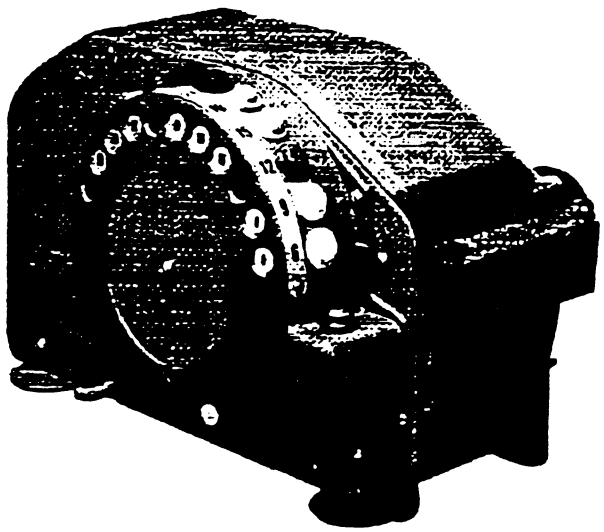
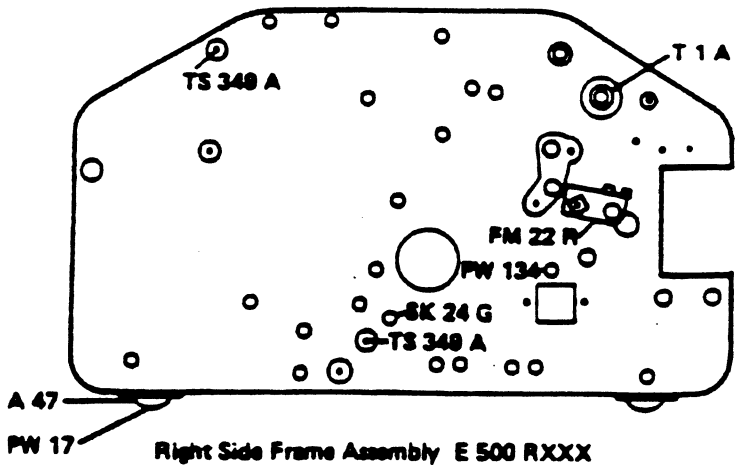
Illustrated Parts List for the Better Pack 555L & 555S Models



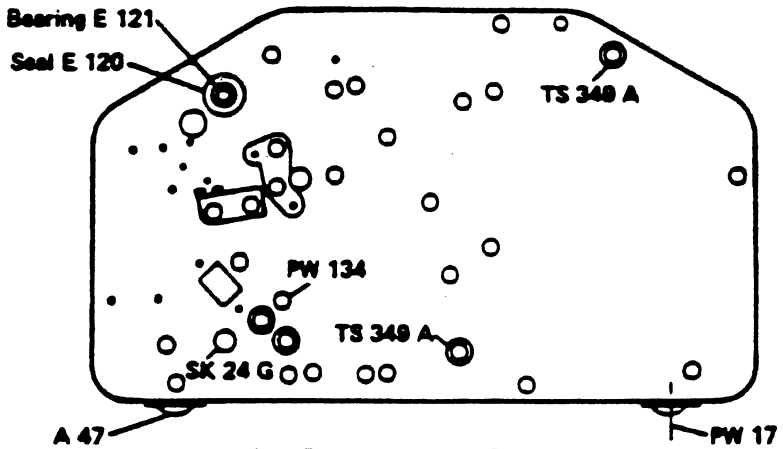
BETTER PACK 555 S&L

FIGURE 1
RIGHT SIDE FRAME ASSEMBLY



Right Side Frame Assembly E 500 RXXX

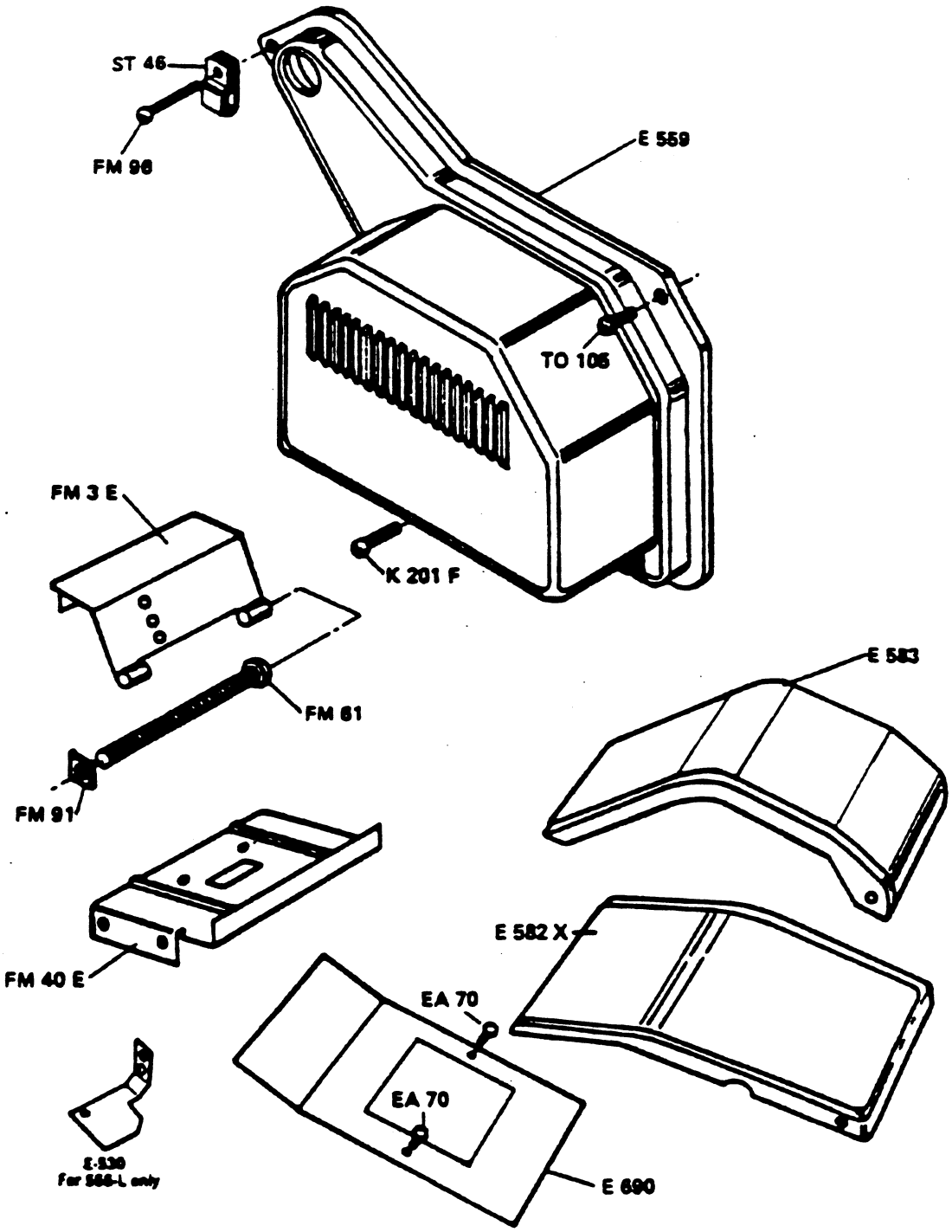
FIGURE 2
LEFT SIDE FRAME ASSEMBLY



Left Side Frame Assembly E 500 LXXX

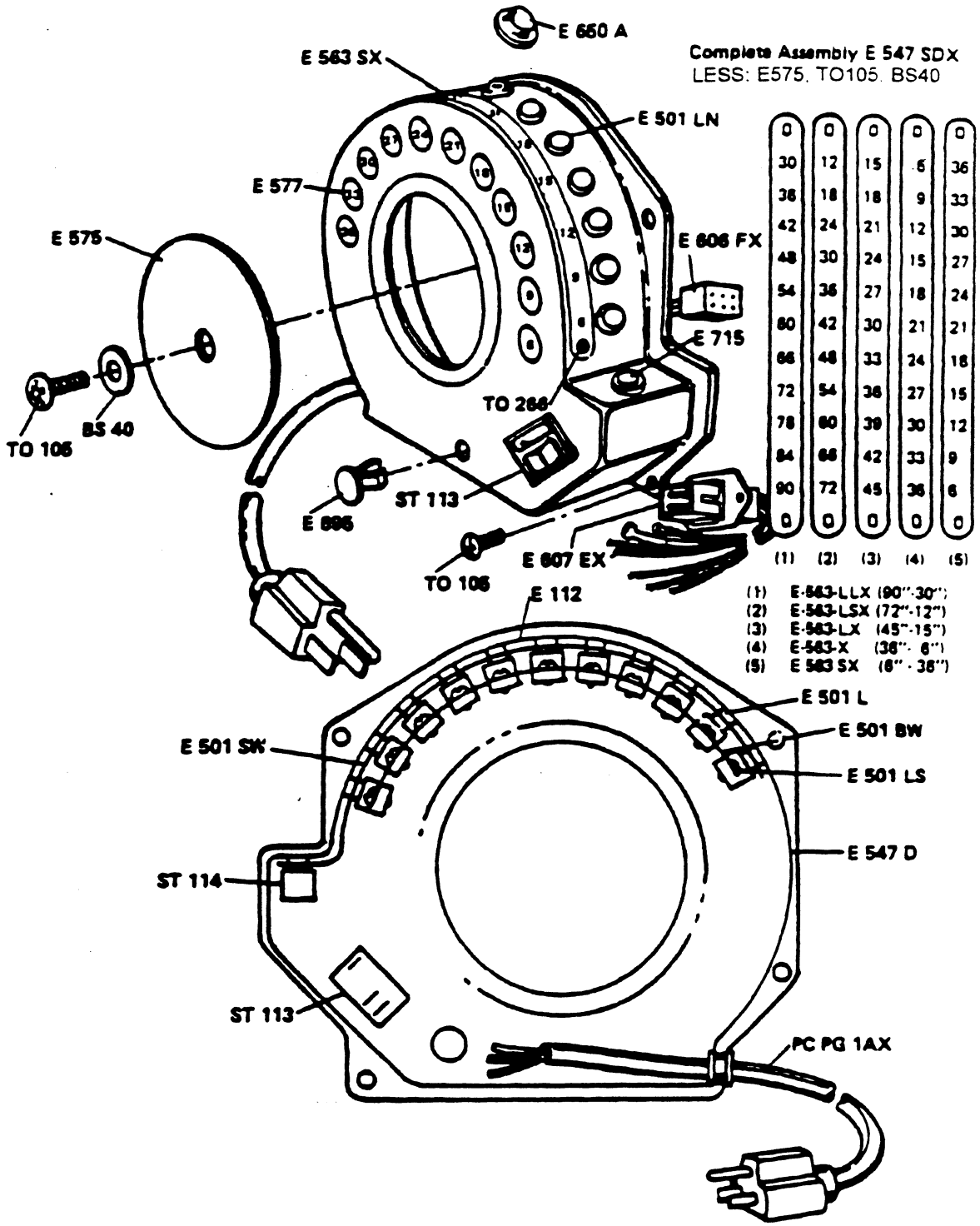
BETTER PACK 555 S&L

FIGURE 3
MOTOR AND CHAIN COVER



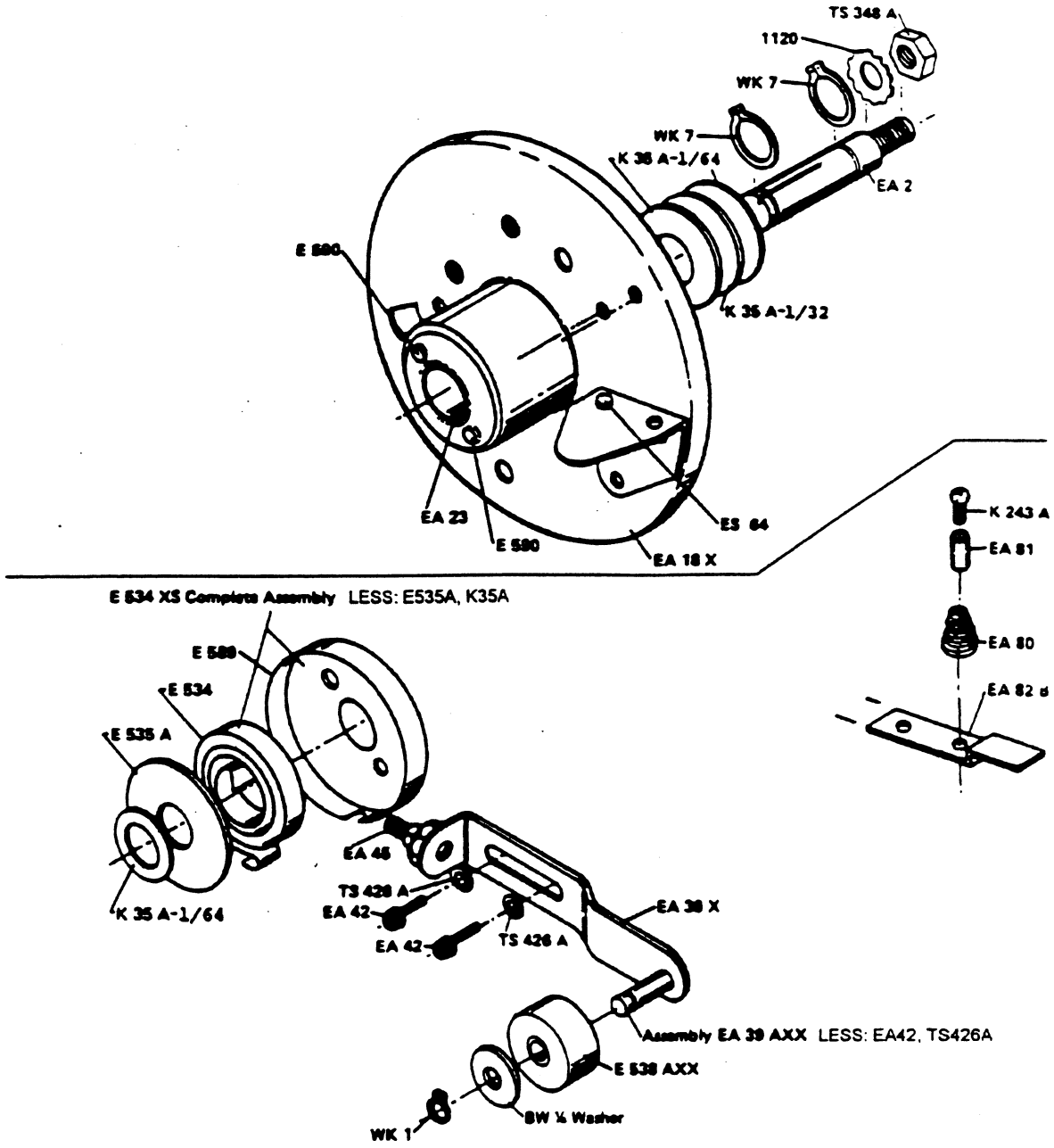
BETTER PACK 555 S&L

FIGURE 4
KEY DRUM ASSEMBLY



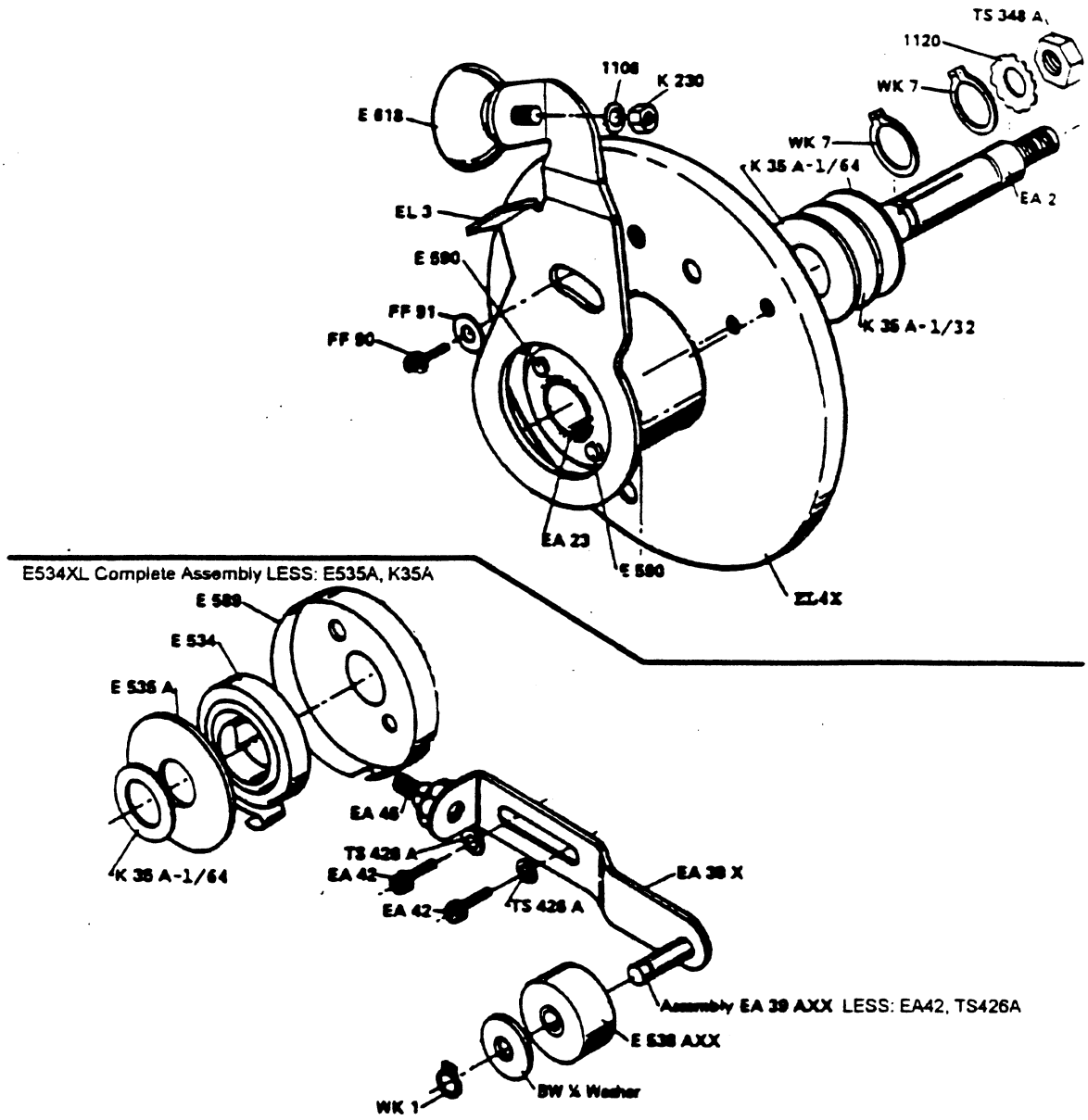
BETTER PACK 555 S&L

FIGURE 5
MEASURING WHEEL & HUB ASSEMBLY (555S)



BETTER PACK 555 S&L

FIGURE 6
MEASURING WHEEL & HUB ASSEMBLY (555L)



BETTER PACK 555 S&L

FIGURE 7
BUMPER RADIUS PLATE ASSEMBLY
EA-3-BXX

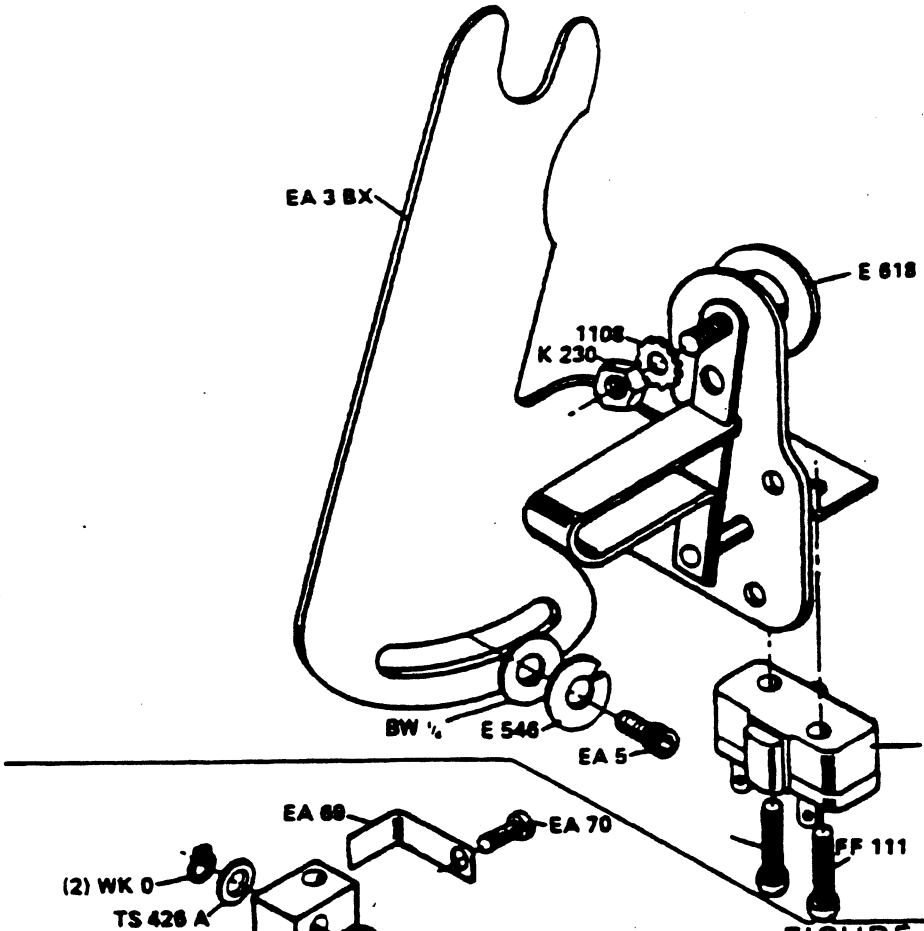
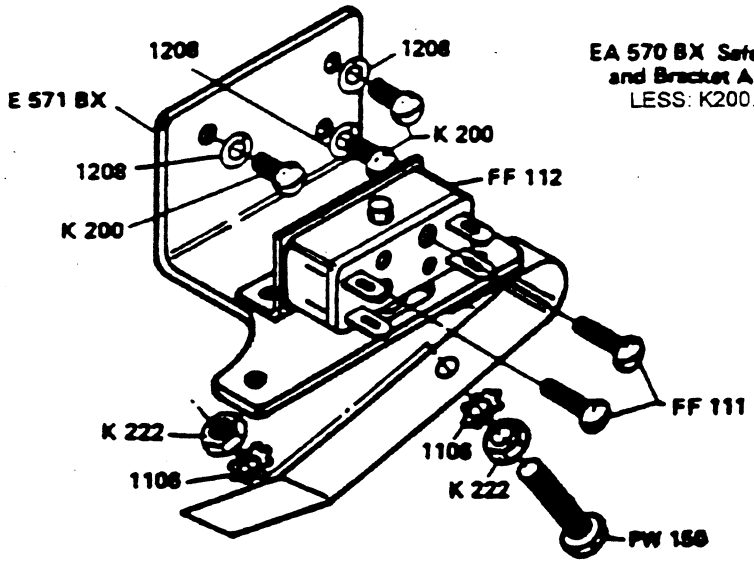


FIGURE 8
CLUTCH CONNECTING ROD ASSEMBLY

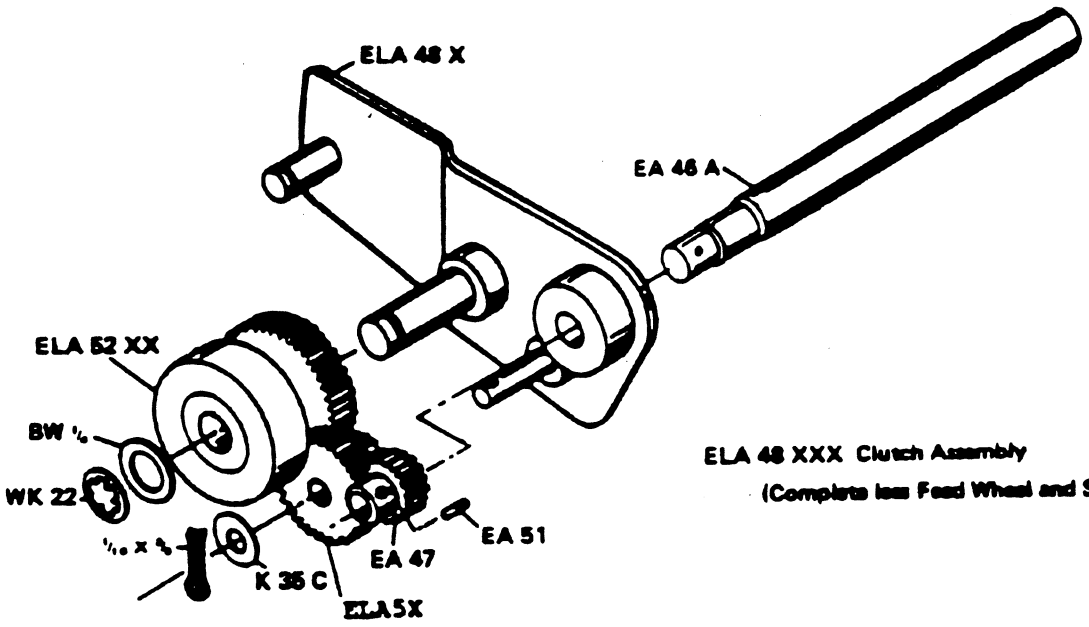
BETTER PACK 555 S&L

FIGURE 9
SAFETY SWITCH ASSEMBLY (555 L)



EA 570 BX Safety Switch and Bracket Assembly
LESS: K200. 1208

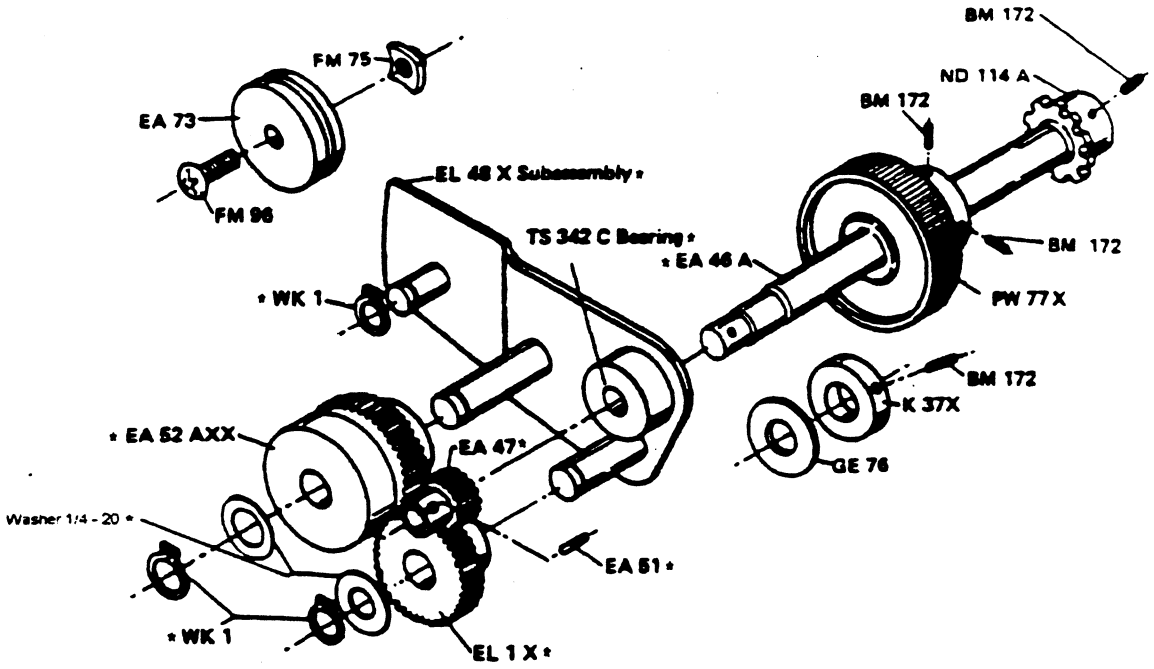
FIGURE 10
CLUTCH ASSEMBLY (555 LL)



ELA 48 XXX Clutch Assembly
(Complete less Feed Wheel and Sprocket)

BETTER PACK 555 S&L

FIGURE 11
CLUTCH ASSEMBLY (555L)



* EL 48 XXX Clutch Assembly

BETTER PACK 555 S&L

FIGURE 12
CLUTCH ASSEMBLY (555S)

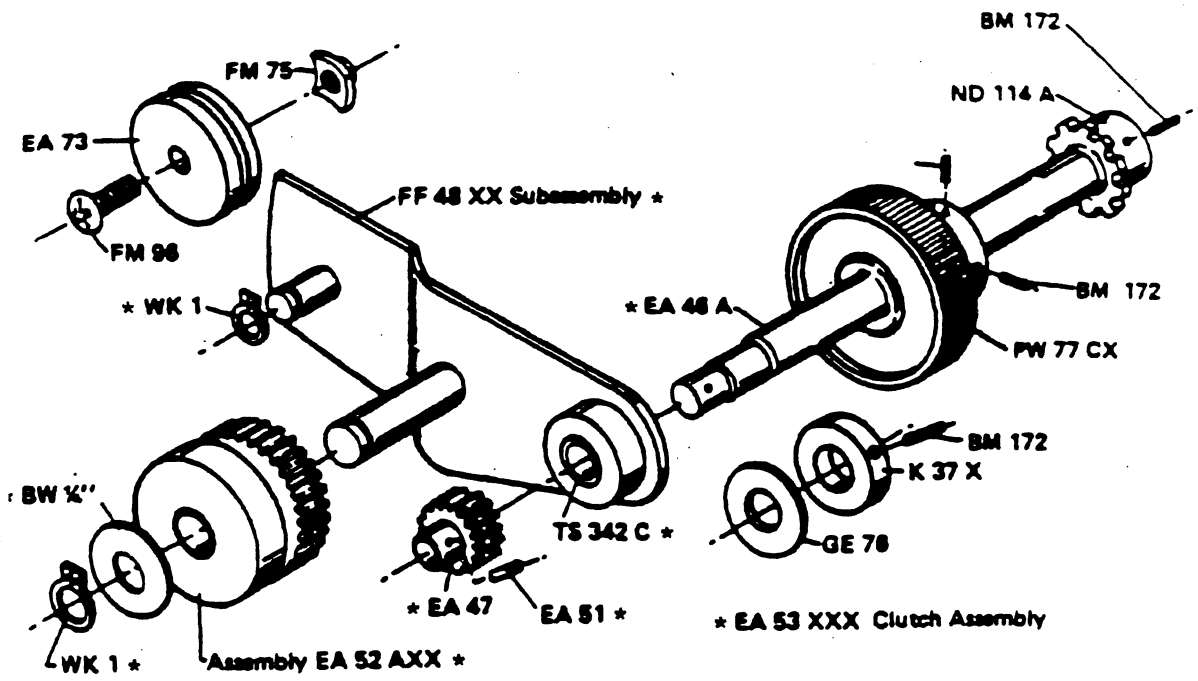
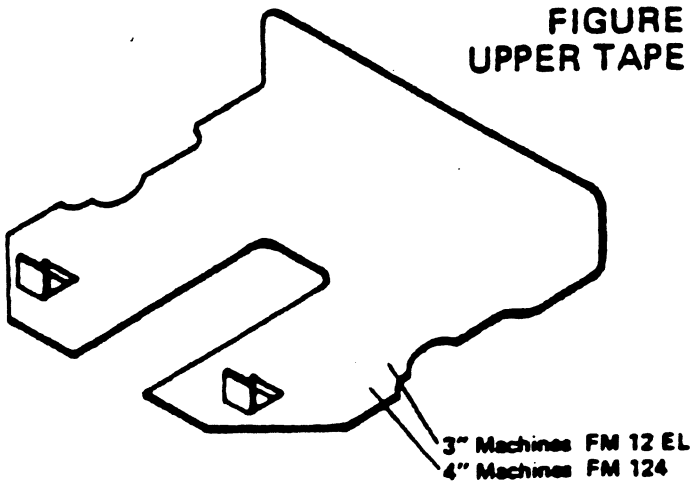


FIGURE 13
UPPER TAPE PLATE



BETTER PACK 555 S&L

FIGURE 14
CUTTER YOKE ASSEMBLY

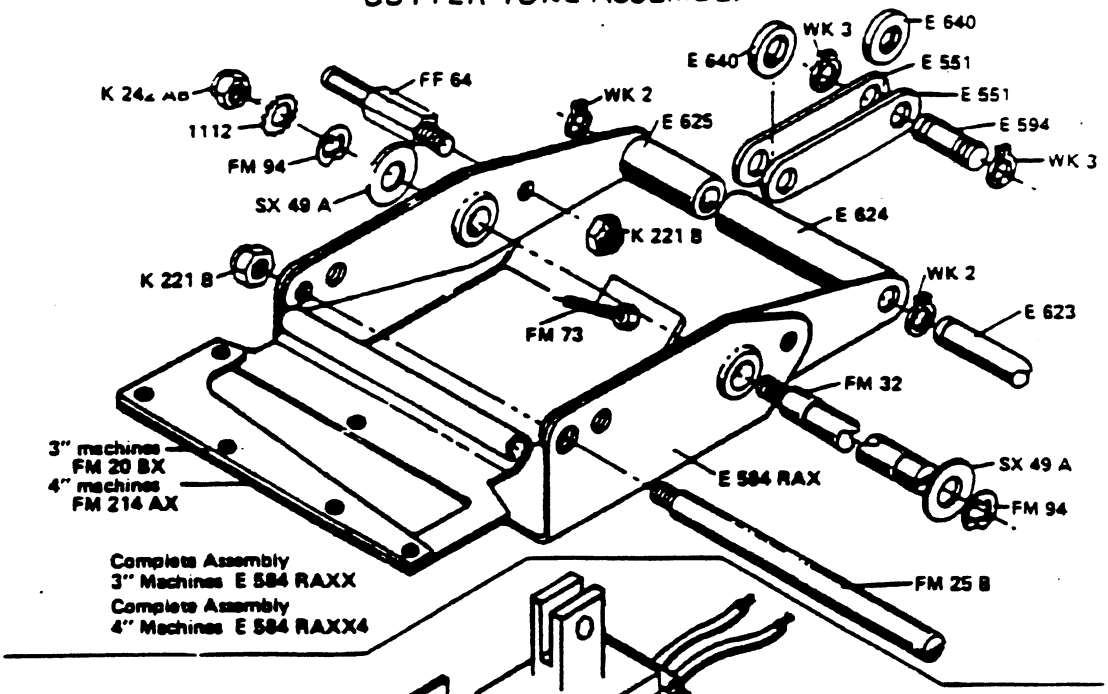
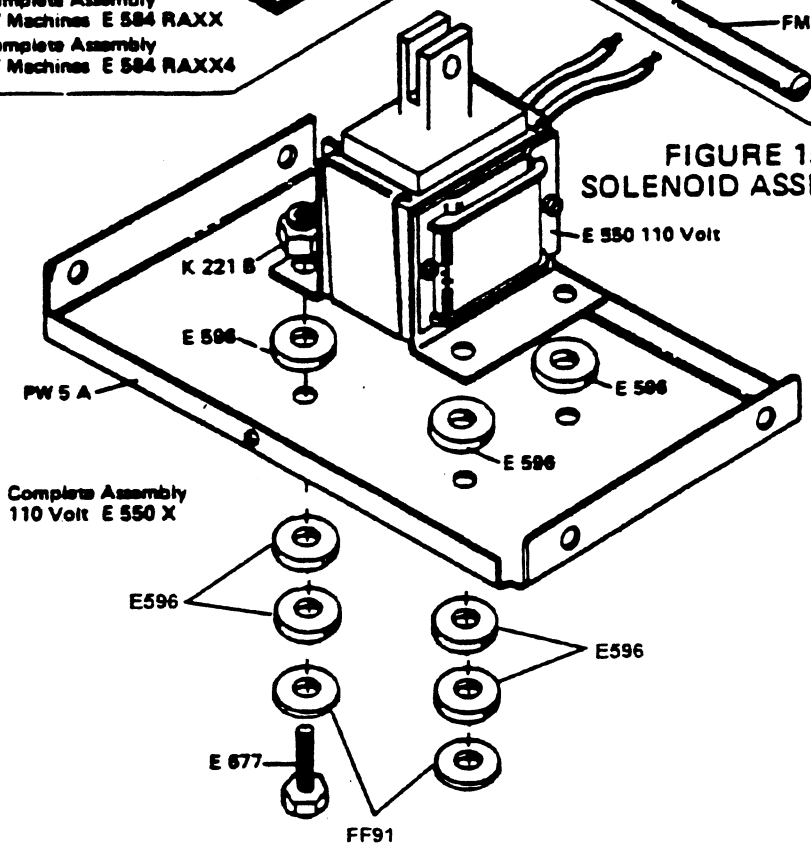


FIGURE 15
SOLENOID ASSEMBLY



BETTER PACK 555 S&L

FIGURE 16
IDLER ASSEMBLY

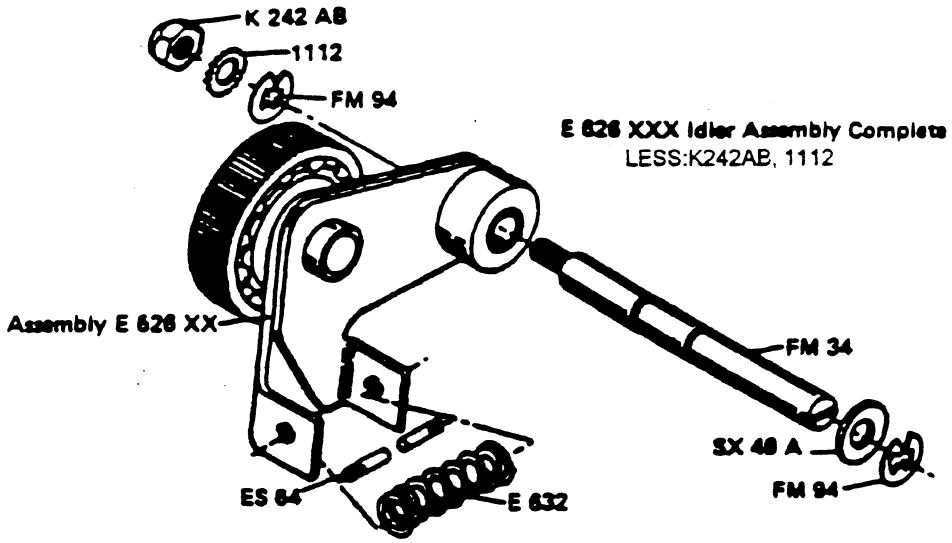
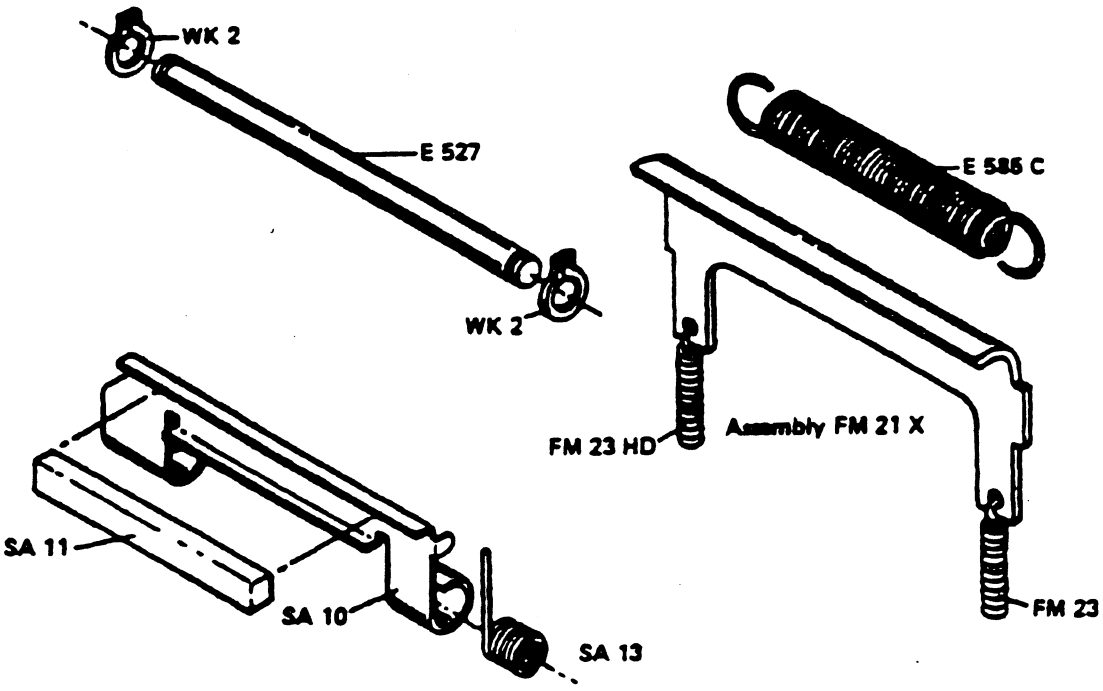


FIGURE 17



BETTER PACK 555 S&L

FIGURE 18

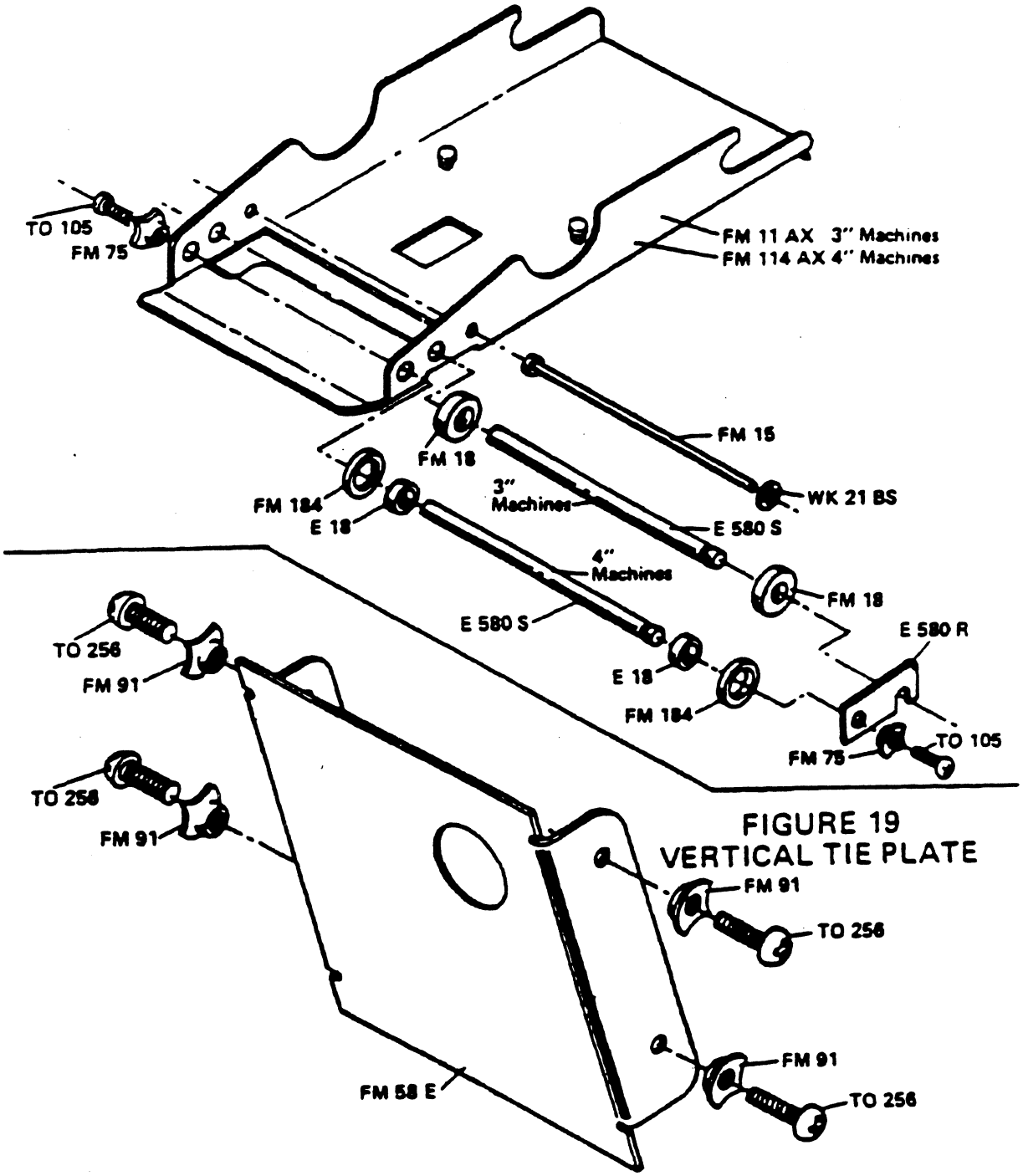


FIGURE 19
VERTICAL TIE PLATE

BETTER PACK 555 S&L

FIGURE 20
(GUM IN TAPE)

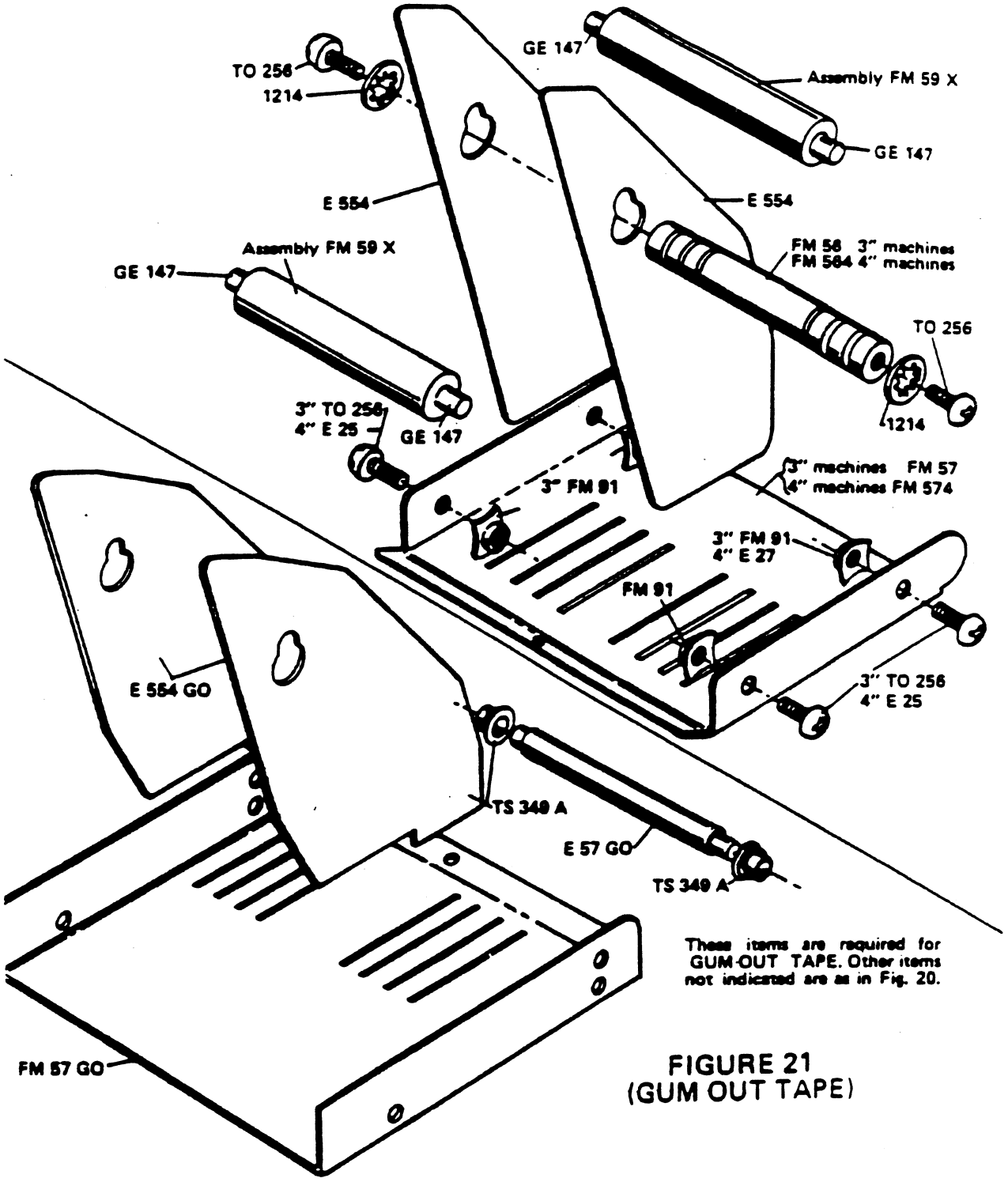
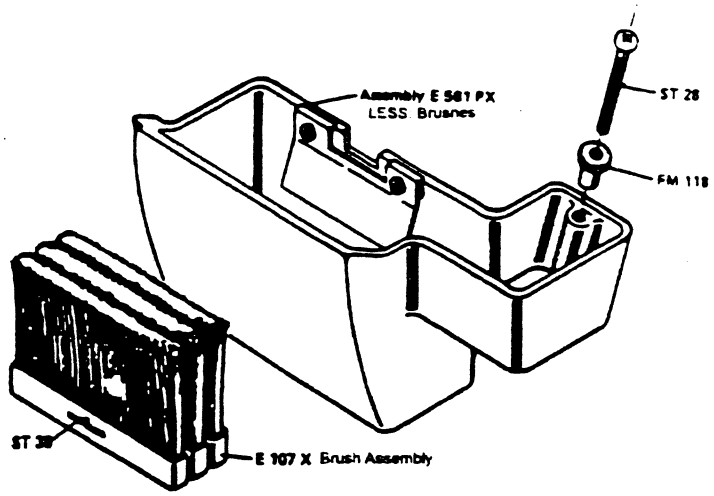


FIGURE 21
(GUM OUT TAPE)

BETTER PACK 555 S&L

FIGURE 22
TANK ASSEMBLY



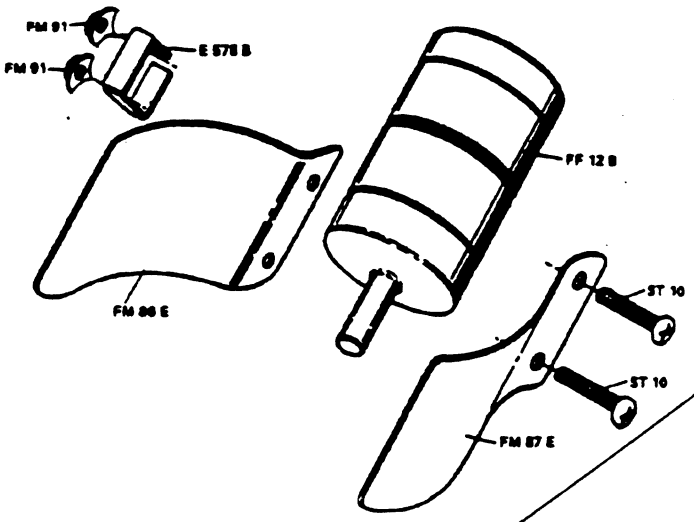
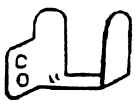


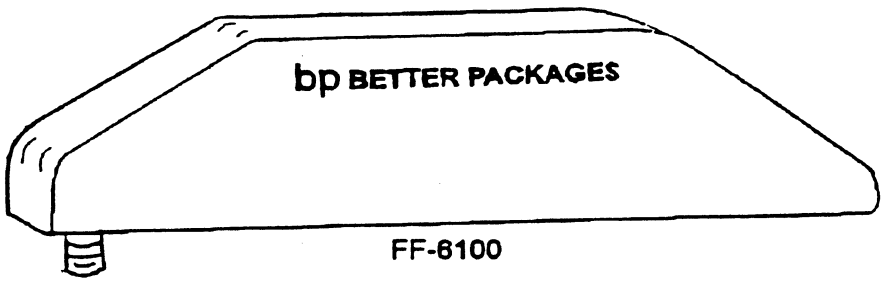
FIGURE 23
WATER BOTTLE

NEW WATER BOTTLE

FF-6120



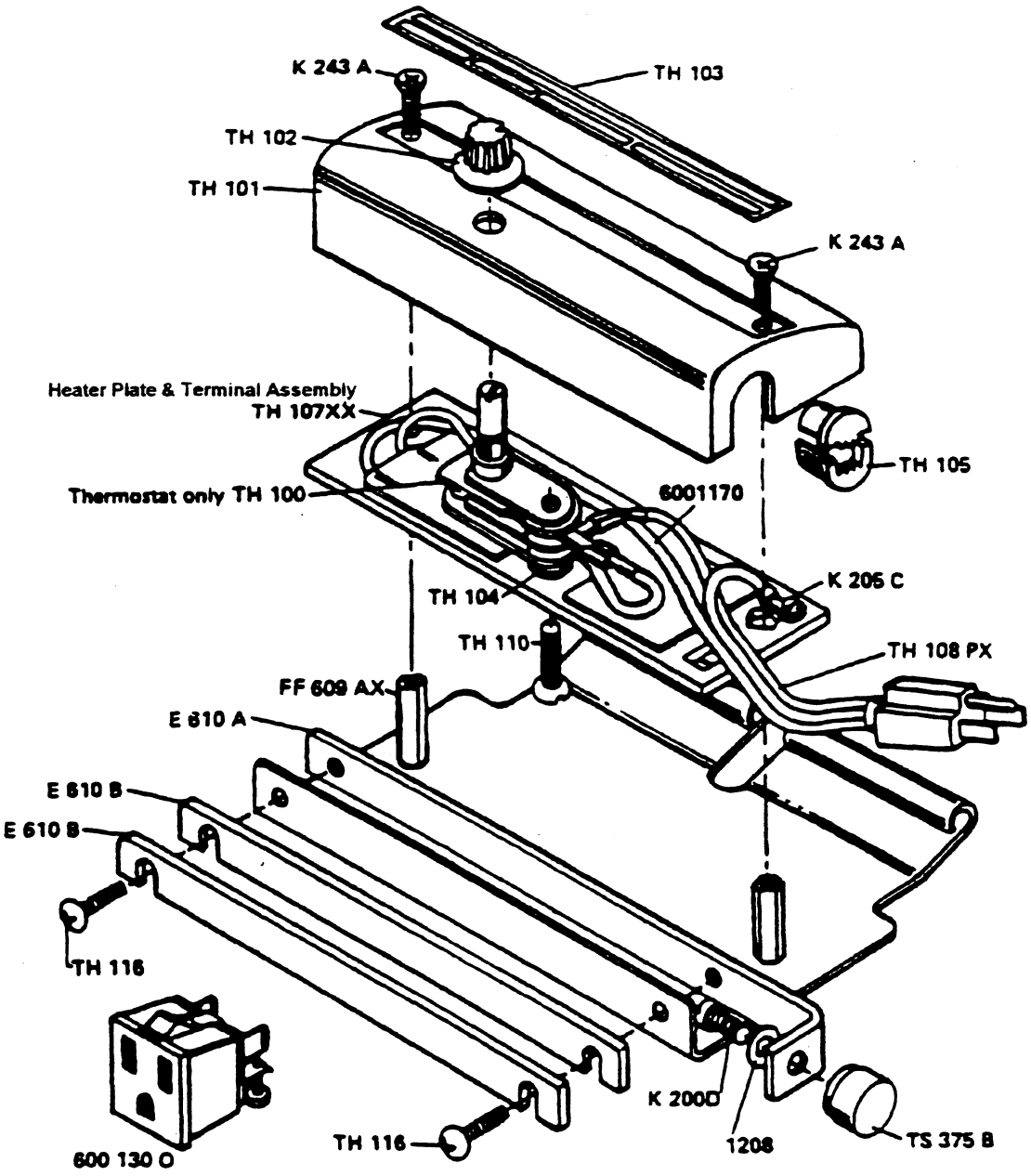
FF-6110



FF-6100

BETTER PACK 555 S&L

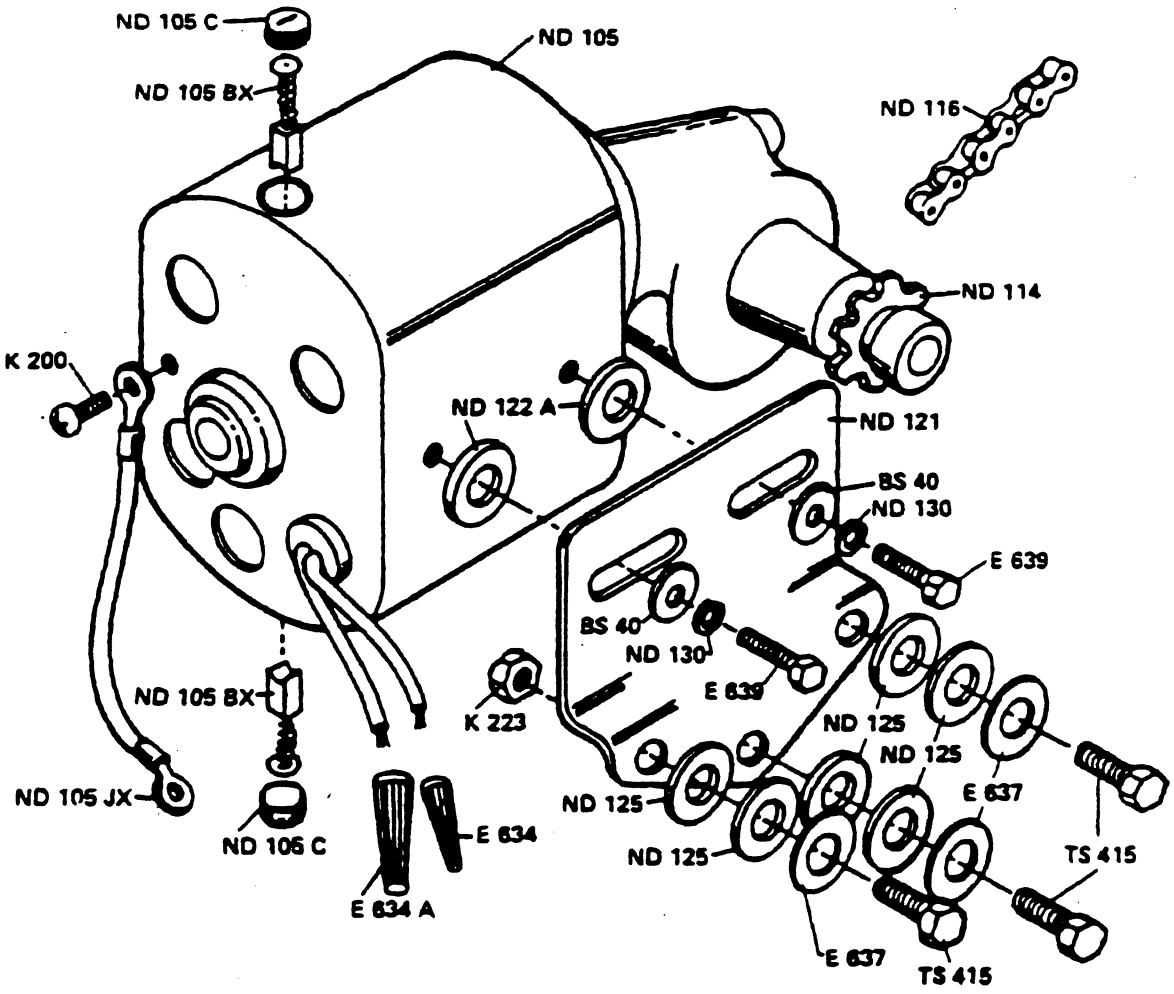
FIGURE 24
HEATER AND TOP PLATE ASSEMBLY



Complete Assembly 110 Volt – TH 55 PXXX
LESS: 600-130-0

BETTER PACK 555 S&L

FIGURE 25
MOTOR



Complete Assembly 110 Volt ND 105 X
LESS: ND-105-JX, ND-116, E-634-A, E-634
K223, ND125, E637, TS415

Better Pack 555L & 555S

All Parts Listed are common to both models except as noted.

FIG. 1

Quantity	Part Number	Description
1	E500RXXX	Right Side Frame Assembly
2	TS349A	Bearing
1	T1A	Bearing
1	FM22R	Bracket
1	PW134	Pin
2	A47	Rubber Feet
2	PW17	Rivet (no longer used - A47 now use adhesive)
1	SK24G	Rubber Grommet

FIG. 2

Quantity	Part Number	Description
1	E500LXXX	Left Side Frame Assembly
2	TS349A	Bearing
1	E121	Bearing
1	E120	Oil Seal Gasket
1	PW134	Pin
2	A47	Rubber Feet (stick-on foot)
1	SK24G	Rubber Grommet

FIG. 3

Quantity	Part Number	Description
1	E559	Motor and Chain Cover
1	ST46	Wire Clamp
1	TO105	Screw
1	K201F	Screw
1	E583	Rear Cover
1	E582X	Front Cover
1	FM3E	Lower Front Cover
1	FM61	Screw
1	FM91	Nut
1	E690	Bottom Plate
2	EA70	Screw
1	FM40E	Tank Shelf
1	FM96	Screw
1	E530	Bumper Plate

FIG. 4

Quantity	Part Number	Description
1	E547SFX	Key Drum Assembly Note: For Serial #S9909 and up. Prior to Serial #S9909 must also order replacement E607EX Male Plug Harness Assembly.
1	E547LEX	Key Drum Assembly Note: For Serial #L8324 and up. Prior to Serial #L8324 must also order replacement E607EX Male Plug Harness Assembly.
1	E547D	Key Drum
11	E501LX	Key Switch Assembly
22	E501LS	Key Switch Screw
11	E501LN	Key Switch Knurled Nut
11	E501SW	Spring Washer
2	E501BW	Buss Wire
1	E112	Key Switch Ground Strip (Canadian Machines Only)
1	ST113	Pilot Light and Power Switch Combo. Note: For Serial #S37471 and #L33153 and up.
	DU60	Pilot Light From Serial #S8135 and L6764 to #S3747 and L33152
	E557	Pilot Light Prior to Serial #S8135 and L6764
1	ST114	Momentary Switch. Note: For Serial #S37471 and #L33153 and up.
	E502	Prior to #S37471 and L33153 (No longer available use ST114)
1	E715	Knurled Nut
1	PCPG1AX	Power Cable Assembly. Note: For Serial #S37471 and #L33153 and up.
	PCPG1A	Prior to Serial #S37471 and #L33153
1	ST116	Parallel Connector
1	E714	Strain Relief
1	E650A	Plastisol Cap (specify color)
1	E650AK	Plastisol Cap (kit of 12 assorted colors)
1	E577	Drum Labels (set of 14 numbers)
1	E575	Access Hole Cover
1	E563SX	6 - 36 Scale Assembly
1	E563LX	45 - 15 Scale Assembly
1	E563X	36 - 6 Scale Assembly
1	E563LSX	72 - 12 Scale Assembly
1	E563LLX	90 - 30 Scale Assembly
1	BS40	Washer
2	TO105 now K241C	Screw
2	E608	Nut
1	E695	Button Hole Plug
4	TO105	Screw
1	E606GX	Female Receptacle Harness Assembly (for Drum) Note: For Serial #S37471 and #L33153 and up. Prior replace E606GX and E607EX together.

FIG. 4 Con't

Quantity	Part Number	Description
1	E607EX	Male Plug Harness Assembly (for machine) Note: For Serial #S6366 and #L8324 and up. Prior replace E606GX and E607EX together.
1	ST115	Adapter
1	E674	Lockwasher

FIG. 5

Quantity	Part Number	Description
1	EA18BXXX	Measuring Wheel, Spring & Arm Assembly (Complete)
1	EA18X	Measuring Wheel & Hub Assembly
2	E590	Pin
1	EA23	Hub Bearing
1	TS384A	Hex Nut (Not Part of EA18BXXX)
1	1120	Lock Washer (Not Part of EA18BXXX)
2	WK7	Retaining Ring (Not Part of EA18BXXX)
1	EA2	Main Pivot Post (Not Part of EA18BXXX)
2	K35A	Washer 1/64" (Not Part of EA18BXXX)
2	K35A	Washer 1/32" (Not Part of EA18BXXX)
1	E534XS	Sector return Spring & Cup Assembly (Not Part of EA18BXXX)
1	E589	Sector Return Spring Cup (Not Part of EA18BXXX)
1	E534	Sector Return Spring (Not Part of EA18BXXX)
1	E535A	Return Spring Plate Washer (Not Part of EA18BXXX)
1	ST142	Spiral Pin
1	EA82B	Switch Trip Lever
1	EA80	Trip Lever Spring
2	TS426A	Washer
1	EA81	Trip Lever Guide Bushing
1	K243A	Screw
1	EA39AXX	Trip Arm and Roller Assembly
1	EA39X	Trip Arm Assembly
1	E538AXX	Trip Roller Assembly
1	EA45	Set Screw
2	EA42	Screw
1	Washer 1/4 - 20	Washer 1/4 - 20
1	WK1	Retaining Ring

FIG. 6

Quantity	Part Number	Description
1	EL4AXX	Measuring Wheel, Trip & Bumper Assembly (Complete)
1	EL4X	Measuring Wheel & Hub Assembly
2	E590	Pin
1	EA23	Hub Bearing
1	TS348A	Hex Nut (Not Part of EL4AXX)
1	1120	Lock Washer (Not Part of EL4AXX)
2	WK7	Retaining Ring (Not Part of EL4AXX)
1	EA2	Main Pivot Post (Not Part of EL4AXX)
2	K35A	Washer 1/64" (Not Part of EL4AXX)
2	K35A	Washer 1/32" (Not Part of EL4AXX)
1	E534XL	Sector Spring & Cup Assembly (Not Part of EL4AXX)
1	E589	Sector Return Spring Cup (Not Part of EL4AXX)
1	E534	Sector Return Spring (Not Part of EL4AXX)
1	E535A	Return Spring Plate Washer (Not Part of EL4AXX)
1	EL3	Bumper Cup Arm
1	E618	Bumper Suction Cup
2	EA42	Screw
1	FF90	Bumper Adjusting Screw
1	FF91	Washer
2	TS426A	Washer
1	K230	Nut
1	1108	Lock Washer
1	EA39AXX	Trip Arm & Roller Assembly
1	EA39X	Trip Arm Assembly
1	E538AXX	Trip Roller Assembly
1	EA45	Set Screw
1	Washer 1/4 - 20	Washer 1/4 - 20
1	WK1	Retaining Ring

FIG. 7

Quantity	Part Number	Description
1	EA3BXX	Bumper Radius Plate Assembly (complete)
1	EA3BX	Bumper Radius Plate Subassembly
1	FF112	Switch
2	FF111	Screw
1	E618	Bumper Suction Cup
1	1108	Lock Washer
1	K230	Nut
1	E546	Lock Washer (Not Part of EA3BXX)
1	EA5	Screw (Not Part of EA3BXX)
1	Washer 1/4	Burr Washer (thick) (Not Part of EA3BXX)

FIG. 8

Quantity	Part Number	Description
1	EA57X	Clutch Connecting Rod Assembly (Complete)
	ELA57X	For 555-LLS 72" - 12" or 555LL 90" - 30" (Complete)
4	WK0	Retaining Ring
2	TS426A	Washer
1	EA64	Connecting Rod Upper Block
	EA64LL	For 555-LLS 72" - 12" or 555LL 90" - 30"
1	EA57	Connecting Rod
1	EA65	Connecting Rod Lower Block
1	EA69	Block Retaining Spring
1	EA70	Screw
1	WK1	Retaining Ring (Not Part of EA57X ELA57X)

FIG. 9

Quantity	Part Number	Description
1	EA570BX	Safety Switch and Bracket Assembly (Complete)
1	E571BX	Switch Mount Bracket Assembly
1	FF112	Switch
1	PW150	Screw
2	K222	Nut
2	FF111	Screw
2	1106	Lock Washer
3	K200	Screw (Not Part of E570BX)
3	1208	Lock Washer (Not Part of E570BX)

FIG. 10

Quantity	Part Number	Description
1	ELA48AXXX	Clutch Assembly (complete) (555L & 555LLS Machines)
1	ELA48X	Clutch Plate Assembly
1	EA46A	Feed Wheel Shaft
1	EA47	Feed Wheel Shaft Pinion Gear
1	EA51	Feed Wheel Shaft Pin
1	ELA5X	Intermediate Gear Assembly
1	ELA52XX	Clutch Roller and Gear Assembly
1	WK22	Retaining Ring
1	K35C	Washer
1		Cotter Pin 1/16" X 3/8"
1	Washer 1/4 - 20	Washer 1/4 - 20

FIG. 11

Quantity	Part Number	Description
1	EL48XXX	Clutch Assembly (includes all parts marked with *) (Complete)
1	EL48X	Clutch Plate Subassembly
1	EA46A	Feed Wheel Shaft
1	EA47	Feed Wheel Shaft Pinion Gear
1	EA51	Feed Wheel Shaft Pin
1	EL1X	Intermediate Gear Assembly
1	EA52AXX	Clutch Roller and Gear Assembly
2	Washer 1/4 - 20	Washer 1/4 - 20
2	WK1	Retaining Ring
1	TS342C	Bearing
1	PW77X	Knurled Feed Wheel Assembly (standard) (Not Part of EL48XXX)
1	PW77CX	Knurled Feed Wheel Assembly (chrome) (Not Part of EL48XXX)
4	BM172	Set Screw (Part of PW77X & PW77CX)
1	K37X	Collar Assembly (Not Part of EL48XXX)
1	ND114A	Feed Wheel Shaft Sprocket (Not Part of EL48XXX)
1	GE76	Brass Washer (Not Part of EL48XXX)
1	EA73	Clutch Guide (Not Part of EL48XXX)
1	FM96	Screw (Not Part of EL48XXX)
1	FM75	Nut (Not Part of EL48XXX)
2	Washer 1/4 - 20	Washer 1/4 - 20

FIG. 12

Quantity	Part Number	Description
1	EA53XXX	Clutch Assembly (includes all parts marked with *) (Complete)
1	FF48XX	Clutch Plate Subassembly
1	EA52AXX	Clutch Roller and Gear Assembly
1	EA46A	Feed Wheel Shaft
1	EA47	Feed Wheel Shaft Pinion Gear
1	EA51	Feed Wheel Shaft Pin
1	WK1	Retaining Ring
1	Washer 1/4 - 20	Washer 1/4 - 20
1	TS342C	Bearing
1	PW77X	Knurled Feed Wheel Assembly (standard) (Not Part of EA53XXX)
1	PW77CX	Knurled Feed Wheel Assembly (chrome) (Not Part of EA53XXX)
4	BM172	Set Screw (Part of PW77X & PW77CX)
1	K37X	Collar Assembly (Not Part of EA53XXX)
1	ND114A	Feed Wheel Shaft Sprocket (Not Part of EA53XXX)
1	GE76	Brass Washer (Not Part of EA53XXX)
1	EA73	Clutch Washer (Not Part of EA53XXX)
1	FM96	Screw (Not Part of EA53XXX)
1	FM75	Nut (Not Part of EA53XXX)

FIG. 13

Quantity	Part Number	Description
1	FM12EL	Upper Tape Plate - 3" Machine
1	FM124	Upper Tape Plate - 4" Machine

FIG. 14

Quantity	Part Number	Description
1	E584RAXX	Cutter Yoke Assembly - 3" Machine (Complete)
1	E584RAXX	Cutter Yoke Assembly - 4" Machine (Complete)
1	E584RAX	Cutter Yoke Subassembly - 3" & 4" Machines
1	FM20BX	Movable Shear Assembly - 3" Machine
1	FM214AX	Movable Shear Assembly - 4" Machine
1	FM25B	Pin - After Serial #8898
	FM25A	Pin - Prior to Serial #8898
2	K221B	Nut
2	FM94	Retaining Ring
2	SX49A	Washer
1	FM32	Shaft
1	FM73	Set Screw
1	E623	Shaft
2	WK2	Retaining Ring
1	E624	Spacer
1	E625	Spacer
2	E551	Link
2	E640	Felt Washer
2	WK3	Retaining Ring
1	E594	Pin
1	FF64	Pivot Pin
1	K242AB	Stop Nut
1	1112	Lock Washer

FIG. 15

Quantity	Part Number	Description
1	E550X	Solenoid Assembly - 110 Volt
1	PW5A	Solenoid Shelf
4	E596	Rubber Washer
4	K221B	Nut
1	E599	Cushion (not used anymore) use (8) E596 washer
1	E598	Cushion Plate (not used anymore) use (4) FF91 washer
4	E677	Screw
1	E550	Solenoid - 110 Volt

FIG. 16

Quantity	Part Number	Description
1	E626XXX	Idler Arm Assembly (complete)
1	E626XX	Idler Arm Assembly
1	FM34	Shaft
1	E632	Spring
2	ES64	Pin
1	SX49A	Washer
2	FM94	Retaining Ring
1	K242AB	Nut (Not Part of E626XXX)
1	1112	Lock Washer (Not Part of E626XXX)

FIG. 17

Quantity	Part Number	Description
1	E585C	Cutter Spring
1	FM21X	Stationary Shear Assembly (complete)
2	FM23HD	Shear Tip Spring (Part of FM21X)
1	SA10X	Felt and Bracket Assembly (complete)
1	SA10	Felt Bracket (Part of FM21X)
1	SA11	Felt (Part of FM21X)
1	SA13	Spring
1	E580	Rod
1	WK20	Retaining Ring
1	E527	Shaft
1	WK2	Retaining Ring

FIG. 18

Quantity	Part Number	Description
1	FM11AX	Lower Tape Plate Assembly - 3" Machine
1	FM114AX	Lower Tape Plate Assembly - 4" Machine
2	TO105	Screw
2	FM75	Nut
1	WK21BS	Retaining Ring
2	FM18	Shear Guide Roller - 3" Machine
1	E580SA	Pressure Plate Pivot Rod
1	E580RA	Pivot Rod Retainer
2	FM184	Shear Guide Roller - 4" Machine
2	E18	Spacer 4" Machine

FIG. 19

Quantity	Part Number	Description
1	FM58E	Vertical Tie Plate
4	TO256	Screw
4	FM91	Nut

FIG. 20

Quantity	Part Number	Description
2	FM59X	Wood Roller Assembly
2	GE147	Pin (Part of FM59X)
2	E554	Roll Guide
1	FM56	Slotted Tie Rod - 3" Machine
1	FM564	Slotted Tie Rod - 4" Machine
6	TO256	Screw
2	1214	Lock Washer
4	FM91	Nut - 3" Machine
1	FM57	Basket - 3" Machine
1	FM574	Basket - 4" Machine
4	E25	Screw - 4" Machine
4	E27	Nut - 4" Machine

FIG. 21 (Gum-Out Tape)

Quantity	Part Number	Description
2	E554GO	Roll Guide
1	FM57GO	Basket
2	TS349A	Bearing
1	E57GO	Basket Roller

FIG. 22

Quantity	Part Number	Description
1	E561PX	Tank Assembly (plastic)
1	ST28	Screw
1	FM118	Thumb Nut
1	E107X	Brush Assembly (Not Part of E561PX)
1	ST38	Cotter Pin (Part of E107X)

Iron Tank and Bottom Heater Assembly

Quantity	Part Number	Description
1	E561BRX	Tank Assembly
1	FM89X	Tank Plate Assembly
1	E687	Rear Brush Retainer
2	K200AB	Brass Screw
4	TO266	Screw
1	E591FX	Tank Heater Assembly Note: For Serial #31462 and up.
	E591CX	Prior to Serial #31462
1	K205A	Screw
1	S9	Washer
1	E635	Cable Clamp

FIG. 23

Quantity	Part Number	Description
1	FF12B	Water Bottle
1	FM86E	Liner
1	FM87E	Cradle
1	E578B	Spacer
2	ST10	Screw
2	FM91	Nut

New Water Bottle Parts

Quantity	Part Number	Description
1	FF6100	Water Bottle
1	FF6110	Rear Bracket
1	FF6120	Front Bracket

FIG. 24

Quantity	Part Number	Description
1	TH55PXXX	Top Heater Complete with Weights
1	TH55XX	Top Heater less Weights Note: For Serial #31462 and up.
	TH55XXX	From Serial #22646 to #31462
	FF55XXX	Prior to Serial #22646
1	FF609AX	Pressure Plate and Stud Assembly
1	TH107XX	Heater Plate and Terminal Assembly
1	TH108PX	Cord Set and Terminal Assembly
1	TH100	Thermostat
1	TH101	Top Heater Housing
1	TH102	Adjusting Knob with Set Screw

FIG. 24 Con't

Quantity	Part Number	Description
1	TH103	Name Plate
2	TH104	Thermostat Spacer
1	TH105	Strain Relief Bushing
1	TH110	Flat Head Screw
2	K243A	Cover Mounting Screw
1	K205C	Grounding Screw
1	1206	Lock Washer for Grounding Screw
1	6001170	Parallel Connector
1	TH121	Container of thermacote
1	E610A	Pressure Plate Weight
2	E610B	Pressure Plate Weight
2	TH116	Screw
1	K200D	Screw
1	1208	Lock Washer
1	TS375B	Knob
1	6001300	Heater Socket (Not Part of Top Heater Assy.)

FIG. 25

Quantity	Part Number	Description
1	ND105X	Motor and Bracket Assembly 110 Volt
1	ND105	Motor
2	ND105C	Brush Cap
2	ND105BX	Motor Brush and Spring Assembly
1	ND105JX	Ground Jumper (Not Part of ND105X)
1	K200	Screw (Not Part of ND105X)
1	E634	Connector (small) (Not Part of ND105X)
1	E634A	Connector (large) (Not Part of ND105X)
1	ND114	Sprocket
1	ND116	Chain and Connector Link (Not Part of ND105X)
1	ND121	Bracket
2	ND122A	Spacer
6	ND125	Rubber Washer (Not Part of ND105X)
3	E637	Steel Washer (Not Part of ND105X)
3	TS415	Screw (Not Part of ND105X)
3	K223	Nut (Not Part of ND105X)
3	BS40	Washer (Not Part of ND105X)
2	ND130	Lock Washer
2	E639	Screw

Replacement Parts Kits

FM20BXK - Shear Kit

Quantity	Part Number	Description
1	FM20BX	Movable Shear Assembly
1	FM14	Washer
1	FM25B	Pivot Rod
1	WK21BS	Retaining Ring
1	FM21	Stationary Shear
2	FM23HD	Tension Spring
1	FM25C	Pivot Rod
1	K221B	Nut

ND105BXK - Motor Brush & Spring Assembly Kit

Quantity	Part Number	Description
2	ND105BX	Motor Brush (set of two)

E650AK - Plastisol Caps Kit

Quantity	Part Number	Description
12	E650A	Plastisol Caps (set of 12 assorted)

SA10XXK - Blade Oiler Kit

Quantity	Part Number	Description
1	SA10X	Oiler Felt & Bracket Assembly
1	SA13	Oiler Bracket Tension Spring
1	WK21BS	Retaining Ring
1	FM12EL	Upper Tape Plate

EA46UXK - Urethane Feed Wheel Kit

Quantity	Part Number	Description
1	EA46AU	Feed Shaft
1	6000092	Urethane Feed Wheel
1	EA46D	Feed Wheel Bushing
1	EA46P	Feed Wheel Pin
1	ST156	Grip Ring 3/8"
1	EA51	Grove Pin

General Trouble Shooting Instructions

Electric Models 555L 555S

Tape Feed Problems:

1) Feeds erratic short strips (feed wheels not gripping tape securely)
   a. incorrect adjustment of set screw on cutter yoke assembly E-584-RAXX (see illustration 1)
   b. elongated holes in frame E-500-LXX or E-500-RXX for cutter yoke pivot shaft FM-32
   c. worn idler assembly E-626-XX
   d. worn feed wheel PW-77-X2

2) Long lengths or constant feed
   a. oil on measuring wheel EA-18-BXX, EL-4-AXX (see illustration 7 & 8)
   b. worn clutch roller EA-52-AXX (see illustration 7 & 8)
   c. incorrectly adjusted clutch roller EA-52-AXX (see clutch roller adjustment, illustration 7 & 8)
   d. worn trip roller (reset roller for key switches) E-538-AXX
   e. incorrect adjustment of trip roller E-538-AXX (see illustration 5 & 6)
   f. defective key switch E-501-LX (doesn't turn off (see illustration 6
   g. defective random key switch ST-114
   h. safety switch FF-112 defective or not being actuated by mechanism (see illustration 5 & 6)

3) Tape feeds slowly
   a. poor motor brush contact with commutator
   b. worn motor brushes
   c. defective motor ND-105-X
   d. tape is binding on sides (especially if CodeTaper is attached)

4) No Tape Feed

a. motor not operating ND-105-X

b. solenoid not operating E-550

c. neither motor or solenoid operating

d. cutter yoke far out of adjustment - feed wheel PW-77-X not gripping tape. (see cutter yoke and shear adjustment, illustration 1)

5) Tape Jams

a. shear blade FM-20-BX doesn't lift up before tape feeds. (see cutter yoke and shear adjustment, illustration 1)

b. tape is being pinched by pressure plate due to worn moistening brushes

c. upper tape plate FM-12-EL missing or not in correct position

d. reduce weight on pressure plate heater assembly TH-55-PXXX

e. insufficient space between heater pivot rod E-580-SA and lower tape plate FM-11-AX

6) Left hand corner of tape folded over

a. shear FM-20-BX too low. (check rocker set screw adjustment to raise shear, see cutter yoke and shear adjustment, illustration 1)

7) Strips not correct length, but consistent (lengths inaccurate up to 1")

a. see length adjustment instructions (see illustration 5 & 6)

Electrical Problems

1) Machine doesn't operate but pilot light and heater work
   a. improperly adjusted safety switch FF-112 so that switch doesn't close when measuring wheel EA-18-BXX or EL-4-AXX returns to rest. (see safety switch adjustment, illustration 5 & 6)
   b. defective safety switch FF-112 or assembly (see illustration 5 & 6)

2) Machine doesn't operate, pilot light doesn't light
   a. power cord not plugged in
   b. break in power cord PC-PG-1AX
   c. main power switch defective ST-113

3) Machine doesn't operate: pilot lights - heater doesn't work
   a. harness plug from key drum to machine not plugged in or connections are poor
   b. wire nuts E-634 and E-634A connecting motor ND-105-X and solenoid E-550 inside motor cover are not making good connection

4) Motor doesn't operate
   a. poor connection at wire nuts E-634 and E-634A under motor cover
   b. worn motor brushes
   c. brushes not contacting commutator
   d. defective motor ND-105-X

5) Solenoid doesn't operate
   a. poor connection at wire nuts E-634, E-634A under motor cover
   b. defective solenoid E-550-X

6) One key switch will not operate machine (all others do)

a. defective key switch E-501-LX (see illustration 6)

7) random switch doesn't operate

a. defective random switch ST-114

Cutting Problems

1) Shear Problems

a. shear blades have accumulated asphalt or non- asphaltic gum. Clean with suitable solvent and keep blade oiler fully oiled.

b. Check stationary blade FM-21-X for correct lateral adjustment (see lateral blade adjustment illustration 2 & 3)

c. blades dull FM-20-BX, FM-21-X (see illustration 1)

d. Cutter spring E-585-C needs replacing

e. Shear pivot holes cutter yoke E-584-RAX worn elongated

f. Solenoid E-550 has to much up and down motion on mounting plate. (see solenoid adjustment, illustration 4)

Miscellaneous Problems

1) Solenoid E-550 buzzes. (see solenoid adjustment, illustration 4)

   a. Solenoid mounting too tight. (not free to align itself, illustration 4)

   b. Solenoid mounting screws not evenly tightened.
   (plunger of solenoid not evenly seated, illustration 4)

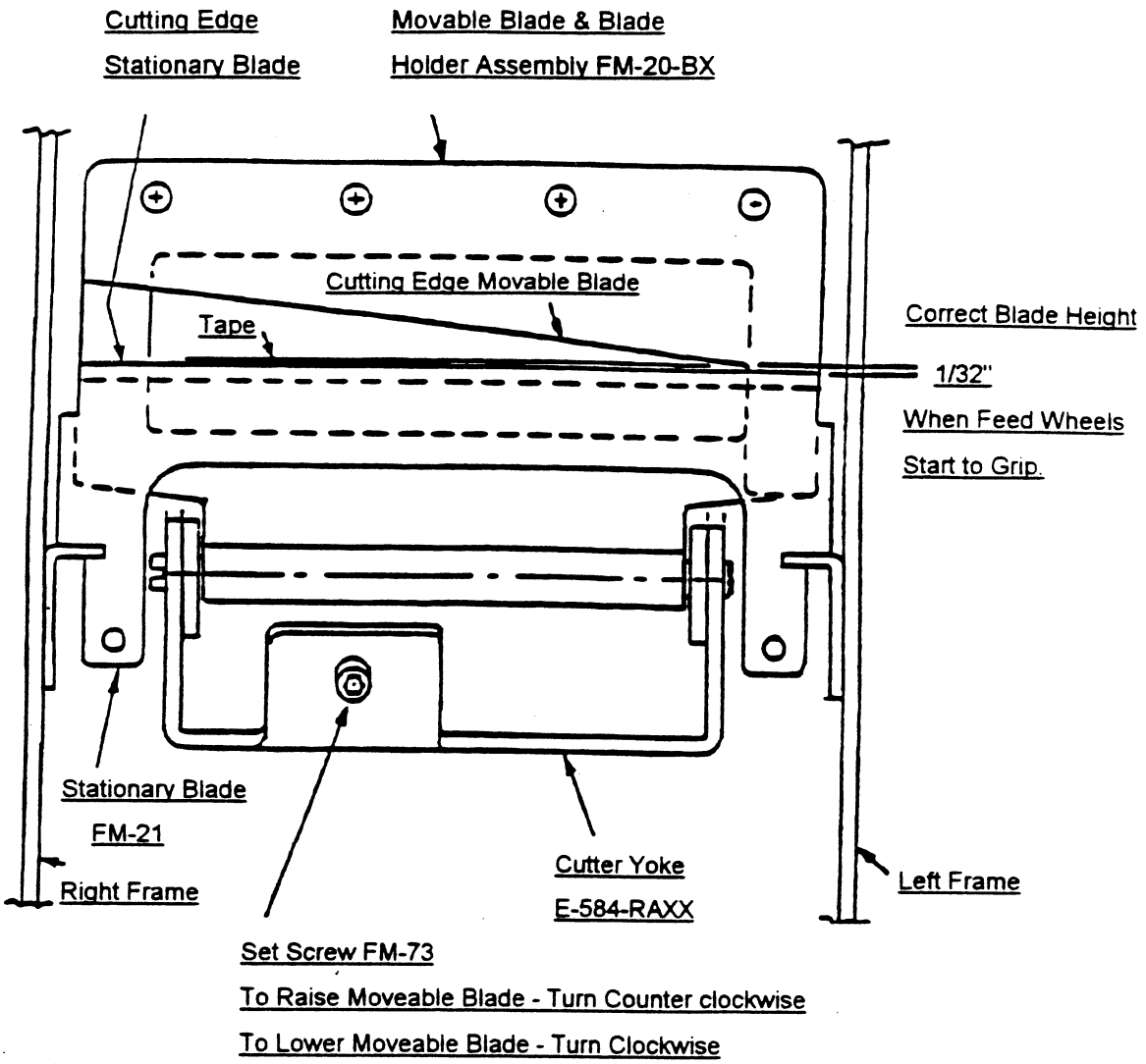
   c. Rust in and around plunger of solenoid.

   d. Solenoid sponge pad E-599 worn or deteriorated.

2) Tape roll jumps out when feeding.

   a. Core from previous roll of tape in machine.

   b. Bottom roller FM-59-X in basket missing or broken.



View From Rear

Movable Shear Blade Adjustment

Illustration 1

Cutter Yoke and Movable Shear Blade Adjustment

Model 555L & 555S

See Illustration 1

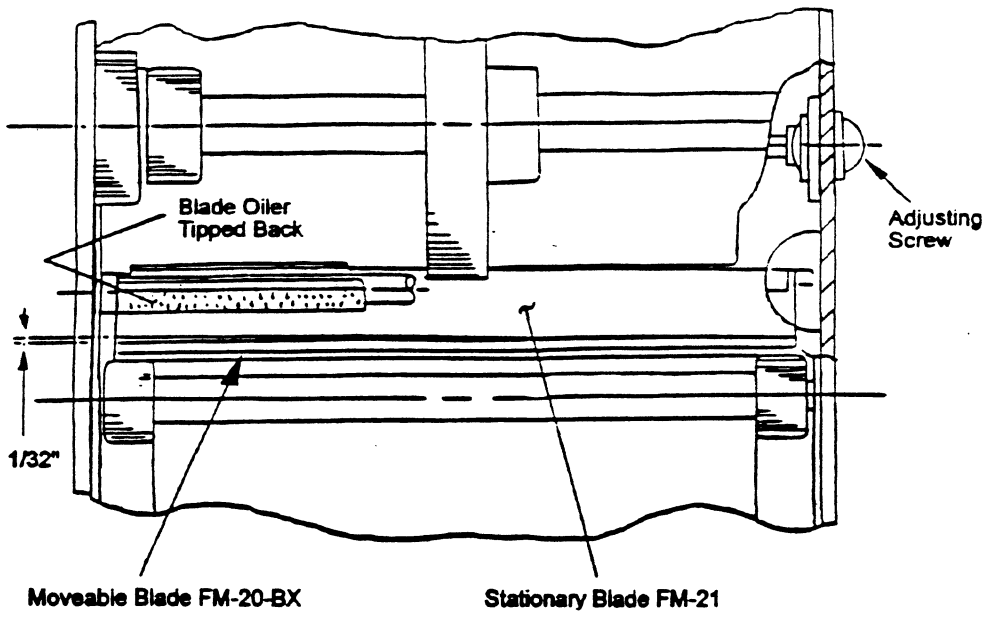
The purpose of this adjustment is to insure that the movable shear blade FM-20-BX is raised out of the path of the tape before the feed wheels come together and grip the tape to feed it forward.

Tools needed: 1. LN-23 Hex Screw Driver 3/32"
2. Short piece of reinforced tape

Unplug the machine from the power source. Remove bottle, brush tank and upper tape plate. Place a short strip of reinforced tape under the feed wheel. Reach into the opening in the front of the machine and lift the cutter yoke and movable shear assembly E-584-RAXX until the separable feed wheels are brought together and just grip the tape. At this point Increased resistance to lifting the cutter yoke assembly E-534-RAXX should be felt. Do this operation several times to Be sure to get the exact point at which the feed wheels start to grip the piece of tape. When this point is found, note the position of the lowest portion of the cutting edge of the movable shear blade FM-20-BX with respect to the stationary blade FM-21. If the adjustment is correct, there will be an opening for the tape approximately 1/32" high in the corner. See figure 1

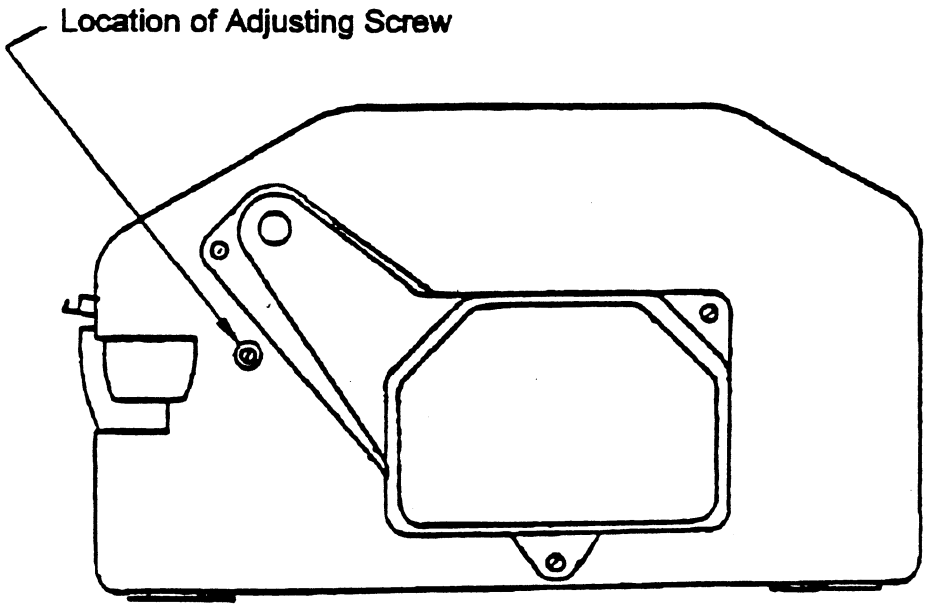
On the rear end of the cutter yoke assembly is a set screw which controls the height of the moving shear at the same time the feed wheels initially grip the tape. This set screw can be seen by looking through the large hole in the vertical tie plate in front of the basket section of the machine. If it as been found that the moving blade was too low, turn the set screw counterclockwise several turns and recheck the position. If the moving blade is too high, turn the set screw clockwise until the correct position is reached. After the adjustment has been made, the cutter yoke assembly should be lifted to be sure that after the feed wheels start to grip the tape it can raise still further against increased resistance.

Try dispensing tape, If the tape is catching on the corner of the shear and jamming, (turning up the left hand corner of the tape, or the tape is slipping under the feed wheels), the adjustment was not correctly made.



View from Front of Machine Looking Down on the Cutter Blades

Illustration 2



View of Right Frame

Illustration 3

Lateral Adjustment of Stationary Blade

Models 555L, 555S

See Illustration 2 & Illustration 3

Tools Needed: 1 Phillips Screw Driver

Unplug machine from power source. Face machine at the front. Tip back blade oiler to expose stationary blade FM-21. A spacing of approximately 1/32" should be visible between stationary and movable blades on the left hand side when the movable blade is down. The blades should be touching on the right side.

If no spacing is visible or spacing is incorrect on the left, then you Must go to the adjusting screw on the right side of the frame. This adjusting screw is in the form of a phillips head screw and a washer, located halfway down the chain cover on the side frame. Loosen the screw just enough to allow movement up and down. Move up for more space, move down for less space.

NOTE: Some difficult-cutting reinforced tapes may require the maximum spacing on the left side. (approximately 3/64").

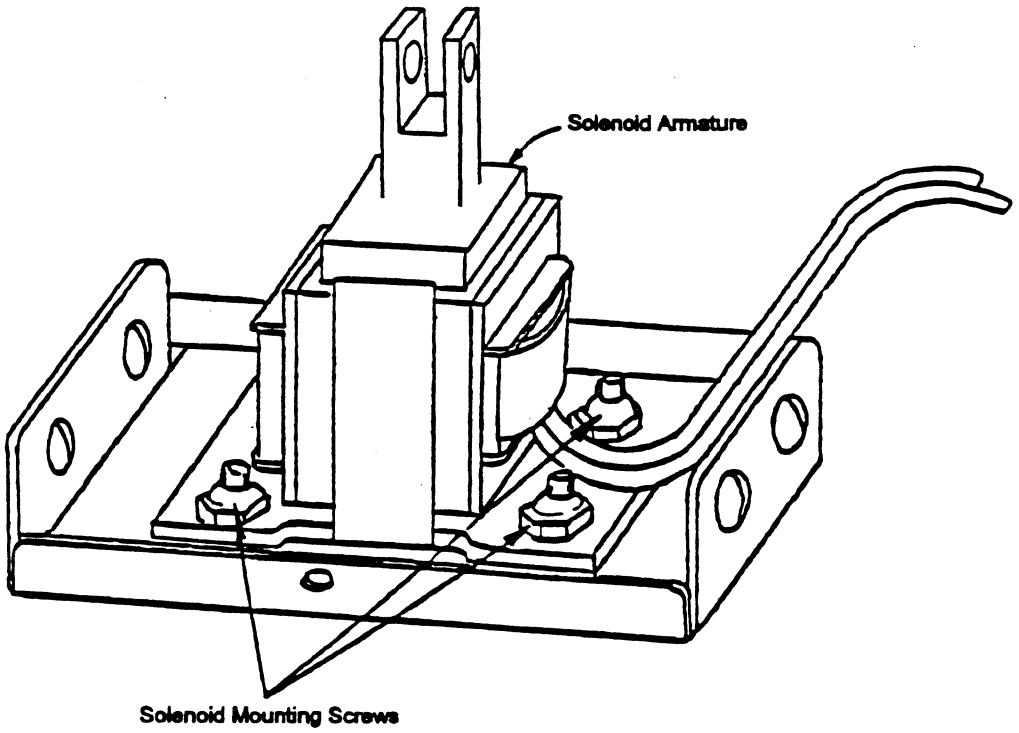


Illustration 4

Solenoid Adjustment

Models 555L, 555S

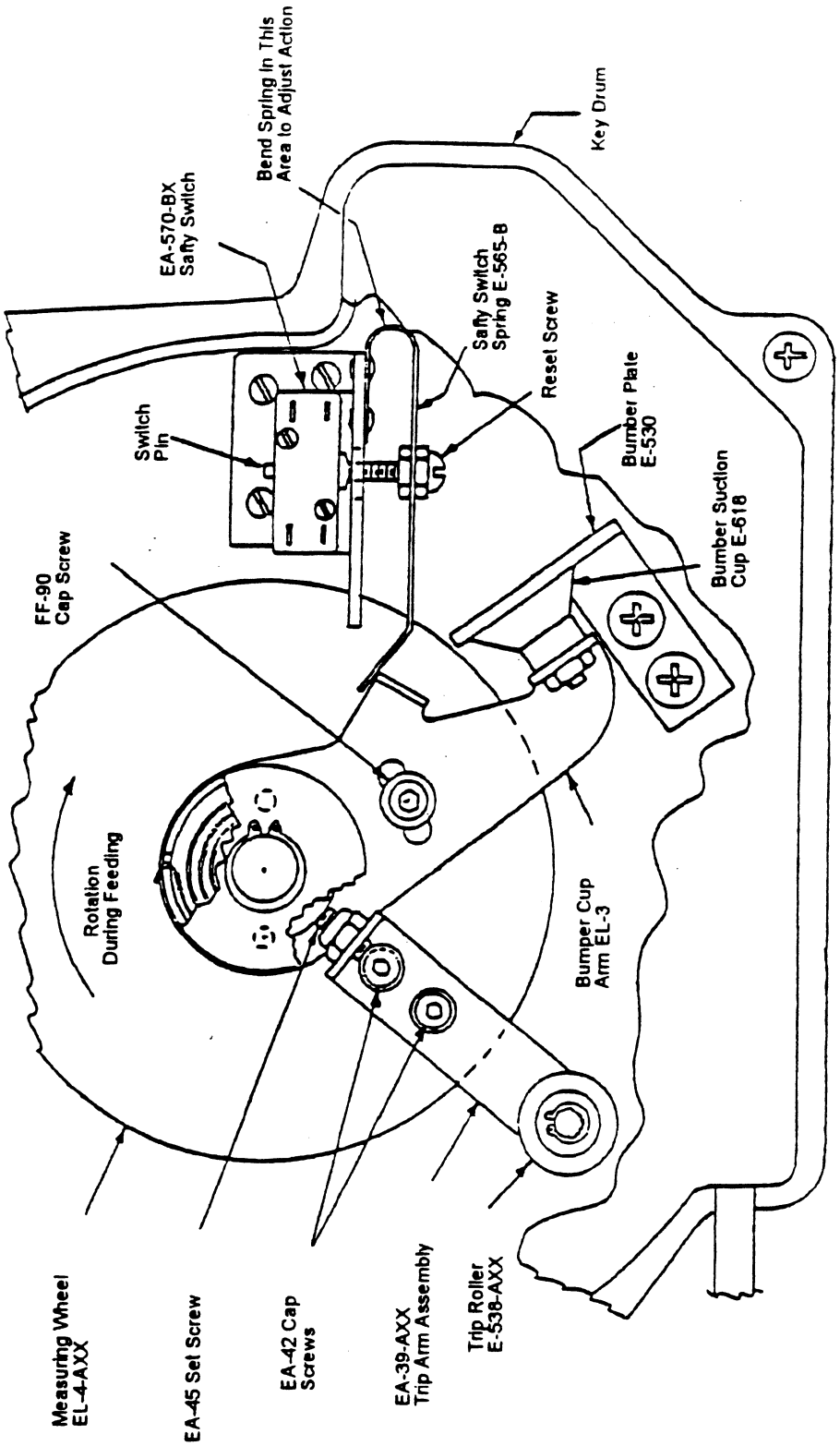
See Illustration 4

Tools Needed: 3/8" Open End Wrench
5/16" Nut Driver

When the solenoid buzzes it is an indication that the cutter yoke linkage and the solenoid are not in correct alignment. More often than not, the misalignment can be traced to uneven tightness of the four mounting screws of the solenoid.

Either tighten or loosen both screws on one half of the machine, then operate the machine if buzzing doesn't stop repeat to other side of machine. Operate the machine several times to see if the buzzing as been cured.

If this doesn't cure the problem and you are certain that the solenoid is in proper alignment, remove the solenoid and shelf assembly from the machine and look for dirt under the armature of the solenoid. The solenoid should not be tighten down tight. It should be loose enough so that it can slide from side to side on it's mounting screws. If it is too loose and there is too much up and down motion on the mounting screws, the cutting may be sluggish.



Model 555L
Illustration 5

Safety Switch Adjustment

Model 555L

See Illustration 5

Tools needed: Screw Driver
5/16" Open End Wrench
Needle Nose Pliers

Unplug machine from power source. Remove key drum assembly. To the right of the measuring wheel is the safety switch assembly EA-570-BX. At the base of this assembly is the safety switch spring E-565-B. This is where the adjustment will be made.

With the screw driver, turn the reset screw all the way up. Now with the needle nose pliers bend the flat spring at the right hand side at the curved portion to shift the reset screw and allow it to move freely in the slot. Check adjustment by pressing down the switch pin from the top. Revolve measuring wheel manually to make sure the switch shuts off when the bumper suction cup comes within 1/4" of the bumper plate. If it doesn't, readjust the screw and spring until it resets at the proper point.

With screw driver and 5/16" open end wrench, tighten to secure the screw in position.

Length Adjustment

Model 555L

See Illustration 5

Tools needed: LN-25 hex screw driver

Unplug machine from power source. Remove Access Hole Cover E-575. With the LN-25 hex screw driver, loosen the Cap Screw FF-90 that holds the Bumper Cup Arm to the Measuring Wheel.

Hold Bumper Cup Arm against the bumper plate and move Cap Screw and Measuring Wheel in clockwise direction to shorten, counter clockwise to lengthen. Re tighten Cap Screw to secure.

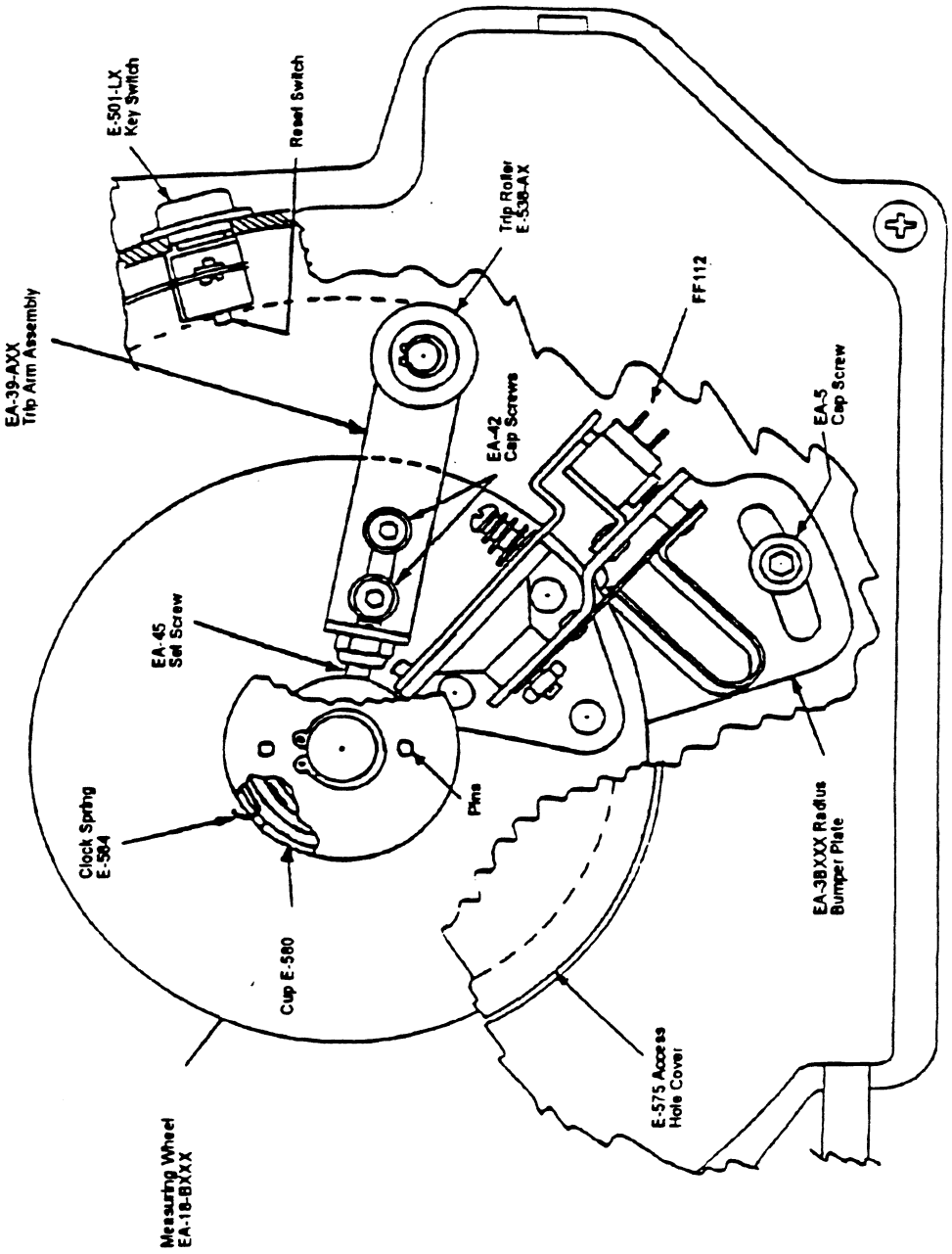
Length Adjustment

Model 555S

See Illustration 6

Tools needed: LN-26 Hex Screw Driver

Unplug machine from the power source. Remove Access Hole Cover E-575 and Button Hole Plug E-695. With the LN-26 Hex Screw Driver, go through the hole left by the removal of the hole plug, and loosen the EA-5 Cap Screw. Move the Radius Plate in a counter clockwise direction to shorten lengths, and in a clockwise direction to lengthen. Re tighten Cap Screw to secure.



Model 555
Illustration 6

Trip Roller Adjustment

Model 555L - See Illustration 5

Model 555S - See Illustration 6

Tools Needed: 5/16" Long Arm Allen Wrench
LN-964 Hex Screw Driver

Unplug machine from power source. remove Access Hole Cover E-575. This will enable you to get at the trip roller easily.

To vary the contact pressure of the trip roller against the reset button of the switches, the trip arm assembly EA-39-AXX carrying the trip roller assembly must be adjusted inward or outward as the case may be.

To decrease the contact pressure of the trip roller on the switches, you will have to first back off on the set screw EA-45 a few turns, using the long arm allen wrench 5/64. Next the two Cap Screws EA-42 must be loosened with 9/64 Hex Screw Driver LN-42 and the trip arm assembly will slide back from the switches. The correct adjustment for the trip roller is to hit the switches just hard enough to reset the key switches, but not so hard as to cause the trip roller to hang up on any of the key switches.

To increase the contact pressure on the trip roller against the key switches, you must first loosen the two Cap Screws EA-42 then turn the Set Screw EA-45 in a few turns, re tighter the Cap Screws, then revolve manually to check trip roller pressure on the switches.

To check the trip roller pressure against the reset button of the Key Switches, manu revolve the measuring wheel so that the roller passes the first key switch. Now press button down and hold it. Gently bring back the measuring wheel until it comes in contact with the switch you are pressing. It should hold back and not release the roller until your finger is removed from the button. Each individual switch should be checked in this manner. If only a few switches are not right, the key switch E-501-L may be individually adjusted by either tightening or loosening the knurled nut on top. If the majority are not correct, the trip arm must be readjusted, and the others brought into alignment by their individual adjustment.

As a final test press down all the key switches, then manually revolve the measuring wheel slowly, making sure all the key switches are being reset. Be sure on the return trip the trip roller doesn't hit the switches with enough pressure to hang up. Be sure this pressure is the same on each key switch around the key drum.

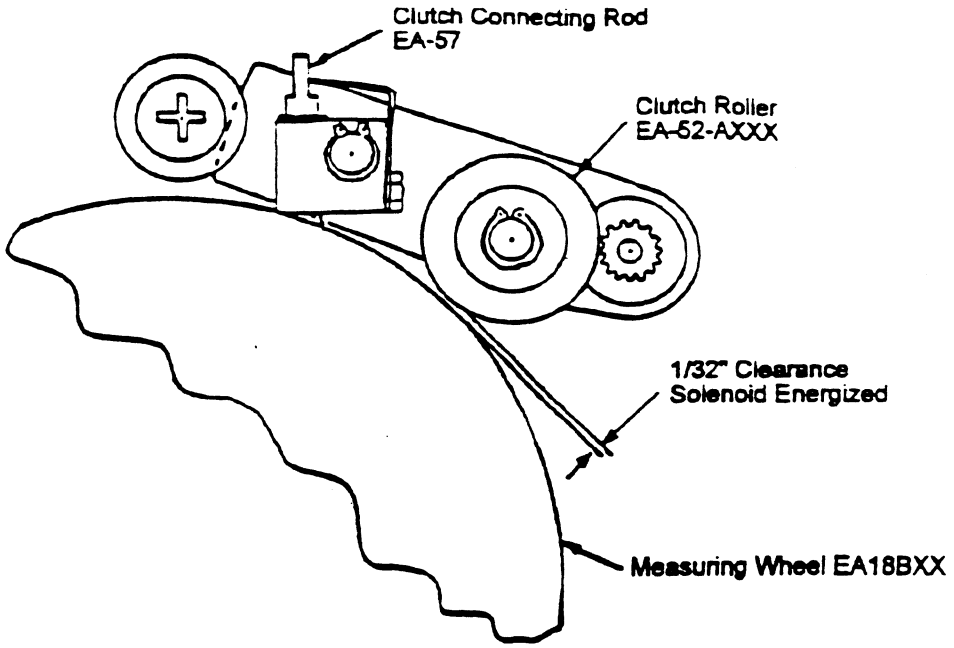


Illustration 7

Model 555 & 556

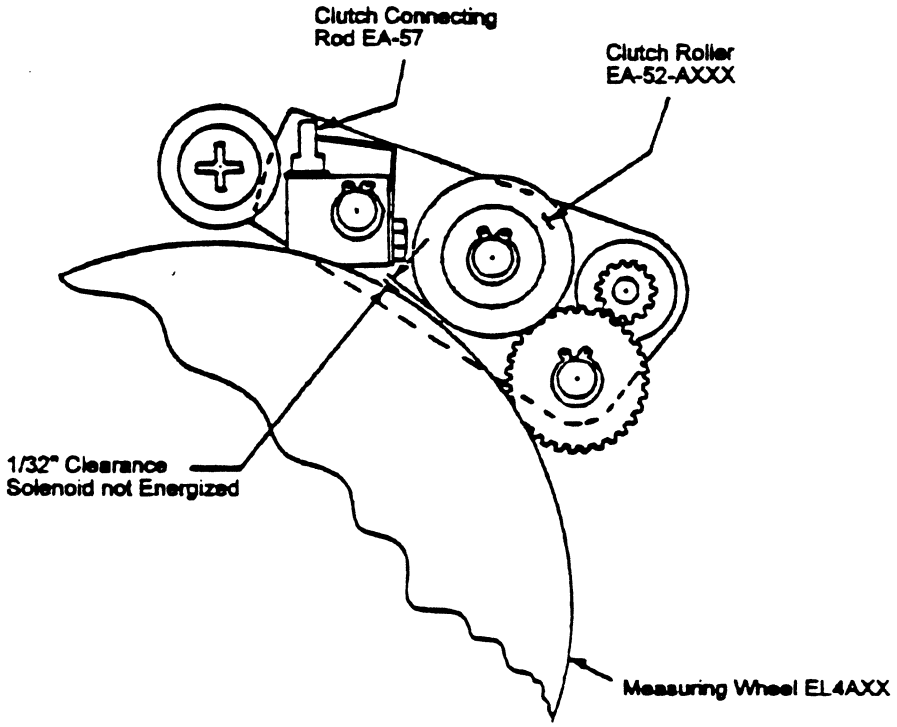


Illustration 8

Model 555L

Clutch Roller Adjustment

Models 555L & 555S

See Illustration 7 & Illustration 8

Tools Needed: 1 Special Adjustment Driver

Unplug machine from power source. Remove Key Drum Assembly. The clutch roller is located to the upper right hand side of the measuring wheel. When the machine is operated, this roller drives the measuring wheel to reset the actuated key switch.

In the reset position, solenoid unenergized, the clutch roller should be adjusted for approximately 1/32" clearance between it and the measuring wheel. The adjustment is changed by using your special adjusting driver on the rectangular top of the clutch connecting rod. Turning the connecting rod clockwise lowers the adjustment, counter clockwise raises the adjustment. This spacing is important, because the measuring wheel should start moving at the same time the tape begins to feed in order to get the correct tape lengths.

After the adjustment has been made, reach into the front of the machine after removing the tank and raise the rocker and shear assembly to the top position. The clutch roller should then be contacting the measuring wheel with enough pressure to drive the measuring wheel.

NOTE: Keep fingers off flange of measuring wheel, clutch roller and gear assembly. Any oil from fingers or another source will prevent proper operation of the measuring mechanism. It is also recommended that when installing a new clutch roller that you clean it first with contact cleaner.

Measuring Wheel Tension Spring Setting

Model 555L See Illustration 5

Model 555S See Illustration 6

Tools required: Tru-Arc Retaining Ring Pliers.

Unplug machine from power source. Remove Key Drum Assembly. The tension on the clock spring is what returns the measuring wheel back to its starting position as soon as the feed cycle is completed and the clutch roller is released from contact with the measuring wheel. This tension is not critical, but must be enough to return the measuring wheel quickly, But not enough to cause so much resistance to the measuring wheel that slippage is encountered when the clutch roller is turning it during the feeding cycle.

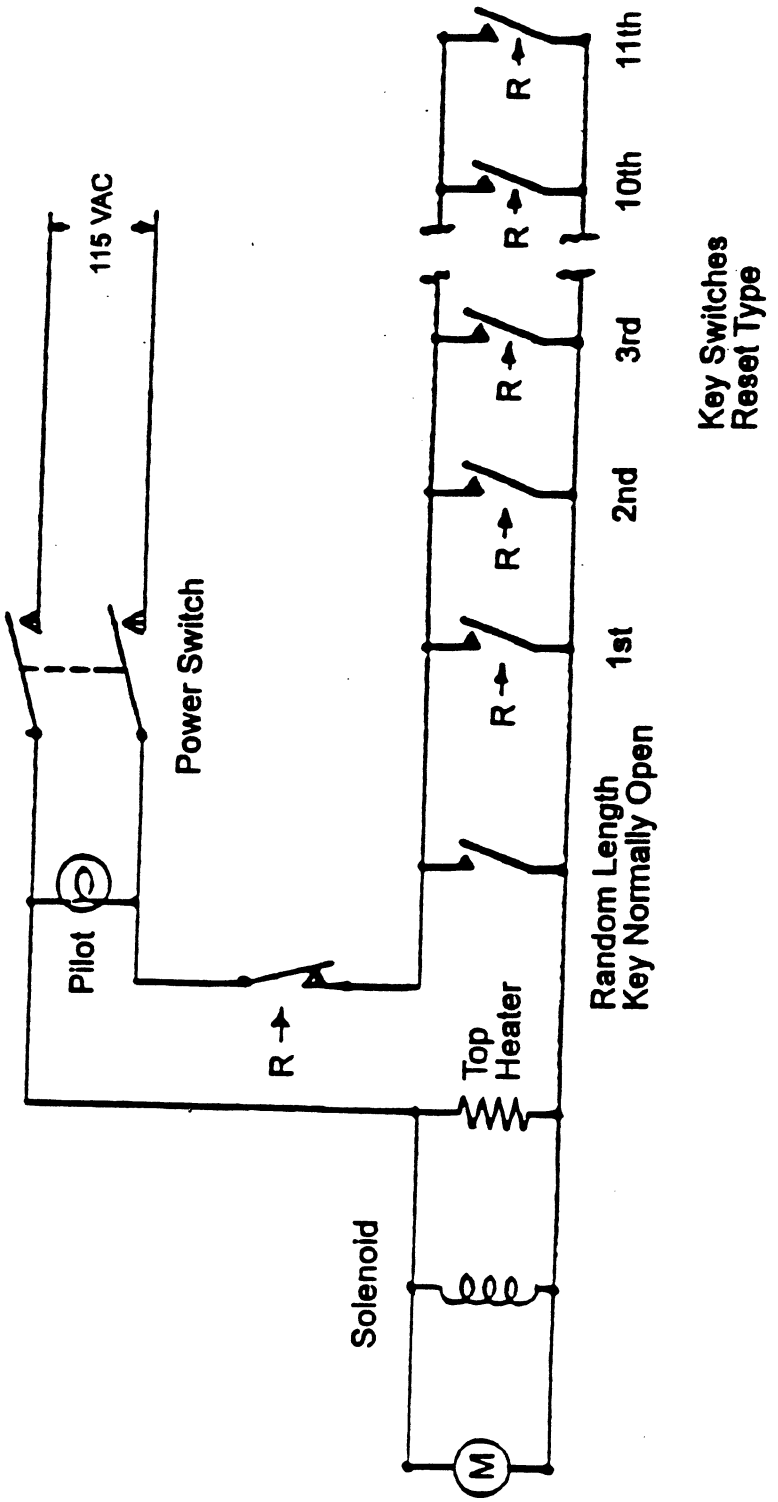
The spring is carried in a metal cup mounted on the pivot shaft for the measuring wheel. The cup and spring can be rotated with respect to the measuring wheel after the retaining ring is removed. To rotate the cup it must be pulled out slightly so that it disengages from the two pins mounted on the measuring wheel hub. After the proper tension is achieved, the cup must be returned to the pins to retain proper spring tension.

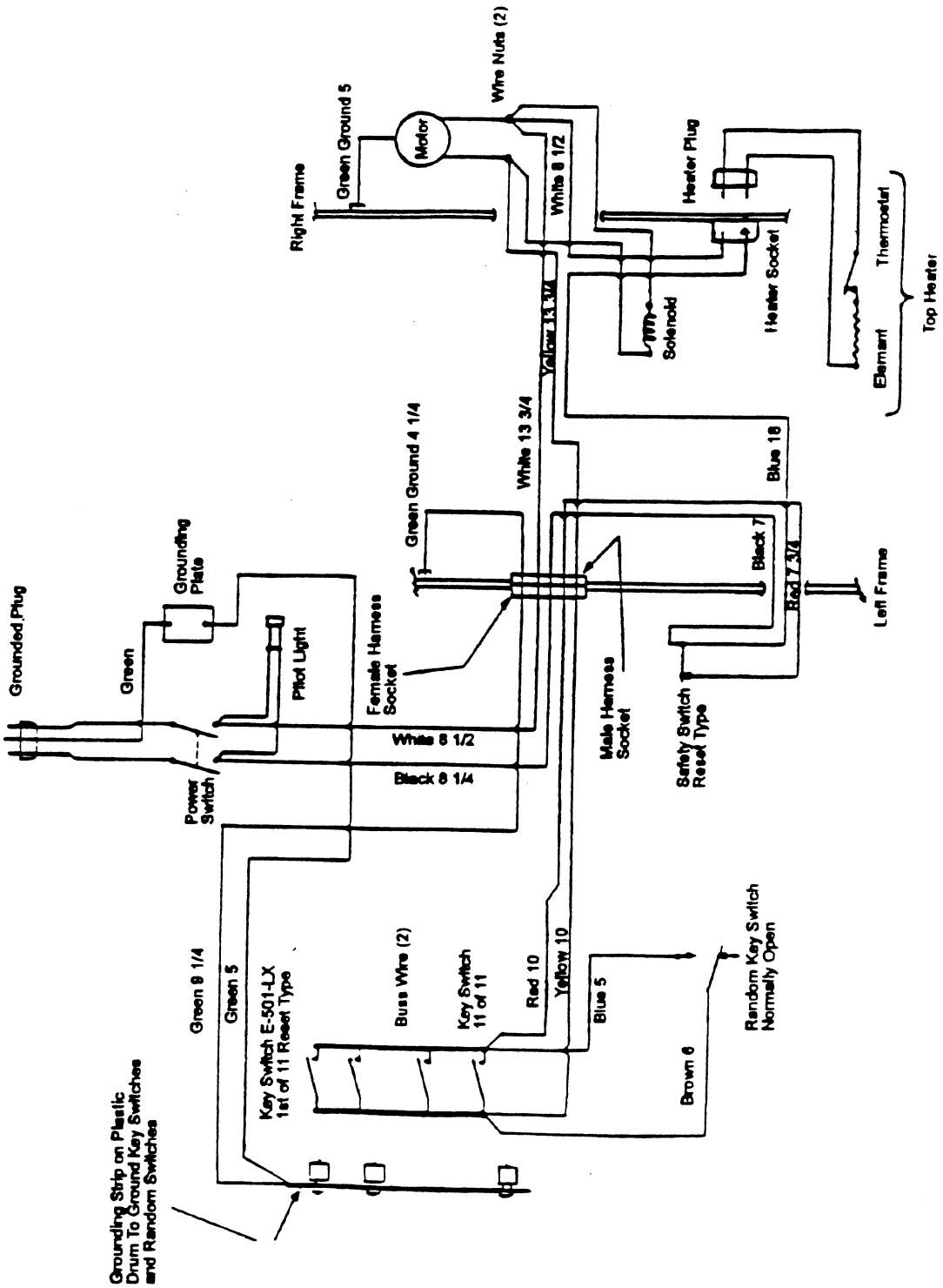
The following is the tension applied to each model at the factory:

Model 555L
With the bumper cup resting against the bumper plate, 1/2 turn counter clockwise. See Illustration 5

Model 555S
With the bumper cup resting against the bumper plate, 1/2 turn clockwise. See Illustration 6

Schematic Wiring Diagram of 555L and 555S





Wiring Diagram of 555L and 555S

TROUBLE SHOOTING

Most Common Malfunctions

Model: BP 755 and 754

Fault 1 - Not Cutting

A. Check for glue buildup on blade - clean - oil

B. Replace DU11 blades 5UN-021-1 and 026-091-0

C. Check blade support stud - 600-030-0

Fault 2 - Feeds Constantly

A. Check flat cable assembly 5UN-110-0

B. Check key pad assembly with known good one

C. Check controller board assembly - with known good one

Fault 3 - Won't Go On

A. Check power cord

B. Check fuse ST-0882

C. Check power on/off switch

Fault 4 - No Heat

A. Check plug connection

B. Replace defective heater TH55PX

Fault 5 - Won't Wet Tape

A. Replace worn brushes - TS37K

B. Check position of brush in tank

C. Check for bent lower lip assembly 5UN-028-0

Better Pack Model 755

The only item replaced on BP-755 has been the main board assembly. This has seemed to solve all problems we have encountered with this model.

The only adjustments are for tape length. The trimpots R-1 through R-20 are for this purpose:

Clockwise to Shorten Length

Counter Clockwise to lengthen

Better Pack Model 754

Adjust the controls on the keyboards as indicated for each step in the instructions.

1. Mode Switch: MAN
   Delay Knob: fully counterclockwise (CCW)
   White Length Knob: fully clockwise (CW)
   Blue Length Knob: fully CW

   Press the white key.
   Verify tape length 100" +/- 2"
   Adjust R34 (WHITE MAX. LENGTH) CW to increase length.

   Press the blue key.
   Verify tape length 100" +/- 2"
   Adjust R33 (BLUE MAX.LENGTH) CW to increase length.

2. Mode Switch: MAN
   Delay Knob: fully CCW
   White Length Knob: fully CCW
   Blue Length Knob: fully CCW

   Press white key.
   Verify tape length 6" +/- ½"
   Adjust R35 (WHITE MIN. LENGTH) CW to increase length.

   Press blue key.
   Verify tape length 6" +/- ½"
   Adjust R36 (BLUE MIN. LENGTH) CW to increase length.

-continued-

Model 754 - Cont'd

3. Mode Switch: AUTO
Delay Knob: fully counterclockwise (CCW)
White Length Knob: fully clockwise (CW)
Blue Length Knob: turn CW 3 index marks.

Press the white key then remove tape. Another piece, the same length, should dispense automatically within ½ - 1 second. Adjust R32 (DELAY) CW to increase time delay.

Press the blue key and then remove tape. Another piece, the same length, should dispense automatically within ½ - 1 second.

Turn the DELAY knob fully CW. Remove tape and verify a delay of between 25 and 40 seconds until the next piece of tape is dispensed. There is no adjustment for the maximum delay. Return to the Electronics Dept. for repair if out of tolerance.

4. Mode Switch: Switch to MAN then 1-2-2 (HPAT)
Delay Knob: fully CCW
White Length Knob: fully CCW
Blue Length Knob: CW 3 index marks

Press the white key and remove the short piece of tape. A longer piece should be dispensed. Remove the tape and a second long piece should dispense. Remove the tape and short piece should dispense. Continue removing the tape for another 1-2-2 (short-long-long) cycle.

Note: It if the Mode Switch is not returned to MAN before positioning it to 1-2-2 (HPAT) the dispensing sequence may not begin with the short length (White Length setting).