

# EASTMAN® LIGHT WEIGHT ROUND KNIVES

**TYPE  
BBS32**  
(PAGE 4)



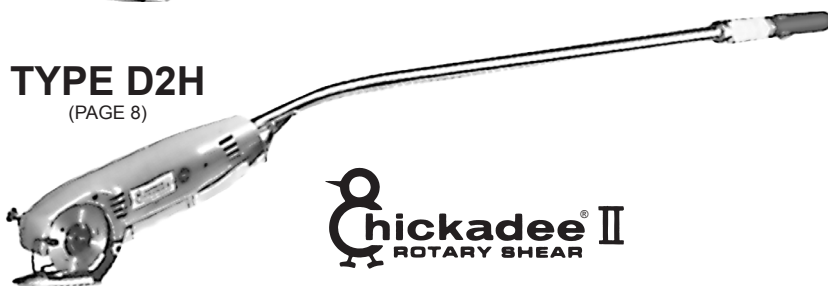
**TYPE  
BBB32**  
(PAGE 6)



**TYPE D2**  
(PAGE 8)



**TYPE D2H**  
(PAGE 8)



**chickadee® II**  
ROTARY SHEAR

**EASTMAN'S  
buzzard™**  
(PAGE 12)



## INSTRUCTION MANUAL & ILLUSTRATED PARTS LIST

**CAUTION**  
**MACHINES EQUIPPED WITH**  
**SHARP BLADE**

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Manufacturers of Eastman Cloth Cutting and Cloth Spreading Machines

[www.EastmanCuts.com](http://www.EastmanCuts.com)

## FAMILIARIZATION

### TYPE BBS32 (PAGE 4)



BBS : Equipped with single Sharpener and Shear Plate where continuous honing of Knife is desired. Fitted with a 3-1/4" Hexagon Knife.

### TYPE BBB32 (PAGE 6)



BBB32 : Equipped with a 3-1/4" Knife for increased capacity and an adjustable Throat Plate.

## CAUTION

Read instructions carefully before starting motor. Be sure that voltage and current are the same as stamped on nameplate. All Eastman machines shown in this catalogue are equipped with sharp blades and extreme caution should be used when this machine is put into use. When this equipment is not being utilized, the power supply should be disconnected from the equipment.

## TO OPERATE MACHINE

Turn machine to ON position; if cutter does not start immediately return switch to OFF position. Check the line output and be sure that the unit is plugged in properly and is making full contact. Do not attempt to start this unit while it is in the material to be cut.

## WARNING

Before performing any of the following procedures, make sure that the attachment plug has been disconnected from power source.

## KNIFE REPLACEMENT

BBS32 (page 5) – To remove knife, lay machine on side and carefully insert blade of screwdriver into fan of the motor and using Spanner Wrench (95C1-19) inserted into Locknut (4C1-175) or (4C1-182), turn counterclockwise and remove Locknut – replace knife making sure the word "Eastman" faces outward.

BBB32 – To remove knife, line up hole in knife and hole in standard, insert pin and use Spanner Wrench (95C1-21). Turn counterclockwise and remove. Replace knife with Eastman name facing outward.

## CAUTION

Discard used sharp knives with care.

## THROAT PLATE ADJUSTMENT

BBB32 (Page 7) – These machines are equipped with an adjustable Throat Plate (79C5-249) and it is important that the edge of the knife be as close as possible without touching edge of knife and equally straddling the blade. Two (2) Screws located on bottom of base can be loosened and tightened for this adjustment.

## SHEAR PLATE ADJUSTMENT

BBB (Page 5) – When adjusting the shear plate on the Model BBB, adjusting screw (20C6-26) in a clockwise manner will increase the spring tension on the shear plate; adjusting the screw in a counterclockwise manner will reduce the spring tension.

## LUBRICATION

BBB32 – BBS32

OIL – Fill oil cup (72C4-2) daily and a small drop of SAE 30 non-detergent motor oil at each end of Sharpener Adjusting Bushing.

GREASE – To lubricate, remove Plug (54C4-35) page 5 or page 7 and inject small quantity of Eastman Gear Lubricant Special Formula (242C2) at 90 day intervals for intermittent use. Every six months the (20C12-145) (BBB32) and (20C12-165) (BBS32) screws that retain the knife gear should be removed and the knife gear taken out and inspected thoroughly to insure that no thread or lint build-up is in or around the gear area.

### CAUTION

Do not use sewing machine oil or detergent oil. It is entirely too light for cutting machine lubrication. For best results use specially compounded Eastman Oil or at least a good grade SAE 30 motor oil. Do not oil base plate rollers.

Do not overload with grease as machine will run hot at gear assembly. Remove knife and gear and remove excessive grease.

### MAINTENANCE PROCEDURES

1. Keep rollers of the base plate free of lint. Motor should be blown clear of lint and dust weekly using air hose at 90 P.S.I.
2. Periodically check terminal pins on the terminal block and the terminal in the attachment plug to insure full contact.
3. When replacing the knife on your cutting unit be sure to clean out any lint build up between knife and standard.
4. If the cutting unit seems to lag or run hot when not cutting, run machine with knife removed to check for over-greasing or any obstructions.
5. When changing knife or cleaning machine check all screws and nuts for tightness.
6. Carefully remove spring loaded brushes – replace brushes when worn to less than .165 inches (4.2mm) or if springs are less than .350 inches (9.00mm).
7. When your machine performance does not appear to be up to par, contact your Eastman Machine authorized dealer.

### MOTOR BRUSH REPLACEMENT

When replacing brushes (36C1-13) in the motor, carefully remove the (54C4-43) brush caps, remove the (34C1-58) brush with springs and replace brushes accordingly.

### KNIFE SHARPENING

BBB32R – BBS32 – Connect power cord and switch motor on. To obtain a fine, keen edge on the blade, press lightly on sharpener lever or button with a constant pressure.

### KNIFE SHARPENER REPLACEMENT

BBB32 – BBS32

### CAUTION

Disconnect from electric power source when servicing.

As the emery wheels wear away and become farther apart, they must be adjusted. Proceed as follows:

1. Slightly loosen four (4) slotted screws (300C8-2) holding adjusting bushings in place.
2. With fingers, turn adjusting bushings (20C6-23) until emery wheels are as close together as possible without touching and centered over knife. Both wheels should grind at the same time when pressed lightly against knife with a maximum 1/32 inch clearance between wheels. The sharpened edge (bevel) should be no more than 1/16 inch.
3. Tighten four (4) screws.

### TO REPLACE EMERY WHEELS

BBS32

1. Remove left hand cap – 2 screws (300C8-2) – lift out emery wheel with bushing.
2. Remove screw (20C13-30).
3. Coat new emery wheel spindle with oil and re-assemble to arm (620C1-21).
4. Repeat above steps for right hand emery wheel.

### NOTE

Left and Right caps must be replaced in the same manner that they were removed.

BBB32

1. Remove cap (35C5-45) and lift out emery wheel and bushing. Then remove screw (304C10-3) from left hand emery wheel and pull out emery wheel (541C1-10). Replace wheels and re-assemble.

2. Adjust wheels as outlined for BBR.

BBS32

Remove sharpener (637C1-23) from machine and disassemble as shown in diagram page 5 – replace emery wheel (541C1-22). Lubricate – re-assemble – re-install.

### 220 VOLT MACHINES

When using the 220 volt machine on three phase outlets, use adaptor (509C1-54) by simply mounting this adaptor on the (25C5-49) single phase attachment plug. The two live leads of the (615C1-5) three phase attachment plug can be utilized for the power this machine requires.

### KNIFE GUARD ADJUSTMENT

Knife guards (25C4-144) and (25C4-106) should be regulated in a manner that only allows the material to pass through the material to be cut.

### REPLACEMENT BLADES

Machine Type	Size	Part Number		Blade Type
		Carbon	High Speed	
BBS32	3 1/4"	80C1-84 80C1-145*	80C1-84HS 80C1-145*	Round Hex
BBB32	3 1/4"	80C1-84*	80C1-84HS	Round
D2 D2H	2 1/4"	—	80C1-147HS* 80C1-149HS	Round Hex
BUZZ	2-1/32"	—	80C1-123HS* 80C1-133HS	Semi Square Octagon

\*Standard Blade

Item numbers are for reference only.  
Please Specify PART NUMBER when  
ordering replacement parts.

# ILLUSTRATED PARTS LIST



**TYPE BBS32**

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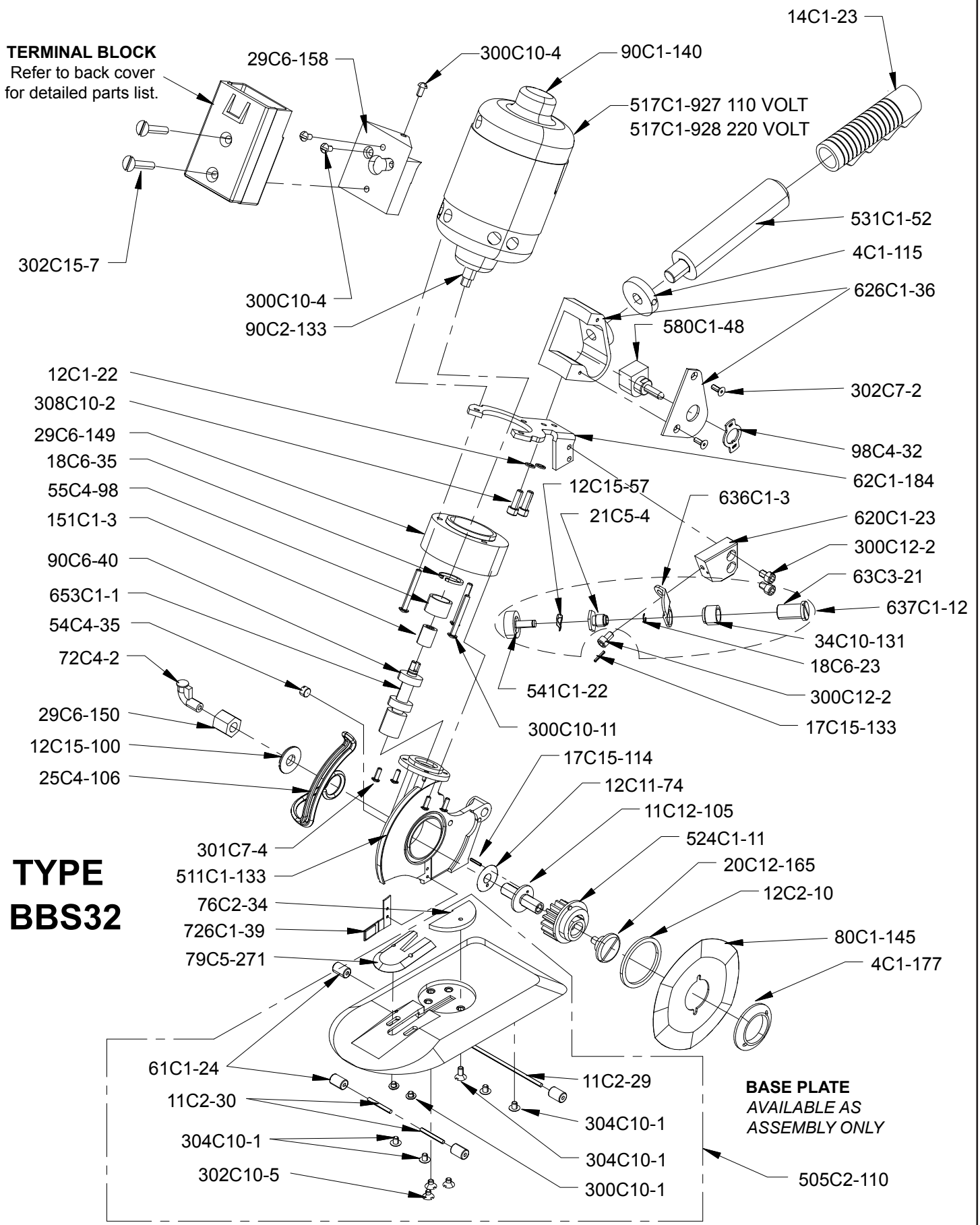
Part No.	No. Req'd	Description
4C1-115	1	HANDLE LOCKNUT
4C1-177	1	KNIFE LOCKNUT
4C2-101	2	WIRE NUT
11C2-29	1	REAR ROLLER SHAFT
11C2-30	2	FRONT ROLLER SHAFT
12C1-22	2	WASHER, SHAKE PROOF
12C2-10	1	FELT WASHER FOR STAND
14C1-23	1	GRIP HANDLE PLASTIC
12C11-74	1	SPACING WASHER
12C15-57	1	SPRING WASHER
12C15-100	1	WASHER FOR WORM GEAR SHAFT
17C15-114	1	PIN IN STANDARD
17C15-133	1	PIN, ROLL 1/16 X 3/8
18C6-23	1	SNAP RING
18C6-35	1	RETAINING RING
20C12-165	1	THRUST SCREW
21C5-4	1	EMERY WHEEL BUSHING
25C4-106	1	KNIFE GUARD
29C6-149	1	MOTOR ADAPTOR
29C6-150	1	OIL CUP ADAPTOR
29C6-158	1	TERMINAL BLOCK ADAPTOR
34C1-58	2	BRUSH SPRING
34C10-131	1	SHARPENER SPRING
36C1-13	2	BRUSH
54C4-35	1	GREASE PLUG
54C4-43	2	BRUSH PLUG
55C4-98	1	SPACER BEARING
61C1-24	4	PLATE ROLLER SHELL
62C1-184	1	HANDLE BRACKET
63C3-21	1	SHARPENER BUTTON
72C4-2	1	OIL CUP
76C2-34	1	PLATE FILLER
79C5-271	1	THROAT PLATE
80C1-145	1	KNIFE
90C1-140	1	BEARING HOUSING REAR
90C2-133	1	BEARING HOUSING FRONT
90C6-40	2	BALL BEARING, WORMSHAFT
98C4-32	1	ON/OFF CLIP
151C1-3	1	COUPLING MOTOR
300C10-1	2	SCREW, 6-32 X 3/16 ROUND HEAD
300C10-4	3	SCREW, 6-32 X 3/8 ROUND HEAD
300C10-11	3	SCREW, 6-32 X 11/16 ROUND HEAD
300C12-2	4	SCREW, 8-32 X 1/4 ROUND HEAD
301C7-4	4	SCREW, 4-36 X 5/16 FILLISTER HEAD
302C10-4	4	SCREW, 6-32 X 5/16 FLAT HEAD
302C10-5	3	SCREW, 6-32 X 3/8 FLAT HEAD
302C7-2	2	SCREW, 4-36 X 1/4 FLAT HEAD
302C15-7	2	SCREW, 10-32 X 1 FLAT HEAD
304C10-1	4	SCREW, 6-32 X 1/8 TRUSS HEAD
308C10-2	2	SCREW, 6-32 X 1/2 SOCKET HEAD
505C2-110	1	FLAT PLATE ROLLER
511C1-133	1	STANDARD
517C1-927	1	MOTOR (120 VOLT ONLY)
517C1-928	1	MOTOR (220 VOLT ONLY)
524C1-11	1	KNIFE GEAR
531C1-52	1	HANDLE
541C1-22	1	SHARPENING STONE
542C1-99	1	ARMATURE (120 VOLT ONLY)
542C1-100	1	ARMATURE (220 VOLT ONLY)
580C1-48	1	SWITCH
620C1-23	1	EMERY WHEEL ARM
626C1-36	1	SWITCH BASE & BRACKET ASSEMBLY
636C1-3	1	SHARPENER BRACKET
637C1-12	1	SHARPENER, COMPLETE
726C1-39	1	SHEAR PLATE ASSEMBLY

Item numbers are for reference only.  
Please Specify PART NUMBER when  
ordering replacement parts.



# TERMINAL BLOCK

Refer to back cover  
for detailed parts list.



## TYPE BBS32

**BASE PLATE**  
AVAILABLE AS  
ASSEMBLY ONLY

# ILLUSTRATED PARTS LIST



## TYPE BBB32

Item numbers are for reference only.  
Please Specify PART NUMBER when  
ordering replacement parts.

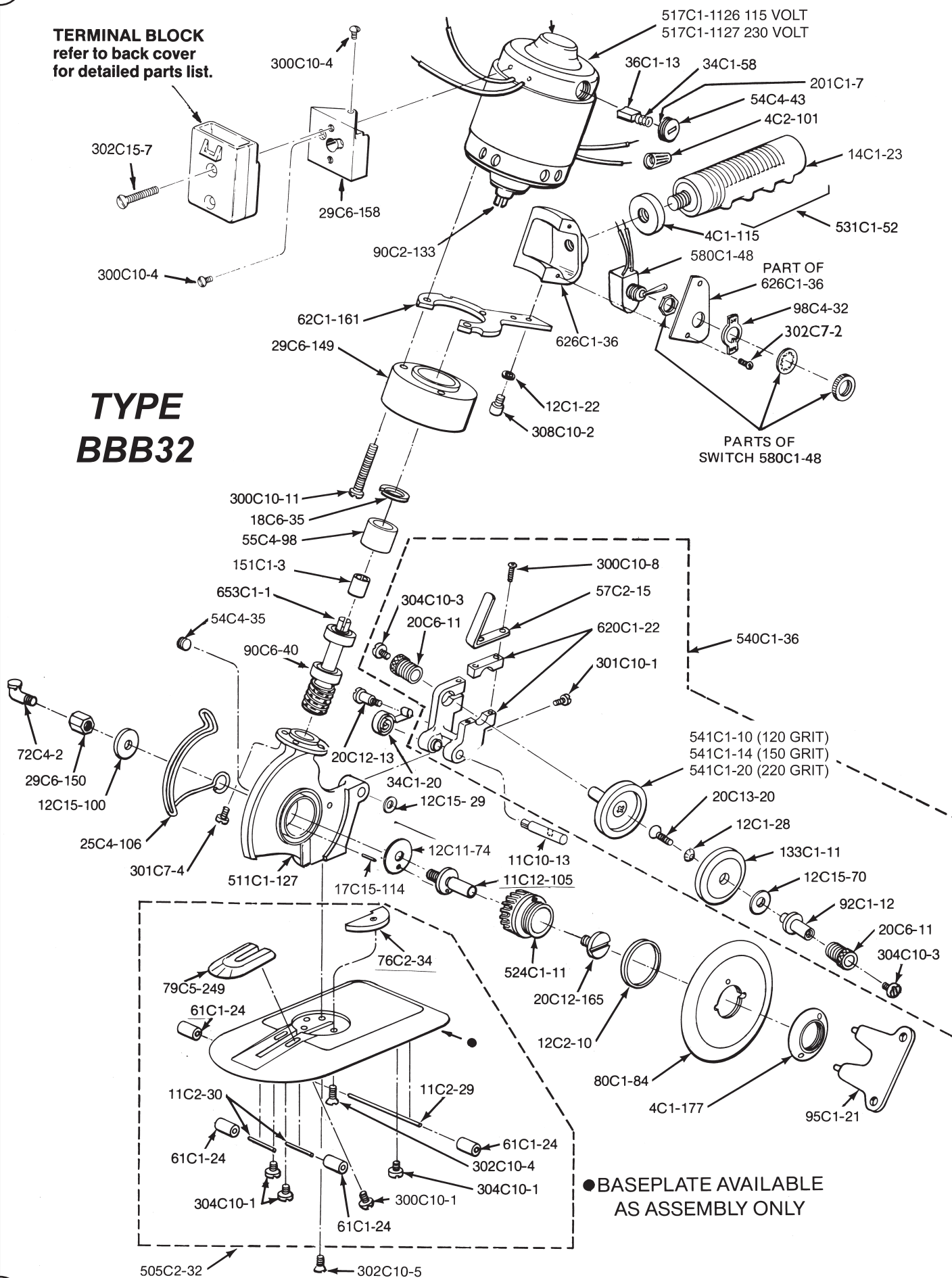
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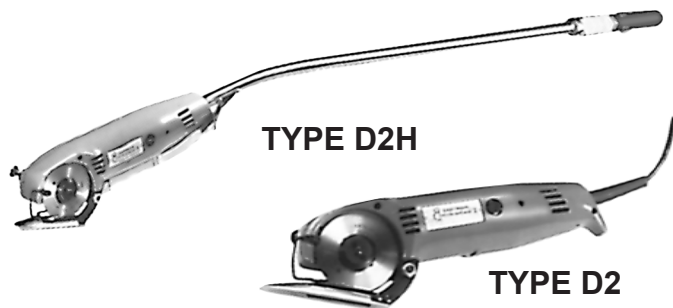
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Part No.	Description
4C1-115	HANDLE LOCKNUT
4C1-177	KNIFE LOCKNUT
4C2-101	WIRE NUT (2 Req'd)
11C2-29	REAR ROLLER SHAFT
11C2-30	FRONT ROLLER SHAFT (2 Req'd)
11C10-13	SHARPENER SHAFT
11C12-105	KNIFE GEAR SHAFT
12C1-22	WASHER SHAKE PROOF (2 Req'd)
12C1-28	LOCK WASHER (2 Req'd)
12C2-10	FELT WASHER FOR STAND
12C11-74	SPACING WASHER
12C15-29	FLAT WASHER
12C15-70	PAPER WASHER
12C15-100	WASHER FOR WORM GEAR SHAFT
14C1-23	RED HANDLE GRIP
17C15-114	PIN IN STANDARD
18C6-35	RETAINING RING
20C6-11	WHEEL ADJUSTING SCREW (2 Req'd)
20C12-13	SHARPENER SPRING SCREW
20C12-165	THRUST SCREW
20C13-20	SCREW SHARPENER (2 Req'd)
25C4-106	KNIFE GUARD
29C6-149	MOTOR ADAPTER
29C6-150	OIL CUP ADAPTER
29C6-158	TERMINAL BLOCK ADAPTER
34C1-20	SHARPENER SPRING
34C1-58	BRUSH SPRING (2 Req'd)
36C1-13	BRUSH (2 Req'd)
54C4-35	GREASE PLUG
54C4-43	BRUSH PLUG (2 Req'd)
55C4-98	SPACER BEARING
57C2-15	SHARPENER LEVER
61C1-24	PLATE ROLLER SHELL (4 Req'd)
62C1-161	HANDLE BRACKET
72C4-2	OIL CUP
76C2-34	PLATE FILLER
79C5-249	THROAT PLATE
80C1-84	KNIFE
90C1-140	BEARING HOUSING REAR
90C2-133	BEARING HOUSING FRONT
90C6-40	BALL BEARING, WORMSHAFT
92C1-12	SPINDLE
92C1-21	WRENCH
98C4-32	ON/OFF CLIP
133C1-11	UNMOUNTED EMERY WHEEL (2 Req'd)
151C1-3	COUPLING MOTOR
201C1-7	BRASS EYELET (2 Req'd)
300C10-1	SCREW, 6-32 X 3/16 ROUND HEAD (2 Req'd)
300C10-4	SCREW, 6-32 X 3/8 ROUND HEAD (4 Req'd)
300C10-8	SCREW, 6-32 X 3/4 ROUND HEAD (3 Req'd)
300C10-11	SCREW, 6-32 X 11/16 ROUND HEAD (3 Req'd)
301C7-4	SCREW, 4-36 X 5/16 FILLISTER HEAD (4 Req'd)
301C10-1	SCREW, 6-32 X 1/4 FILLISTER HEAD
302C10-4	SCREW, 6-32 X 5/16 FLAT HEAD (2 Req'd)
302C10-5	SCREW, 6-32 X 3/8 FLAT HEAD (3 Req'd)
302C15-7	SCREW, 10-32 X 1 FLAT HEAD (2 Req'd)
302C7-2	SCREW, 4-36 X 1/4 FLAT HEAD (2 Req'd)
304C10-1	SCREW, 6-32 X 1/8 TRUSS HEAD (4 Req'd)
304C10-3	SCREW, 6-32 X 1/4 TRUSS HEAD (2 Req'd)
308C10-2	SCREW, 6-32 X 1/2 SOCKET HEAD (2 Req'd)
505C2-32	FLAT PLATE - ROLLER
511C1-126	STANDARD
517C1-1126	MOTOR 115 VOLT
517C1-1127	MOTOR 230 VOLT
524C1-11	KNIFE GEAR
531C1-52	HANDLE
540C1-36	EMERY WHEEL ARM WITH WHEELS
541C1-10	(120 GRIT) EMERY WHEEL ASSEMBLY (2 Req'd)
541C1-14	(150 GRIT) EMERY WHEEL ASSEMBLY (2 Req'd)
541C1-20	(220 GRIT) EMERY WHEEL ASSEMBLY (2 Req'd)
542C1-99	ARMATURE 115 VOLT
542C1-100	ARMATURE 230 VOLT
580C1-48	SWITCH
620C1-22	EMERY WHEEL ARM
626C1-36	SWITCH BASE & BRACKET ASSEMBLY
653C1-1	WORMSHAFT

**TERMINAL BLOCK**  
refer to back cover  
for detailed parts list.

## TYPE BBB32





## DESCRIPTION

Your new Chickadee D2 or D2H is designed for increase performance and capacity, with a minimum of maintenance and service when not subjected to abnormal use.

## CAUTION

Read instructions carefully before starting motor. Be sure that voltage and current are the same as stamped on nameplate.

## TO OPERATE MACHINE

Turn machine to on position; if cutter does not perform properly check line output and be sure the unit is plugged in properly making full contact. Do not attempt to start this unit while it is in material to be cut.

## WARNING

Before performing any of the following procedures, make sure that the attachment plug has been disconnected from power source.

## REMOVE AND REPLACE THE KNIFE

Insert a pin - (17C11-2) thru knife against bottom of machine housing and with a large screwdriver, remove screw (300C12-3) and flange (53C11-112). DISCARD WORN SHARP KNIFE WITH CARE and install new blade with the Eastman facing outward.

To obtain a fine keen edge on the blade, press lightly on sharpener button with a constant pressure for 15 seconds..

## LUBRICATION

Follow this procedure yearly for intermittent use, or every six months for continuous use. Remove knife, remove retainer plate (79C12-276) (2 screws) with gear intact. Then remove screw (20C13-99) emery wheel (541C1-24) and wipe away any grit deposits. Apply a light coat of Eastman Lubricko Grease (242C2-2) to parts and reassemble. Then add small quantity of Eastman Lubricko Grease to gears and shaft. Saturate wick (191C1-37) with good quality SAE 30 non-detergent motor oil when changing blade.

## DISASSEMBLY

Remove knife. Remove two (2) flat head screws (302C8-2) and gear retaining plate (79C12-276) from housing.

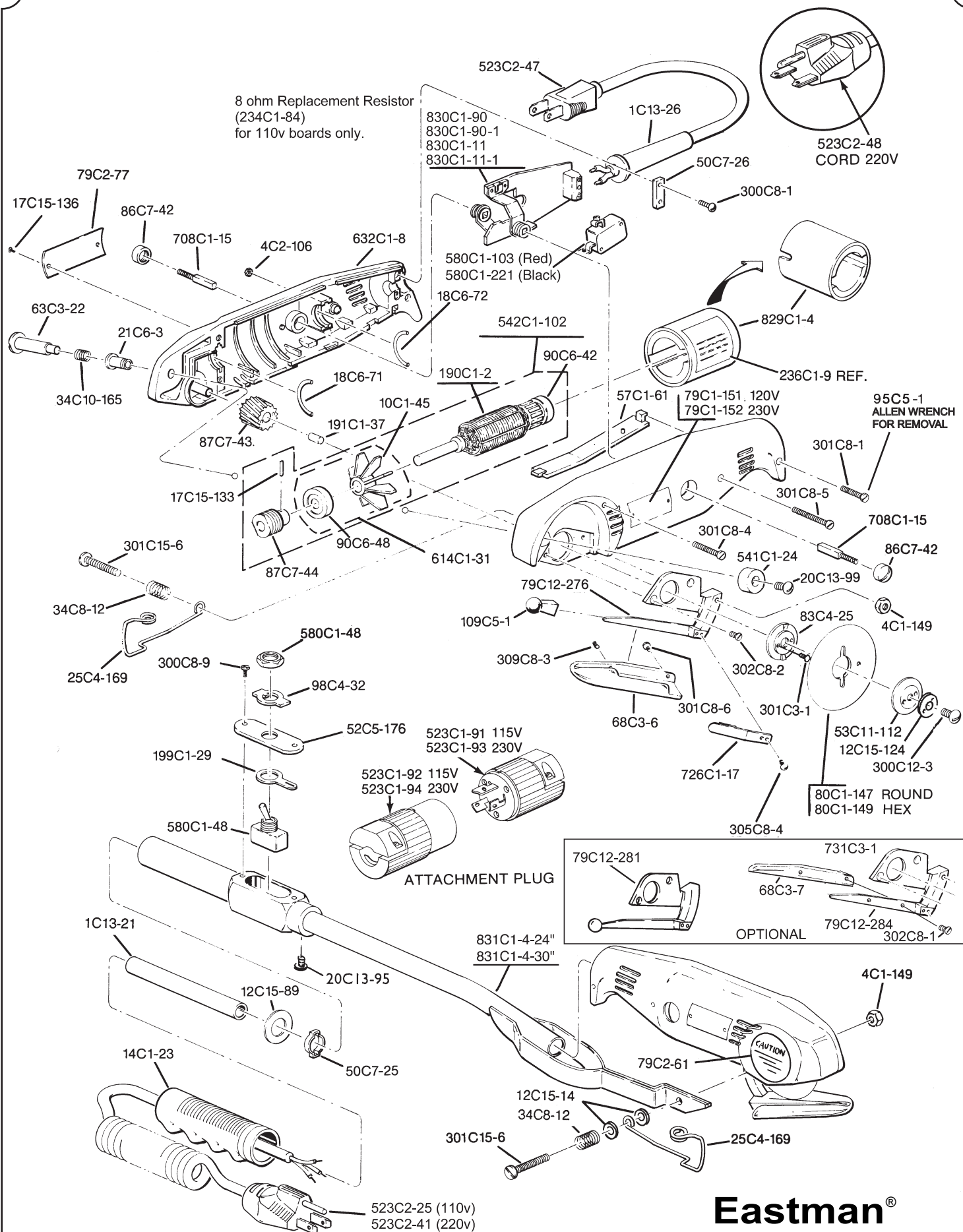
Note: it is not necessary to loosen two fillister head screws (301C3-1) from knife flange.

Remove brush caps and brushes. Completely remove three fillister head screws (308C1-1, 308C1-4, 308C1-5) from housing and lift off left side motor housing, leaving motor parts in right side housing. Clean lint and dirt from motor housing and grease from gear cavity.

## ILLUSTRATED PARTS LIST

PART NO.	DESCRIPTION
1C13-21.....	SLEEVE
1C13-26.....	CORD SLEEVE
4C1-149.....	HEX NUT
4C2-106.....	HEX NUT
10C1-45.....	FAN
12C15-14.....	WASHER, FLAT #10
12C15-89.....	WASHER
12C15-124.....	WASHER, BLADE RETAINER
14C1-23.....	HANDLE GRIP
17C15-133.....	ARMATURE PIN
17C15-136.....	PIN LABEL (4 REQUIRED)
18C6-71.....	FRONT "O" RING HALF (2 REQUIRED)
18C6-72.....	BACK "O" RING HALF (2 REQUIRED)
20C13-99.....	PAN HEAD SCREW
21C6-3.....	SHARPENER BUSHING
25C4-169.....	KNIFE GUARD
34C8-12.....	SPRING
34C10-165.....	SHARPENER SPRING
50C7-25.....	CORD CLAMP D-2H
50C7-26.....	CORD CLAMP D-2
52C5-176.....	BASE SWITCH
53C11-112.....	KNIFE COVER FLANGE
57C1-61.....	SWITCH LEVER
63C3-22.....	SHARPENER BUTTON
68C3-6.....	PRESSURE FOOT
68C3-7.....	NARROW PRESSURE FOOT
79C1-151.....	PLATE, NO. 120V
79C1-152.....	PLATE, NO. 230V
79C2-61.....	CAUTION PLATE
79C2-77.....	NAME PLATE
79C12-276.....	GEAR RETAINING PLATE
79C12-284.....	GEAR RETAINING PLATE FOR NARROW FOOT
80C1-147.....	ROUND KNIFE, 2 1/4"
80C1-149.....	HEX KNIFE, 2 1/4"
83C4-25.....	KNIFE FLANGE
86C7-42.....	BRUSH CAP (2 REQUIRED)
87C7-43.....	KNIFE GEAR
87C7-44.....	WORM GEAR
90C6-42.....	REAR BEARING
90C6-48.....	FRONT BEARING
95C5-7.....	ALLEN KEY
98C4-32.....	ON/OFF PLATE
109C5-1.....	TIP SHEAR PLATE
190C1-2.....	ARMATURE 120V
191C1-37.....	WICKING FELT
199C1-29.....	LUG
300C8-1.....	SCREW, 4-40 X 3/8 ROUND HEAD (2 REQUIRED)
300C8-9.....	SCREW, 4-40 X 3/16 ROUND HEAD
300C12-3.....	SCREW, 8-32 X 3/8 ROUND HEAD
301C3-1.....	SCREW, 2-56 X 1/2 FILLISTER HEAD (2 REQUIRED)
301C8-1.....	SCREW, 4-40 X 1/2 FILLISTER HEAD
301C8-4.....	SCREW, 4-40 X 3/4 FILLISTER HEAD
301C8-5.....	SCREW, 4-40 X 1 1/2 FILLISTER HEAD
301C8-6.....	SCREW, 4-40 X 3/16 FILLISTER HEAD
301C15-6.....	SCREW, 10-32 X 1 FILLISTER HEAD
302C8-1.....	SCREW, 4-40 X 3/8 FLAT HEAD (2 REQUIRED)
302C8-2.....	SCREW, 4-40 X 3/4 FLAT HEAD (2 REQUIRED)
305C8-4.....	SCREW, 4-40 X 1/8 BINDING HEAD (2 REQUIRED)
309C8-3.....	SCREW, 4-40 X 1/8 SOCKET HEAD
523C1-91.....	ATTACHMENT PLUG 120V MALE
523C1-92.....	ATTACHMENT PLUG 120V FEMALE
523C1-93.....	ATTACHMENT PLUG 230V MALE
523C1-94.....	ATTACHMENT PLUG 230V FEMALE
523C2-25.....	CORD 120V (COIL)
523C2-41.....	CORD 230V
523C2-46.....	CORD 230V EUROPE
523C2-47.....	CORD ASSEMBLY 120V DOMESTIC
523C2-48.....	CORD ASSEMBLY 230V DOMESTIC
541C1-24.....	EMERY WHEEL ASSEMBLY
542C1-102.....	ARMATURE ASSEMBLY 120V
580C1-48.....	SWITCH, D-2H
580C1-103.....	RED, SWITCH, D-2
580C1-221.....	BLACK, SWITCH, D-2
614C1-31.....	FAN & BEARING
632C1-8.....	HOUSING, COMPLETE W/SWITCH LEVER
708C1-15.....	BRUSH W/SPRING (2 REQUIRED)
726C1-17.....	SHEAR PLATE W/CARBIDE
731C3-1.....	GEAR RETAINING NARROW FOOT ASSEMBLY
829C1-4.....	MAGNET ASSEMBLY
830C1-11.....	(110V ONLY) CIRCUIT BOARD ASSEMBLY
830C1-11-1.....	(110V D2H ONLY) CIRCUIT BOARD ASSEMBLY
830C1-90.....	(220V ONLY) CIRCUIT BOARD ASSEMBLY
830C1-90-1.....	(220V D2H ONLY) CIRCUIT BOARD ASSEMBLY
831C1-4-24.....	24" HANDLE & TUBE ASSEMBLY
831C1-4-30.....	30" HANDLE & TUBE ASSEMBLY





NOTE: NOISE LEVEL 1.0' ft. FROM BLADE = 80db.

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## ASSEMBLY

Install circuit board in right motor housing. Place armature of correct voltage into magnet ring (829C1-1). Insert armature and magnet by passing rear end of armature between brush holders on circuit board.

Note that notch in magnet ring must mate with stud in right housing for proper fit. Rotate magnet ring until slot "clicks" into stud.

Fit switch lever into recess at bottom of right housing. Check functioning of switch by squeezing lever when in place. Place left housing over right housing with slight pressure. Replace three screws into left housing. Pack gear cavity 3/4 full of Eastman grease. Replace gear retaining plate. Squeeze one drop of oil into knife screw hole. Replace knife with Eastman facing outward. Insert brushes and brush caps.

Repairs to these machines should be made by a qualified person familiar with safe repairs of electrical devices. Exercise extreme caution when working with, or near the blade as the cutting edge is extremely sharp. Be sure to disconnect machine from power supply and remove knife before continuing with adjustments or repairs.

To sharpen knife, press lightly on sharpener button with constant pressure, while machine is running. Lubricate wick (191C1-37) with Eastman oil when replacing blade or once each month.

## REPLACE MOTOR BRUSHES

Remove black brush caps (86C7-42) from sides of housing with a large bladed screwdriver. Gently pull on springs to remove brushes. If brushes are stuck, tap machine gently on padded surface to loosen brushes.

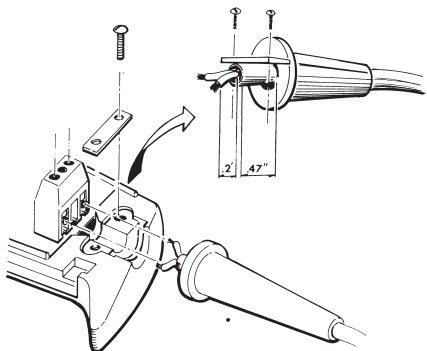
Replace brushes if worn to less than 5/32" (4.2mm) or if spring is less than 11/32" (9.0 mm). Replace brush caps and tighten gently.

## ADJUSTMENT OF SHEAR PLATE

Shear plate (726C1-17) should contact knife at sharpened edge *only*. Clearance of back of shear plate is .010" (.25mm) and can be checked with feeler gage.

## REPLACE CORD

Disassemble machine per instructions. Loosen two screws in terminal block and remove two screws (300C8-1) in cord clamp. Gently pull cord from terminal block. Strip outer jacket on new cord to .4" (12mm). Strip insulation on wires to .2" (5mm). Insert wire leads into terminal block and tighten two screws. Replace and secure cord clamp (50C7-26), making sure clamp bears on outer jacket of wire as shown. Reassemble per instructions.



## FAN AND FRONT BEARING REMOVAL

Measure and record distance of fan and front bearing from rear bearing. Position armature assembly in collar jig, as shown. Lightly heat gear (87C7-44) at pin (17C15-133) to release adhesive.

### CAUTION

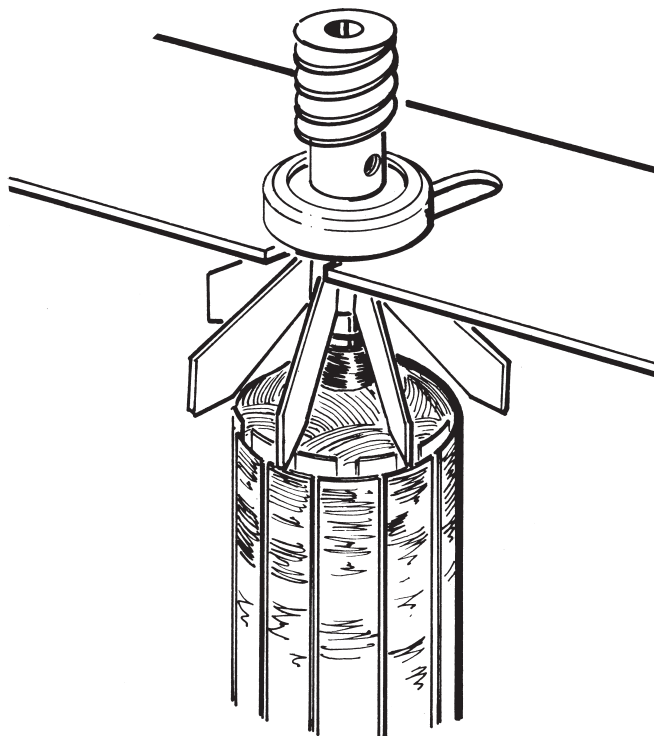
Do not heat entire armature.

Press worm from armature shaft with drift pin. Remove front bearing from armature shaft.

### CAUTION

Do not allow armature to fall from collar jig.

Remove fan by gently twisting and pulling fan from armature shaft.



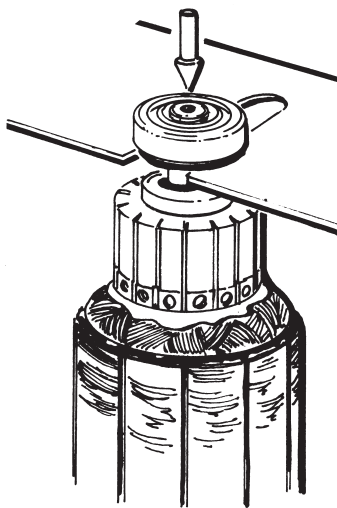
## INSTALLATION OF FAN, FRONT BEARING AND WORM GEAR

Apply adhesive (Loctite 242 recommended) to inside diameter of fan, (10C1-45) bearing (90C6-48) and worm (87C7-44). Use steel tube with 1/4" I.D. to press fan, bearing and worm onto armature shaft. Make sure parts are returned to original position as recorded in FAN AND BEARING REMOVAL, above.

Pin in worm must be aligned with slot in armature shaft for proper assembly.

## REAR BEARING REMOVAL

Position armature in collar jig as shown. Use steel rod to press armature shaft through bore of bearing. Do not allow armature to fall from jig.



## INSTALLATION OF REAR BEARING

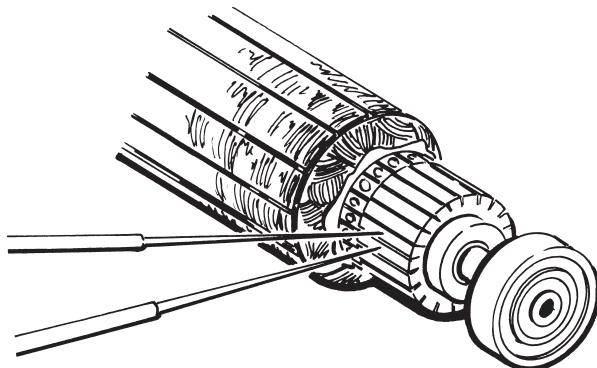
Lubricate armature shaft. Use 1/4" I.D. steel tube to press rear bearing down to shoulder on armature shaft.

Support armature at front end and protect shaft from bending during reassembly.

## ELECTRICAL TESTS OF ARMATURE

Repeated blown fuses or burned resistor may indicate failed armature.

Use multimeter to check adjacent bar to bar resistance of commutator as shown. Check each bar around entire commutator.



## VOLTAGE

230v

115v

## RESISTANCE

20 ohms

10 ohms

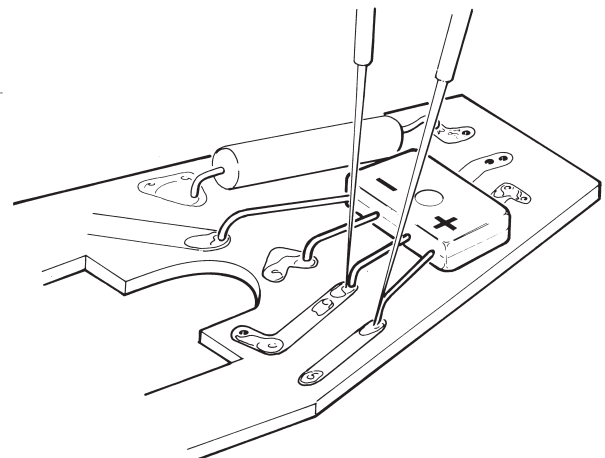
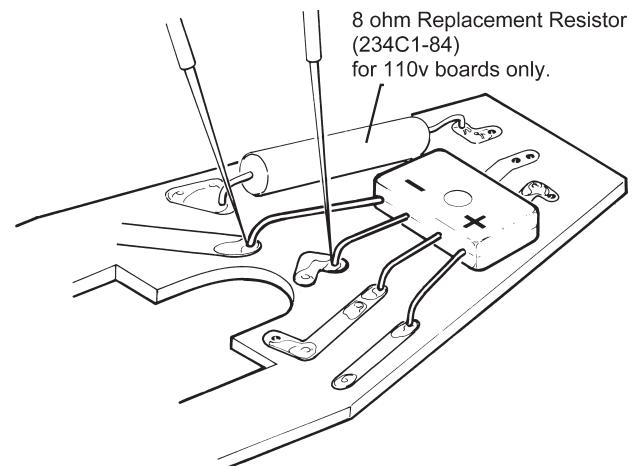
IF READINGS ARE 10% ABOVE OR BELOW STANDARDS, REPLACE ARMATURE.

## ELECTRICAL TESTS OF RECTIFIER

Set multimeter to 1,000 ohm scale. Measure resistance between negative and adjacent lead as shown. Reading should be 5-50 ohms. Reverse multimeter probes. Reading should be 1,000,000 (1 million) ohms minimum.

Repeat above procedure on remaining leads as shown. Readings should be identical to above.

Any readings other than above indicate failed rectifier and circuit board must be replaced.





## **PNEUMATIC ROTARY SHEAR**

(AIR REQUIREMENT: 10-12 CFM@90PSI)

### **DESCRIPTION**

The Buzzaird Rotary Shear has been carefully designed by the Eastman Machine Company to efficiently cut a variety of fabrics and provide many years of trouble free service. This pneumatic cutter is equipped with a heavy duty pneumatic motor and can be used primarily for heavier types of material that cannot be cut with our now world-famous Chickadee Machine. The maximum output is 1/3 horsepower and should run at 90 psi with a 20,000 rpm motor speed. This machine should not be run with less than 60 psi.

### **BALL TIP AND SHEAR PLATE FOOT OPTIONAL \***

A ball tip (109C5-1) for cutting loosely woven materials and shear plate foot (68C3-4) for additional support and cutting accuracy are optional. To attach shear plate foot to shear plate (726C1-5) use allen key (95C5-7) as illustrated.

### **WARNING**

Before performing any of the following procedures, make sure the air line has been disengaged.

### **TO LUBRICATE**

A few drops of 30 weight, non-detergent machine oil twice a day while operating are all that is required to keep the buzzaird lubricated. The parts illustration (page 13) clearly indicates the three recommended lubrication points. To lubricate gears, remove plug (point C), inject grease once a day. Eastman Gear Lubricant Special Formula (242C2) is recommended. Be sure oil felt (191C1-26) is kept clean and moist with oil.

### **TO REMOVE KNIFE**

Remove lock nut (4C1-194) turn counter-clockwise and lift knife from the gear. When replacing knife (80C1-123) be sure the knife is installed so that the Eastman name is in the outward position.

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## **ILLUSTRATED PARTS LIST**

<b>PART NO.</b>	<b>DESCRIPTION</b>
4C1-194	KNIFE LOCK NUT
4C3-12	ADJUSTING NUT
11C12-88	WORM GEAR SHAFT
12C15-57	SPRING WASHER
12C15-74	THRUST WASHER
12C15-95	WASHER FOR KNIFE GUARD
*17C9-10	LOCK PIN
17C15-120	PIN
17C15-127	PIN
18C6-23	RETAINING RING
18C6-35	RETAINING RING
20C5-21	CLAMP SCREW
20C12-117	SCREW, 6-32 X 3/8 FLAT HEAD
20C13-56	SCREW, 6-32 X 3/4 SOCKET SET
20C13-63	SET SCREW
21C5-4	SHARPENER BUSHING
25C4-150	KNIFE GUARD
*25C4-192	PELLICAN STYLE KNIFE GUARD
25C4-197	TRANSPARENT, LEXAN KNIFE GUARD
29C6-142	MOTOR ADAPTER
*29C6-178	SWIVEL SHARPENER MOTOR ADAPTER
34C10-131	SHARPENER SPRING
*34C10-154	LOCK PIN SPRING
34C10-163	KNIFE SPRING
34C10-205	VALVE SPRING
54C4-35	PLUG
63C3-21	SHARPENER BUTTON
*68C3-4	SHEAR FOOT
*68C3-18	SHEAR FOOT EXTENSION
80C1-123	(4-SIDED) KNIFE
80C1-127	(ROUND) KNIFE
80C1-133	(OCTAGON) KNIFE
*95C5-7	ALLEN KEY
*109C5-1	BALL TIP
170C1-40	
191C1-26	OIL FELT
200C1-11-1	DRIVER FOR MOTOR SHAFT
300C12-6	SCR. 8-32 X 1/2 ROUND HEAD (2 REQUIRED)
*302C8-7	SCREW, FLT. HD. #4-40 X 3/16
*309C8-1	SCREW, 4-40 X 1/4 (2 REQUIRED)
517C1-842-1	AIR MOTOR
524C1-10	(BRASS) KNIFE GEAR
524C1-21	KNIFE GEAR
541C1-22	SHARPENING STONE
636C1-3	SHARPENER BRACKET
*636C1-17	SWIVEL SHARPENER BRACKET
637C1-12	SHARPENER, COMPLETE
*637C1-37	SWIVEL SHARPENER, COMPLETE
647C1-1	STANDARD HOUSING
653C1-1	WORM, COMPLETE
720C1-42	KNIFE ROD, COMPLETE
726C1-5	SHEAR PLATE
*726C1-37	PELLICAN STYLE SHEAR PLATE
*726C1-32	30 DEGREE SHEAR PLATE W/ BALL TIP
*726C1-38	30 DEGREE SHEAR PLATE
*726C1-41	DULL POINT SHEAR PLATE
817C1-1	EXHAUST OVER HOSE
817C1-2	AIR INTAKE HOSE
*820C1-105	SWIVEL SHARPENER UPGRADE KIT
822C1	MOTOR COUPLING

\*These parts furnished on special order.

### **TO REPLACE SHARPENING STONE**

Sharpening stone may be replace as required without disassembling cutting head. Remove knife lock nut (4C1-194) and knife (80C1-123). Remove sharpener button (63C3-21) and sharpener spring (34C10-131) from rear of sharpener assembly. Sharpening stone and bushing assembly can then be removed from front of sharpener bracket (636C1-3). Remove retaining ring (18C6-23) from shaft of sharpening stone (541C1-22) and remove stone. Note: This procedure is reversed when reassembling.

### **CARE AND MAINTENANCE OF THE MOTOR**

An air line oiler and filter should be used for the best performance of this pneumatic motor. The motor must be lubricated and free of moisture. If an air line oiler and filter is not available, a few drops of SAE 5 spindle oil should be used several times a day in the air input line.





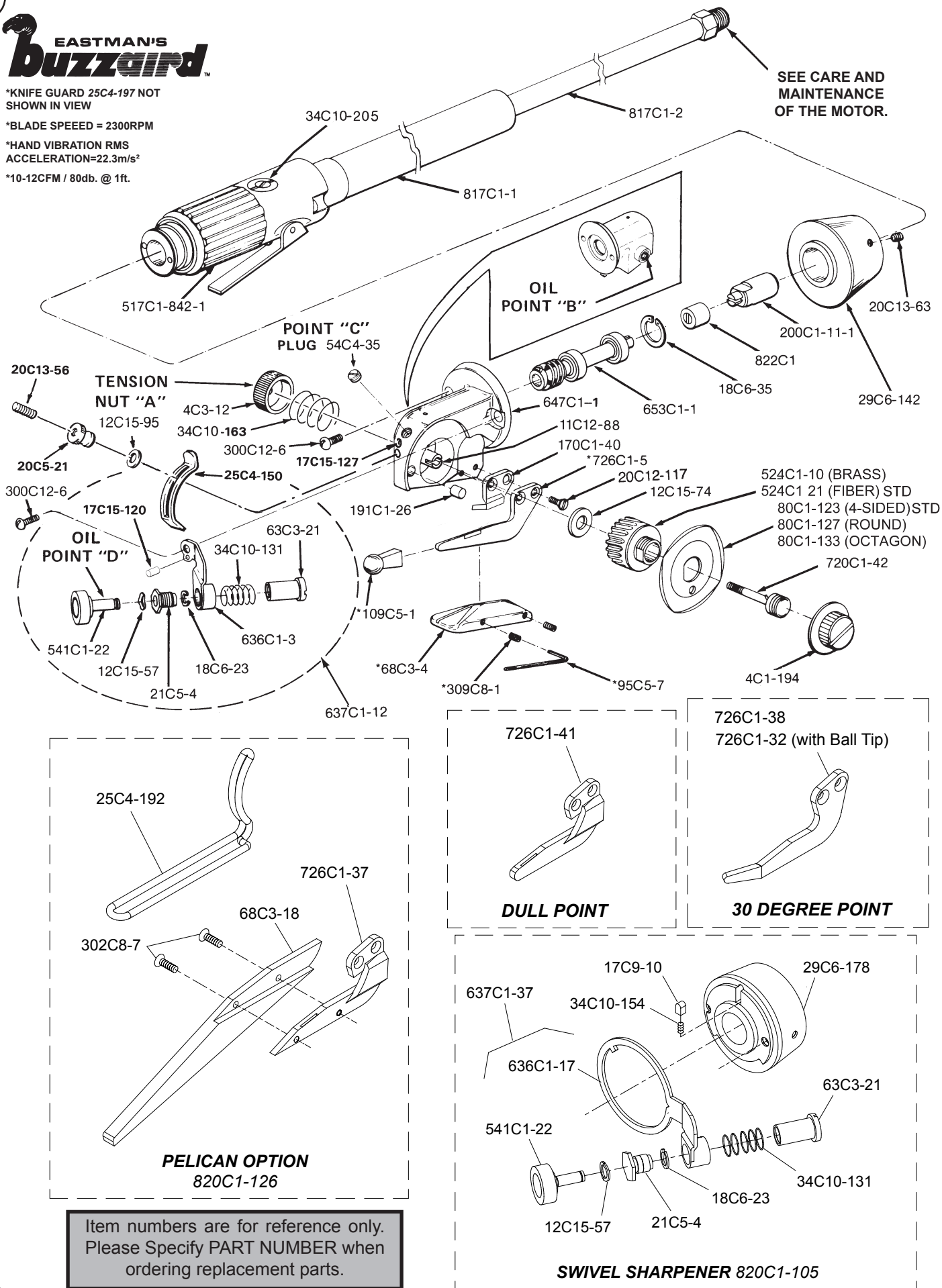
\*KNIFE GUARD 25C4-197 NOT SHOWN IN VIEW

\*BLADE SPEED = 2300RPM

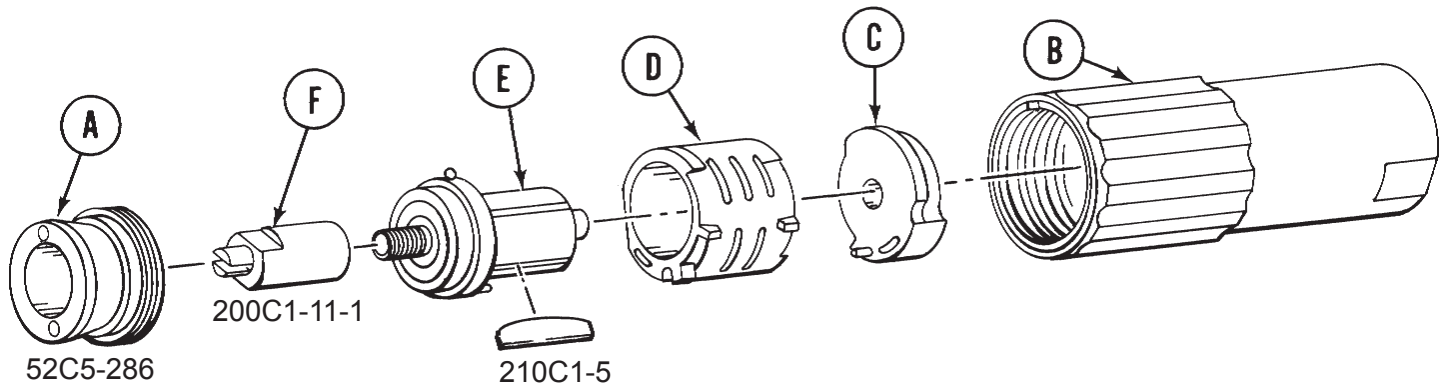
\*HAND VIBRATION RMS ACCELERATION=22.3m/s<sup>2</sup>

\*10-12CFM / 80db. @ 1ft.

SEE CARE AND MAINTENANCE OF THE MOTOR.



## INSTRUCTIONS FOR REPLACING DRIVER 200C1-11-1



1. Remove retaining nut "A" from housing "B", while holding housing in a soft jawed vise by the flats. Insert spanner wrench and turn counter clockwise to remove nut.
2. Slide driver assembly "C", "D", "E" and "F" out of housing.
3. BEFORE PROCEEDING FURTHER – Not the orientation of the pins in the bearing housings "C" and "E", with respect to the pockets in the sleeves "D". THESE PARTS MUST BE ASSEMBLED IN EXACTLY THE SAME WAY.
4. Rear bearing housing "C" is pressed on stub shaft of "E". To remove, clamp bearing housing in soft jawed vise. NEVER CLAMP SLEEVE DIAMETER "D" AS THIS MIGHT CAUSE THE SLEEVE TO CRACK. With a drift pin slightly smaller than the shaft diameter, lightly tap shaft out of the bearing housing.
5. The sleeve "D" will now slide off assembly "E" and "F".
6. Remove the driver "F" by clamping rotor at the vane diameter "E" in a soft jawed vise and turn counter clockwise with a wrench on the flats of driver "F".
7. Re-assemble in reverse of the above procedure. After completing assembly, check for free rotation of driver "F". Remedy any binding or chatter caused by the rear bearing housing being too tight by inserting a drift pin and tap end of stub shaft on "E" lightly to loosen assembly.

# Safety Information

Throughout this manual, safety information is presented by use of the terms *Warning*, *Caution*, and *Note*. These terms have the following meanings:

## WARNING

A warning contains critical information regarding potential safety hazards that can occur during proper use or misuse of the machine. Failure to follow these procedures may result in serious personal injury to the user.

## CAUTION

A caution contains instructions for the use or maintenance of the machine. Failure to follow these procedures may result in damage to the machine.

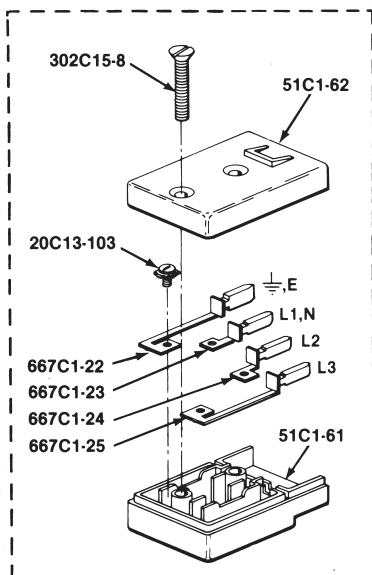
## SAFETY AND INDEMNIFICATION

During the life of the machine, the purchaser agrees to provide to all machine users (including its own employees and independent contractors) all relevant safety information, including warning labels and instruction manuals. The purchaser also agrees to maintain the safety features and working condition of the machine, and to adequately train all users in the safe use and maintenance of the machine. The purchaser agrees to defend, protect, indemnify, and hold Eastman Machine Company harmless from and against all claims, losses, expenses, damages, and liabilities to the extent that they have been caused by the purchaser's failure to comply with the terms and instructions of this manual.

## GENERAL SAFETY PRECAUTIONS

### WARNING

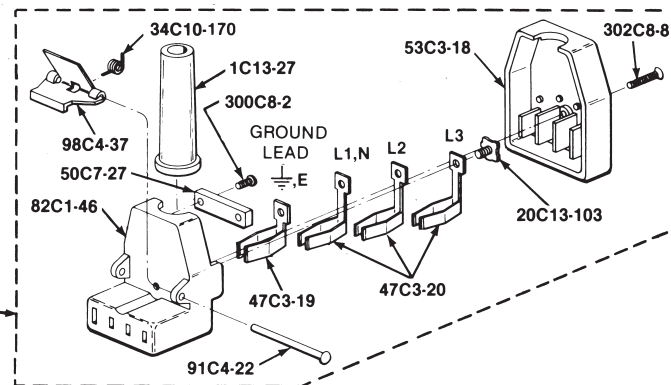
- This machine is equipped with a very sharp and dangerous knife. Keep hands, arms, and hair away from the knife area at all times. When the machine is not in use, keep the knife guard lowered at all times. Safety glasses and appropriate clothing may prevent serious personal injuries.
- Disconnect the power and air supply from the machine when it is not in use or during routine maintenance, including lubrication.
- The purchaser must instruct all operators in the proper use of the machine according to the instructions on the machine and in this manual. This training must include instruction on the potential safety hazards arising from the use or misuse of the machine. In addition to such training, the purchaser should provide written work instructions as necessary to ensure correct use of the machine for specific cutting applications.
- The purchaser must provide appropriate safety measures and equipment as recommended in this manual. Observe all statutory requirements concerning the use of hazardous machinery that apply to your location.
- Do not modify this machine or disable safety features. Unauthorized modification may result in serious personal injuries to the user. Electrical connections to this machine must be made by a qualified electrician familiar with applicable codes and regulations. To prevent electrocution, a ground lead must be connected to terminal "E" on the attachment plug.
- This machine may be equipped with a remote start interface. Misuse of this machine or use of this machine as part of another machine may result in serious personal injuries to the user.
- Safety labels must be kept clean and legible at all times. Call the Eastman Machine factory to order replacement labels.



# **TERMINAL BLOCK** PATENT PENDING **508C1-100** **SHOWN**

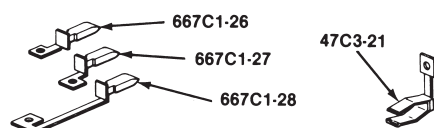
**PLEASE SPECIFY  
VOLTAGE WHEN  
ORDERING PARTS**

# **ATTACHMENT PLUG** PATENT PENDING **523C1-100** **SHOWN**



## **WARNING** **Wiring Instructions** **Eastman** **Attachment Plugs**

Electrical connections to this device should be made by a qualified electrician who is familiar with applicable codes and regulations. To ensure operator safety, a ground lead must be connected to terminal "E" on the attachment plug. Disconnect this equipment from electrical power before proceeding with any disassembly for adjustment, inspection or repair.



DESCRIPTION	PART NO.
ATTACHMENT PLUG	
CORD SLEEVE	1C13-27
U-LOCK SCREW	20C13-103
SPRING	34C10-170
TERMINAL SLEEVE	47C3-19
TERMINAL SLEEVE (CURRENT)	47C3-20
TERMINAL SLEEVE (CURRENT)	47C3-21
CORDCLAMP	50C7-27
ATTACHMENT PLUG COVER	
ATTACHMENT PLUG BODY	82C1-45
ATTACHMENT PLUG BODY	82C1-46
ATTACHMENT PLUG BODY	82C1-47
ATTACHMENT PLUG BODY	82C1-48
ATTACHMENT PLUG BODY	82C1-49
RIVET	91C4-22
THUMB CLIP	98C4-37
SCREW #4-40 X 3/8 ROUND HEAD	300C8-1
SCREW #4-40 1/2 ROUND HEAD	300C8-2
SCREW #4-40 X 7/8 FLAT HEAD	300C8-8
TERMINAL BLOCK	
U-LOCK SCREW	20C13-103
TERMINAL BLOCK BOTTOM	51C1-61
TERMINAL BLOCK TOP	
SCREW #10-32 X 1 1/8 FLAT HEAD	302C15-8
TERMINAL CONTACT W/PIN E	667C1-22
TERMINAL CONTACT W/PIN L1,N	667C1-23
TERMINAL CONTACT W/PIN L2	667C1-24
TERMINAL CONTACT W/PIN L3	667C1-25
TERMINAL CONTACT W/PIN L1, N	667C1-26
TERMINAL CONTACT W/PIN L2	667C1-27
TERMINAL CONTACT W/PIN L3	667C1-28

EASTMAN 10A 380V 3~	EASTMAN 10A 220V 3~	EASTMAN 10A 220V ~	EASTMAN 15A 120V ~	EASTMAN 25A 42V ~
523C1-99	523C1-100	523C1-101	523C1-102	523C1-103
1	1	1	1	1
4	4	3	3	3
1	1	1	1	1
1	1	1	1	1
2	3	1	1	1
1	—	1	1	1
1	1	1	1	1
1	1	1	1	1
—	—	—	—	—
—	1	—	—	—
—	—	1	—	—
—	—	—	1	—
—	—	—	—	1
1	1	1	1	1
1	1	1	1	1
—	—	2	2	—
2	2	—	—	2
1	1	1	1	1
508C1-99	508C1-100	508C1-101	508C1-102	508C1-103
4	4	3	3	3
1	1	1	1	1
1	1	1	1	1
2	2	2	2	2
1	1	1	1	1
1	1	1	—	—
1	1	—	1	—
—	1	—	—	1
—	—	—	1	1
—	—	1	—	—
1	—	—	—	—

**Limited Warranty.** Eastman warrants to the buyer that the equipment shall be free from defects in materials or workmanship for a period of 180 days commencing on the date of invoice. Any goods or parts claimed by the buyer to be defective must be returned to Eastman, freight charges prepaid, within the 180 day warranty period. If Eastman determines that the goods or parts are defective in materials or workmanship, Eastman's sole obligation under this warranty shall be, at Eastman's sole option, to repair or replace the defective goods or parts or to provide the buyer a credit equal to the portion of the purchase price allocable to the defective goods or parts. This warranty shall not apply if defects are caused by product misuse or neglect, if the machine has been altered or modified by the buyer, or if other than genuine Eastman belts, emery wheels, knives or parts are used in the machine. THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THIS PURCHASE. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**Limitation of Liability.** Eastman's liability to the buyer, and the buyer's remedies from Eastman, whether in contract, negligence, tort, under any warranty or otherwise, shall be limited to the remedies provided in the foregoing Limited Warranty. In no event shall Eastman have any responsibility or liability to the buyer for (a) any special, indirect, incidental, or consequential damages, including, but not limited to, loss of use, revenue, or profit, even if Eastman has been advised of the possibility of such damages, or (b) any claim against the buyer by any third party. The price stated for the product sold is a consideration for limiting Eastman's liability.

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