

BIRO[®]

Model 34

Power Meat Cutter

Operating and Service Parts Identification Manual

The BIRO Model 34 Power Meat Cutter was manufactured from September, 1958 to October, 1969 when it was replaced by the BIRO Model 3334 Power Meat Cutter.

This manual is published and supplied as an aid to purchase replacement parts for those machines still in service.

Please check your machine to see that warning labels (Item No. 653, Pages 2 & 4) are attached to your machines. If there are no warning labels, please advise The BIRO Manufacturing Company, phone (419) 798-4451 and the warning labels will be sent at "no charge". Please review the WARNING (Page 5, 1 through 15).

When ordering replacement parts, the machine pictured may not exactly match your machine. The serial number is located on model plate riveted to the head and is stamped on the top of the base structure. Please give the serial number of your machine when ordering parts.

Please contact The BIRO Manufacturing Company for a BIRO Authorized Service Agency nearest you.

THE BIRO MANUFACTURING COMPANY
MARBLEHEAD, OHIO 43440-2099 U.S.A.
FAX (419) 798-9106
Phone 419-798-4451

OPERATING AND SERVICE MANUAL FOR BIRO MODEL 34

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 ELECTRICIANS: 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) The aluminum head, Item No. 15005 comes detached from the base. Slip the head into the Gib, Item No. 260, (slide gibs) section of the base, See Page 5. Make sure the Gibs, Item No. 260, (slide gibs) are oiled or greased to insure free movement.
- (3) To assemble meat gauge plate, Item No. 275, Page 5, to machine loosen the wing nut on right side of meat gauge bracket, Item No. 272-6-S. Raise the right side of the meat gauge bar, Item 15272, and slip the meat gauge plate over the bar, lower bar back to its original position, tighten wing nut. Keep bar well oiled with food machine oil 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-291.
- (5) Placing blade on cutter: Lift up nylon filler, Item No. 177, Page 4. 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 steel 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 slit, Item No. 602. The blade has already dropped over the lower wheel and is ready for tightening. Press down on ratchet handle, Item No. 10 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 5.
- (6) The stationary platter, Item No. A34163, is placed on top of the base and held in place with two platter rods, Item No. 15212W, located on the rear rim of the cutter.
- (7) The sliding meat carriage table, Item No. A34155, is removed by turning movable stop, Item No. 200, clockwise. After the carriage is in the channel for operation turn movable stop, counterclockwise, Page 4.

RE-WIRING REPLACEMENT 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 specifications.
- (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.

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 ADJUSTMENTS:

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

SAW GUIDE ADJUSTMENTS:

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.

CLEANING THE BIRO POWER CUTTER:

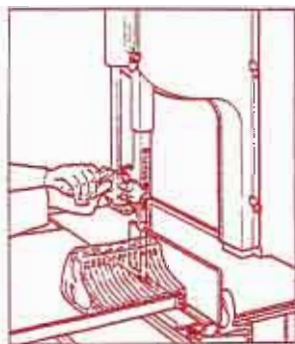
Sixty years of engineering and experience has been built into this BIRO cutter to make the machine easier to clean. Every part has been made accessible and easily removed without tools. No other cutter on the market comes apart for cleaning like a BIRO cutter. To insure cleaner cuts, keep the cleaning system in good condition. Parts on the cleaning system that should be checked weekly, and changed often are as follows: wheel cleaners, upper and lower, Item No. 179; steel saw cleaners, Item No. 131; steel guide in stationary bar, Item No. 119; upper saw guide, Item No. 602; lower blade back up guides, Item No. 605; nylon filler, Item No. 177.

SAFETY FEATURES:

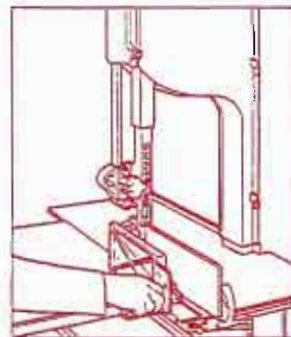
- (1) The blade is controlled on the wheels by spring tension. If the blade is broken, the blade band stops turning immediately because there is no tension on the saw blade to cause motion. Never twist the cutting blade while operating. Never leave your cutter running when not in use.
- (2) The end cut (pusher) plate, Item No. 256P, supplied with each cutter should be used whenever possible and always when cutting or splitting the last slice. This insures safety and prevents injury to hands.
- (3) Saw guide bar #116-22 should be pulled down to the height of meat being cut. This power cutter meets the requirements of Underwriters' Laboratories. Do not attempt to hold meat with hands in front of blade.

RECOMMENDED SAFE OPERATING PROCEDURES:

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



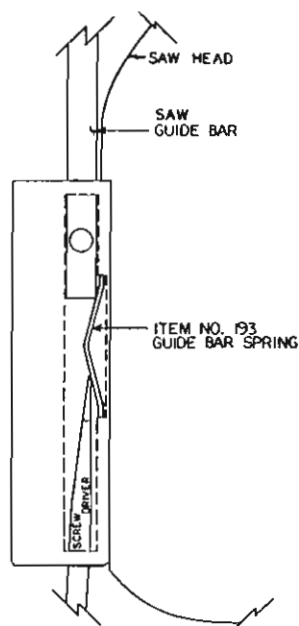
- (2) The 256P Safety End Cut Pusher Plate supplied with every machine as standard equipment, should be used when cutting end cuts of meat.



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.

Since 1969 safety requirements have changed. To meet current safety requirements, The Biro Manufacturing Company recommends that before any work is performed on any Model 33 and 34 Power Meat Cutters, the Item No. A116-22 Saw Guide Bar Assembly be installed in the head and Item No. 661-1 Guard be installed on the head door.

Failure to comply with this notice could place an agency performing work on a Model 33 or 34 Power Meat Cutter in a solely liable status. Please follow this recommendation.

MODELS 33, 34 SAW GUIDE BARS AND SAW GUARDS

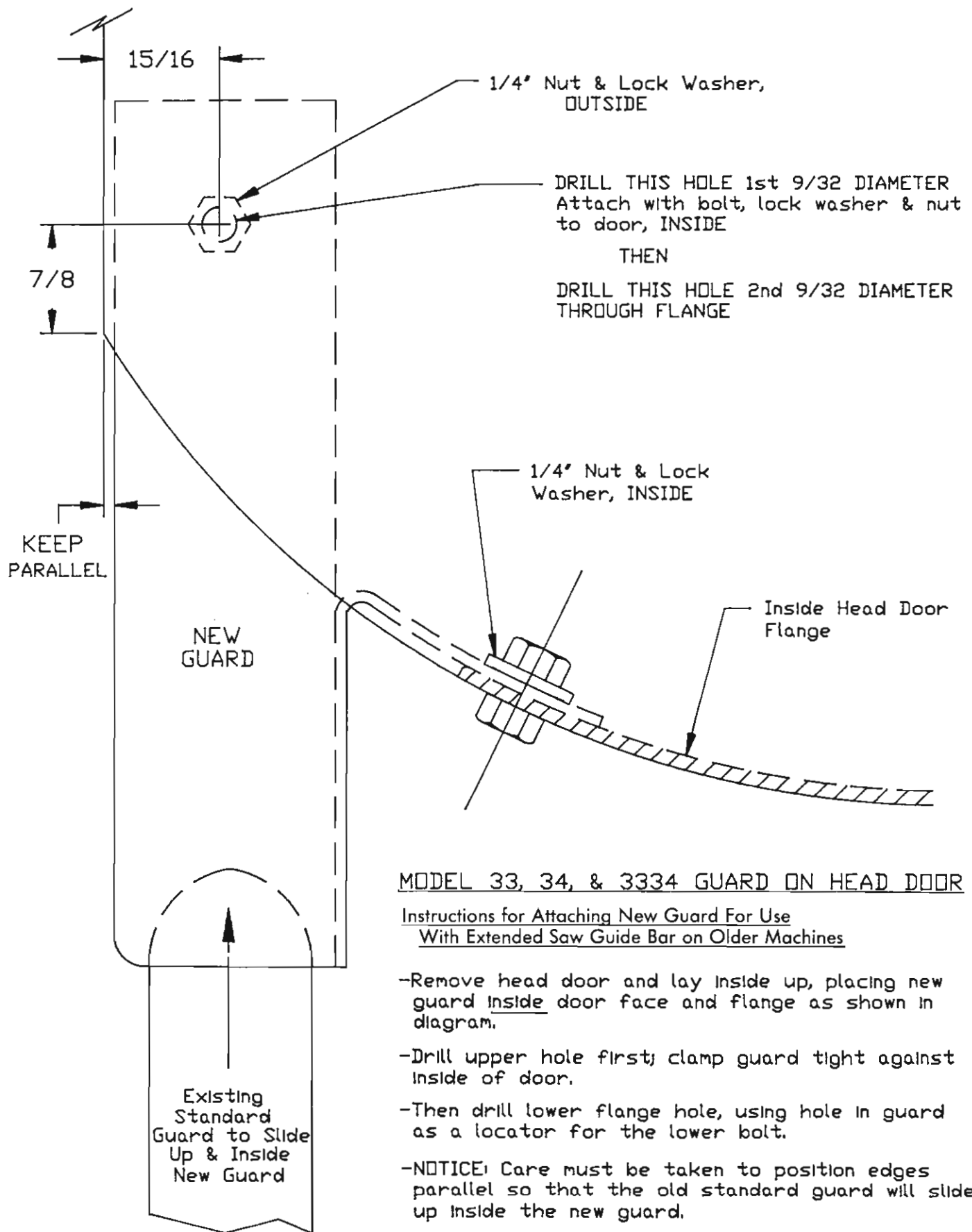
The BIRO Model 33 was manufactured from December 1945 until June of 1969.

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.

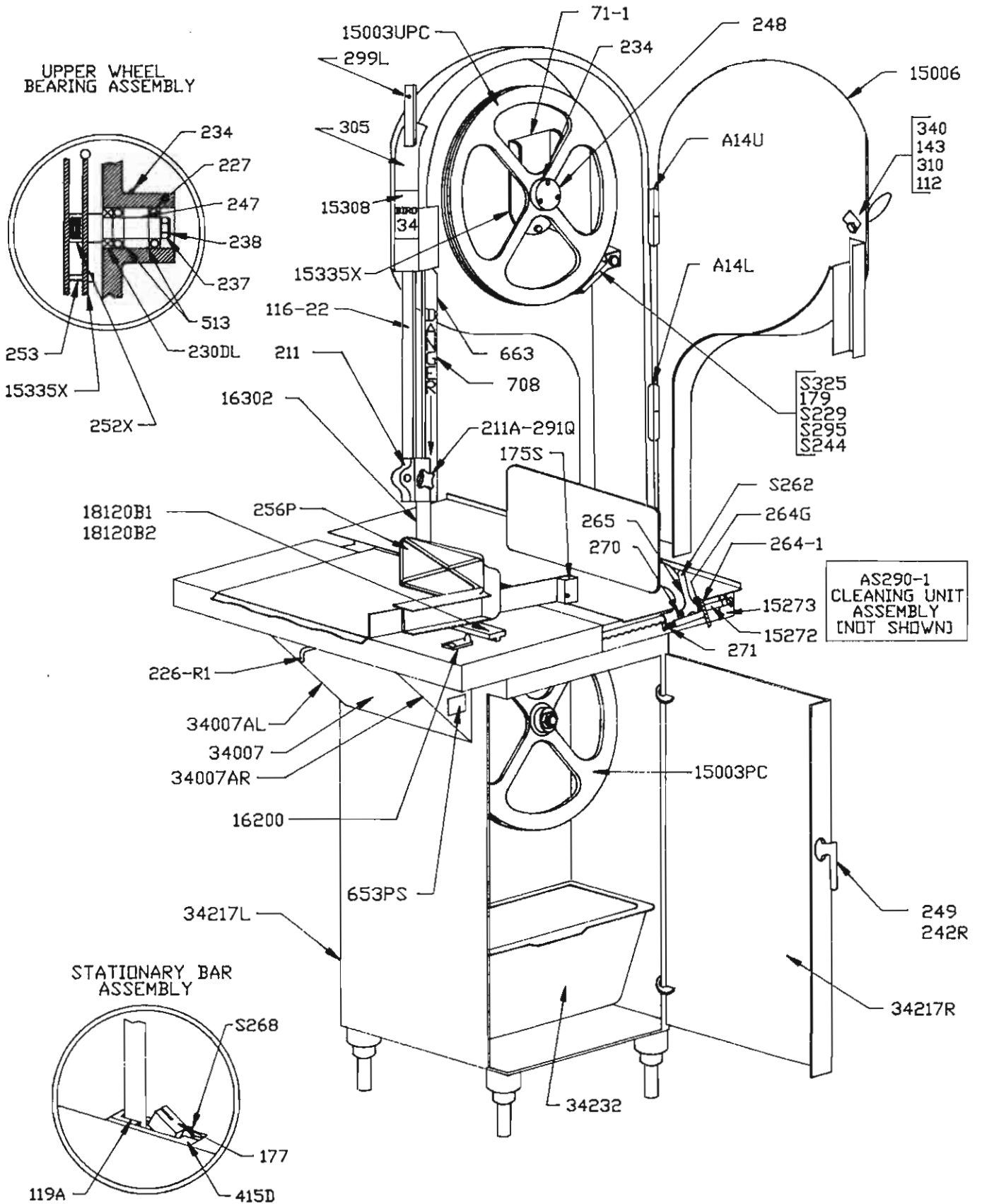


MODEL 33, 34, & 3334 GUARD ON HEAD DOOR

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.

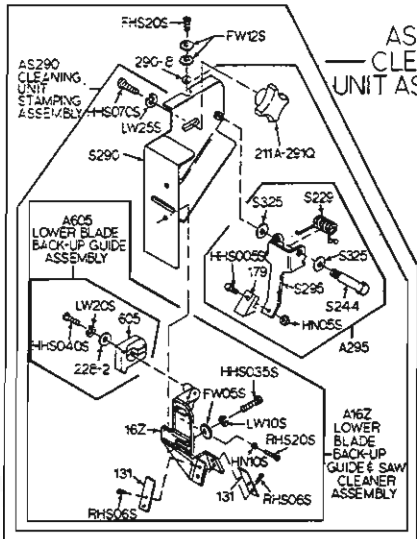
NOTE:
 ALWAYS REPORT MACHINE
 SERIAL NUMBER WHEN
 ORDERING PARTS



COMPLETE ASSEMBLIES

Item Number	Description
A116-22	Saw Guide Bar Assembly, Front
A602	Saw Guide Assembly, Upper
A415D	Stationary Bar Assembly
A16Z	Steel Cleaner Assembly
A196	Tension Spring Assembly
A6808-G	Toggle Switch Assembly, 1 Phase
A7810-G	Toggle Switch Assembly, 3 Phase
A247	Upper Shaft Bearing Assembly Without Wheel
A15003U	Upper Wheel Assembly Without Hinge Plate
A15003U335	Upper Wheel Assembly With Hinge Plate
A14L	Head Door Hinge Assembly, Lower
A14U	Head Door Hinge Assembly, Upper
A18700	Parts Repair Kit
A227	Upper Bearing Cup/Cone Assembly
A249R	Base Door Handle Assembly, Right

Item Number	Description
AS34120	Channel Assembly S
A16220-1	Channel Stop Assembly, Fixed
A16200	Channel Stop Assembly, Movable
AS290	Cleaning Unit Assembly
A211	Finger Lift Assembly Removable
A15005	Head Assembly
A15006	Head Door Assembly
A363	Lower Bearing Cup/Cone Assembly
A34360-3	Lower Bearing Housing Wheel Assembly
A34360	Lower Bearing Housing Assembly
A16278	Meat Gauge Assembly
A262	Meat Gauge Release Assembly
A34155	Meat Carriage Assembly
A19-1	Ratchet Assembly



NOTE:
ALWAYS REPORT MACHINE SERIAL NO. WHEN ORDERING PARTS.

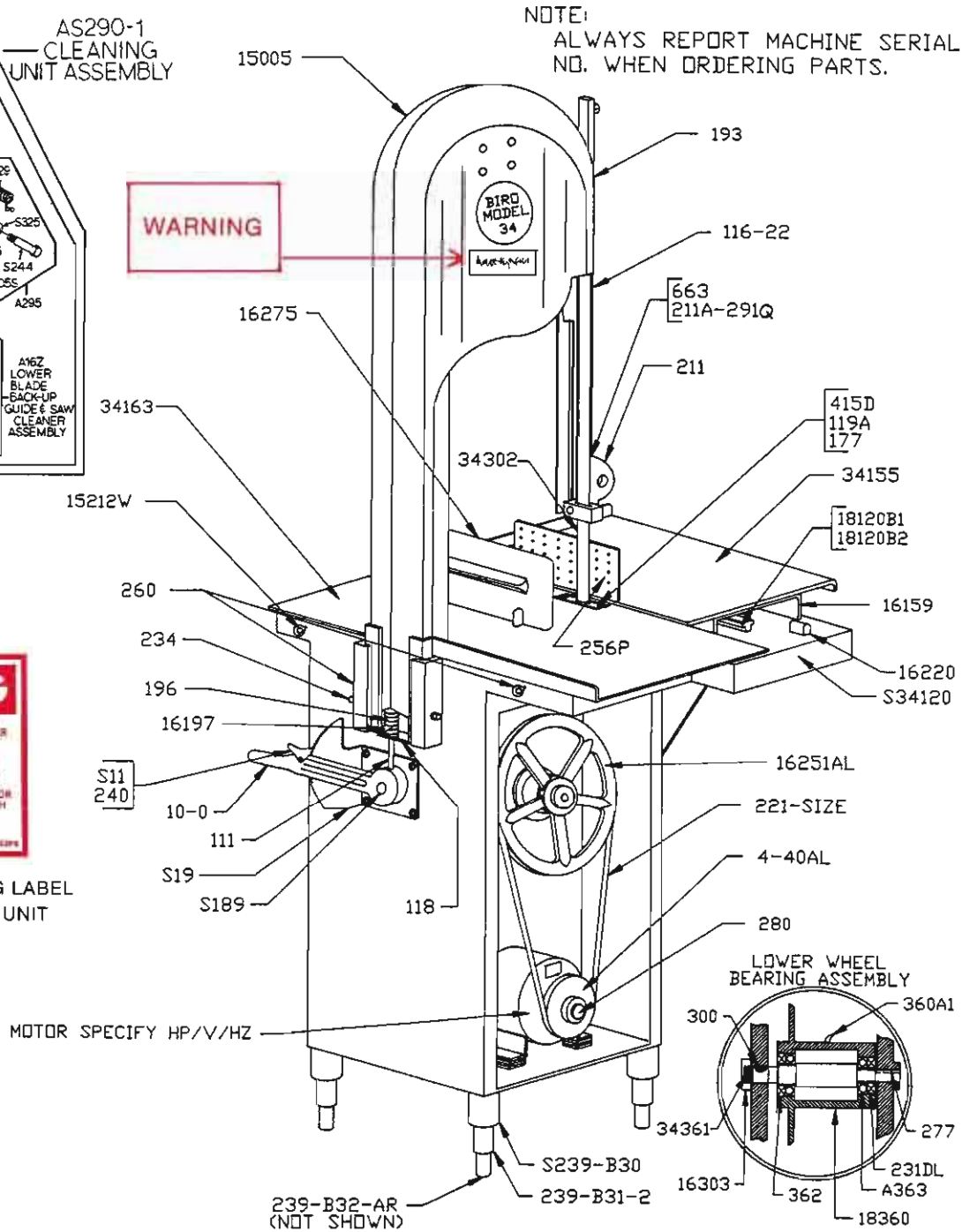
WARNING

WARNING

DO NOT TAMPER, BYPASS, REMOVE ANY SAFETY INTERLOCK SWITCHES OR OTHER SAFETY DEVICES.

ALWAYS DISCONNECT POWER SUPPLY BEFORE REMOVING SHROUDS, GUARDS, COVERS, DOORS, FENCES, PANELS, FOR CLEANING, SERVICING, REASSEMBLING, OR ANY REASON. FAILURE TO COMPLY WITH WARNING COULD RESULT IN SERIOUS BODILY INJURY.

ITEM No. 653PS — WARNING LABEL
2 LABELS REQUIRED PER UNIT



PLEASE GIVE SERIAL NUMBER WHEN ORDERING PARTS

Item Number	Description	Item Number	Description
16001	Upper Main Bearing Spacer	16503	Motor Base Plate Stud 3 Inch
15003	Lower Saw Wheel, 15"	16015-2	Motor Base Plate Stud Nut
15003U	Upper Saw Wheel, 15"	16015-3	Motor Base Plate Wing Nut
4-40	Motor Pulley 5 x 1" Bore	16502	Motor Base Plate Lock Washer
15005	Head	239FB	Motor Base Plate, 1 Phase
15006	Head Door	240	Ratchet Trigger Spring
34007	Channel Bracket	241	Wire, 12 Gauge, UL & CSA
10-1	Ratchet Arm	242R	Base Door Lock, Right
S11	Ratchet Trigger	S244	Wheel Cleaner Arm Stud
14GP	Upper Head Door Hinge Pin, Long	247	Upper Shaft
14GP-1	Lower Head Door Hinge Pin, Short	248	Upper Wheel Hub Cap
16Z	Lower Guide Bracket Saw Cleaner Holder	249	Base Door Handle
17-3	Finger Lift Washer	16251AL	Upper V-belt Pulley, 11.4 x 1
17211-22	Finger Lift Shim .022	252X	Upper Shaft Lock Nut
17211-35	Finger Lift Shim .035	S253	Upper Wheel Aligning Screw
S19	Ratchet Base	256P	Safety Block, Composition
19CB	Ratchet Base Carriage Bolt	259	Anti-Short Bushing, 1/2"
71-1	Upper Wheel Hinge Bracket	260	Aluminum Slide Gib
111AL	Tension Spring Pin, w/Capnut	S262	Meat Gauge Release Handle
143	Head Door Catch	264-1	Meat Gauge Hand Wheel
16112-1	Head Door Latch Bolt	264G	Meat Gauge Hand Wheel Groove Pin
116-212	Waved Washer Head Door/Platter Latch	S265	Meat Gauge Release Spring
116-22	Saw Guide Bar, 22 inch	267	Meat Gauge Release Cotter Spring
118	Tension Spring Plate	S268	Stationary Bar Headless Screw
119A	Saw Guide Stationary Bar	270	Meat Gauge Release Spring
S34120	Channel, Stainless Steel	271	Meat Gauge Worm Gear
131	Saw Cleaner, SS	15272	Meat Gauge Gear Rack
34155	Meat Carriage Top and Angle	272-6-S	Meat Gauge Bracket Wing Nut
	Carriage Stop Angle SS	A15273	Meat Gauge Bracket Assembly
16159	Meat Carriage Bearing	A16278	Meat Gauge Plate Assembly
A34163	Platter	277	Lower Shaft Key
163A	Platter Rod Clip	S290	Cleaning Unit Stamping
16163B	Platter Neck Guard		Cleaning Unit Taper Pin 4 x 1.5
175S	Thumb Guard, Nylon	S295	Wheel Cleaner Arm
175-1-S	Thumb Guard Nut, Stainless	296	Toggle Switch Bracket
175-2-S	Thumb Guard Screw 1/4D x 1/2 long	300	Lower Shaft Woodruff Key
177	Nylon Filler	34302	Saw Blade, 118" Long
179	Wheel Cleaner	252X	Lower Shaft Nut
S189	Ratchet Arm Stud	310	Washer Movable Carriage Stop/Head Door Lock
193	Saw Guide Bar Spring	34313	Catalog
196	Saw Tension Spring	S325	Wheel Cleaner Washer
16197	Tension Spring Gauge	S15335X	Upper Wheel Hinge Plate
16200	Carriage Stop Movable w/311-1	18360	Lower Bearing Housing
S200B1	Stop Stud Guide Bar & Carriage Stop	360A1	Lower Bearing Housing Angled Grease Fitting
211	Finger Lift Bracket	360B	Lower Bearing Housing Tilt Set Screw
211A-291Q	Finger Lift Cleaner Unit Knob, 4 Point	360CB-1	Bearing Housing Carriage Bolt
211D	Finger Lift Fastener Stud	34361	Lower Shaft
16220-1	Carriage Stop Fixed, w/311	362	Lower Bearing Housing Cap
221-54	V-belt (standard)	374	M-6 Lubrico Grease, 1 lb. can
6808-G	Toggle Switch, 1 Phase	375	Drive Screw Name & Model Plate
7810-G	Toggle Switch, 3 Phase	376	Drive Screw #10 x 1/2
228-2	Saw Guide Washer	415D	Stationary Bar
S229	Wheel Cleaner Arm Spring	416	Platter Locator Weld Pins
230DL	Upper Shaft Seal	16501	Motor Mount Rubber 1 Phase
231DL	Lower Shaft Seal	16502	Motor Mount Washer 1 Phase
34232	Scrap Bucket	16508	Motor Mount Star Washer 1 Phase
234	Grease Fitting Upper Wheel	513	Upper Wheel Hub Gasket
S235	Taper Pin #4 x 3/4	601	Upper Saw Guide Bracket
	Motor Specify HP, PH & Volts	602B	Saw Guide, Upper
237	Upper Shaft Castellated Lock Nut	605	Saw Guide, Lower Blade Back (Up
238	Upper Shaft Castellated Lock Washer	653PS	Warning Label, English
S239-B30	Base Foot Welded, SS	635SP	Warning Label, Spanish
239-B31-2	Pipe Leg, Aluminum	654	Adhesive Solvent, 4 oz. can
239-B31-AR	Pipe Leg Cap	661-1	Saw Guard to Head Door
34217R	Base Door Right	663	Saw Guard On Saw Guide Bar
34217L	Base Door Left		

The BIRO Manufacturing Co.
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Marblehead, Ohio 43440-2099, U.S.A.