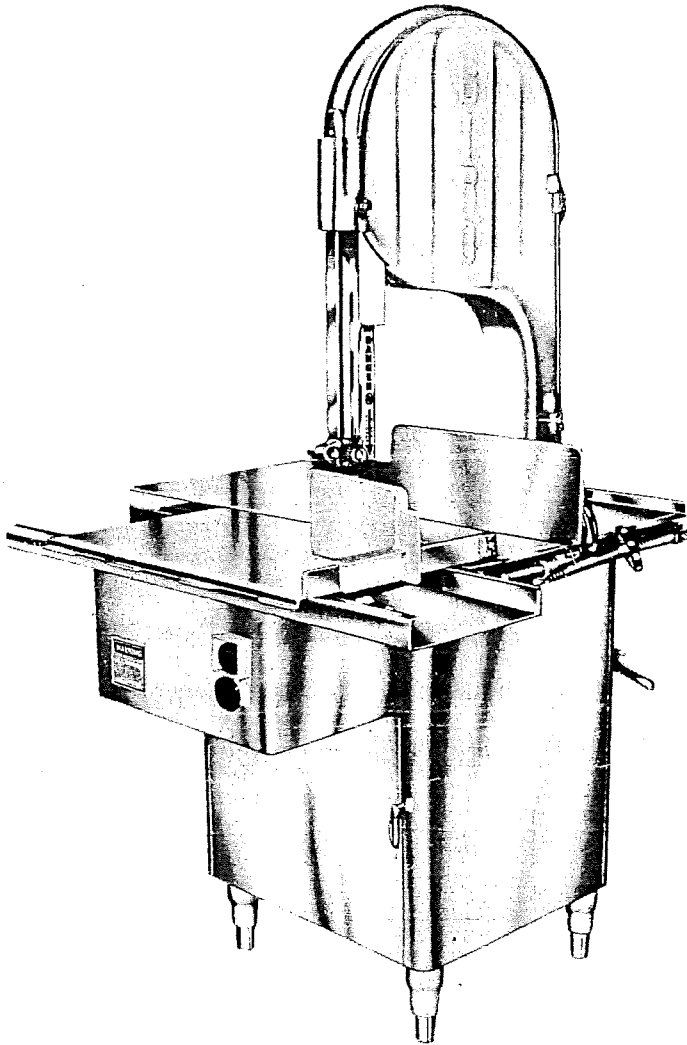


BIRO[®]

MODEL 3334 POWER MEAT CUTTER OPERATING AND SERVICE MANUAL REVISED — SERIAL No. 1,000 ON TRUE LEFT



THE BIRO MANUFACTURING COMPANY

MARBLEHEAD, OHIO 43440-2099 U.S.A.

TELEX NO. 241-003 (BIRO MBLE UD)

FAX (419) 798-9106

Phone (419) 798-4451

PTCT 3334
100-5-91-18

OPERATING AND SERVICE MANUAL FOR BIRO MODEL 3334

**WARNING TO ALL PURCHASERS, OPERATORS AND OPERATION SUPERVISORS:
FAILURE TO READ AND ADHERE TO THE FOLLOWING IMPORTANT INSTRUCTIONS COULD
RESULT IN BODILY INJURY.**

**NOTE TO ELECTRICIAN: IF THIS MACHINE IS NOT CORD AND PLUG CONNECTED TO THE
ELECTRICAL SUPPLY SOURCE, THEN IT SHOULD BE EQUIPPED WITH, OR CONNECTED TO, A
LOCKABLE, MANUALLY-OPERATED DISCONNECT SWITCH (OSHA 1010.147).**

- (1) Do not electric wire this power cutter. Have only a qualified and certified electrician wire this power cutter as required. Be sure machine is grounded. Failure to ground this machine could result in electric shock.
- (2) Do not place machine on sloping floor. Always place machine on flat non-skid floor.
- (3) Do not use this power cutter for non-food products.
- (4) Do not use this power cutter to cut pigs feet.
- (5) Do not attempt to operate this power cutter until this machine has been inspected and demonstrated by the seller — recognized BIRO Representative.
- (6) Do not attempt to operate this power cutter unless you or the operator has been properly trained. Improper use or operation of this power cutter could result in bodily injury.
- (7) Do not leave power cutter in operation — unattended.
- (8) Do not tamper, bypass, remove fixed guards, safety interlock electrical switches or any other safety device.
- (9) Do not at any time force feed product through this power cutter.
- (10) Do not alter or modify this power cutter in any way from its original form. This power cutter in its original form meets the intent of O.S.H.A. applicable standards.
- (11) Always use safety pusher plate supplied with each power cutter when cutting small product.
- (12) Do not touch moving blade or moving parts. Never place hand or arm between blade and head column structure.
- (13) Always disconnect power supply before removing shrouds, removable guards, covers, doors, fences, panels for servicing, cleaning or any other reason.
- (14) Use only BIRO parts and accessories properly installed, contact your nearest service agency or The BIRO Manufacturing Company for authorized referral assistance.
- (15) Power cutter operating manuals as supplied with this power cutter are available from BIRO.

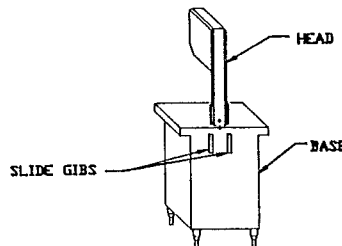
FAILURE TO COMPLY WITH THIS WARNING NOTICE COULD RESULT IN BODILY INJURY.

**THE BIRO MANUFACTURING COMPANY, 1114 WEST MAIN STREET, MARBLEHEAD, OHIO
43440-2099 U.S.A. — PHONE (419) 798-4451 — TELEX NO. 241-003 — FAX (419) 798-9106**

TO ASSEMBLE AND SET UP CUTTER FOR USE:

- (1) After placing cutter in operational area, it is imperative that three of the four adjustable foot studs be tightened, using the fourth leg for adjustment to level the cutter.
- (2) To assemble meat gauge plate, Item No. 16275, Page 10, to machine loosen the lock knob, Item No. 272-7, on right side of meat gauge bracket. Raise the right side of the meat gauge gear rack, Item 16272, and slip the meat gauge plate over the gear rack, lower gear rack back to its original position, tighten lock knob. Keep gear rack well oiled with food machine oil to insure free movement.

- (3) The aluminum head, Item No. 16005 comes detached from the base. Slip the head into the Gib, Item No. 260, (slide gibs) section of the base. Make sure the Gibs, Item No. 260, (slide gibs) are oiled or greased to insure free movement.



- (4) Place upper saw guide removable unit assembly on saw guide bar, Item No. 116-22, and fasten in place with finger lift fastener knob, Item No. 211A-291Q.
- (5) Placing blade on cutter: Hang upper wheel assembly, Item No. A16003U335 on the upper wheel hinge bracket, Item No. 71-1. Lift up nylon filler, Item No. 177, Page 7. Hang blade on upper wheel and hold blade on wheel with left hand. With the right hand force the back of the blade between the two saw cleaners, Item No. 131, located below the nylon filler, Item No. 177. Lower the nylon filler, Item No. 177, and insert back of blade in upper saw guide slot, Item No. 602. The blade has already dropped over the lower wheel and is ready for tightening. Press down on ratchet arm, Item No. 10-0, to tighten. Turn wheel one turn to insure proper tracking and tighten to proper tension. When the tension gauge, Item No. 16197, located at the bottom of the head becomes tight laterally the blade is at its proper tension, Page 7.
- (6) Fasten the side platter bracket, Item No. S12214. The stationary platter, Item No. A16163, is placed on top of the base and held in place with two push-pull platter hold down catches, Item No. 16212, located on the base structure.
- (7) The sliding meat carriage table, Item No. 16155, is removed by turning movable stop, Item No. 16200, clockwise. After the carriage is in the channel for operation turn movable stop, counter-clockwise, Page 6.

(8) When not in use, the plastic end cut pusher plate, Item No. 256P is stored in a holding clip on the left side of the channel bracket.

WIRING MOTOR:

- (1) Interchange of current is made in motor outlet box. Leads are properly marked. Changing instructions are on motor plate or motor outlet box.
- (2) All cutters are wired 220 volts unless otherwise specified. Be sure motor specifications (voltage, cycle, phase) match power supply line. Be sure line voltage is up to specification.
- (3) Connect leads to machine in a manner that will be approved by local electrical inspectors.
- (4) We recommend not less than No. 12 wire, otherwise an overload condition may occur. If leads are too light machine may not have sufficient cutting power and/or speed.
- (5) The BIRO Manufacturing Company is not responsible for permanent wiring, connection or installations.
- (6) V-Belt is packed loose with machine and must be installed on pulleys.

LUBRICATION:

Table Bearings: grease packed at the factory. Repack as necessary.

Meat Gauge Bar: grease every four months.

Slide Gibs: for mounting head are provided with grease fittings and should be greased every four months.

Main Bearings: grease packed at factory. Check and grease if necessary.

MOTOR BASE PLATE:

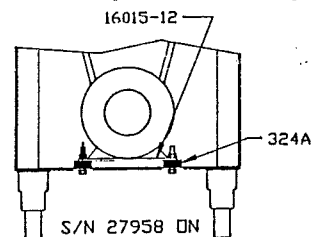
Starting with Serial No. 27958 **three (3) phase** Model 3334's will no longer be equipped with the adjustable motor base plate, Part No. 16015-10 and 16015-11. The motor will be bolted to the base bottom plate in the same manner as the Model 22 and 44.

This change has evolved as a result of the market demand for higher blade speed. The revised mounting procedure will insure a more rigid motor installation creating positive belt alignment and reducing machine vibration.

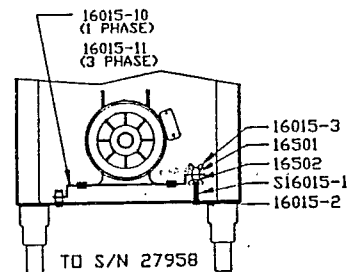
The base bottom plate has been redesigned to accept the frame sizes of the current 3 phase motors. Units prior to Serial No. 27958 can be retrofitted by ordering Item No. 16015-12 motor base plate and template (flat), and 36 each Item No. 324A motor shims.

ADJUSTMENTS:

(1) For tightening motor V-Belt on rigid mount base plate, remove the appropriate amount of shims #324A under the motor until the desired total flex of the V-Belt is approximately $\frac{1}{2}$ ".



(1A) For tightening motor V-Belt on floating old style motor mounting plates (Part No. 16015-10 and 16015-11), loosen the upper wing nut #16015-3. Then loosen the bottom wing nut #16502 which is located under the mounting plate. This enables the motor mounting plate to drop to the desired belt tension. Re-tighten upper wing nut. Do not tighten the belt to extremes. This will cause undue pressure on motor bearings.

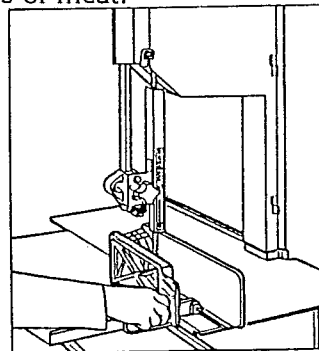
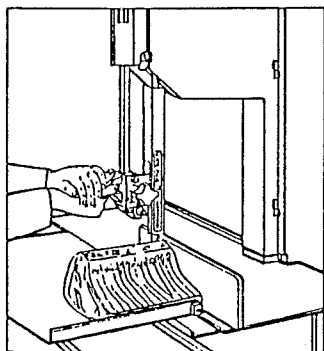


(2) Saw Guides: Should be adjusted so the guide is $\frac{1}{32}$ " from the back edge of the blade when the machine is idling. This prolongs the life of the saw wheels by reducing pressure and wear of the saw blade against the flange of the wheel.

RECOMMENDED SAFE OPERATING PROCEDURES:

(1) Before starting saw, adjust the Saw Guide Bar down to within $\frac{1}{2}$ " of product to be cut.

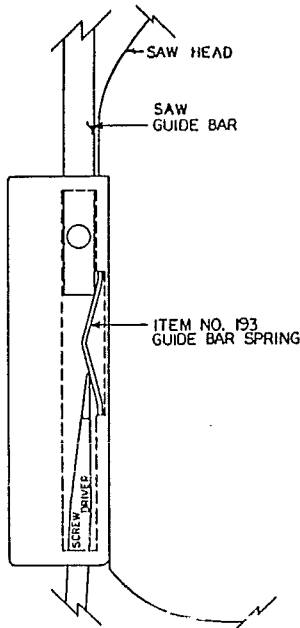
(2) The 256P Safety End Cut Pusher Plate supplied with every machine as standard equipment, should be used when cutting end cuts of meat.



SAW GUIDE BAR SPRING SERVICING PROCEDURE

Item #193 Saw Guide Bar Spring, is located in the head structure on all BIRO Power Meat Saws. The spring is not visible as it is located within the babbitt pocket area.

Dependent upon the frequency of adjustments, that portion of the saw guide bar spring in constant contact with the guide bar will eventually wear. As the spring becomes worn, a loss of tension will cause the finger lift assembly to slide down or not hold the adjusted height setting. When this happens, the saw guide bar spring, Item #193 must be replaced.



1. Remove the finger lift fastener knob and the finger lift assembly.
2. Remove the finger lift fastener stud.
3. Push the saw guide bar up and out of the top, of the head structure.
4. Remove the saw guide bar spring.
5. Clean and relubricate the babbitt pocket area (the square indented area that seats the saw guide bar spring).
6. Lower the new saw guide bar spring through the top of the babbitt pocket area and guide the spring into position with a standard screwdriver (NOTE: drawing).
7. While holding the saw guide bar spring in position re-enter saw guide bar from the top compressing the saw guide bar spring slightly until the saw guide bar slides past the spring.
8. Replace the finger lift fastener stud, the finger lift assembly and finger lift fastener knob.
9. Test by making several adjustments.

SAW GUIDE BAR AND GUARD SERVICING PROCEDURE

Current Model 3334 SAW GUIDE BAR assemblies and GUARDS fit all BIRO Models 33, 34, and 3334 manufactured.

The factory recommends that when service is performed on any BIRO SAW the servicing agency be sure that the BIRO SAW is equipped with the most current safety features available.

MODELS 33, 34 SAW GUIDE BARS AND SAW GUARDS

The BIRO Model 33 was manufactured from December 1945 until June of 1969.

The BIRO Model 34 was manufactured from September 1958 until October 1969.

The Model 33 was originally equipped with a 20" guide bar. The Model 34 was originally equipped with a 18½" guide bar. In 1962 both models were changed to 19" guide bars and in 1967 both models were extended to 21½" until the end of their production.

The SAW GUARD used as original equipment throughout the production of Models 33 and 34 was Item #255.

All Model 33's and 34's in the field should be updated by (Item #A116-22) SAW GUIDE BAR ASSEMBLY complete, (Item #193) SAW GUIDE BAR SPRING, and Item #661-1, DOOR GUARD (see adjacent page). DO NOT DEVIATE FROM THE ITEMS LISTED. These items are matched and engineered to meet current safety standards.

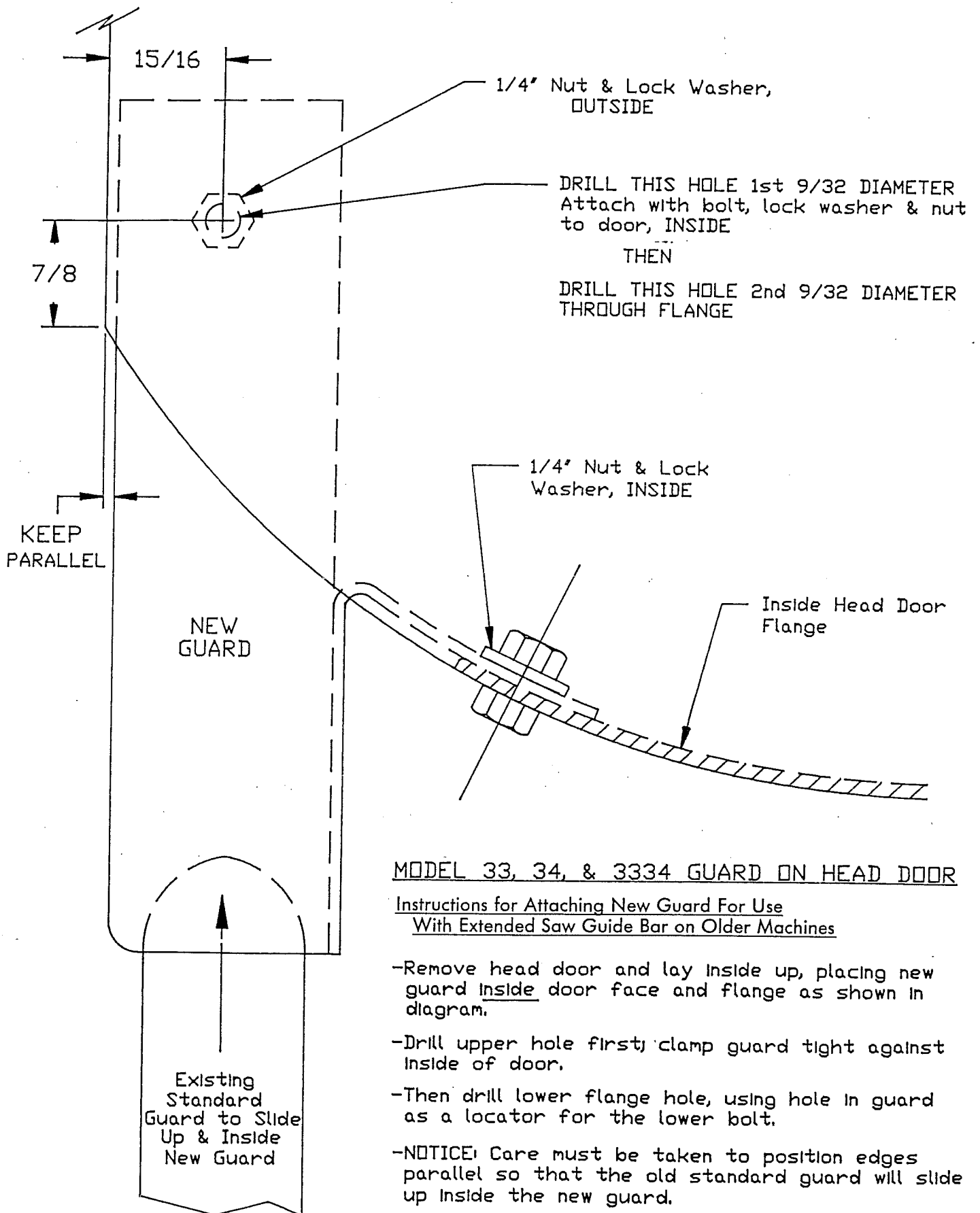
MODEL 3334 SAW GUIDE BAR AND SAW GUARDS

In September 1969 production of the Model 3334 began and is current. The Model 3334 was first equipped with a 19" saw guide bar until March 1973 when the length was extended to 23". In June 1977, the bar was shortened to 22" and is used in current production.

The same (Item #255) SAW GUARD on the guide bar used on Models 33 and 34 was carried over to the 3334 and used in production until June 1975.

Item #663 SAW GUARD on guide bar replaced Item #255 in June 1976 starting with serial #12242. At the same time, the Item #661 GUARD to HEAD DOOR introduced in 1974 was replaced by Item #661-1 GUARD to HEAD DOOR. Both Item #663 and #661-1 are current production today.

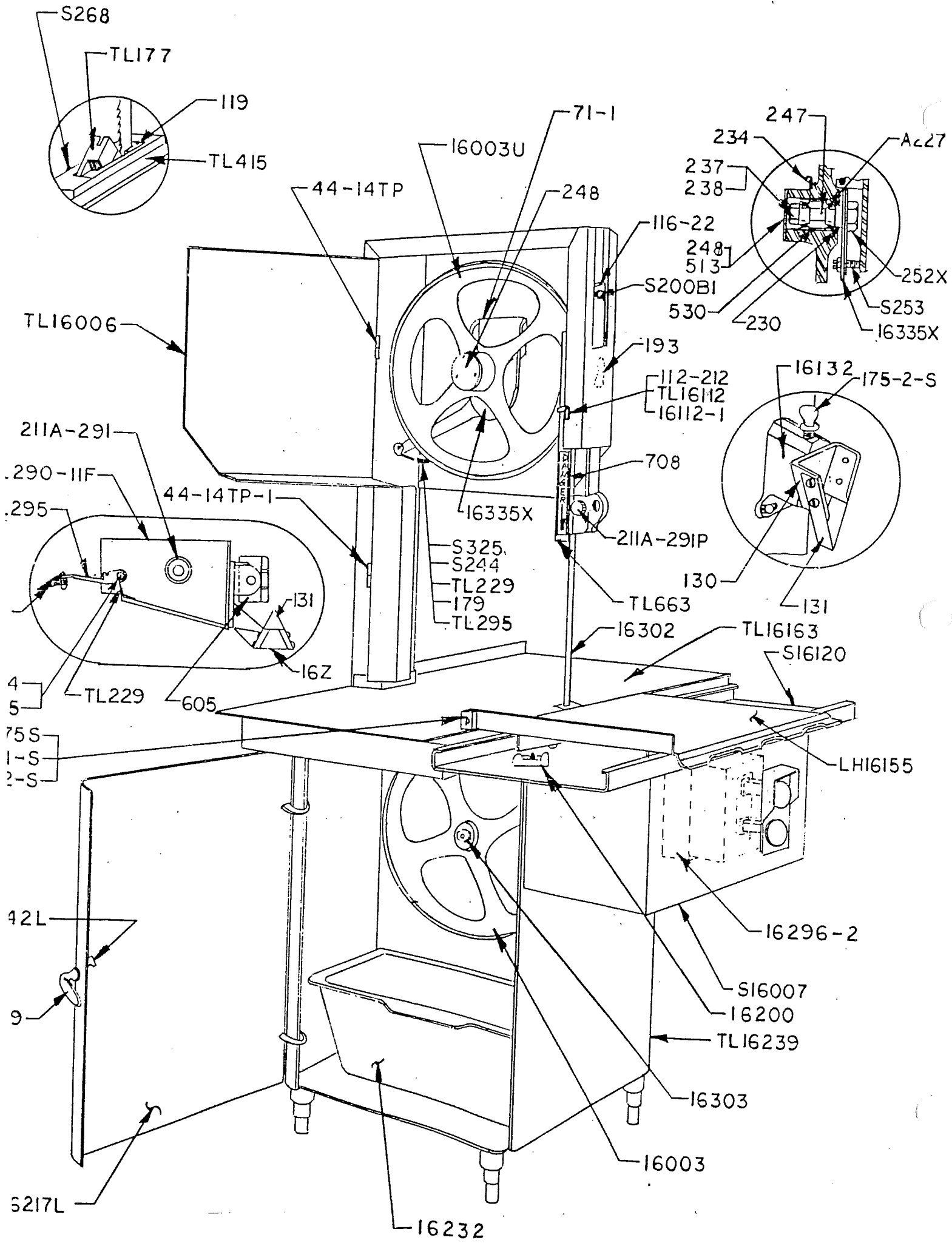
The factory recommends that all Model 3334's prior to serial #12242 be updated by installing the current (Item #A116-22) SAW GUIDE BAR ASSEMBLY, (Item #193) SAW GUIDE BAR SPRING, and (Item #661-1) HEAD DOOR GUARD.

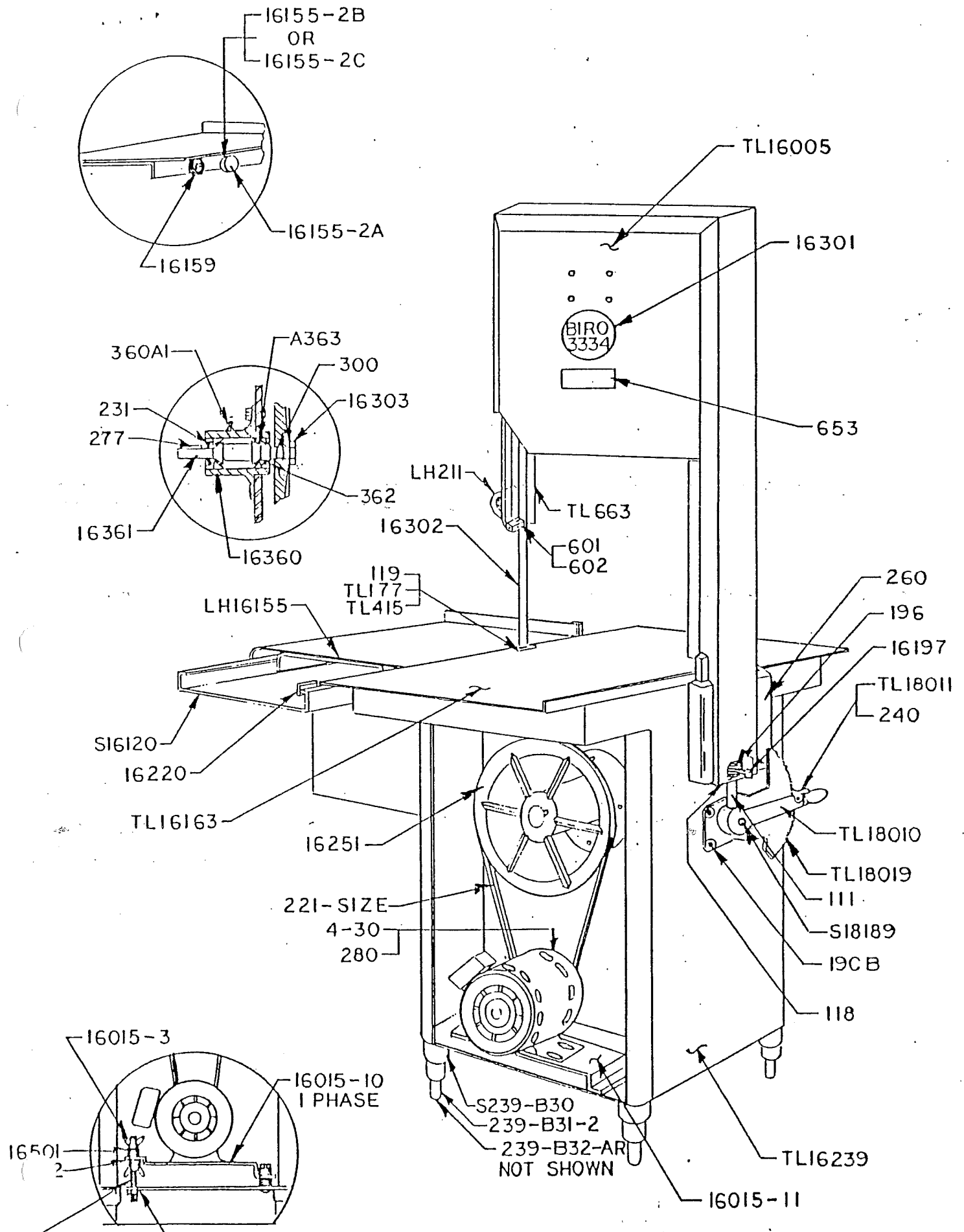


MODEL 33, 34, & 3334 GUARD ON HEAD DOOR

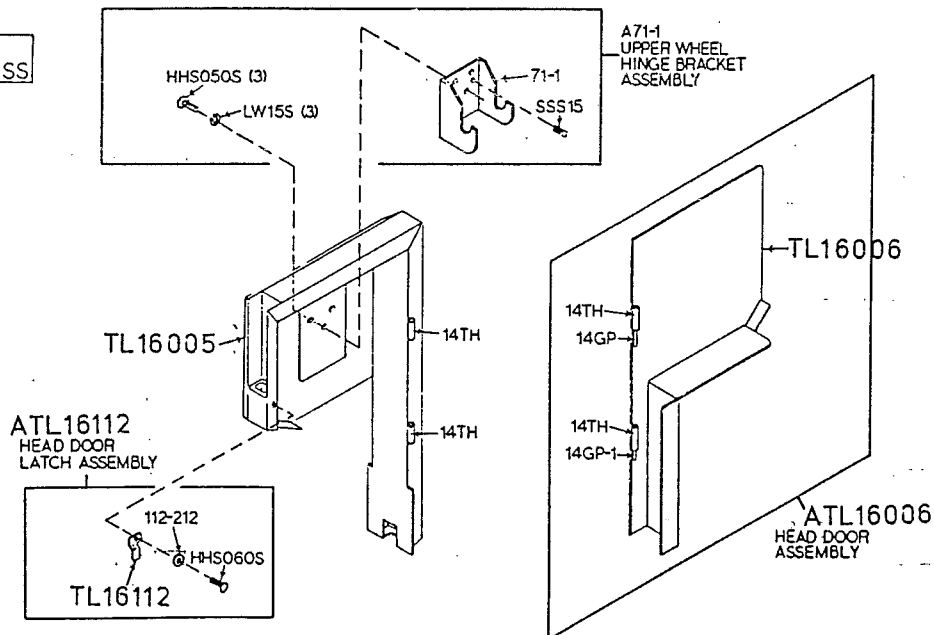
Instructions for Attaching New Guard For Use With Extended Saw Guide Bar on Older Machines

- Remove head door and lay inside up, placing new guard inside door face and flange as shown in diagram.
- Drill upper hole first; clamp guard tight against inside of door.
- Then drill lower flange hole, using hole in guard as a locator for the lower bolt.
- NOTICE! Care must be taken to position edges parallel so that the old standard guard will slide up inside the new guard.



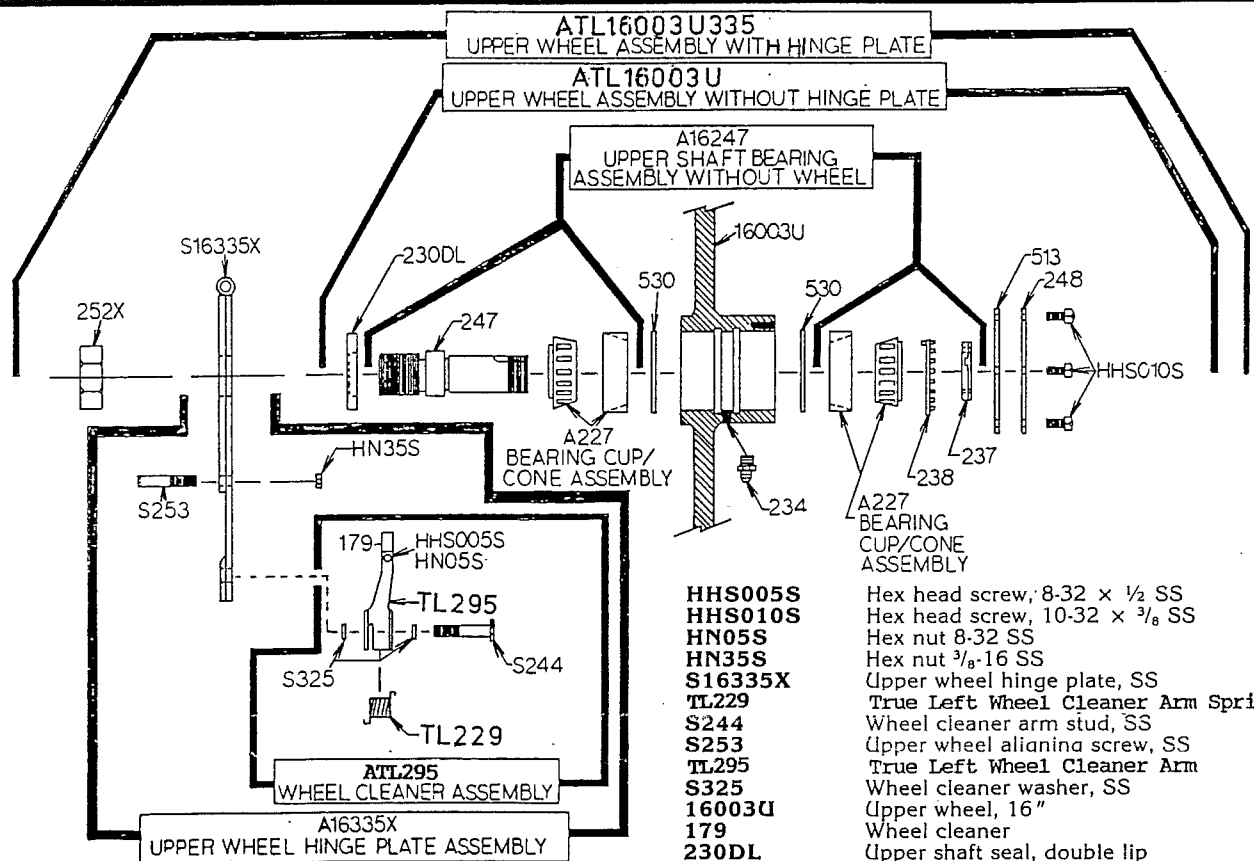


ATL16005
HEAD & DOOR ASSEMBLY, SS



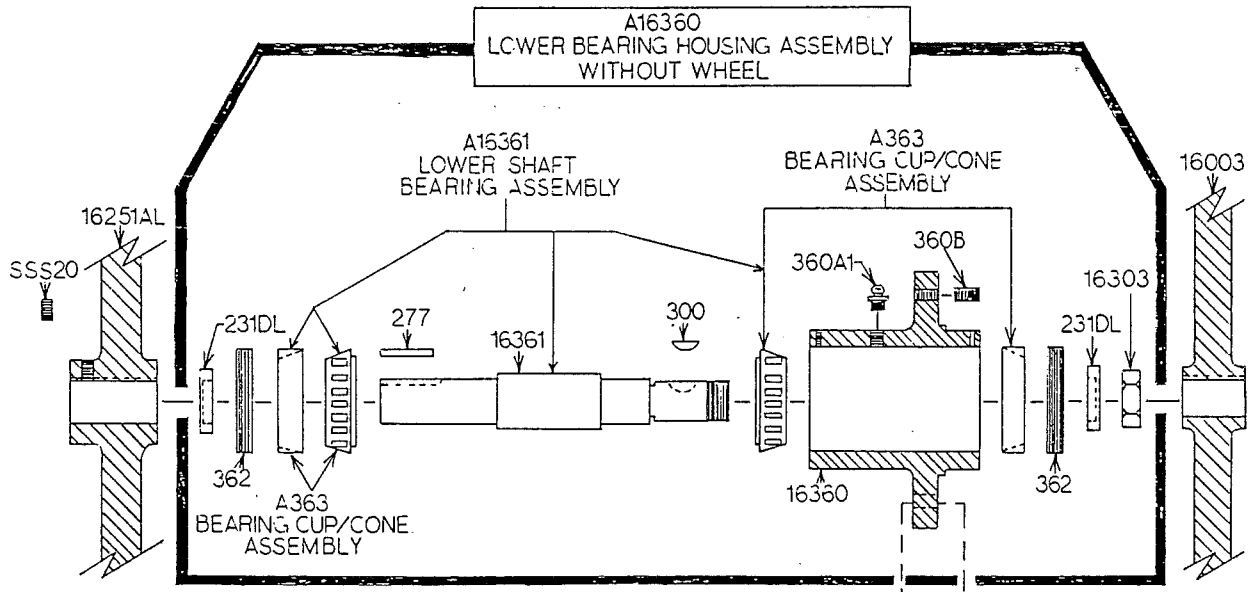
Item No.	Description
ATL16005	True Left Head & Door Assembly, SS
ATL16112	True Left Head Door Latch Assembly
TL16006	True Left Head Door, SS
A71-1	Upper wheel hinge bracket assembly
HHS050S	Hex head screw, $\frac{5}{16}$ x $\frac{3}{8}$ SS
LW15S	Lock washer, $\frac{5}{16}$ SS
SSS15	Set screw, $\frac{5}{16}$ x $\frac{3}{16}$ cup point
TL16005	True Left Head, SS

Item No.	Description
TL16112	True Left Head Door Latch, SS
14TH	Head door hinge, welded
14GP	Head door hinge, pin, $1\frac{1}{2}$ "
14GP-1	Head door hinge pin, $1\frac{1}{4}$ "
112-212	Waved washer
16112	Head door latch
71-1	Upper wheel hinge bracket



Item No.	Description
ATL16003U	TL Upper Wheel Assembly W/O Hinge
ATL16003U335	TL Upper Wheel Assembly W/Hinge
A16247	Upper shaft bearing assembly
A16335X	Upper wheel hinge plate assembly
A227	Bearing cup/cone assembly
ATL295	True Left Wheel Cleaner Assembly

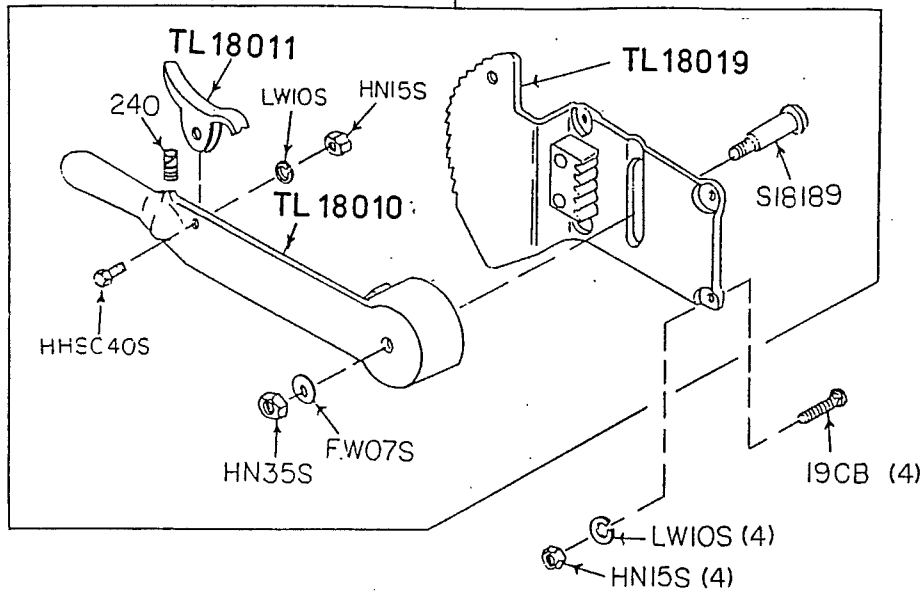
HHS005S	Hex head screw, 8-32 x 1/2 SS
HHS010S	Hex head screw, 10-32 x 3/8 SS
HN05S	Hex nut 8-32 SS
HN35S	Hex nut 3/8-16 SS
S16335X	Upper wheel hinge plate, SS
TL229	True Left Wheel Cleaner Arm Spring
S244	Wheel cleaner arm stud, SS
S253	Upper wheel allenina screw, SS
TL295	True Left Wheel Cleaner Arm
S325	Wheel cleaner washer, SS
16003U	Upper wheel, 16"
179	Wheel cleaner
230DL	Upper shaft seal, double lip
234	Grease fitting
237	Upper shaft castellated lock nut
238	Upper shaft castellated lock washer
247	Upper shaft
248	Upper wheel hub cap
252X	Shaft lock nut
513	Upper wheel hub gasket
530	Retaining ring (2 req.)



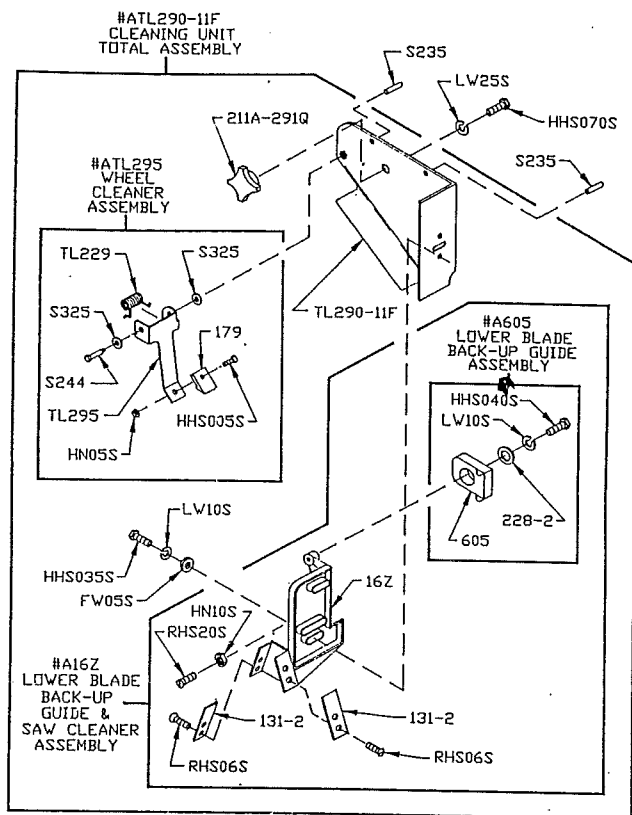
Item No.	Description
A16361	Lower shaft bearing assembly
A363	Bearing cup/cone assembly
HN25S	Hex nut, 3/8-16 SS
LW25S	Lock washer, 3/8 SS
SSS20	Set screw, 3/8-16 x 3/8 cup point
S360CB-1	Carriage bolt, 3/8-16 x 1 1/4 SS
16003	Lower wheel 16"
16251AL	Upper v-belt pulley, 11.4 x 1 AL
16303	Lower shaft nut

16360	Lower bearing housing
16361	Lower shaft
231DL	Lower shaft seal, double lip
277	Lower pulley key
300	Lower shaft Woodruff key
360A1	Grease fitting
360B	Set screw, 3/8-16 x 1/2 flat point
362	Lower bearing housing adj. cap

ATL18019
RATCHET ASSEMBLY

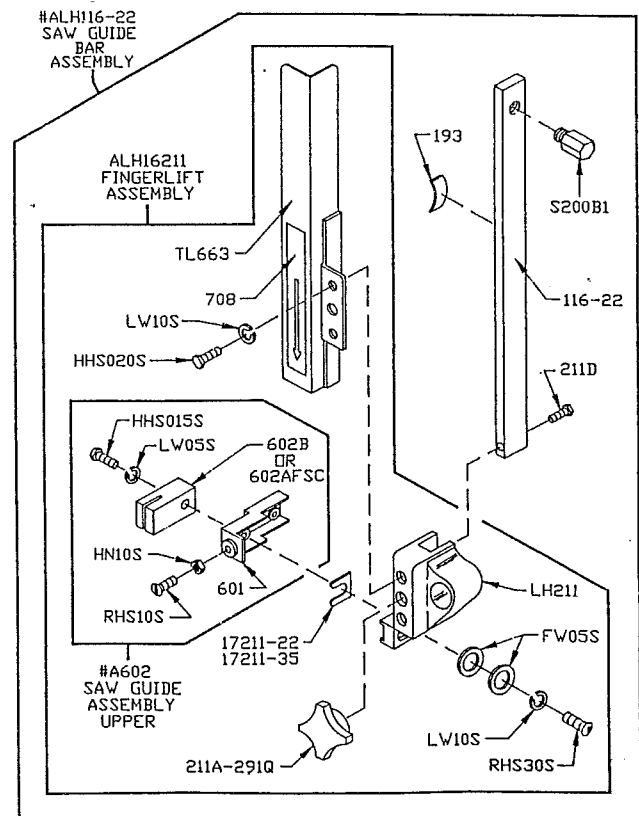


Item No.	Description	Item No.	Description
ATL18019	True Left Ratchet Assembly	S18189	Ratchet Arm Stud
FW07S	Flat washer, $\frac{3}{8}$ SS	TL18010	True Left Ratchet Arm
HHS025S	Hex head screw, $\frac{1}{4}$ -20 x $\frac{1}{2}$ SS	TL18011	True Left Ratchet Trigger, SS
HN15S	Hex nut, $\frac{1}{4}$ -20 SS	TL18019	True Left Ratchet Base
HN35S	Hex nut, $\frac{3}{8}$ -16 SS	19CB	Carriage bolt $\frac{1}{4}$ -20 x $\frac{3}{4}$ SS
LW10S	Lock washer, $\frac{1}{4}$ SS	240	Ratchet trigger spring

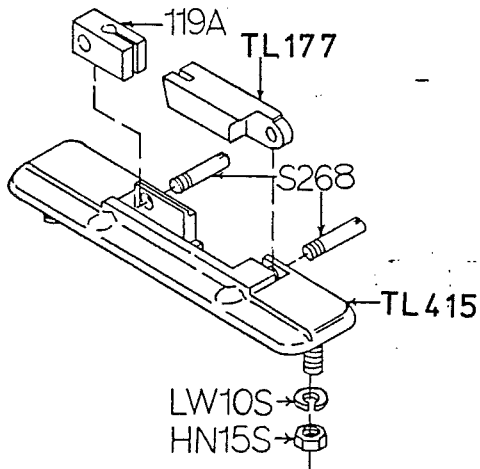


Item No.	Description
A16Z	Guide bracket saw cleaner assembly
ATL295	True Left Wheel Cleaner Assembly
A605	Lower blade back-up guide assembly
ATL290-11F	Cleaning Unit Assembly Front
FW05S	Flat washer, 1/4 SS
HHS005S	Hex head screw, 8-32 x 1/2 SS
HHS035S	Hex head screw, 1/4-20 x 5/8 SS
HHS040S	Hex head screw, 1/4-20 x 3/4 SS
HHS070S	Hex head screw, 3/8-16 x 1 SS
HN05S	Hex nut, 8-32 SS
HN10S	Hex nut, 10-32 SS
LW10S	Lock washer, 1/4 SS
LW25S	Lock washer, 3/8 SS
RHS06S	Round head screw, 8-32 x 1/4 SS
RHS20S	Round head screw, 10-32 x 1 1/4 SS
TL290-11F	True Left Cleaning Unit Stamping
TL229	True Left Wheel Cleaner Arm Spring
S244	Wheel cleaner arm stud SS
TL295	True Left Wheel Cleaner Arm
S325	Washer SS
TP4S	Taper pin #4 x 1 1/2 SS
131	Saw cleaner SS
16Z	Lower guide bracket saw cleaner holder
179	Wheel cleaner
211A-291Q	Fastener knob, 4 point
228-2	Lower guide washer
605	Saw guide, lower blade back-up

Item No.	Description
ALH116-22	Left Hand Saw Guide Bar Assembly
ALH16211	Left Hand Finger Lift Assembly
A602	Saw guide assembly, upper
FW05S	Flat washer, 1/4 SS
HHS015S	Hex head screw, 10-32 x 7/8 SS
HHS020S	Hex head screw, 1/4-20 x 3/8 SS
HN10S	Hex nut, 10-32 SS
TL663	Saw guard for true left head
LW05S	Lock washer, #10 SS
LW10S	Lock washer, 1/4 SS
RHS10S	Round head screw, 10-32 x 3/4 SS
RHS30S	Round head screw, 1/4-20 x 7/8 SS
S200B1	Stop stud on guide bar
116-22	Saw guide bar, 22"
17211-22	Finger lift, shim, .022
17211-35	Finger lift shim .035
193	Saw guide bar spring
IH211	Left Hand Finger Lift
211A-291Q	Fastener knob, 4 point
211D	Finger lift fastener bolt
601	Upper saw guide bracket
602A	Upper saw guide with carbide
602AFSC	Upper saw guide, narrow. fish
708	Decal "DANGER EXPOSED BLADE"

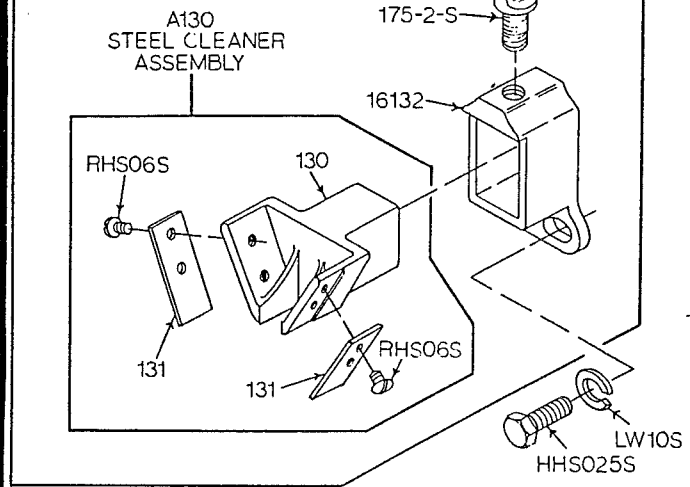


ATL415 STATIONARY BAR ASSEMBLY



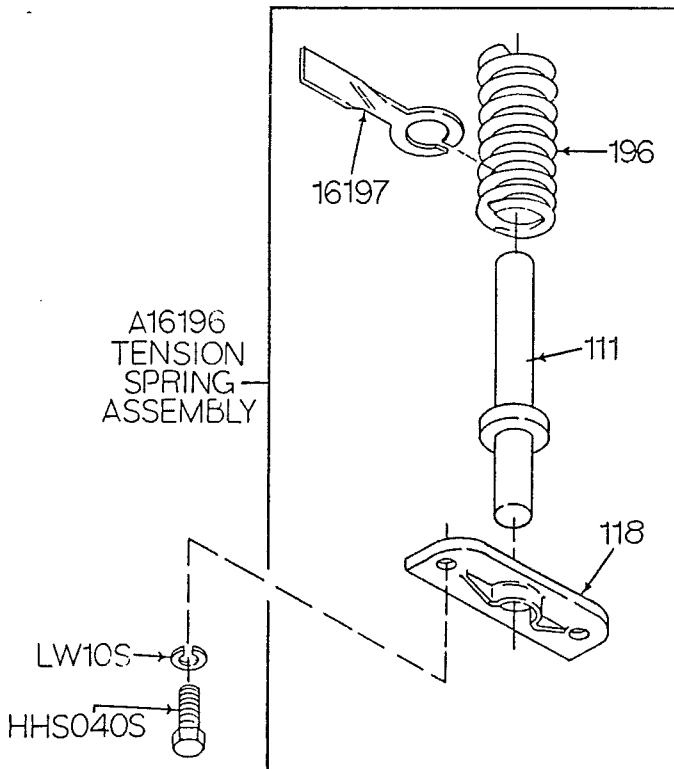
Item No.	Description
ATL415	True Left Sta. Bar Assembly, SS
TL415	True Left Stationary Bar, SS
HN15S	Hex nut, 1/4-20 SS
LW10S	Lock washer, 1/4 SS
S268	Stationary bar headless screw
119A	Saw guide in stationary bar
TL177	True Left Nylon Filler

A16132 REAR STEEL CLEANER ASSEMBLY

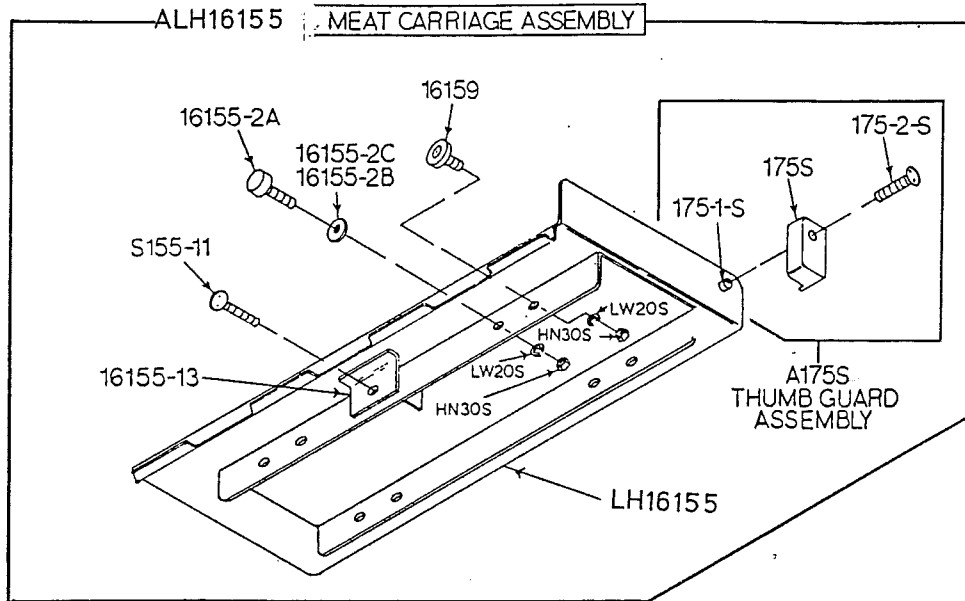


Item No.	Description
A130	Saw cleaner assembly
A16132	Steel cleaner assembly, rear
HHS025S	Hex head screw, 1/4-20 x 1/2 SS
LW10S	Lock washer, 1/4 SS
RHS06S	Round head screw, 8-32 x 1/4 SS
130	Saw cleaner bracket rear
131	Saw cleaner SS
16132	Saw cleaner bracket holder, rear
175-2-S	Thumb screw, 1/4-20 x 1/2

A16196 TENSION SPRING ASSEMBLY

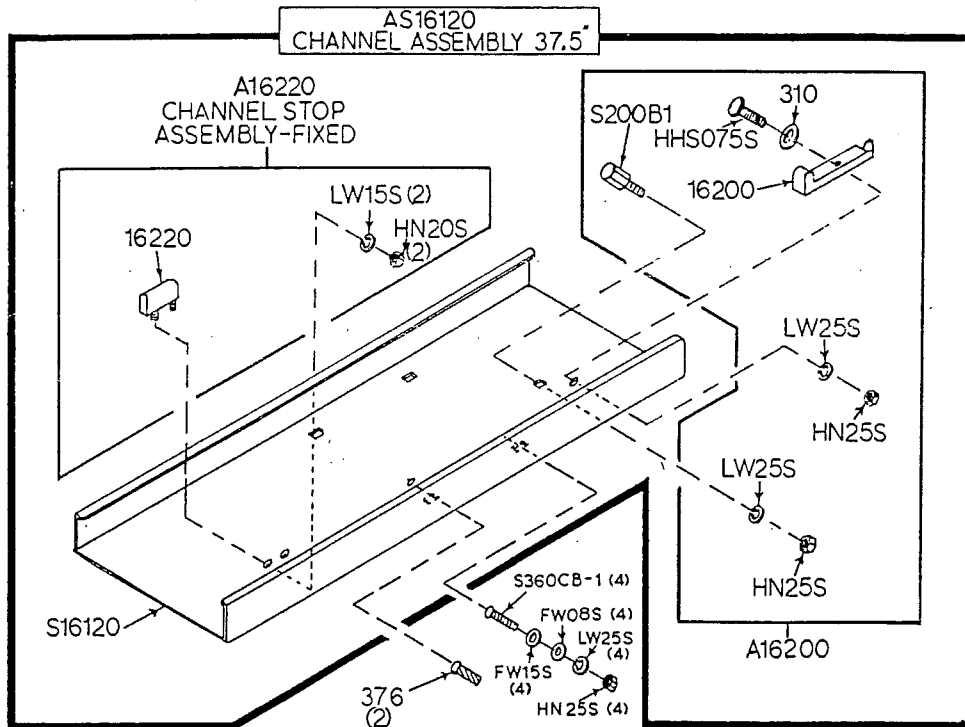


Item No.	Description
A16196	Tension spring assembly
HHS040S	Hex head screw, 1/4-20 x 3/4 SS
LW10S	Lock washer, 1/4 SS
111	Tension spring pin
118	Tension spring plate
16197	Tension spring gauge
196	Saw tension spring



Item No.	Description
ALH16155	Left Hand Meat Carriage Assembly
A175S	Thumb guard assembly
HN30S	Hex nut, 3/8-16 light jam SS
LW20S	Lock washer 3/8 light SS
S155-11	Meat carriage stop thumb screw
LH16155	Left Hand Meat Carriage
16155-2A	Meat carriage guide

Item No.	Description
16155-2B	Meat carriage guide spacer, 1/64 TK
16155-2C	Meat carriage guide spacer, 1/32 TK
16155-13	Carriage stop angle SS, welded
16159	Meat carriage bearing SS
175S	Thumb guard, nylon
175-1-S	Thumb guard nut SS
175-2-S	Thumb screw 1/4-20 x 1/2

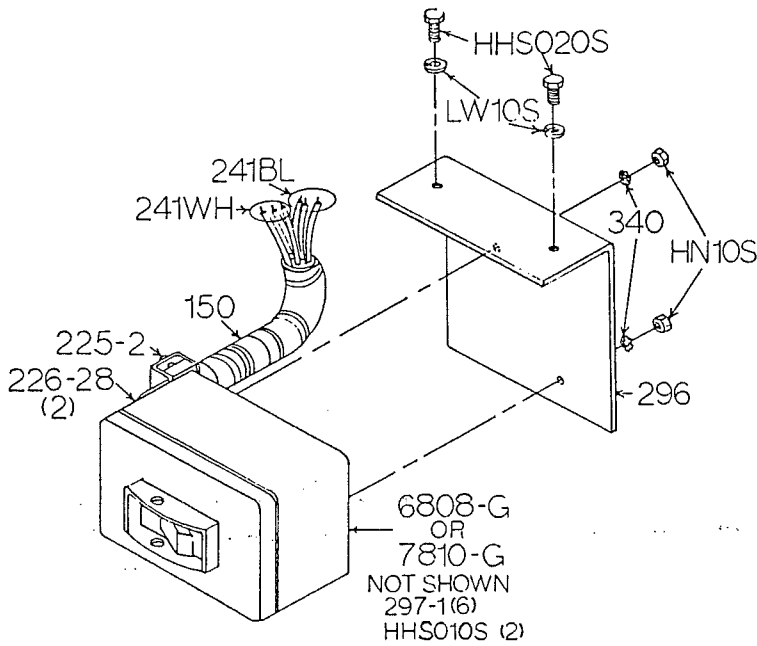


Item No.	Description
A16200	Carriage stop assembly, movable
A16220	Carriage stop assembly, fixed
AS16120	Channel assembly, 37"
FW08S	Flat washer, 3/8 SS
FW15S	Flat washer, 1/2 SS
HHS075S	Hex head screw, 3/8-16 x 1 1/4 SS
HN20S	Hex nut, 5/16-18 SS
HN25S	Hex nut, 3/8-16 SS
LW15S	Lock washer, 5/16 SS

Item No.	Description
LW25S	Lock washer, 3/8 SS
S16120	Channel, 37" SS
S200B1	Carriage stop stud SS
S360CB-1	Carriage bolt 3/8-16 x 1 1/4 SS
16200	Carriage stop, movable
16220	Carriage stop, fixed
310	Waved washer
376	Drive screw 10 x 1/2 SS

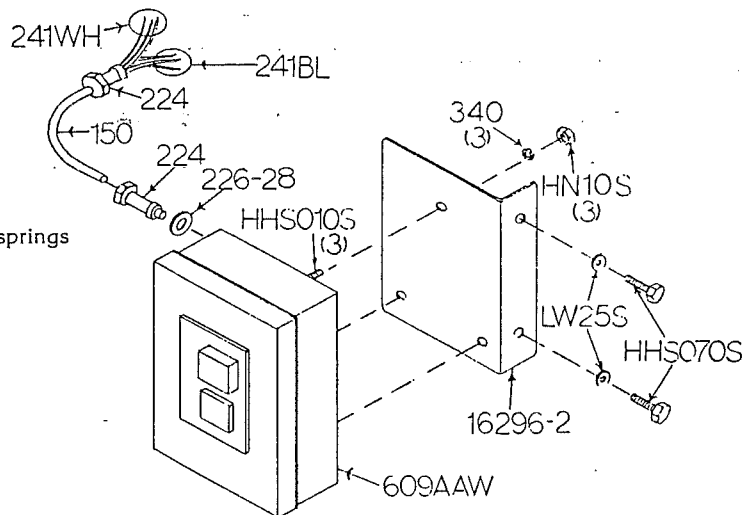
A6808-G-16
TOGGLE SWITCH
ASSEMBLY 1PHASE

OR
A7810-G-16
TOGGLE SWITCH
ASSEMBLY 3PHASE

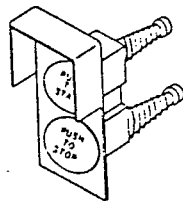


Item No.	Description
A6808-G-16	Toggle switch assembly, 1PH
A7810-G-16	Toggle switch assembly, 3PH
HHS010S	Hex head screw, 10-32 x 3/8 SS
HHS020S	Hex head screw, 1/4-20 x 3/8 SS
HN10S	Hex nut, 10-32 SS
LW10S	Lock washer, 1/4 SS
150	Conduit, 1/2"
225-2	Conduit connector, 45°
226-28	Washer SS
241BL	Wire, black, 12GA., CSA & UL
241WH	Wire, white, 12GA., CSA & UL
296	Switch bracket SS
297-1	Wire terminal eyelet
340	Star lock washer
6808-G	Toggle switch, 1 phase
7810-G	Toggle switch, 3 phase.

A609AAW-16
SWITCH ASSEMBLY

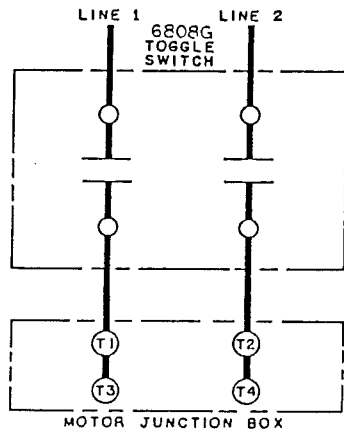


Item No.	Description
A16226A	Green/red switch button assembly w/springs
A609AAW-16	Switch assembly less heater coils
HHS010S	Hex head screw, 10-32 x 3/8 SS
HHS070S	Hex head screw, 3/8-16 x 1 SS
HN10S	Hex nut, 10-32 SS
LW25S	Lock washer, 3/8 SS
16296-2	Switch bracket SS
150	Conduit, 1/2"
224	Conduit connector, 180°
226-28	Washer SS
241BL	Wire, black, 12GA., CSA & UL
241WH	Wire, white, 12GA., CSA & UL
340	Star lock washer
609AAW	Manual switch, size 0

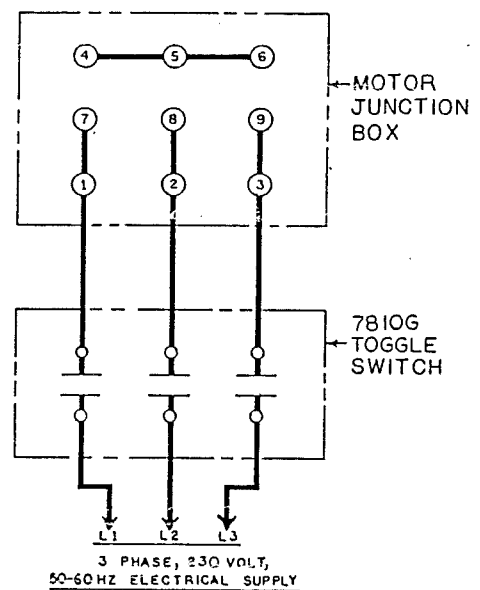
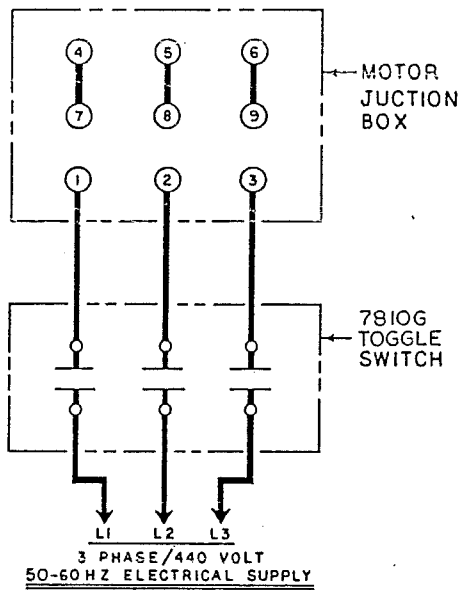
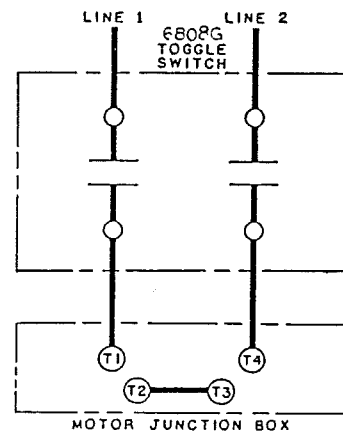


A16226A

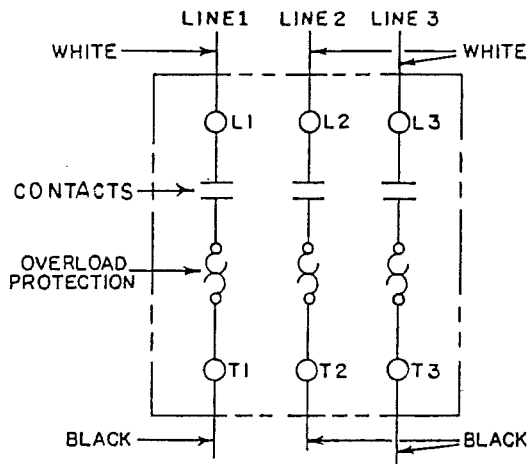
110-115 VOLTS



220-230 VOLTS

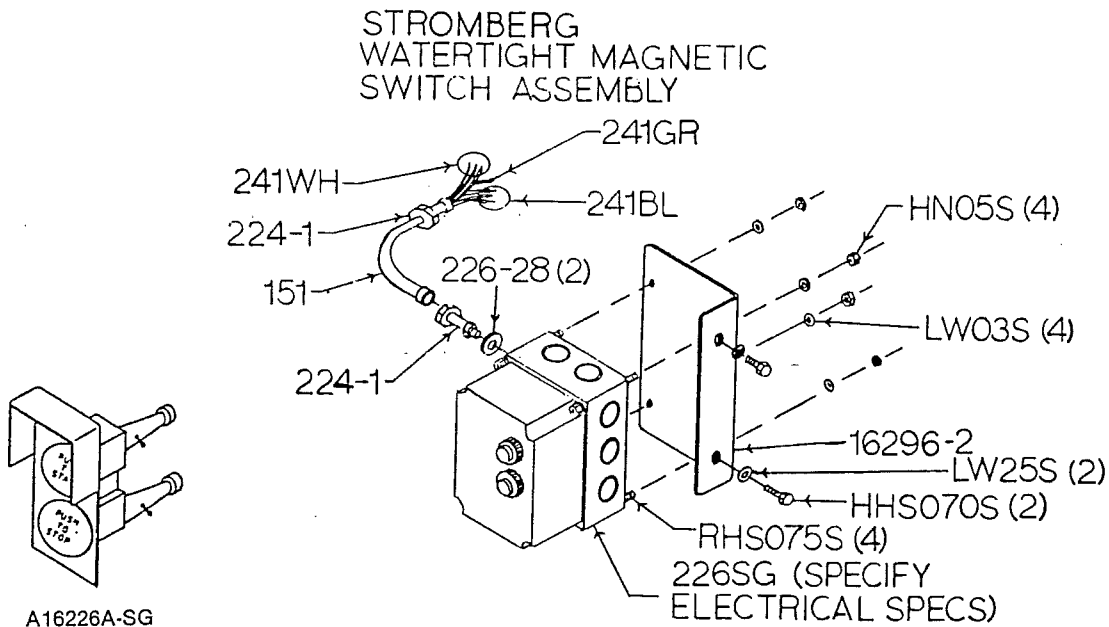


609AAW



**WATERTIGHT MAGNETIC SWITCH ASSEMBLIES
(STROMBERG)
INCLUDES MOUNTING BRACKET AND WIRES**

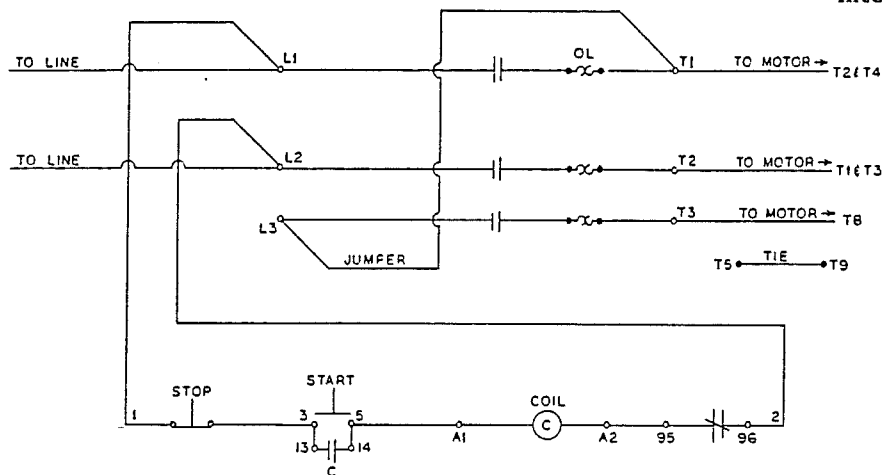
Item No.	Description
A22616SG-512	BOK/PC-PB/A6, 1½HP, 208/220/230-50/60-3
A22616SG-514	BOK/PC-PB/A8, 2HP, 208/220/230-50/60-3
A22616SG-516	BOK/PC-PB/B3, 1½HP, 440/460-60-3
A22616SG-518	BOK/PC-PB/C4.2, 1½HP, 380/415-50-3, 2HP, 380/415-50-3
A22616SG-520	BOK/PC-PB/E01-22, 1½HP, 104/115-50/60-1
A22616SG-522	BOK/PC-PB/A01-12, 1½HP, 208/220/230-50/60-1
A22616SG-524	BOK/PC-PB/E01-32, 2HP, 115-60-1
A22616SG-526	BOK/PC-PB/A01-15, 2HP, 230-60-1
A22616SG-528	BPK/PC-PB/B4.2, 2HP, 440/460-60-3
A22616SG-530	BOK/PC-PB/D3, 2HP, 550/575-60-3
A22616SG-531	BOK/PC-PB/A10, 3HP, 208/230-60-3
A22616SG-532	BOK/PC-PB/A12, 3HP, 220-50-3
A22616SG-534	BOK/PC-PB/B6, 3HP, 440/460-60-3
A22616SG-535	BOK/PC-PB/C6, 3HP, 380/415-50-3
A22616SG-538	BOK/PC-PB/D4.2, 3HP, 550/575-60-3
A22616SG-540	BOK/PC-PB/A15, 5HP, 208/230-60-3
A22616SG-541	BOK/PC-PB/A18, 5HP, 220-50-3
A22616SG-543	BOK/PC-PB/B8, 5HP, 440/460-60-3
A22616SG-548	BOK/PC-PB/D8, 5HP, 550/575-60-3



Item No.	Description	Item No.	Description
A16226A-SG	Green/red switch button assembly	226SG-S0CC	Contactors, Size 0, OK0W10L-380/415
HHS070S	Hex head screw, 3/8-16 x 1 SS	226SG-S0DD	Contactors, Size 0, OK0W10L-550/575
HN05S	Hex nut, 8-32 SS	226SG-S1AA	Contactors, Size 1, OK01W10L-208/220/230
LW03S	Lock washer, #8 SS	226SG-S1EE	Contactors, Size 1, OK01W10L-104/115
LW25S	Lock washer, 3/8 heavy SS	226SG-512	BOK/PC-PB/A6
RHS075S	Round head screw, 8-32 x 3/4 SS	226SG-514	BOK/PC-PB/A8
16296-2	Switch bracket SS	226SG-516	BOK/PC-PB/B3
151	Watertight conduit	226SG-518	BOK/PC-PB/C4.2
224-1	Conduit connector, WT, 180°	226SG-520	BOK/PC-PB/E01-22
226SG-BOX	Switch box less cover	226SG-522	BOK/PC-PB/A01-12
226SG-CVR-B	Switch box cover with button holes	226SG-524	BOK/PC-PB/E01-32
226SG-ENCL-PB	Switch box complete with button holes	226SG-526	BOK/PC-PB/A01-15
226SG-GR	Green start button	226SG-528	BOK/PC-PB/B4.2
226SG-RD	Red stop button	226SG-530	BOK/PC-PB/D3
226SG-OLK03	Overload relay, PATAM1K 3	226SG-531	BOK/PC-PB/A10
226SG-OLK04.2	Overload relay, PATAM1K 4.2	226SG-532	BOK/PC-PB/A12
226SG-OLK06	Overload relay, PATAM1K 6	226SG-534	BOK/PC-PB/B6
226SG-OLK08	Overload relay, PATAM1K 8	226SG-535	BOK/PC-PB/C6
226SG-OLK10	Overload relay, PATAM1K 10	226SG-538	BOK/PC-PB/D4.2
226SG-OLK12	Overload relay, PATAM1K 12	226SG-540	BOK/PC-PB/A15
226SG-OLK15	Overload relay, PATAM1K 15	226SG-541	BOK/PC-PB/A18
226SG-OLK18	Overload relay, PATAM1K 18	226SG-543	BOK/PC-PB/B8
226SG-OLK22	Overload relay, PATAM1K 22	226SG-548	BOK/PC-PB/D8
226SG-OLK32	Overload relay, PATAM1K 32	226-28	Washer, 1½ x 27/32 SS
226SG-S0AA	Contactors, Size 0, OK0W10L-208/220/230	241BL	Wire, black, 12 GA., CSA & UL
226SG-S0BB	Contactors, Size 0, OK0W10L-440/460	241GR	Wire, green, 12 GA., CSA & UL
		241RD	Wire, red, 12 GA., CSA & UL
		241WH	Wire, white, 12 GA., CSA & UL

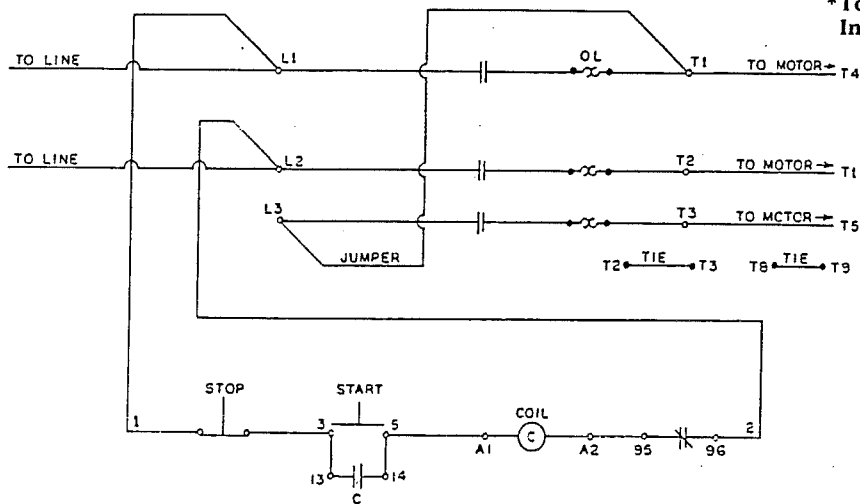
**Model 3334 Schematic Using 3PH Stromberg W.T. Switch
for 115 Volts, Single Phase, 60 Cycle Baldor Motor
To Eliminate Breaking Effect of Motor After Stop is Engaged**

***To Reverse Rotation
Interchange Leads 5 & 8**

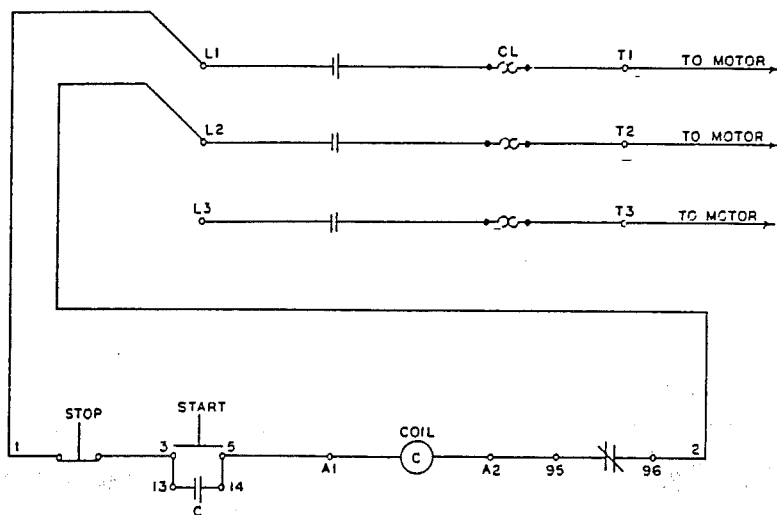


**Model 3334 Schematic Using 3PH Stromberg W.T. Switch
for 230 Volts, Single Phase, 60 Cycle Baldor Motor
To Eliminate Breaking Effect of Motor After Stop is Engaged**

***To Reverse Rotation
Interchange Leads 5 & 8**



**Model 3334 Schematic Using 3PH Stromberg W.T. Switch
for 220/440 Volts, Three Phase, 60 Cycle Baldor Motor**



MODEL 3334 PARTS NUMBERS AND DESCRIPTIONS

SEND IN MODEL NO. AND SERIAL NO. WHEN ORDERING PARTS

Item No.	Description	Item No.	Description
M39-73032-D	Mtr, 1½HP, 115/230-50-1, open	16Z	Lower gde brkt saw clnr holder
M45-72933-D	Mtr, 1½HP, 115/230-60-1, open		
M48-XR72927-D	Mtr, 2HP, 208/220/440-60-3		
M55-R72929-D	Mtr, 2HP 208/220/440-50/60-3, opn		
M61-73020-D	Motor, 2HP, 550-60-3, open		
M65-L3605-B	Motor, 2HP, 115/230-60-1, TE		
M66-L1322T-B	Motor, 2HP, 115/230-60-1, open	16015-1	Motor base plate stud 7 inch, repl. by S16015-1
M68-67385-D	Mtr, 2HP, 208/220/440-50/60-3, TE	16015-10	Motor base plate, 1 ph
M70-72540-D	Mtr, 3HP, 220/440-50/60-3, TE	16015-11	Mtr bseplt, spec. TE FRM145T, SS
M701-75425-D	Mtr, 3HP 230/460-50/60-3, TE	16015-12	Motor base plate, spec. Norway
M73-A907-D	Mtr, 5HP, 208/220/440-50/60-3, TE	16015-2	Motor base plate stud nut
S12214	Plätter bräcket starting with S/N 24464*	16015-3	Motor base plate wing nut
S155-11	Meat carr stop thumb screw, SS	16015-4	Motor base plate lock washer
S155B	Meat carriage stop welded		
S16007	Channel bracket SS		
S16120	Channel stainless steel		
S16217L	Base door left no bell SS — USE WITH: M48-XR72927-D, 2HP, 208/220/440-50/60-3, open motor	16132	Saw cleaner brkt holder rear
	M55-R72929-D, 2HP, 208/220/440-50/60-3, open motor	16154	Table extension, SS
	M61-73020-D, 2HP, 550-60-3, open motor	16155	Meat carriage top & angle
S16217LB	Base door left w/bell SS (see S16217LTP)	16155-13	Carriage stop angle SS
S16217LBB	Base door left bell/bell SS (see S16217LTP)	16155-2A	Meat carriage guide
S16217LTP	Base door left w/bell, SS — USE WITH: M39-7302-D, 1½HP, 115/230-50-1, open motor	16155-2B	Meat carriage guide spacer 1/64
	M42-73021-D, 1½HP, 104/208-60-1, open motor	16155-2C	Meat carriage guide spacer 1/32
	M45-72933-D, 1½HP, 115/230-60-1, open motor	16159	Meat carriage bearing
	M68-M3558T-B, 2HP, 208/220/440-50/60-3, TE motor	16163A	Platter hold down clip
	M65-L3605-B, 2HP, 115/230-60-1, TE motor	16163B	Platter neck guard, SS
	M66-L1322T-B, 2HP, 115/230-60-1, open motor	16197	Tension spring gauge
	M71-M3611-B, 3HP, 208/220/440-50/60-3, TE motor	16200	Carriage stop movable
	M73-73031-D, 5HP, 208/220/440-50/60-3, TE motor	16220	Carriage stop fixed
S16296	Switch brkt, SS, for 609AAW, BAW	16226A-5	Switch button plate rivet
S16296-8	Switch brkt Kroger 800S2SA4	16226A-6	Switch button speed nut
S16335X	Upper wheel hinge plate, SS	16226A-8	Switch buttonhole filler plate
S189	Ratchet arm stud, stainless	16232	Scrap bucket
S19	Ratchet base, stainless	16239-16	Base interlock plte, SS, England
S200B1	Stopstud gde bar & crg stp SS	16251AL	Upper v-belt pulley 11.4 x 1, aluminum
S217C	Base door hinge pin long SS		
S217E	Base door hinge pin short SS		
S235	Taper pin, stainless, 4 x 3/4	16301	Name & model plate (Ser. No. required)
S239-B30	Base foot welded, SS	16302	Saw blade 124 inch
S244	Wheel cleaner arm stud SS	16303	Lower shaft nut
S253	Upper wheel aligning screw, SS	16313-100	Operating manual
S268	Stationary bar hdless screw, SS	16360	Lower bearing housing
S295	Wheel cleaner arm, stainless	16361	Lower shaft
S325	Wheel cleaner washer, SS	16501	Motor mount, rubber, 1 ph
S360CB-1	Carriage blt 3/8-16 x 1 1/4 SS	16502	Motor mount washer, 1 ph
S416	Platter locator weld pin, SS	16503	Motor mount bolt 3 inch, 1 ph
TP4S	Taper pin, SS, #4 x 1 1/2	16508	Motor mount star washer 1 ph
10-0	Ratchet arm	16662	Saw guard, fabricated head 3334
111	Tension spring pin	16700	Parts repair kit
112-212	Waved washer, 2 1/64 ID, 3/8 OD	17-3	Fngrlft wshr, 9/16 x .276 x .104, use FW05S
116-22	Saw guide bar 22 inch	17211-22	Finger lift shim .022
118	Tension spring plate	17211-35	Finger lift shim .035
119A	Saw guide stationary bar	175-1-S	Thumb guard nut, SS
119FSC	Saw guide stationary bar fish	175-2-S	Thumb screw 1/4 D x 1/2 long
130	Saw cleaner bracket, rear	175S	Thumb guard, nylon
131	Saw cleaner SS	177	Stationary bar nylon filler
14GP	Head door hinge pin long 1 1/2	179	Wheel cleaner
14GP-1	Head door hinge pin short 1 1/4	19	Ratchet base, replaced by S19
		19CB	Ratchet base carriage blt, 3/4SS
		193	Saw guide bar spring
		196	Saw tension spring
		211	Finger lift bracket
		211A-291	Fngrlft cing unit knob — 3/8 short, replaced by 211A-291Q
		211A-291Q	Fingerlift fastener knob, plastic, 4 point
		211D	Finger lift fastener bolt 3/8-16 x 1 1/4
		221-(size)	V-belt

Item No.	Description
226-28	Cndt conctrwshr 1 1/2 x 27/32 SS
228-2	Lwr sawguide wsher, 1/4 x 7/8 x 1.16
S229	Wheel cleaner arm spring SS
230DL	Upper shaft seal
231DL	Lower shaft seal
234	Grease fitting upper wheel
237	Up shaft castellated lock nut
238	Up shaft castld lock nut washr
239-B31-2	Pipe leg, aluminum, 6"
239-B32-AR	Pipe leg cap

240	Ratchet trigger spring
242R	Base door lock, right
247	Upper shaft
248	Upper wheel hub cap
249	Base door handle
252X	Shaft lock nut
256P	Safety pusher plate, compostn
256PM	Safety pusher plate, aluminum
259	Anti-short bushing, 1/2
260	Aluminum slide gib
260ALS	Shim for aluminum slide gib
S262	Meat gauge release handle
264-1	Meat gauge hand wheel
264G	Meat gauge hand whl groove pin

Item No.	Description
265	Meat gauge release spring
267	Meat gauge release cotter key
270	Meat gauge release pin
271	Meat gauge worm gear
272-6-S	Meat gauge bracket wing nut
275BRG	Meat gauge bushing, long
275BRG-1	Meat gauge bushing, short
277	Lower shaft key
280	Motor shaft key
296	Toggle switch bracket, 1 1/2HP mtr
296-3	Sw brkt ACW, BCW, AAA1, TAA1, 2HP mtr & up
300	Lower shaft woodruff key
310	Washr move carr stp headdr lck
360A1	Lower brg hsgng angl grease fit
360B	Lower brg hsgng tilt set screw
362	Lower bearing housing cap
374	M-6 Lubriko grease, 16 oz.
375	Drive screw, name & model plate
376	Drive screw #10 x 1/2, SS
4-30AL	Motor pulley 5 x 3/4, standard
416	Platter locator weld pins
513	Upper wheel hub gasket
530	Retaining ring (replaces 16001) 22164 on
601	Upper saw guide bracket
602A	Saw guide, upper
602AFSC	Saw guide upper bracket, fish
605	Saw guide, lower blade back-up
653PS	Warning label pressure sensitive
71-1	Upper wheel hinge bracket SS
708	Saw guard safety decal

TRUE LEFT PART NUMBERS AND DESCRIPTIONS

ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION
IH16155	Left Hand Meat Carriage	TL16239	True Left Base, SS
IH211	Left Hand Finger Lift	TL177	True Left Nylon Filler
S18189	Ratchet Arm Stud	TL229	True Left Wheel Cleaner Arm Spring
TL16005	True Left Head, SS	TL295	True Left Wheel Cleaner Arm
TL16006	True Left Head Door, SS	TL415	True Left Stationary Bar, SS
TL16112	True Left Head Door Latch, SS	TL663	True Left Saw Guard, SS
TL16163	True Left Stationary Platter	TL18010	True Left Ratchet Arm
TL16212	True Left Platter Latch, SS	TL18011	True Left Ratchet Trigger, SS
TL16217L	True Left Hinged Base Door, SS	TL18019	True Left Ratchet Base
		TL290-11F	True Left Cleaning Unit Stamping

COMPLETE TRUE LEFT ASSEMBLIES

ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION
ALH116-22	Left Hand Saw Guide Bar Assembly	ATL16005	True Left Head & Door Assembly, SS
ALH16155	Left Hand Meat Carriage Assembly	ATL16112	True Left Head Door Latch Assembly
ALH16211	Left Hand Finger Lift Assembly	ATL18019	True Left Ratchet Assembly
ATL16003U	TL Upper Wheel Assembly W/O Hinge	ATL290-11F	Cleaning Unit Assembly Front
ATL16003U335	TL Upper Wheel Assembly W/Hinge	ATL295	True Left Wheel Cleaner Assembly
		ATL415	True Left Sta. Bar Assembly, SS

COMPLETE ASSEMBLIES FOR MODEL 3334

Item No.	Description	Item No.	Description
A130	Steel cleaner assembly	A16220	Channel stop assembly fixed
A16Z	Guide brkt saw cleaner assem	A16247	Up shaft brg assem without wheel
		A16360	Lower bearing housing assembly
		A19	Ratchet assembly
		A211	Finger lift assembly removable
		A227	Up bearing cup/cone assembly
		A260	Aluminum slide gib assembly
		A262	Meat gauge release assembly
		A295	Wheel cleaner assembly
		A363	Lower bearing cup/cone assem
A16196	Tension spring assembly	A602	Saw guide assembly, upper
A16200	Channel stop assem movable		

LIMITED WARRANTY

WARRANTY: The Biro Manufacturing Company warrants that Model 3334 Power Cutter will be free from defects in material and workmanship under normal use and with recommended service. BIRO will replace defective parts, which are covered by this limited warranty, provided that the defective parts are authorized for return, shipping charges prepaid, to a designated factory for inspection and/or testing.

DURATION OF WARRANTY: The warranty period for all parts covered by this limited warranty is one (1) year from installation/demonstration or eighteen (18) months starting from original factory shipping date, whichever occurs first, except as noted below.

PARTS NOT COVERED BY WARRANTY: The following are **not** covered by this limited warranty: steel saw cleaners, item number 131; wheel cleaners, item number 179; steel guide, item number 119A; upper saw guide, item number 602A; lower back guide, item number 605; nylon filler, item number 177. This limited warranty does not apply to machines sold as used, rebuilt, modified, or altered from the original construction in which the machine was shipped from the factory. (Water contaminated electrical systems are not covered under this limited warranty.) BIRO is not responsible for electrical connection of equipment, adjustments to switch gear or any other electrical requirements, which must be performed only by a certified electrician. BIRO is not responsible for service charges or labor required to replace any part covered by this limited warranty or for any damages resulting from misuse, abuse, lack of proper or recommended service.

EXCLUSION OF WARRANTIES AND LIMITATION OF REMEDIES: BIRO gives no warranties other than those expressly stated in this limited warranty. THE IMPLIED WARRANTY OF MERCHANTABILITY, THE IMPLIED WARRANTY OF FITNESS FOR PROCESSING OF FOOD PRODUCTS, AND ALL OTHER IMPLIED WARRANTIES ARE SPECIFICALLY EXCLUDED. BIRO IS NOT LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, EXPENSES, OR LOSSES. THE REMEDIES PROVIDED IN THIS BIRO LIMITED WARRANTY ARE PURCHASER'S SOLE AND EXCLUSIVE REMEDIES AGAINST BIRO.

REGISTRATION CARDS: You must sign, date and complete the warranty card supplied with each machine. The warranty card must be returned to The BIRO Manufacturing Company for proper registration. If no warranty card is returned to BIRO, the warranty period will begin from the date the machine was originally shipped from the factory.

HOW TO GET SERVICE:

1. Contact the agency from whom you purchased the machine.
2. Consult the yellow pages of the phone directory for the nearest authorized dealer.
3. Or call BIRO Service Department (419) 798-4451 who will put you in contact with the nearest service agency.