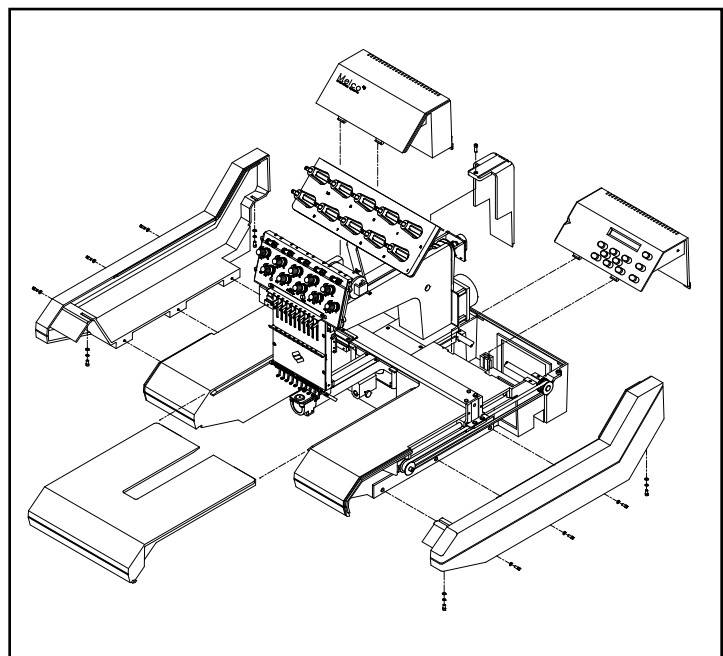


Illustrated Parts Manual for the EMC 10 embroidery peripheral



- A Complete Illustrated Parts Manual
- Trimmer & Non-Trimmer Machines
- Advanced Under Thread Control
- 

Melco 
Embroidery Systems
A Saurer Group Company

110270-01, Revision C

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INTRODUCTION

Model and Serial Numbers

The contents of this manual must be understood by the user to ensure that the correct part for the correct machine model is selected.

Some equipment built by Melco containing the same "common" name may be identified by more than one model part number. In some cases, a different serial number sequence is also prevalent between two models of the same machine.

There are two models of the Melco EMC 10 Sewing Peripherals. This manual represents both models of the product. The EMC 10 is identified as model part number 006833-01. The EMC 10T is identified as model part number 006334-01.

Determine the model number of your machine before you use this manual to order parts. The machine MODEL number is located on the label that is placed on the rear of the chassis, next to the power supply.

Remember, although many parts are identical between the various embroidery peripheral models, this manual should only be used for identifying and ordering parts for the machines described above.

How To Use This Manual

The manual is divided into several sections, each containing a set of parts most common to each other, or to a function of the machine.

FIGURES

Accompanying each section is a figure showing the general area of the machine that is represented in that section. Parts are identified with letters and numbers in these figures. Letters contained in circles generally are used to refer the user to a different figure or section of the manual that identifies the assembly with more detail. Part numbers and part identifications of the numbers inside circles are found on the pages adjacent to the figure.

ITEM NUMBERS

All the numbers in circles on a diagram are listed in the first column of the parts listing accompanying that figure. Each item number in each figure is identified independently in hopes to help prevent any confusion that may occur by trying to "cross-reference" part numbers.

PART NUMBERS

The Melco part number is found in the second column of the parts list, directly in line with each item number from the first column.

PART DESCRIPTIONS

Each part listed has a descriptive name in the third column of the parts listing. Hardware (such as screws, washers, etc.) are described by size in order to help the user to identify common hardware items that can be obtained by local sources if desired.

CAUTION: When purchasing hardware from a source other than Melco, it is the user's responsibility to ensure that such hardware is of sufficient quality and grade to meet or exceed Melco's original equipment hardware. Melco assumes no liability for the use of inadequate hardware that was purchased by and/or installed by other than an authorized Melco factory representative.

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Machine Assemblies (Covers) (1 of 2)

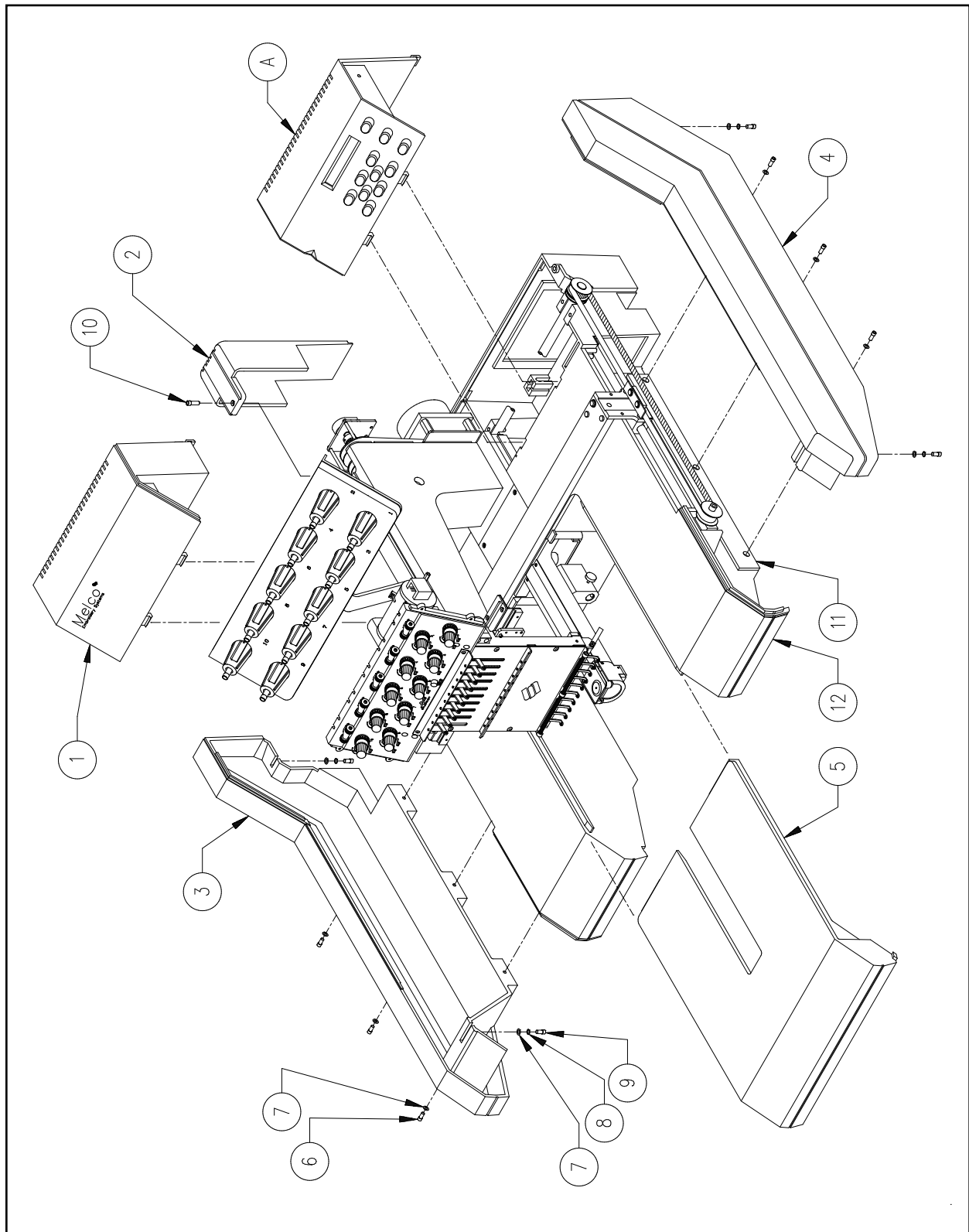


Figure 1

Machine Assemblies (Covers) (1 of 2)**Reference Figure 1**

Item No.	Part Number	Item Description	Comments
A	-----	Keyboard Cover Assembly	See Page 3-1
1	009369-01	Cover, Electronics, Sub-assembly	
2	003618-21	Cover, Z-Drive	
3	004520-21	Cap, End, Left	
4	004520-22	Cap, End, Right	
5	004521-21	Insert, Table Top	
6	670038-08	Screw, Socket Head Cap, 10-32 x 1/2"	
7	690034-03	Washer, Flat, #10	
8	690033-03	Washer, Lock, #10	
9	670038-12	Screw, Socket Head Cap, 10-32 x 3/4"	
10	672018-14	Screw, Socket Head Cap, M4 x 0.7 x 14 Lg	
11	003821-01	Pan, Bottom	
12	009366-21	Chassis	

Machine Assemblies (Covers) (2 of 2)

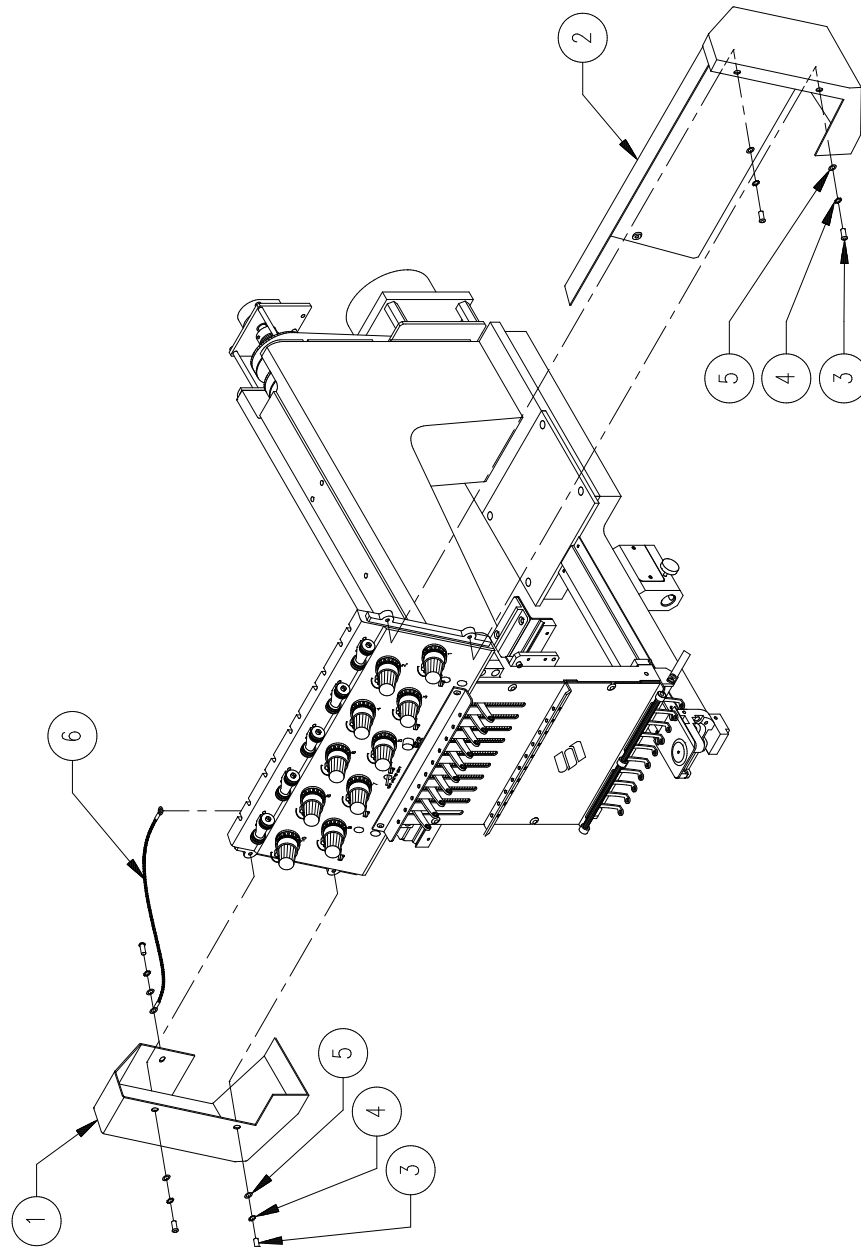


Figure 2

Machine Assemblies (Covers) (2 of 2)**Reference Figure 2**

Item No.	Part Number	Item Description	Comments
1	006565-01	Cover, Rear, Tensioner, Bracket, Left	
2	006564-01	Cover, Rear, Tensioner, Bracket, Right	
3	003509-06	Screw, Button Head Socket, M4 x 0.7 x 6 Lg	
4	690439-04	Washer, Flat, M4	
5	690713-38	Washer, Lock, External Star, #8	
6	009317-01	Cable, Ground, Pan	

Keyboard Cover Assembly

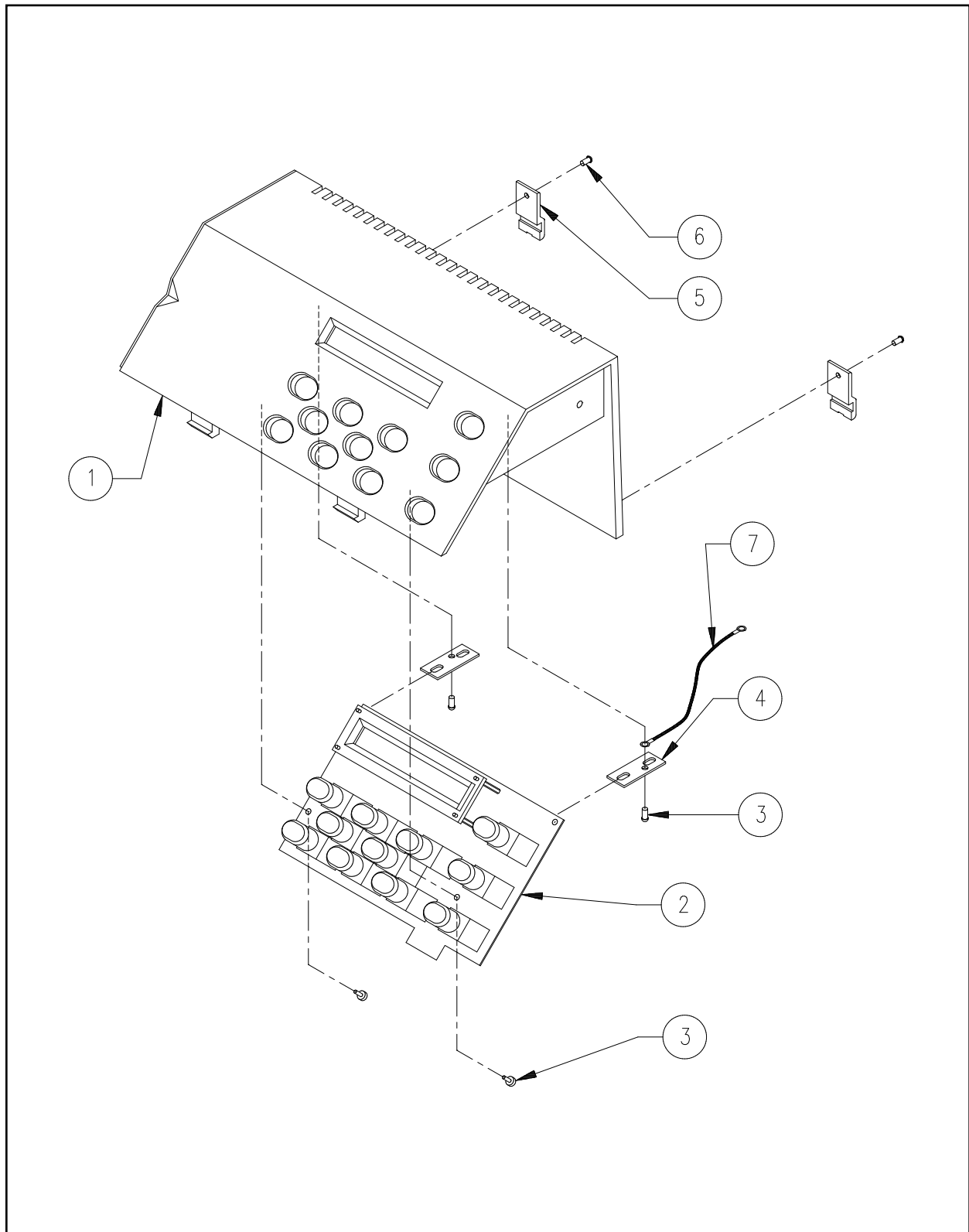


Figure 3

Keyboard Cover Assembly**Reference Figure 3**

Item No.	Part Number	Item Description	Comments
1	009281-01	Cover, Keyboard, Sub-assembly	
2	011149-01	PCB, Keyboard	
3	674433-06	Screw, Thread Forming, #6 x 3/8"	
4	555325-01	Bracket, Retainer	
5	003846-21	Catch, Cover, Grey	
6	009697-01	Screw, Pan Head, Slotted, Nylon, 4-40 x 1/4"	
7	009317-04	Cable, Ground, Pan	

Machine Assemblies (General)

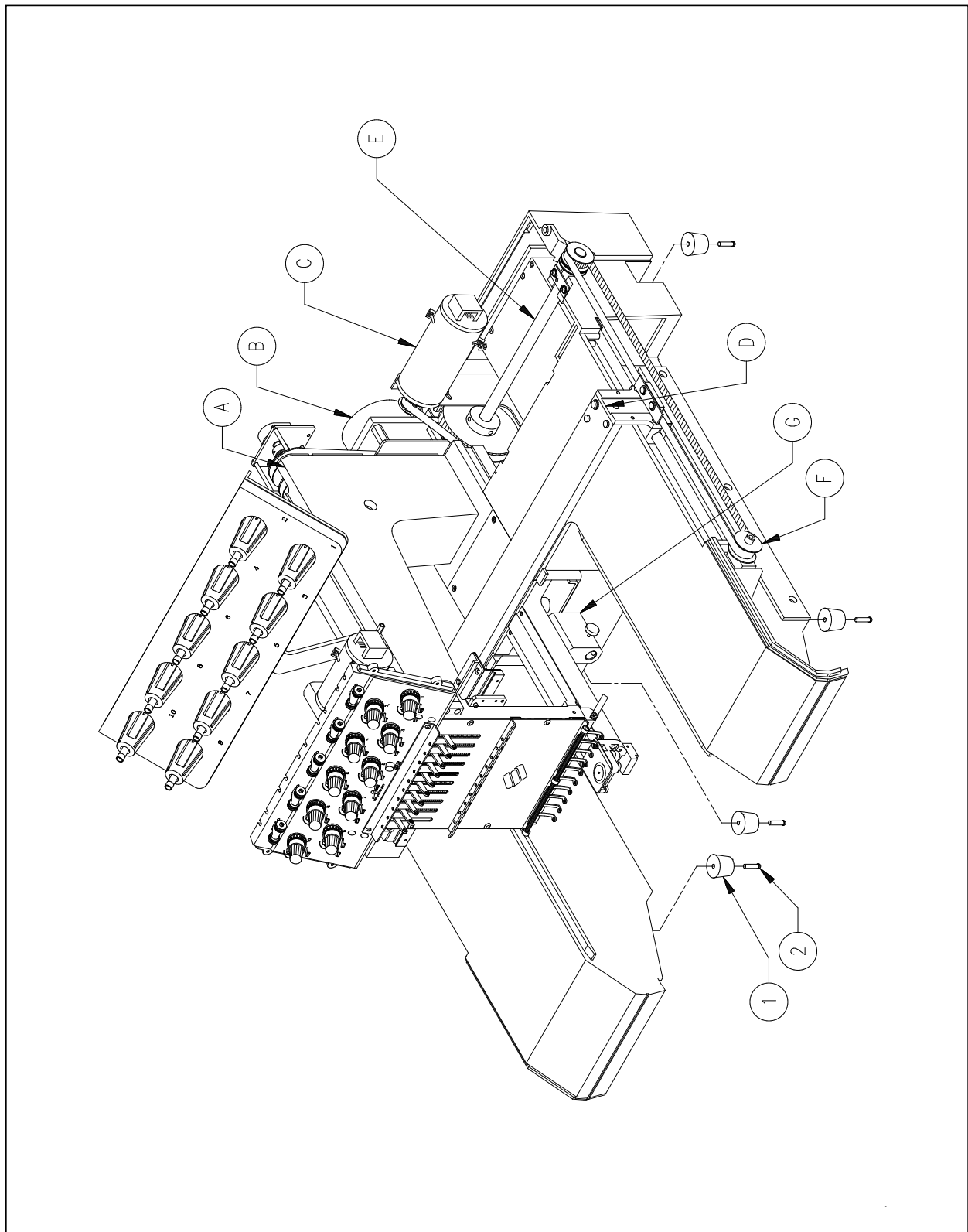


Figure 4

Machine Assemblies (General)**Reference Figure 4**

Item No.	Part Number	Item Description	Comments
A	-----	Sewing Head Assemblies	See Page 5-1
B	-----	Z-Drive/Encoder Assembly	See Page 26-1
C	-----	Y-Drive Motor Assembly	See Page 19-1
D	006758-01	X-Drive Assemblies	See Pages 21-1 to 25-1
E	-----	Y-Drive Assembly	See Page 27-1
F	-----	Y-Carriage Assemblies	See Pages 28-1 & 29-1
G	-----	Cap Frame Mount Assembly	See Page 30-1
1	341643-01	Foot, Rubber	
2	670149-12	Screw, Socket Head Cap, 8-32 x 3/4"	

Sewing Head Assemblies

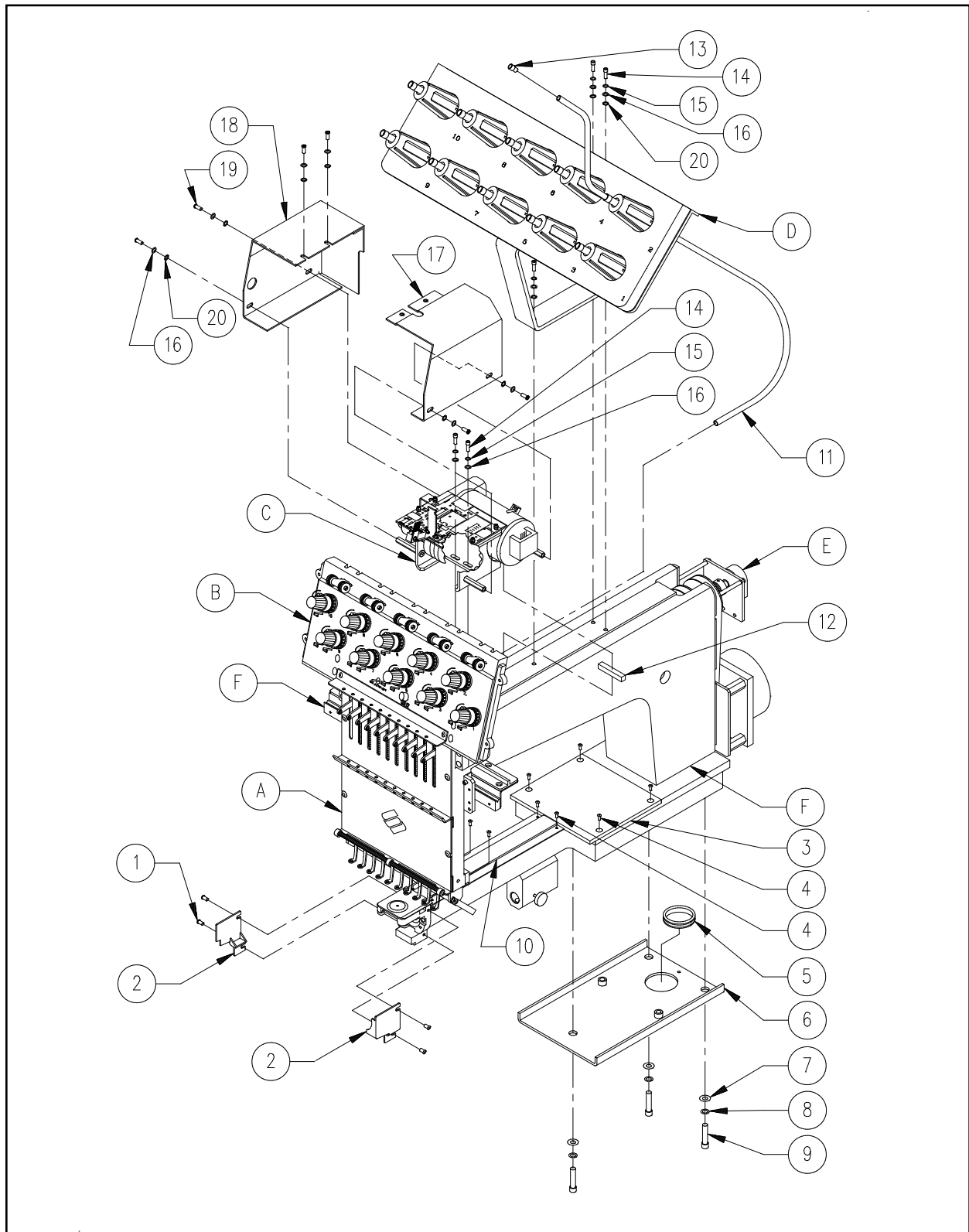


Figure 5

Sewing Head Assemblies**Reference Figure 5**

Item No.	Part Number	Item Description	Comments
A	-----	Needle Case Assemblies	See Pages 8-1 & 9-1
B	-----	Thread Tensioner Assembly	See Page 10-1
C	-----	Color Change Assembly	See Page 6-1
D	-----	Thread Tree Assembly	See Page 7-1
E	-----	Z-Drive/Encoder Assembly	See Page 26-1
F	-----	Sewing Head Components	See Pages 11-1 to 13-1
1	003136-06	Screw, Button Head Socket, M3 x 0.5 x 6 Lg	
2	006529-01	Set, Cover, Rotary Hook	
3	006034-21	Cover, Bed, Rear	
4	003509-08	Screw, Button Head Socket, M4 x 0.7 x 8 Lg	
5	342375-01	Grommet, Round, 1-1/8" ID	
6	006528-01	Plate, Base, Sewing Head	
7	690034-05	Washer, Flat, 5/16"	
8	690033-05	Washer, Lock, Split, 5/16"	
9	671687-30	Screw, Socket Head Cap, M8 x 1.25 x 30 Lg	
10	007526-01	Cover, Bed, Front	
11*	005704-01	Tubing, .125" ID x .187" OD	
12	004779-01	Key, Color Change Mount	
13*	005702-01	Guide, Thread, Thread Tree	
14	672018-12	Screw, Socket Head Cap, M4 x 0.7 x 12 Lg	
15	690427-04	Washer, Lock, Split, M4	
16	690439-04	Washer, Flat, M4	
17	006686-01	Cover, Drive, Color Change, Right	
18	006740-01	Cover, Drive, Color Change, Left	
19	004262-06	Screw, Pan Head, Phillips, M4 x 0.7 x 6 Lg	
20	690713-38	Washer, Lock, External Star, #8	

Note:

*Items 11 and 13 should be replaced as a factory built assembly: 006937-01 Tubing, Thread Tree, 24", Assembly

Color Change Assembly

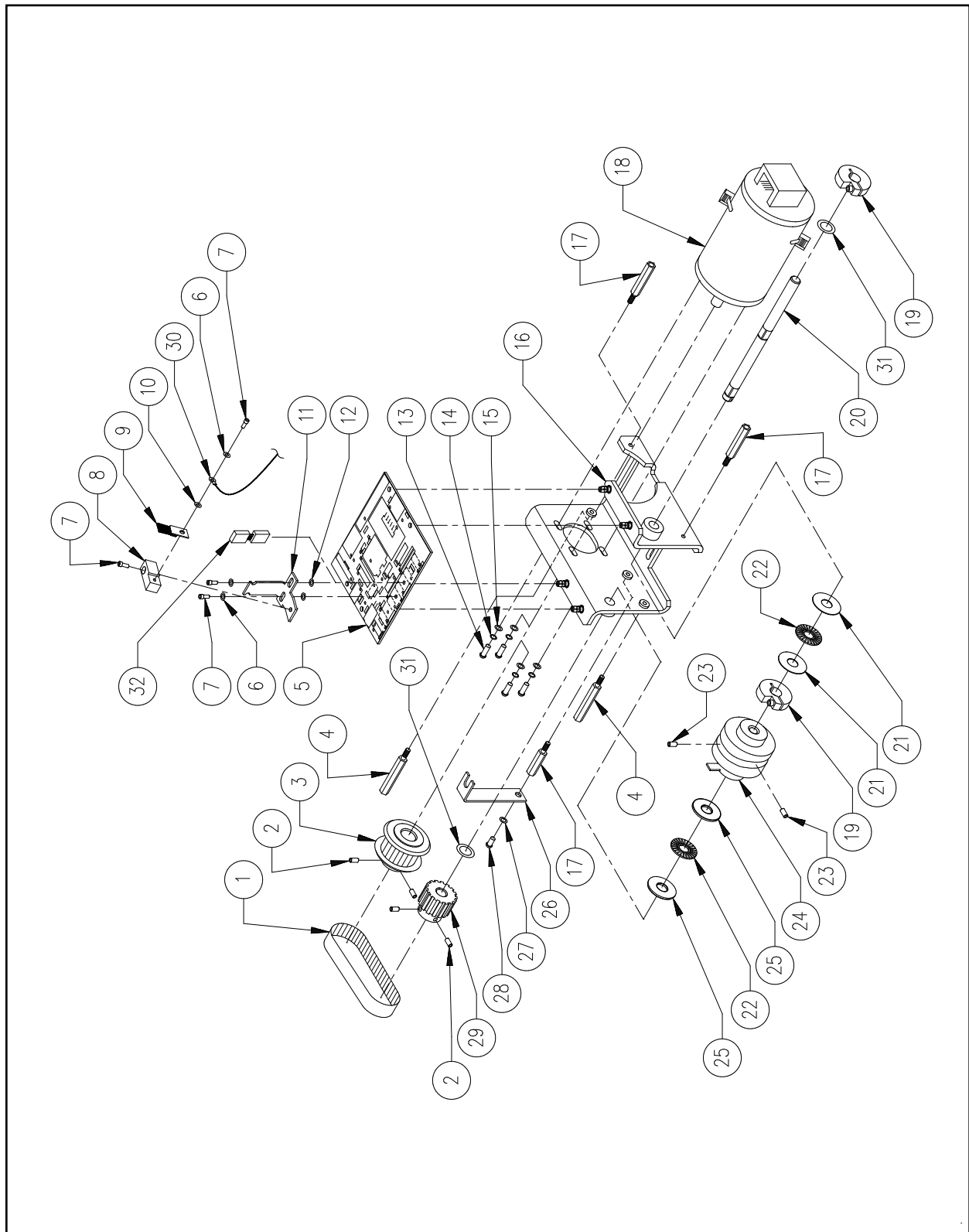


Figure 6

Color Change Assembly**Reference Figure 6**

Item No.	Part Number	Item Description	Comments
1	003504-01	Belt, Timing, 39T, 1/5P	
2	001960-04	Screw, Set, Flat Point, M4 x 0.7 x 4 Lg	
3	006855-01	Pulley, Timing, 1/5P, 12 Groove	
4	008129-35	Standoff, Hex, M-F, M4 x 0.7 x 35 Lg	
5	006514-01	PCB, Color Change, Assembly	
6	690439-03	Washer, Flat, M3	
7	007571-03	Screw, Pan Head Phillips, Nylon, M3 x 0.5 x 8 Lg	
8	008068-01	Bracket, Detect, Thread Break	
9	008069-01	Brush, Contact, Thread Break	
10	690811-34	Washer, Internal Star, #4	
11	007565-01	Bracket, Mounting, Sensor, Thread Break	
12	007561-01	Washer, Flat, Nylon	
13	670174-08	Screw, Pan Head Phillips, 6-32 x 1/2 "	
14	690033-36	Washer, Lock, Split, #6	
15	690034-36	Washer, Flat, #6	
16	006340-01	Housing, Drive, Color Change	
17	008129-22	Standoff, Hex, M-F, M4 x 0.7 x 22 Lg	
18	006570-01	Motor, Color Change	
19	008062-01	Clamp, Split-Hub, 8mm ID	
20	006485-01	Shaft, Cam, Color Change	
21	007574-01	Washer, Thrust, 1.00mm Thick	
22	008061-01	Bearing, Thrust, 8mm	
23	001927-06	Screw, Set, Socket, M5 x 0.8 x 6 Lg	
24	007077-01	Cam, Color Change	
25	007573-01	Washer, Thrust, 2.75mm Thick	
26	006782-01	Bracket, Wire Guard	
27	690439-04	Washer, Flat, M4	
28	004262-06	Screw, Pan Head Phillips, M4 x 0.7 x 6 Lg	
29	008060-01	Pulley, Timing, 5.08mmP, 16 Groove	
30	006582-01	Harness, Thread Break	
31	003235-08	Spacer, Shaft, .375" ID x .562" OD x .016" Thick	
32	009535-01	Connector, Resistor Array	

Thread Tree Assembly

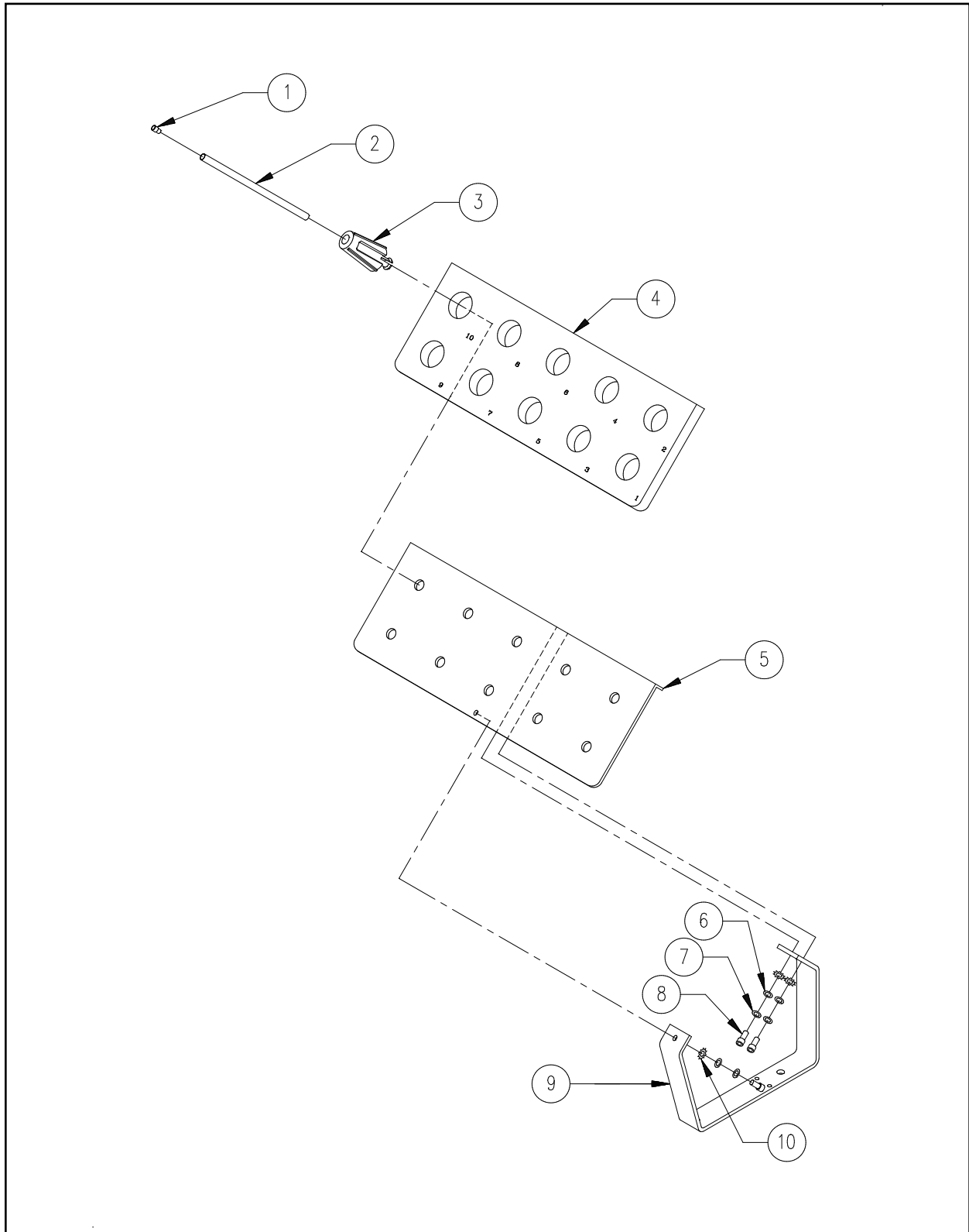


Figure 7

Thread Tree Assembly**Reference Figure 7**

Item No.	Part Number	Item Description	Comments
1	005702-01	Guide, Thread, Thread Tree	
2	005703-01	Tube, Guide, Thread, Thread Tree	
3	005701-01	Seat, Cone, Thread, Thread Tree	
4	006482-01	Pad, Thread Tree	
5	006481-01	Plate, Thread Tree	
6	690439-05	Washer, Flat, M5	
7	690427-05	Washer, Lock, Split, M5	
8	671852-12	Screw, Socket Head Cap, M5 x 0.8 x 12 Lg	
9	006775-01	Bracket, Support, Thread Tree	
10	690713-38	Washer, Lock, External Star, #8	

Needle Case Assembly (1 of 2)

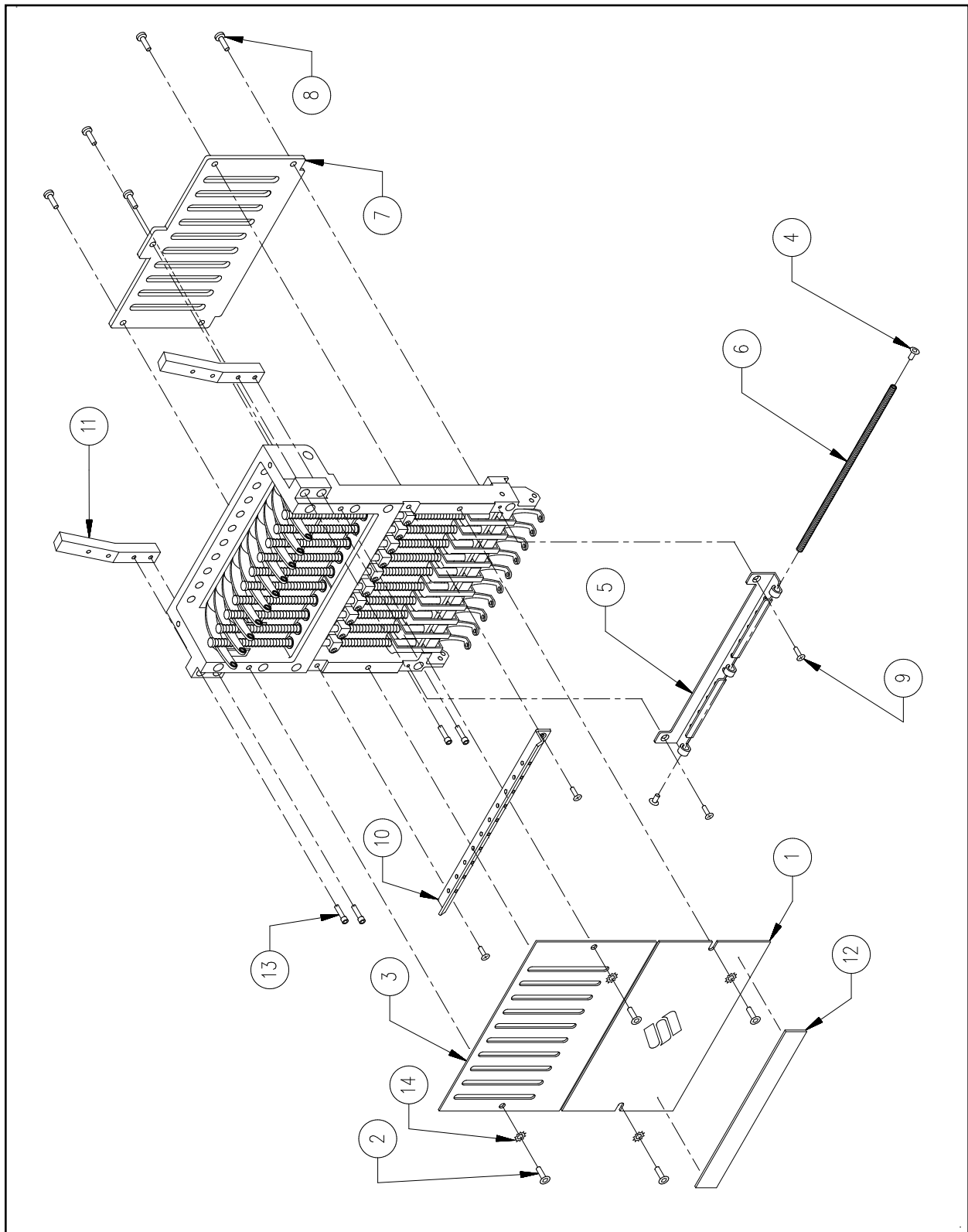


Figure 8

Needle Case Assembly (1 of 2)**Reference Figure 8**

Item No.	Part Number	Item Description	Comments
1	007511-01	Cover, Needle Case, Lower	
2	003509-06	Screw, Button Head Cap, M4 x 0.7 x 6 Lg	
3	007510-02	Cover, Needle Case, Upper	
4	003509-10	Screw, Button Head Cap, M4 x 0.7 x 10 Lg	
5	008483-01	Guide, Thread, Lower, w/Eyelet	
6	007519-01	Spring, Lower Thread Guide	
7	007503-01	Plate, Guide, Needle Bar	
8	001924-06	Screw, Cheese Head, Slotted, M4 x 0.7 x 6 Lg	
9	001935-06	Screw, Flat Head Phillips, M3 x 0.5 x 6 Lg	
10	008482-01	Guide, Thread, Middle, w/Eyelet	
11	007528-01	Support, Tensioner Bracket	
12	007527-01	Magnet, Thread Retaining	
13	672018-16	Screw, Socket Head Cap, M4 x 0.7 x 16 Lg	
14	690713-38	Washer, Lock, External Star, #8	

Needle Case Assembly (2 of 2)

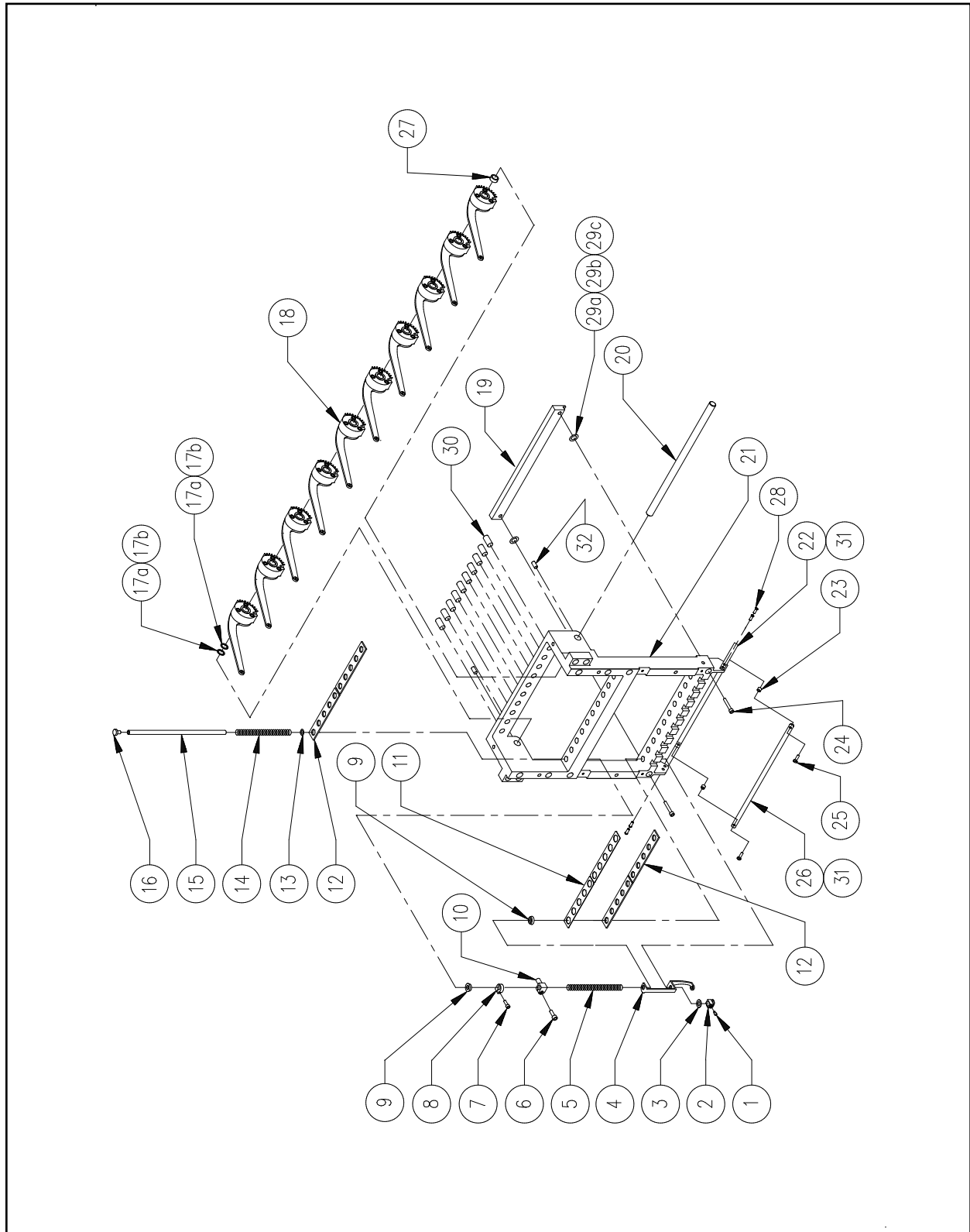


Figure 9

Needle Case Assembly (2 of 2)**Reference Figure 9**

Item No.	Part Number	Item Description	Comments
1	001828-01	Screw, Set, Needle Clamp	
2	001528-01	Clamp, Needle	
3	007591-01	Damper, Needle Clamp	
4	007924-01	Foot, Presser, Assembly	
5	001535-01	Spring, Presser Foot	
6	001922-08	Screw, Socket Head Cap, M3 x 0.5 x 8 Lg	
7	001922-10	Screw, Socket Head Cap, M3 x 0.5 x 10 Lg	
8	001840-01	Clamp, Stop, Needle Bar	
9	005577-01	Damper, Needle Case	
10	007408-01	Stud, Connecting, Needle Bar	
11	007505-01	Shim, Needle Case	
12	007506-01	Felt, Needle Case	
13	005009-01	Washer, Flat, .260" ID x .420" OD x .03" Thick	
14	001537-01	Spring, Holding, Needle Bar	
15	001532-01	Bar, Needle	
16	002637-08	Screw, Socket Head Cap, Low Head, M5 x 0.8 x 8 Lg	
17a	702876-05	Spacer, Precision, .313" ID x .010" Thick	(Use as Required)
17b	702876-08	Spacer, Precision, .313" ID x .016" Thick	(Use as Required)
18	010360-01	Lever, Take-Up, Assembly	
19	10207	Rail, Guide, Lower	
20	007504-01	Shaft, Take-Up Lever	
21	007501-01	Case, 10 Needle	
22*	007512-01	Bracket, Grabber	
23*	002884-01	Spacer, Support, Velcro	
24	672018-20	Screw, Socket Head Cap, M4 x 0.7 x 20 Lg	
25	671855-08	Screw, Pan Head Slotted, M3 x 0.5 x 8 Lg	
26*	007513-01	Bar, Grabber	
27	007518-01	Spacer, Shaft, Take-Up Lever	
28	671855-06	Screw, Pan Head Slotted, M3 x 0.5 x 6 Lg	
29a	700837-01	Spacer, Shaft, 1/4" ID x .002" Thick	(Use as Required)
29b	700837-02	Spacer, Shaft, 1/4" ID x .004" Thick	(Use as Required)
29c	700837-03	Spacer, Shaft, 1/4" ID x .006" Thick	(Use as Required)
30	662744-08	Pin, Dowel, .25" OD x .50" Lg	
31*	007545-01	Velcro, Wiper, Pile	
32	001960-06	Screw, Set, Flat Point, M4 x 0.7 x 6 Lg	

Note:

*Items 22, 23, 26 and 31 should be replaced as a factory built assembly: 008491-01 Grabber Brkt/Bar Assembly

Thread Tensioner Assembly

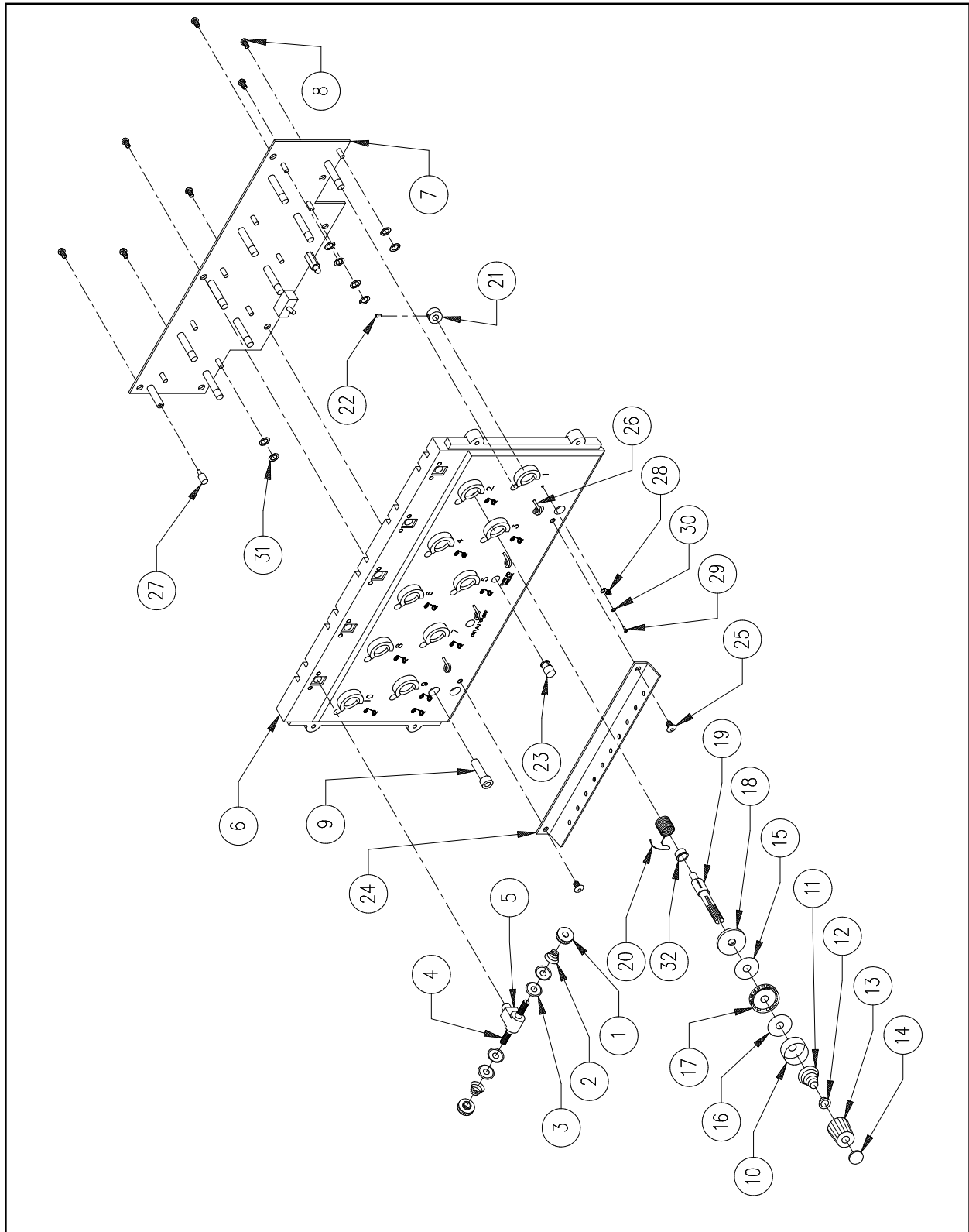


Figure 10

Thread Tensioner Assembly**Reference Figure 10**

Item No.	Part Number	Item Description	Comments
1•	007080-01	Knob, Adjust, Pretensioner, Plastic	
2•	003654-01	Spring, Pretensioner	
3•	005137-01	Disk, Pretensioner	
4•	007531-01	Post, Pretensioner	
5	007524-01	Bracket, Pretensioner	
6	10154	Bracket, Tensioner	
7	009415-04	PCB, Thread Break, Assembly	
8	001924-06	Screw, Cheese Head, Slotted, M4 x 0.7 x 6mm	
9	010171-16	Screw, Socket Head Cap, M4 x 0.7 x 16mm, Zinc Plate	
10*	005196-01	Base, Tensioner	
11*	004854-01	Spring, Tensioner, Thread	
12*	005422-01	Cap, Spring	
13*	005197-01	Knob, Tensioner, Black, Assembly	
14	003560-01	Tab, Tensioner	
15*	005198-02	Pad, Felt, .095" Thick	
16*	005198-01	Pad, Felt, .065" Thick	
17*	006474-01	Disk, Tensioner, Thread, Assembly	
18*	004908-01	Disk, Plastic	
19*	004897-01	Post, Tensioner	
20*	007559-01	Spring, Check, Tensioner, Thread	
21	007529-01	Collar, Tensioner, Assembly	
22	010170-10	Screw, Socket Head Cap, M3 x 0.5 x 10mm, Zinc Plate	
23	010373-01	Cover, LED, Yellow	
24	008481-01	Guide, Thread, Upper, Assembly	
25	003509-06	Screw, Button Head Cap, M4 x 0.7 x 6mm	
26	002897-01	Post, Guide	
27	007659-02	Standoff, M-F, 3/16" Round	
28	008468-01	Pigtail	
29	672386-03	Screw, Pan Head Phillips, 2-56 x 3/16"	
30	690034-32	Washer, Flat #2	
31	010917-01	Re-inforcement, Self-Adhesive	
32	011351-01	Bushing, Tensioner	

Note:

*Items 10-13 and 15-20 should be replaced as a factory built assembly: 007547-01 Tensioner, Thread, Main, Black, Assembly

•Items 1-4 should be replaced as a factory built assembly:
007530-01 Pretensioner, Assembly

Sewing Head Components (1 of 3)

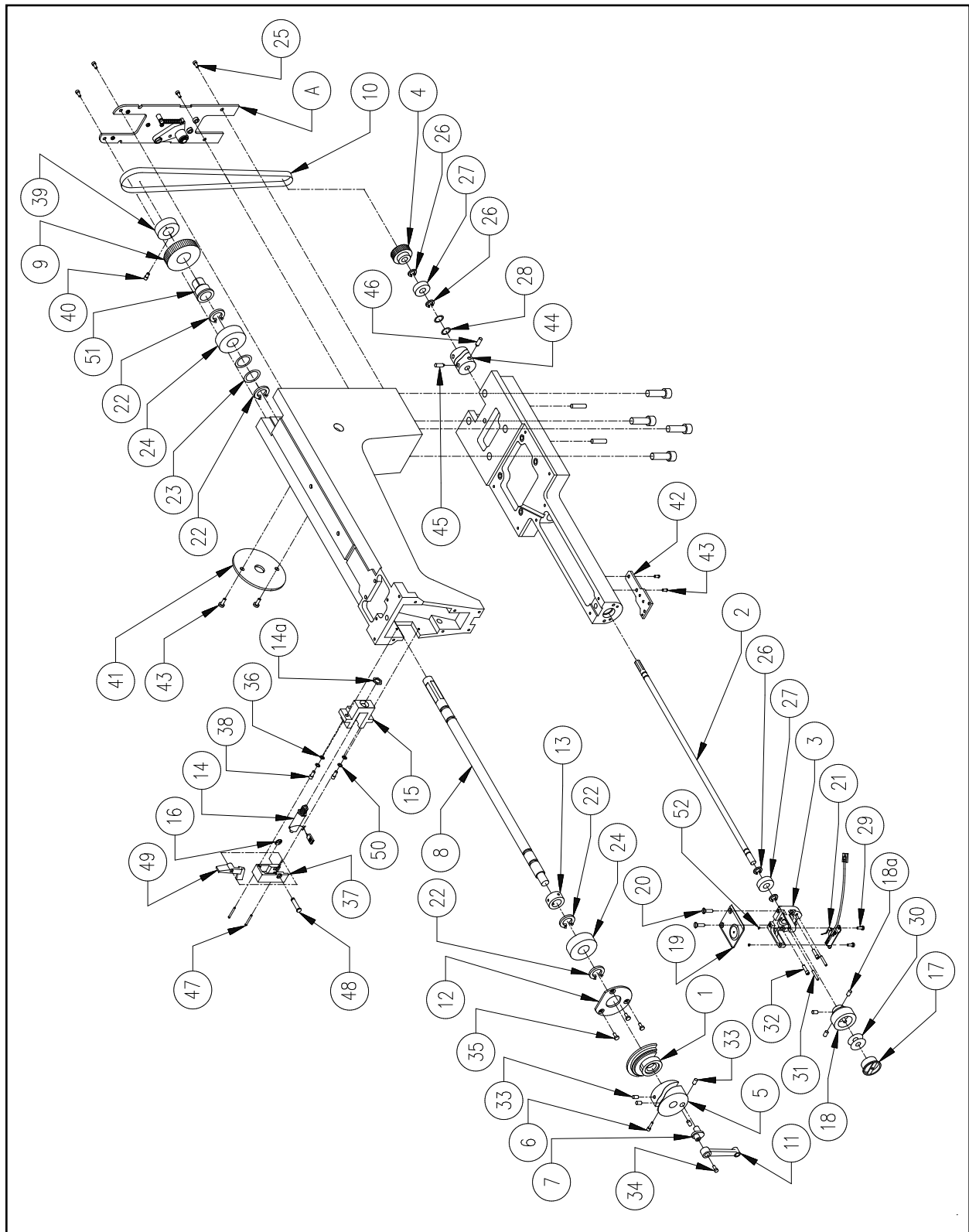


Figure 11

Sewing Head Components (1 of 3)**Reference Figure 11**

Item No.	Part Number	Item Description	Comments
A	004504-01S	Bobbin Idler Assembly	See Page 14-1
1	003539-01	Counterweight, Phase II	
2	003535-01	Shaft, Bobbin, Phase II	
3a	005601-01	Bracket, Needle Plate	(Trimmer Only)
3b	006576-01	Bracket, Needle Plate	(Non-Trimmer Only)
4	001522-01	Pulley, Drive, Bobbin, Bottom, 16T, 1/5P	
5	003545-01	Cam, Drive, Take-Up Lever	
6	003546-01	Screw, Set, Cam	
7	002698-01	Rod, Crank, 90 Deg	
8	003532-01	Shaft, Arm	
9*	005332-01	Pulley, Adjustable, Top, 32T, 1/5P	
10	002809-01	Belt, Timing, 1/5P, 104 Groove, 3/8" Wide	
11	001939-01	Rod, Connecting	
12	003531-01	Plate, Retainer, Bearing, Arm Shaft	
13	004261-01	Collar, Shaft, Headup	
14	001801-01	Solenoid, Jump Stitch	
14a	-----	Nut, Panel	Included in Item #14
15	006561-01	Bracket, Jump Stitch Solenoid	
16•	001955-14	Ring, Retaining, External	
17	004267-01	Case, Bobbin	
18	009000-01	Hook, Rotary, Small Bobbin	
18a	-----	Screw, Rotary Hook	Included in Item #18
19	006520-01	Plate, Needle	
19a	006579-01	Plate, Needle, Raised	(not shown)
20	004643-01	Screw, Needle Plate	
21	010107-01	Sensor, Under Thread Control, Assembly	
22	003533-05	Ring, Retainer, External, Arm Shaft	
23	002697-09	Washer, Wave, 35mm OD	
24	002696-15	Bearing, Ball, Radial, 15mm ID	
25	001926-12	Screw, Flat Head Socket, M4 x 0.7 x 12 Lg	
26	003534-10	Ring, Retaining, External, Bobbin Shaft	
27	002696-08	Bearing, Ball, Radial, 8mm ID	
28	002697-03	Washer, Wave, 22mm OD	
29	671855-06	Screw, Pan Head Slotted, M3 x 0.5 x 6 Lg	
30	761002-11	Thread, Bobbin, White	
31	002610-14	Pin, Spring, 3mm OD x 14mm Lg	
32	672018-16	Screw, Socket Head Cap, M4 x 0.7 x 12 Lg	
33	001971-06	Screw, Set, Flat Point, M6 UNF x 6 Lg	
34	002637-10	Screw, Socket Head Cap, Low Head, M5 x 0.8 x 10 Lg	
35	001926-12	Screw, Flat Socket, M4 x 0.7 x 12 Lg	
36	702946-30	Spacer, Shaft, .187" ID x .312" OD x .03" Thick	
37•	006560-01	Bracket, Latch	
38	672018-12	Screw, Socket Head Cap, M4 x 0.7 x 12 Lg	

Sewing Head Components (1 of 3)**Reference Figure 11**

Item No.	Part Number	Item Description	Comments
39	002668-01	Collar, Support, Gear	
40	670038-10	Screw, Socket Head Cap, 10-32 x 5/8"	
41a	002893-21	Cover, Solenoid	(Trimmer Only)
41b	003622-21	Cover, Solenoid	(Non-Trimmer Only)
42	006526-01	Bracket, Picker	
43	003509-08	Screw, Button Head Socket, M4 x 0.7 x 8 Lg	
44	007257-01	Cam, Trimmer	
45	001927-10	Screw, Set, Flat Point, M5 x 0.8 x 10 Lg	
46	007272-10	Screw, Set, Cone Point, M5 x 0.8 x 10 Lg	
47	001922-20	Screw, Socket Head Cap, M3 x 0.5 x 20 Lg	
48•	006559-01	Pin, Latch	
49•	002876-21	Latch, Jump Stitch	
50	690427-04	Washer, Lock, Split, M4	
51*	005331-01	Pulley, Hub, Adjustable	
52	006549-03	O-Ring, .187" ID x .06" Thick	

Note:

*Items 9 and 51 should be replaced as a factory built assembly:
005191-01 Pulley, Adjustable, Assembly

•Items 16, 37, 48 and 49 should be replaced as a factory built assembly:
007340-01 Bracket, Latch, Jump Stitch, Assembly

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Sewing Head Components (2 of 3)

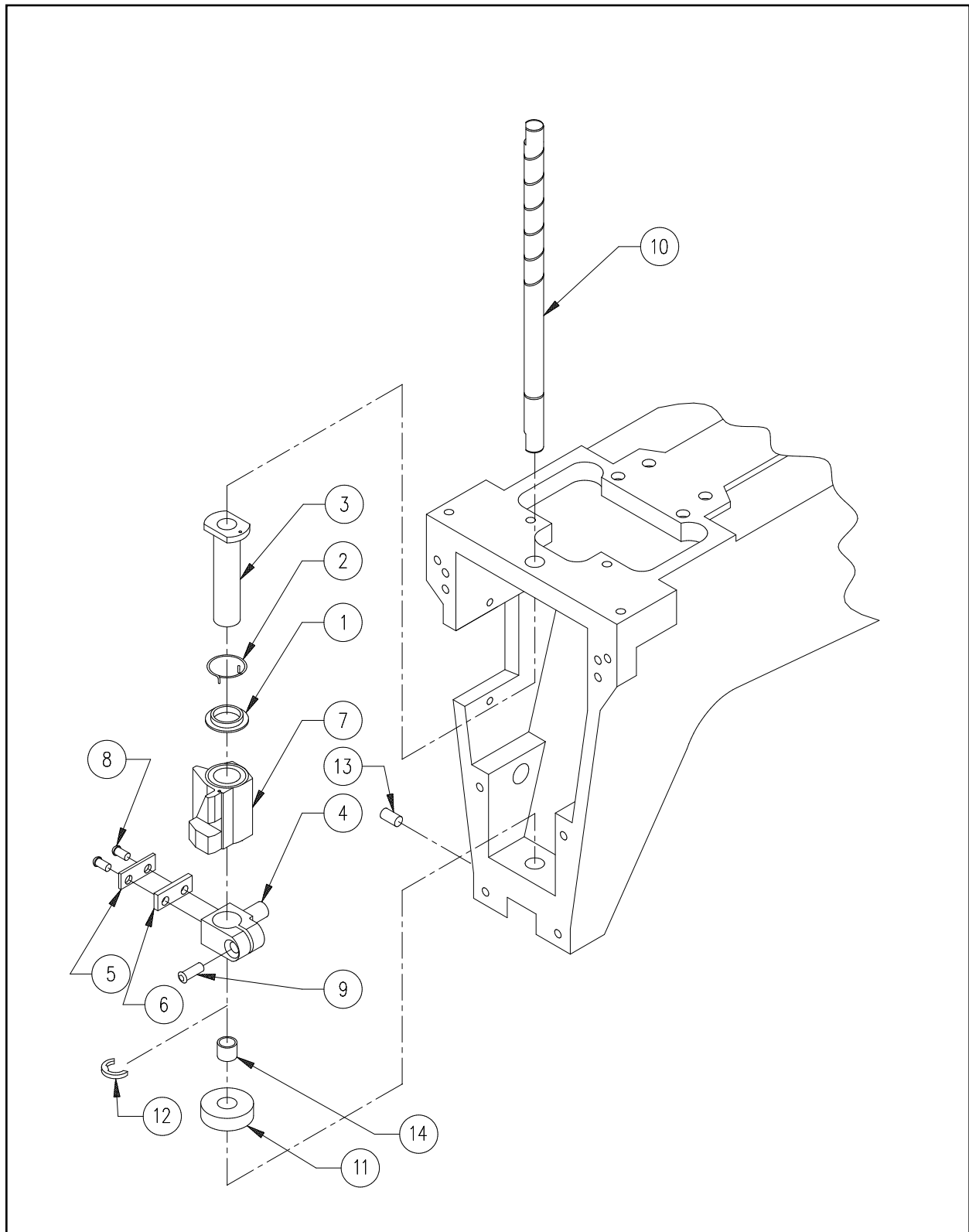


Figure 12

Sewing Head Components (2 of 3)**Reference Figure 12**

Item No.	Part Number	Item Description	Comments
1*	007449-01	Bushing, Cradle, Spring	
2	007448-01	Spring, Jump, Reciprocator	
3*	001865-01	Bushing, Shaft, Needle Bar	
4*	002807-01	Stud, Connector, Reciprocator	
5*	001842-01	Bracket, Stopper, Steel	
6*	004676-01	Bracket, Stopper, Delrin	
7*	004878-01	Reciprocator	
8	671855-06	Screw, Pan Head Slotted, M3 x 0.5 x 6 Lg	
9	672018-10	Screw, Socket Head Cap, M4 x 0.7 x 10 Lg	
10	10206	Shaft, Guide, Needle Bar	
11	10209	Bearing, Radial, 9mm ID x 24mm OD	
12	001955-18	Ring, Retainer, External, 5/16" ID	
13	004264-08	Screw, Set, Cone Point, M4 x 0.7 x 8 Lg	
14	10208	Bushing, Bearing, Lower Guide	

Note:

*Items 1 and 3-7 should be replaced as a factory built assembly: 001990-01 Assembly, Reciprocator

Sewing Head Components (3 of 3)

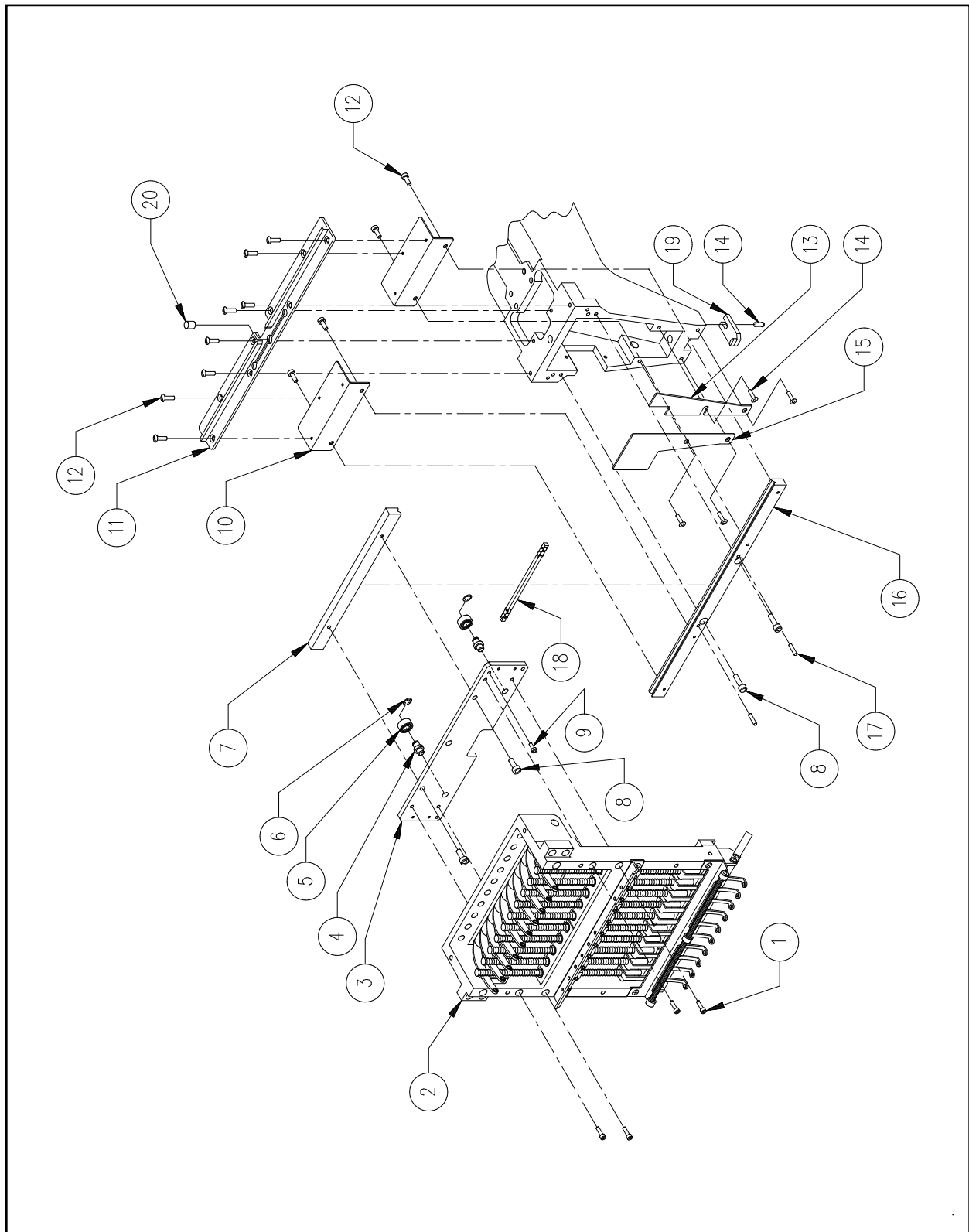


Figure 13

Sewing Head Components (3 of 3)**Reference Figure 13**

Item No.	Part Number	Item Description	Comments
1	672018-16	Screw, Socket Head Cap, M4 x 0.7 x 16 Lg	
2	-----	Needle Case Assemblies	See Pages 8-1 & 9-1
3*	007515-01	Plate, Bearing, Retainer	
4*	007516-01	Stud, Bearing, Retainer	
5	007517-01	Bearing, Radial, 6mm ID x 13mm OD	
6	007562-06	Ring, Retaining	
7	007520-01	V-Rail, Needle Case	
8	672018-12	Screw, Socket Head Cap, M4 x 0.7 x 12 Lg	
9	672018-06	Screw, Socket Head Cap, M4 x 0.7 x 6 Lg	
10	007546-01	Bracket, Support, Take-Up Lever Guide	
11	007507-01	Guide, Take-Up Lever	
12	671855-06	Screw, Pan Head Slotted, M3 x 0.5 x 6 Lg	
13	007473-01	Cover, Front, Arm, Right	
14	003509-08	Screw, Button Head Socket, M4 x 0.7 x 8 Lg	
15	007514-01	Cover, Front, Arm, Left	
16	007521-01	V-Rail, Arm	
17	002610-14	Pin, Spring, 3mm	
18	007522-01	Bearing, Cross-Roller	
19	001942-01	Plate, Position, Machined	
20	002821-01	Pad, Reservoir, Felt	

Note:

*Items 3 and 4 should be replaced as a factory built assembly:
007558-01 Plate, Retainer, Bearing, Assembly

Bobbin Idler Assembly

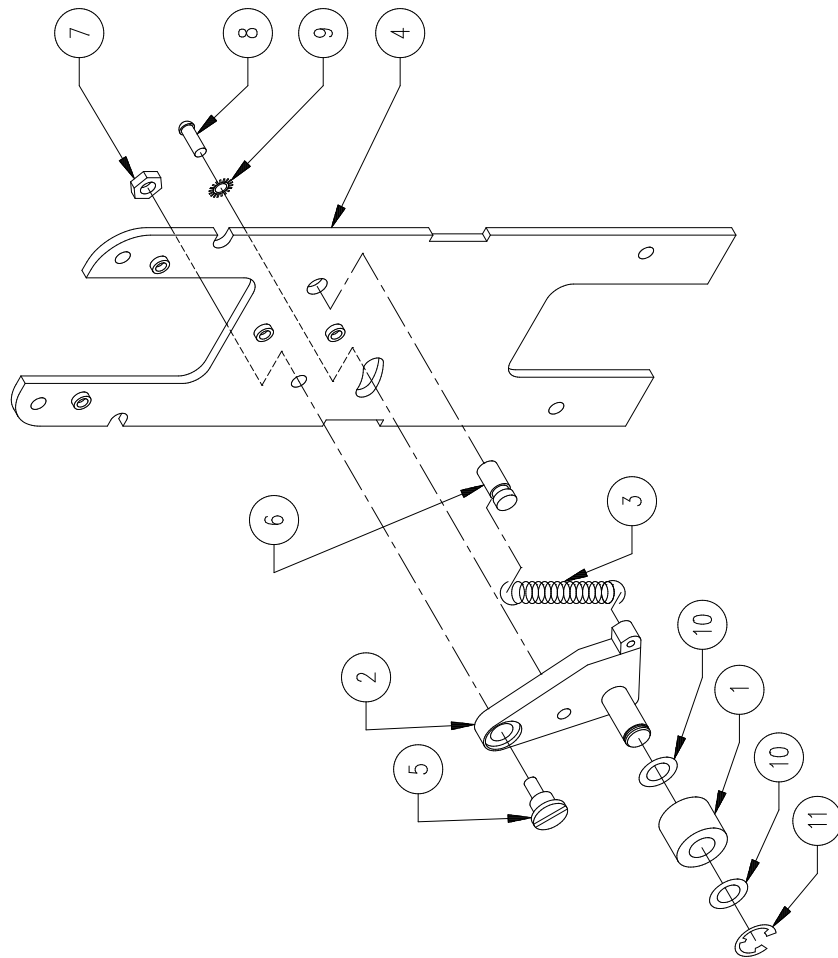


Figure 14

Bobbin Idler Assembly**Reference Figure 14**

Item No.	Part Number	Item Description	Comments
1	003593-01	Roller, Idler	
2	002817-01	Bar, Idler, Assembly	
3	002816-06	Spring, Idler	
4	003668-01	Cover, Rear	
5	003188-01	Screw, Shoulder, M5 x 7mm OD x 0.8 Lg	
6	660278-01	Stud, Press, 1/4" OD x 1/2" Lg	
7	003543-05	Nut, Jam, Hex, M5	
8	672036-10	Screw, Button Head Cap, M5 x 0.8 x 10 Lg	
9	690713-04	Washer, Lock, External Star, 1/4"	
10	702876-08	Spacer, Shaft, 5/16" ID x .016" Thick	
11	001955-18	Ring, Retainer, External, 5/16" ID	

Take-Up Drive Lever Assembly

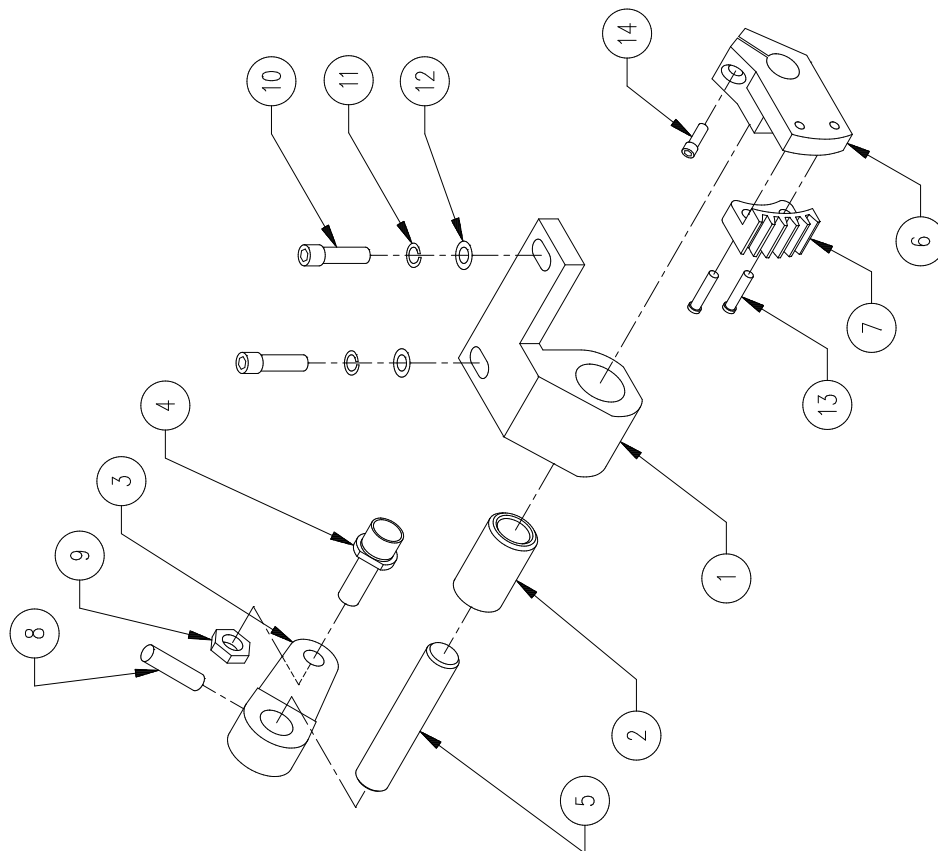


Figure 15

Take-Up Drive Lever Assembly**Reference Figure 15**

Item No.	Part Number	Item Description	Comments
1*	003567-01	Base, Drive, Lever, Take-Up, PHS II	
2*	001947-01	Bushing, Base, Drive, Lever, Take-Up	
3•	004821-01	Lever, Drive, Lever, Take-Up	
4	001983-01	Follower, Assembly	
5•	004820-01	Shaft, Drive, Lever, Take-Up	
6	001893-01	Case, Gear, Drive, Lever, Take-Up	
7	001894-01	Gear, Drive, Lever, Take-Up	
8•	660830-10	Pin, Groove, 1/8" OD x 5/8" Lg	
9	003543-05	Nut, Jam, Hex, M5	
10	672018-16	Screw, Socket Head Cap, M4 x 0.7 x 16 Lg	
11	690427-04	Washer, Lock, Split, M4	
12	690439-04	Washer, Flat, M4	
13	671855-06	Screw, Pan Head Slotted, M3 x 0.5 x 6 Lg	
14	672018-10	Screw, Socket Head Cap, M4 x 0.7 x 10 Lg	

Note:

*Items 1 and 2 should be replaced as a factory built assembly:
005362-01 Assembly, Bushing, Take-Up Lever

•Items 3, 5, and 8 should be replaced as a factory built
assembly: 004768-01 Lever, Drive, Lever, Take-up, Assembly

Trimmers, Head Level Parts (1 of 2)

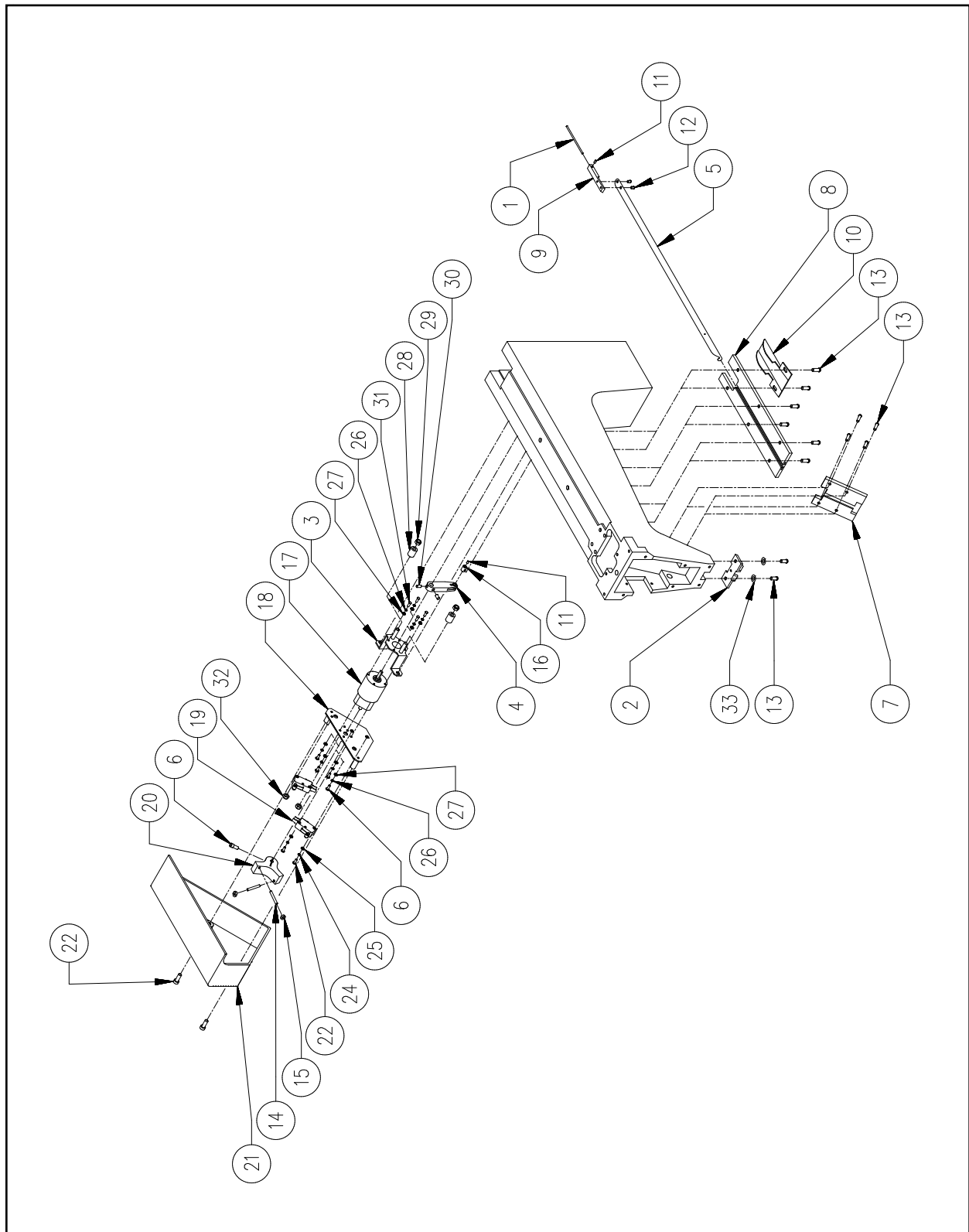


Figure 16

Trimmers, Head Level Parts (1 of 2)**Reference Figure 16**

Item No.	Part Number	Item Description	Comments
1	003185-01	Rod, Guide	
2	10156	Guide, Grabber	
3	003676-01	Bracket, Mounting, Grabber Drive	
4	003692-01	Arm, Drive, Grabber	
5	003586-01	Blade, Grabber	
6	670068-08	Screw, Socket Head Cap, 6-32 x 1/2"	
7	10157	Cover, Blade, Front	
8	003589-01	Cover, Blade, Top	
9	003590-01	Bracket, Transition	
10	003592-21	Cover, Blade, Rear	
11	001962-03	Screw, Set, Flat Point, M3 x 0.5 x 3 Lg	
12	670406-02	Screw, Button Head Cap, 4-40 x 1/8"	
13	011162-08	Screw, Button Head Socket, M4 x 0.7 x 8 Lg	
14	004709-01	Screw, Set, 8-32 x 1", Brass Tip	
15	680032-38	Nut, Hex, 8-32	
16	003155-01	Swivel, Wire	
17	006726-01	Motor, Grabber, Assembly	
18	003811-01	Bracket, Mounting, Switch	
19	282911-01	Switch, Limit, Roller	
20	003812-01	Arm, Actuator, Switch	
21	004719-21	Cover, Drive, Grabber Motor	
22	672018-14	Screw, Socket Head Cap, M4 x 0.7 x 14 Lg	
23	670131-12	Screw, Pan Head Phillips, 4-40 x 3/4"	
24	690033-34	Washer, Lock, Split, #4	
25	690034-34	Washer, Flat, #4	
26	690033-32	Washer, Lock, Split, #2	
27	690034-32	Washer, Flat, #2	
28	003176-01	Bumper, Motor Stop	
29	003573-05	Nut, Nylock, M5	
30	001960-04	Screw, Set, Flat Point, M4 x 0.7 x 4 Lg	
31	672386-04	Screw, Pan Head Phillips, 2-56 x 1/4"	
32	680043-34	Nut, Lock, 4-40	
33	690439-04	Washer, Flat, M4	

Trimmers, Head Level Parts (2 of 2)

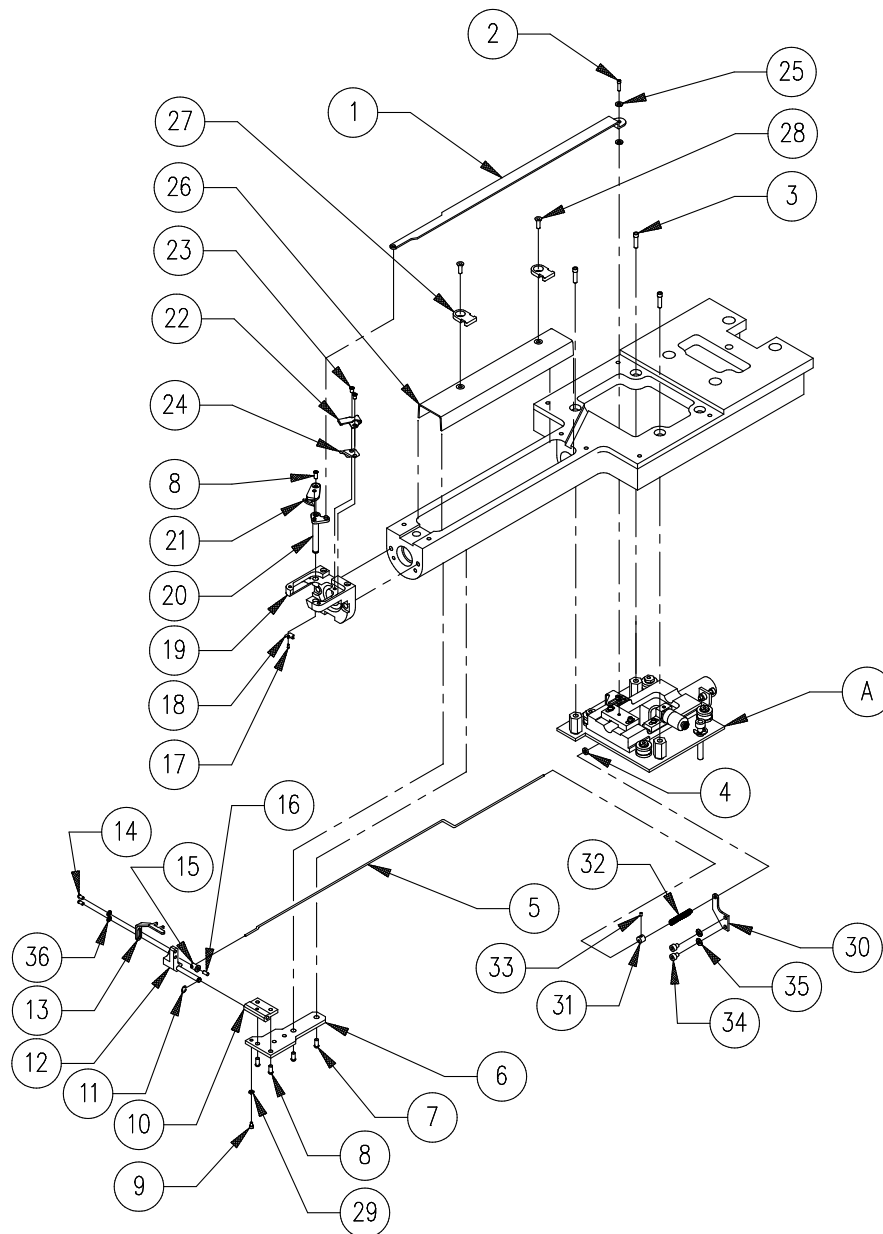


Figure 17

Trimmers, Head Level Parts (2 of 2)**Reference Figure 17**

Item No.	Part Number	Item Description	Comments
A	007265-01	Trimmer Drive	See Page 20-1
1	010609-01	Link, Connecting	
2	003679-01	Screw, Shoulder, 4-40 x 1/8" OD x 1/8"	
3	010172-16	Screw, Socket Head Cap, M5 x 0.8 x 16mm, Zinc Plate	
4	690364-32	Washer, Flat, #2, .032" Thick	
5	010355-01	Link, Connecting, Picker	
6	006526-01	Bracket, Picker	
7	003509-08	Screw, Button Head Socket, M4 x 0.7 x 8mm	
8	007443-06	Screw, Flat Head Socket, M3 x 0.5 x 6mm	
9	010170-10	Screw, Socket Head Cap, M3 x 0.5 x 10mm, Zinc Plate	
10	003511-01	Mount, Picker	
11	001955-08	Ring, Retainer, External, .125"	
12	003141-01	Base, Picker	
13	005615-01	Picker	
14	010170-06	Screw, Socket Head Cap, M3 x 0.5 x 6mm, Zinc Plate	
15	003131-01	Pin, Swivel, Front	
16	001962-03	Screw, Set, Flat Point, M3 x 0.5 x 3mm	
17	006305-01	Screw, Cheese Head, M2 x 0.4 x 3mm	
18	003685-01	Clip, Fixing, Drive Arm	
19	005601-01	Bracket, Needle Plate	
20	005602-01	Arm, Drive, Movable Knife	
21	005617-01	Knife, Movable	
22	005600-01	Knife, Spring, Fixed	
23	003136-04	Screw, Button Head Socket, M3 x 0.5 x 4mm	
24	006671-01	Presser, Under Thread	
25	005098-01	Spacer, Shaft, .128" ID x .317" OD x .03" Thick	
26	006387-01	Bracket, Bed, Cable	
27	004550-01	Mount, Cable Tie	
28	001926-10	Screw, Flat Head Socket, M4 x 0.7 x 10mm	
29	010178-03	Nut, Hex, M3	
30	008465-01	Bracket, Spring, Mount	
31	008467-01	Collar, Picker	
32	010892-01	Spring, Picker, Front	
33	003123-03	Screw, Set, Cup Point, M3 x 0.5 x 3mm	
34	010170-06	Screw, Socket Head Cap, M3 x 0.5 x 6mm, Zinc Plate	
35	690427-03	Washer, Lock, Split, M3	
36	690811-34	Washer, Internal Star, #4	

Trimmer Drive Assembly

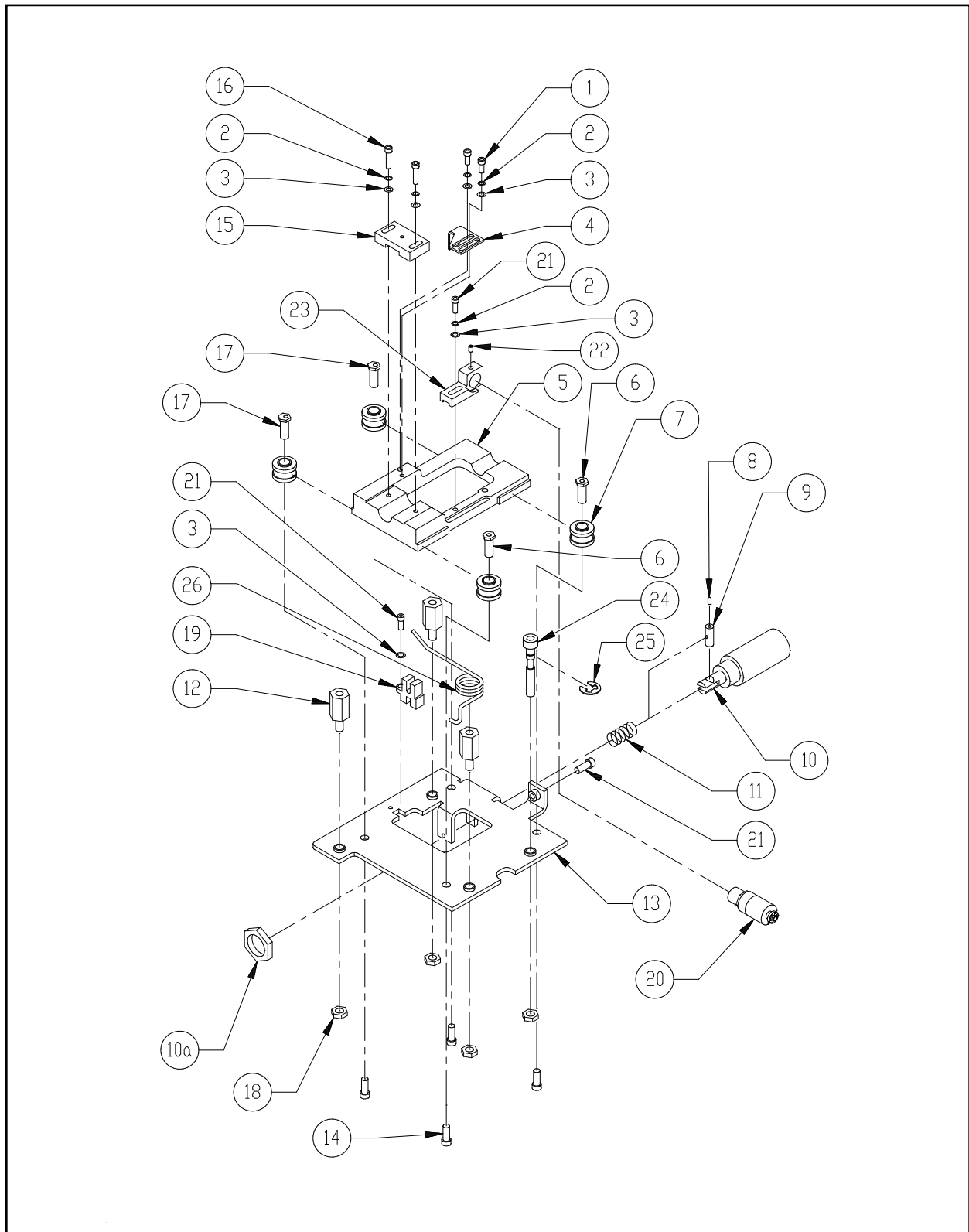


Figure 18

Trimmer Drive Assembly**Reference Figure 18**

Item No.	Part Number	Item Description	Comments
1	001922-06	Screw, Socket Head Cap, M3 x 0.5 x 6 Lg	
2	690427-03	Washer, Lock, Split, M3	
3	690439-03	Washer, Flat, M3	
4	005611-01	Bracket, Switch, Adjusting	
5	007258-01	Frame, Movable, Machined	
6	005661-01	Shaft, Roller, Movable Frame	
7	005669-01	Roller, Movable, Frame	
8	001962-06	Screw, Set, Flat Point, M3 x 0.5 x 6 Lg	
9	003627-01	Clamp, Swivel, Picker	
10*	007273-01	Picker, Solenoid, Assembly	
10a	-----	Nut, Panel, Solenoid	(Included with Item 10)
11	003686-01	Spring, Return, Solenoid	
12	004746-01	Standoff, 10mm Hex, M-F, M5 x 0.8 x 16 Lg	
13	007259-01	Bracket, Solenoid, Mounting	
14	670174-08	Screw, Pan Head Phillips, 6-32 x 1/2 "	
15	005609-01	Plate, Link Adjusting	
16	001922-14	Screw, Socket Head Cap, M3 x 0.5 x 14 Lg	
17	005661-02	Shaft, Roller, Movable Frame	
18	680430-05	Nut, Hex, M5	
19*	007264-01	Switch, Optical, Assembly	
20*	007262-01	Solenoid, Trimmer, Assembly	
21	001922-10	Screw, Socket Head Cap, M3 x 0.5 x 10 Lg	
22	001962-03	Screw, Set, Flat Point, M3 x 0.5 x 3 Lg	
23	007255-01	Mount, Solenoid, Trimmer	
24	007256-01	Bolt, Adjuster, Trimmer	
25	001955-15	Ring, Retaining, External, .188"	
26	009202-01	Spring, Trimmer Home	

Note:

*Items 10, 19 and 20 should be replaced as a factory built assembly: 007261-01 Trimmer, Picker, Solenoid, Opto, Assembly

Y-Drive Motor Assembly

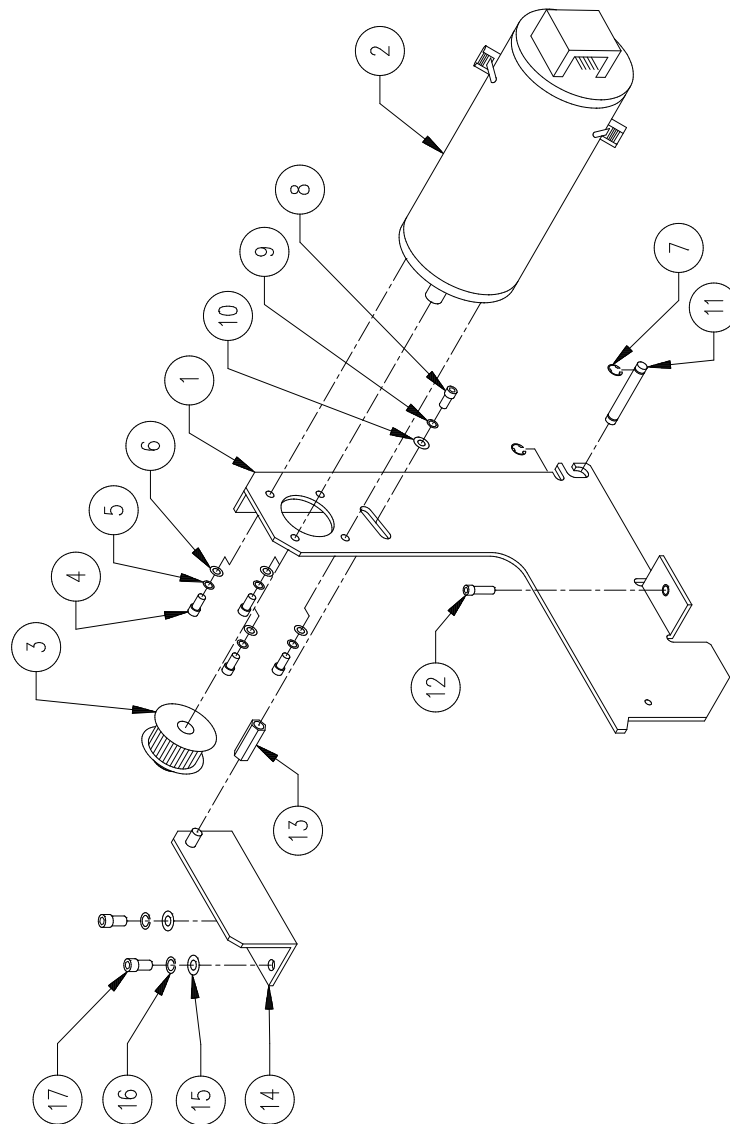


Figure 19

Y-Drive Motor Assembly**Reference Figure 19**

Item No.	Part Number	Item Description	Comments
1	003664-01	Bracket, Mounting, Y-Motor	
2	000465-01	Motor, X-Y Servo	
3	004962-01	Pulley, 5.08mmP, 15 Groove	
4	670174-06	Screw, Pan Head Phillips, 6-32 x 3/8"	
5	690033-36	Washer, Lock, Split, #6	
6	690034-36	Washer, Flat, #6	
7	344378-02	Ring, Retaining, .238" ID	
8	670038-08	Screw, Socket Head Cap, 10-32 x 1/2"	
9	690033-03	Washer, Lock, Split, #10	
10	690034-03	Washer, Flat, #10	
11	662744-24	Pin, Dowel, .250" OD x 1.5" Lg	
12	670038-14	Screw, Socket Head Cap, 10-32 x 7/8"	
13	712145-16	Standoff, Female, 10-32 x 1" Lg, 3/8" Hex	
14	004519-01	Bracket, Support, Y-Motor	
15	690034-38	Washer, Flat, #8	
16	690033-38	Washer, Lock, Split, #8	
17	670149-06	Screw, Socket Head Cap, 8-32 x 3/8"	

Electronics Assembly

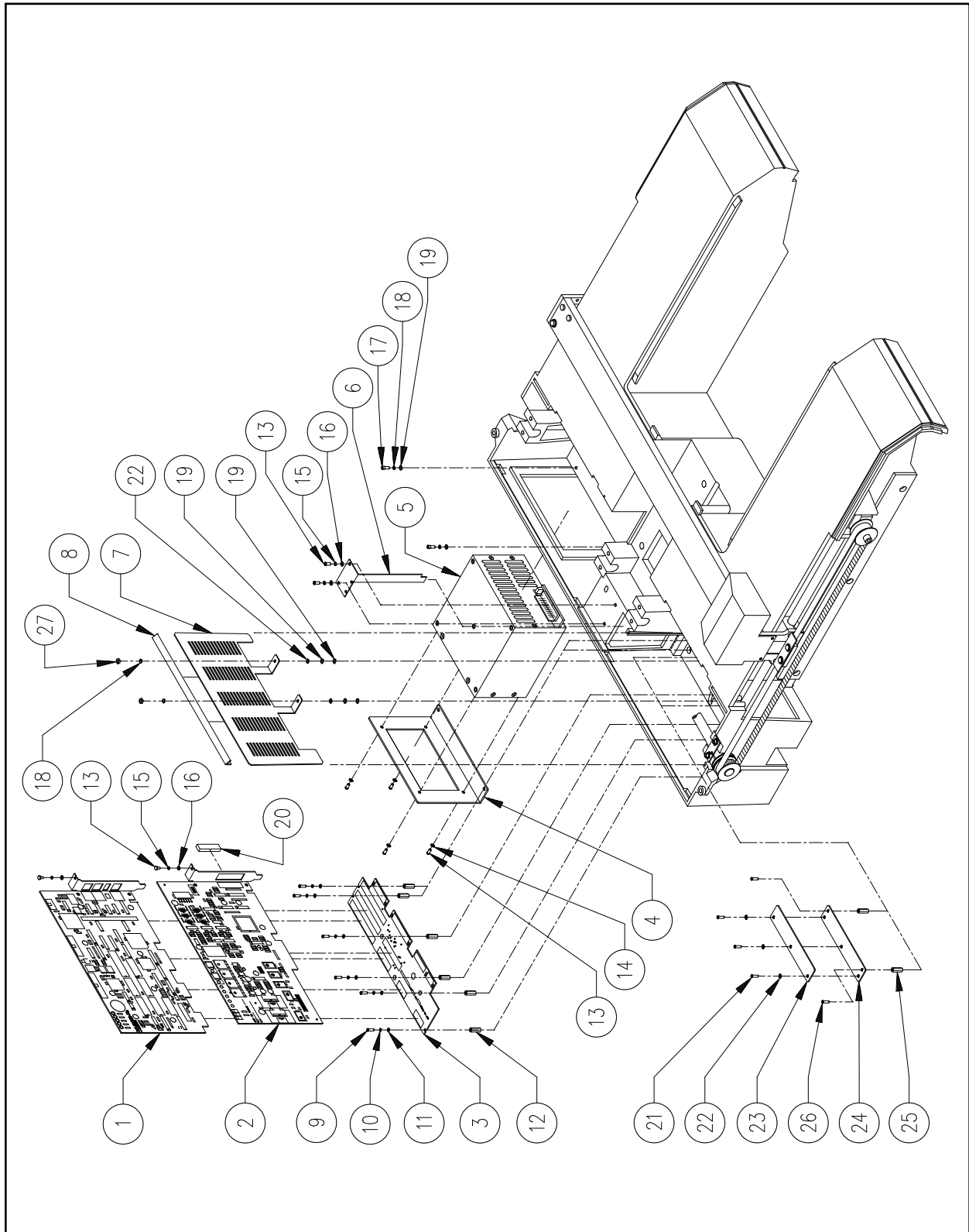


Figure 20

Electronics Assembly**Reference Figure 20**

Item No.	Part Number	Item Description	Comments
1	009591-01	PCB, CPU188/Disk	
2	009820-01	PCB, 4-Axis Driver, Assembly	
3	005631-01	PCB, Backplane	
4	004523-02	Bracket, Power Supply	
5	005570-01	Power Supply	
6	004526-01	Bracket, Slot Cover, Single	
7	009360-01	Wall, Shielding, RFI	
8	345095-11	Seal, EM-1, 10"	
9	670131-10	Screw, Pan Head Phillips, 4-40 x 5/8"	
10	690033-34	Washer, Lock, Split, #4	
11	690034-34	Washer, Flat, #4	
12	710420-15	Standoff, Female, 4-40 x 15/16" Lg, 1/4" Hex	
13	670174-06	Screw, Pan Head Phillips, 6-32 x 3/8"	
14	690713-36	Washer, Lock, External Star, #6	
15	690033-36	Washer, Lock, Split, #6	
16	690034-36	Washer, Flat, #6	
17	670149-10	Screw, Socket Head Cap, 8-32 x 5/8"	
18	690033-38	Washer, Lock, Split, #8	
19	004648-01	Washer, Flat, Steel, #10, .203" ID x	
20	190709-01	Connector, Header, Straight, 26 Position	
21	672982-06	Screw, Pan Head Phillips, 8-32 x 3/8"	
22	690713-38	Washer, External Star, #8	
23	009496-01	Clamp, Upper	
24	009495-01	Clamp, Lower	
25	710161-14	Standoff, F-F, 6-32 x 7/8"	
26	670174-04	Screw, Pan Head Phillips, 6-32 x 1/4"	
27	680032-38	Nut, Hex, 8-32	

X-Drive System (1 of 5)

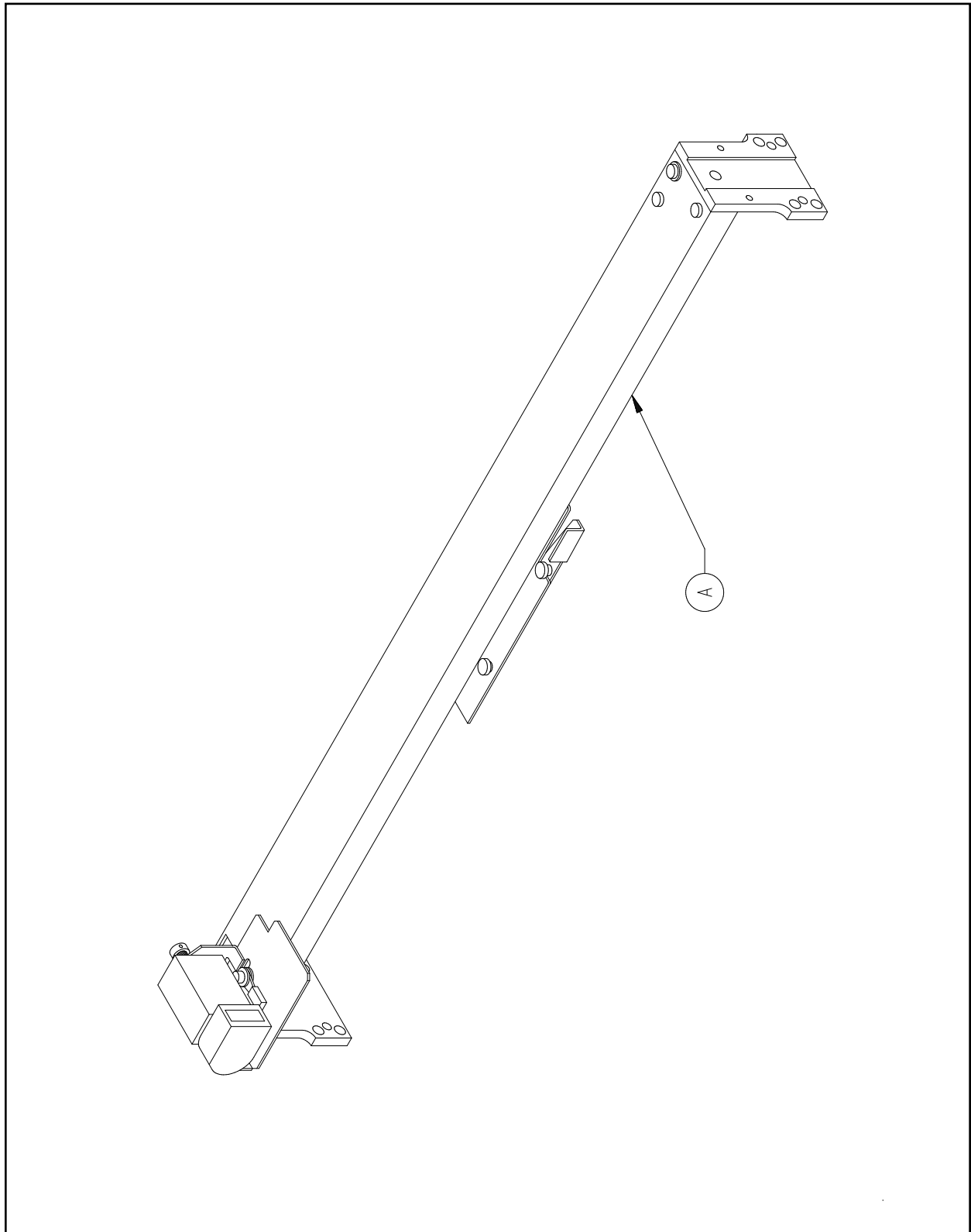


Figure 21

X-Drive System (1 of 5)**Reference Figure 21**

Item No.	Part Number	Item Description	Comments
A	009847-01	X-Drive Assembly, CE	See Page 22-1

X-Drive System (2 of 5)

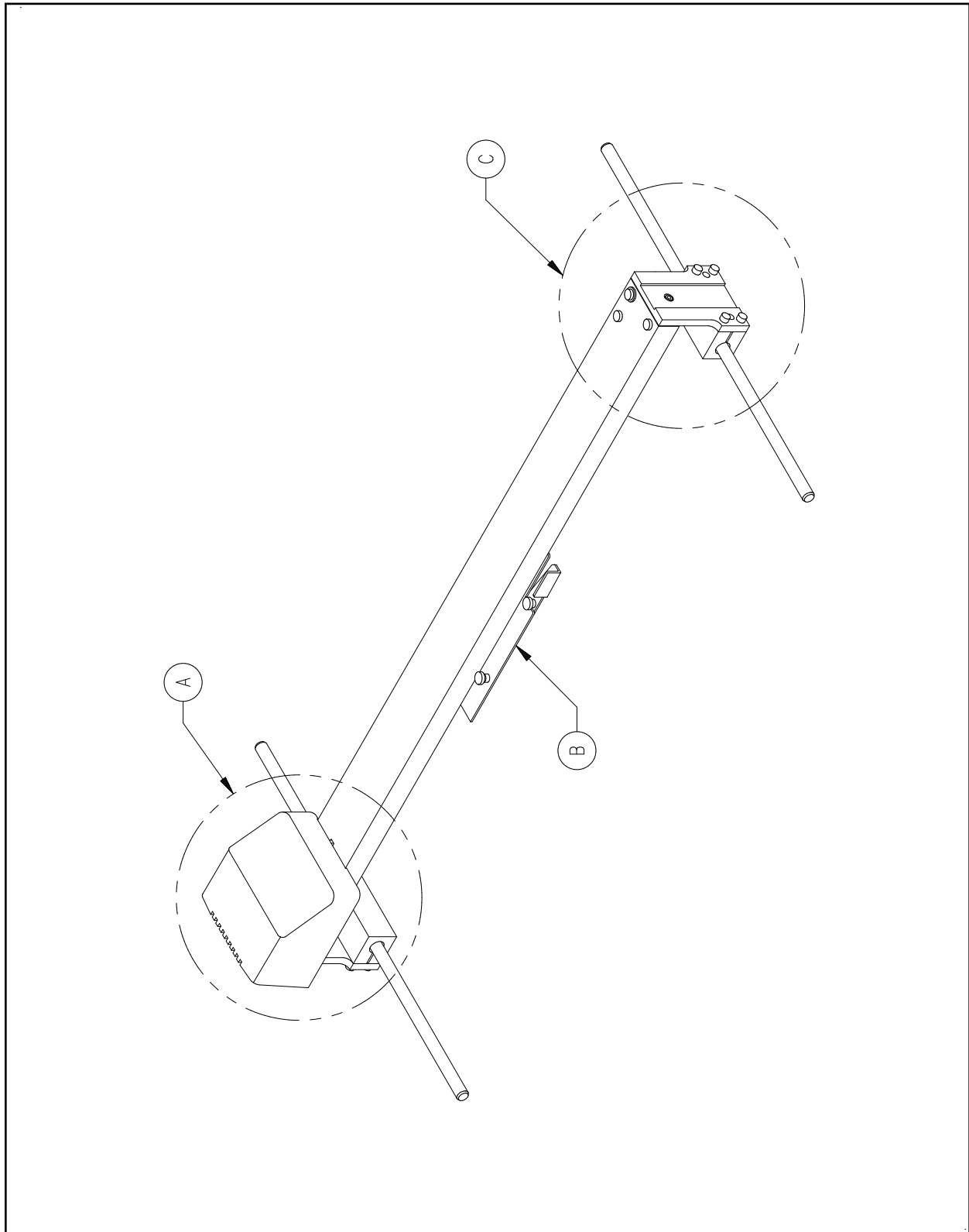


Figure 22

X-Drive System (2 of 5)**Reference Figure 22**

Item No.	Part Number	Item Description	Comments
A	-----	X-Drive Sub-assembly (Motor End)	See Page 23-1
B	004835-01S	Assembly, X-Carriage	See Page 24-1
C	-----	X-Drive Sub-assembly (Idler End)	See Page 25-1

X-Drive System (3 of 5)

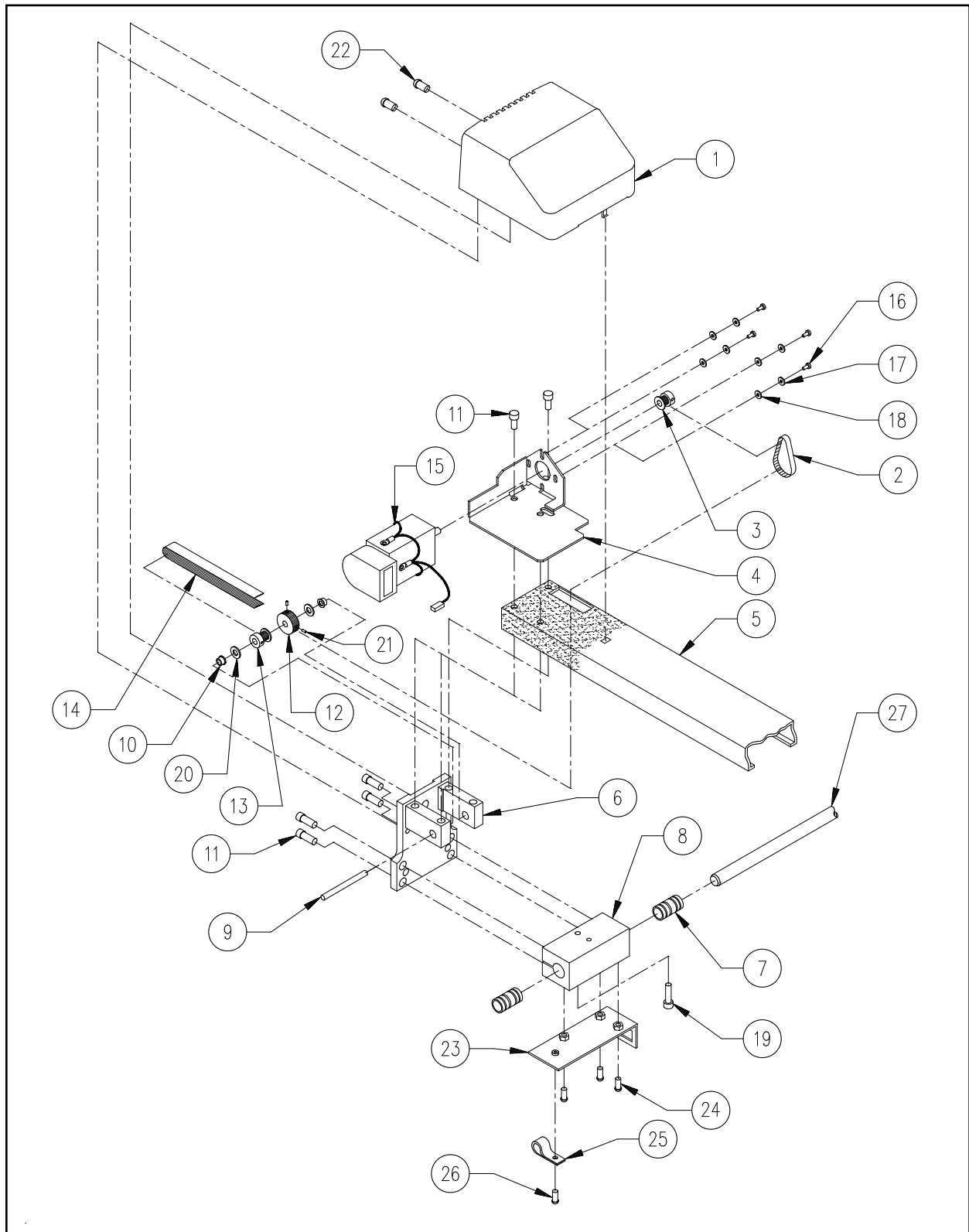


Figure 23

X-Drive System (3 of 5)**Reference Figure 23**

Item No.	Part Number	Item Description	Comments
1	009640-01	Cover, X-Motor	
2*	005156-01	Belt, Timing, 63 Groove, .080P, 1/4" Wide	
3	344371-15	Pulley, Timing, 15 Groove, .080P, 1/4" Wide	
4	004812-01	Mount, X-Motor	
5	005070-02	Channel, X-Drive	
6*	005119-01	Carriage, Y-Axis	
7	005342-06	Bearing, Sleeve, Frelon	
8	006741-01	Housing, Bearing	
9*	005066-01	Shaft, Drive, X-Axis	
10*	006416-01	Bearing, Ball, Radial, Flanged	
11	670149-06	Screw, Socket Head Cap, 8-32 x 3/8"	
12*	006044-01	Pulley, Drive, X-Axis	
13*	344373-15	Pulley, Timing, 15 Groove, .080P, 3/8" Wide	
14	005117-01	Belt, Timing, X-Drive, 577 Groove	
15	009676-01	Motor/Encoder, X-Axis	
16	672386-04	Screw, Pan Head Phillips, 2-56 x 1/4"	
17	690033-32	Washer, Lock, Split, #2	
18	690034-32	Washer, Flat, #2	
19	670149-08	Screw, Socket Head Cap, 8-32 x 1/2"	
20*	702875-05	Spacer, Shaft, 3/16" ID x .010" Thick	
21*	670166-03	Screw, Set, Knurled Cup Point, 4-40 x 3/16"	
22	670406-04	Screw, Button Head Cap, 4-40 x 3/16"	
23	003814-01	Bracket, Connector	
24	670174-06	Screw, Pan Head Phillips, 6-32 x 3/8"	
25	009336-01	Clamp, Cable, 1/4"	
26	670131-04	Screw, Pan Head Phillips, 4-40 x 1/4"	
27	441423-02	Rail, Y-Axis	

Note:

*Items 2, 6, 9, 10, 12, 13, 20 and 21 should be replaced as factory built assembly: 006419-01 Assembly, Carriage, Y-Axis

X-Drive System (4 of 5)

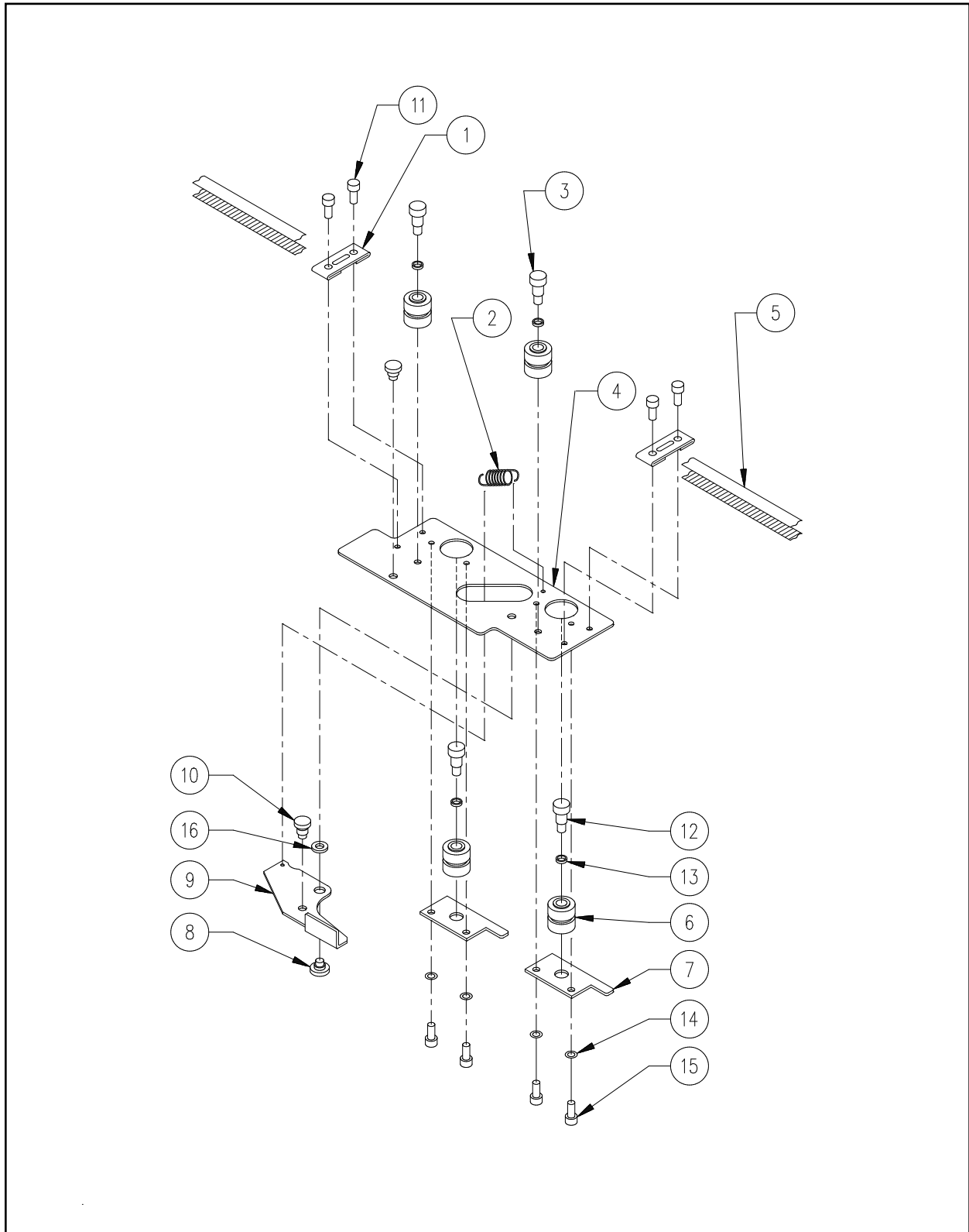


Figure 24

X-Drive System (4 of 5)**Reference Figure 24**

Item No.	Part Number	Item Description	Comments
1*	554305-01	Clamp, Belt, X-Drive	
2	504396-01	Spring, Extension	
3•	454308-01	Pin, Hoop Holder, Carriage	
4•	004815-01	Carriage, X-Axis	
5*	005117-01	Belt, Timing, X-Drive, 577 Groove	
6	444302-01	Roller, X-Carriage	
7	554306-01	Plate, Roller, Adjustable	
8•	454307-01	Pivot, Hoop Holder	
9•	554304-01	Actuator, Hoop Holder	
10•	454308-02	Pin, Hoop Holder, Actuator	
11*	670267-06	Screw, Button Head Cap, 8-32 x 3/8"	
12	674395-05	Screw, Shoulder, 1/4" Dia x .312" Lg	
13a	702875-01	Spacer, Shaft, 3/16" x .002"	(Use as Required)
13b	702875-02	Spacer, Shaft, 3/16" x .004"	(Use as Required)
13c	702875-03	Spacer, Shaft, 3/16" x .006"	(Use as Required)
13d	702875-04	Spacer, Shaft, 3/16" x .008"	(Use as Required)
13e	702875-05	Spacer, Shaft, 3/16" x .010"	(Use as Required)
14	690811-38	Washer, Internal Star, #8	
15	670149-06	Screw, Socket Head Cap, 8-32 x 3/8"	
16•	344377-01	Washer, Flat, #8, Teflon	

Note:

*Items 1, 5, and 11 are not included in Assembly 004835-01S and must be replaced separately.

•Items 3, 4, 8-10 and 16 should be replaced as a factory built assembly: 007458-01 Carriage, X, Assembly

X-Drive System (5 of 5)

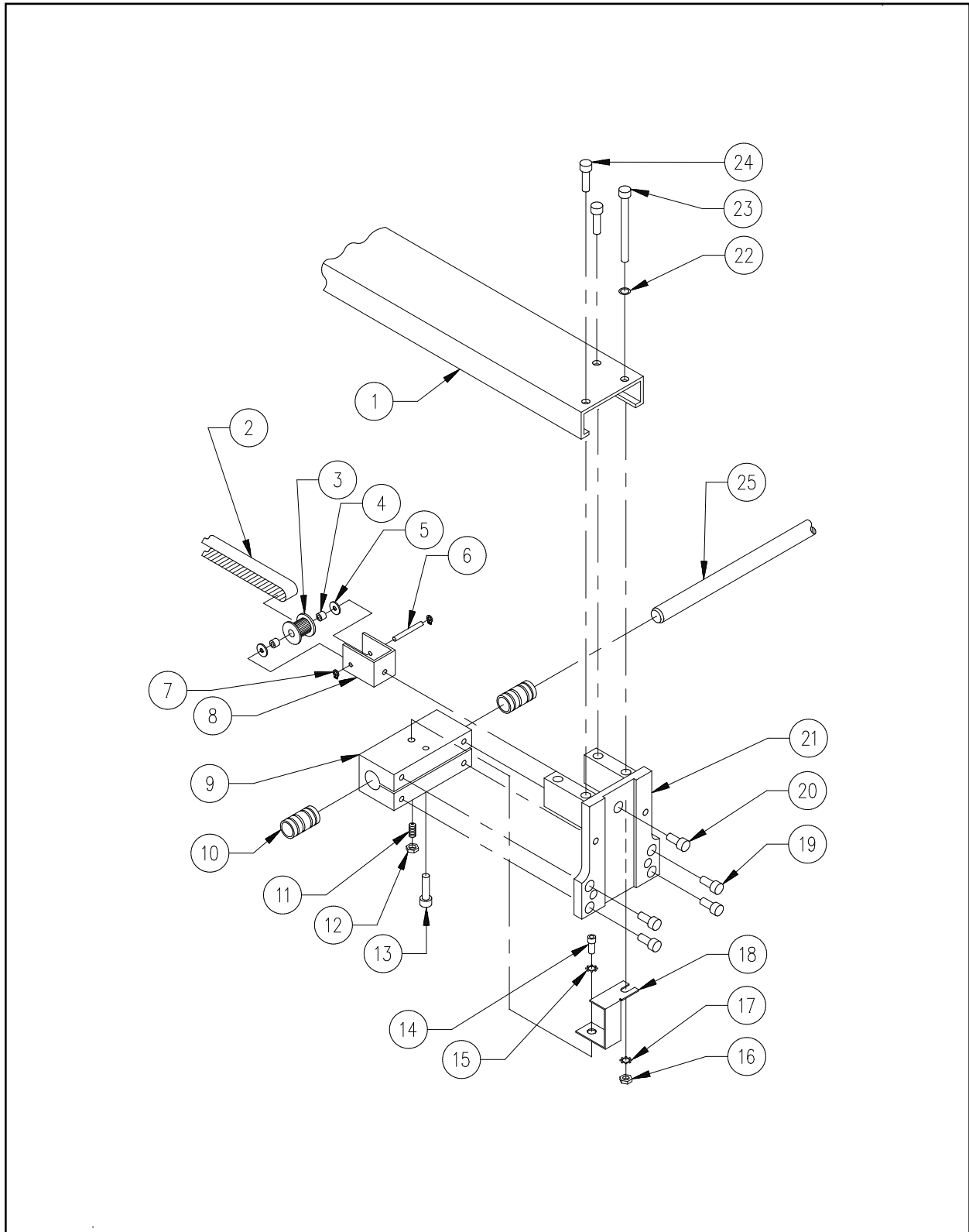


Figure 25

X-Drive System (5 of 5)**Reference Figure 25**

Item No.	Part Number	Item Description	Comments
1	005070-01	Channel, X-Drive	
2	005117-01	Belt, Timing, X-Drive, 577 Groove	
3*	-----	Pulley, X-Drive	
4*	005095-01	Bearing, X-Drive, Idler	
5*	003419-30	Spacer, Shaft, .190" x .310" Lg	
6*	000378-14	Pin, Dowel, 1/8" OD x .875" Lg	
7*	344378-03	Ring, Retaining, .125"	
8*	554327-01	Tensioner, Belt, X-Axis	
9	006741-01	Housing, Bearing	
10	005342-06	Bearing, Sleeve, Frelon	
11	344883-01	Plunger, Ball, 1/4-20	
12	680032-04	Nut, Hex, 1/4-20	
13	670149-08	Screw, Socket Head Cap, 8-32 x 1/2"	
14	670038-06	Screw, Socket Head Cap, 10-32 x 3/8"	
15	690713-03	Washer, External Star, #10	
16	680032-38	Nut, Hex, 8-32	
17	690713-38	Washer, External Star, #8	
18	555044-01	Strap, Ground	
19	670149-08	Screw, Socket Head Cap, 8-32 x 1/2"	
20*	670149-10	Screw, Socket Head Cap, 8-32 x 5/8"	
21	004522-01	Carriage, Y-Axis	
22	690811-38	Washer, Internal Star, #8	
23	670267-18	Screw, Button Head Cap, 8-32 x 1-1/8"	
24	670267-06	Screw, Button Head Cap, 8-32 x 3/8"	
25	441423-02	Rail, Y-Axis	

Note:

*Items 3-8 and 20 should be replaced as a factory built assembly: 855185-01 Assembly, Pulley, X-Idler

Z-Drive Encoder Assembly

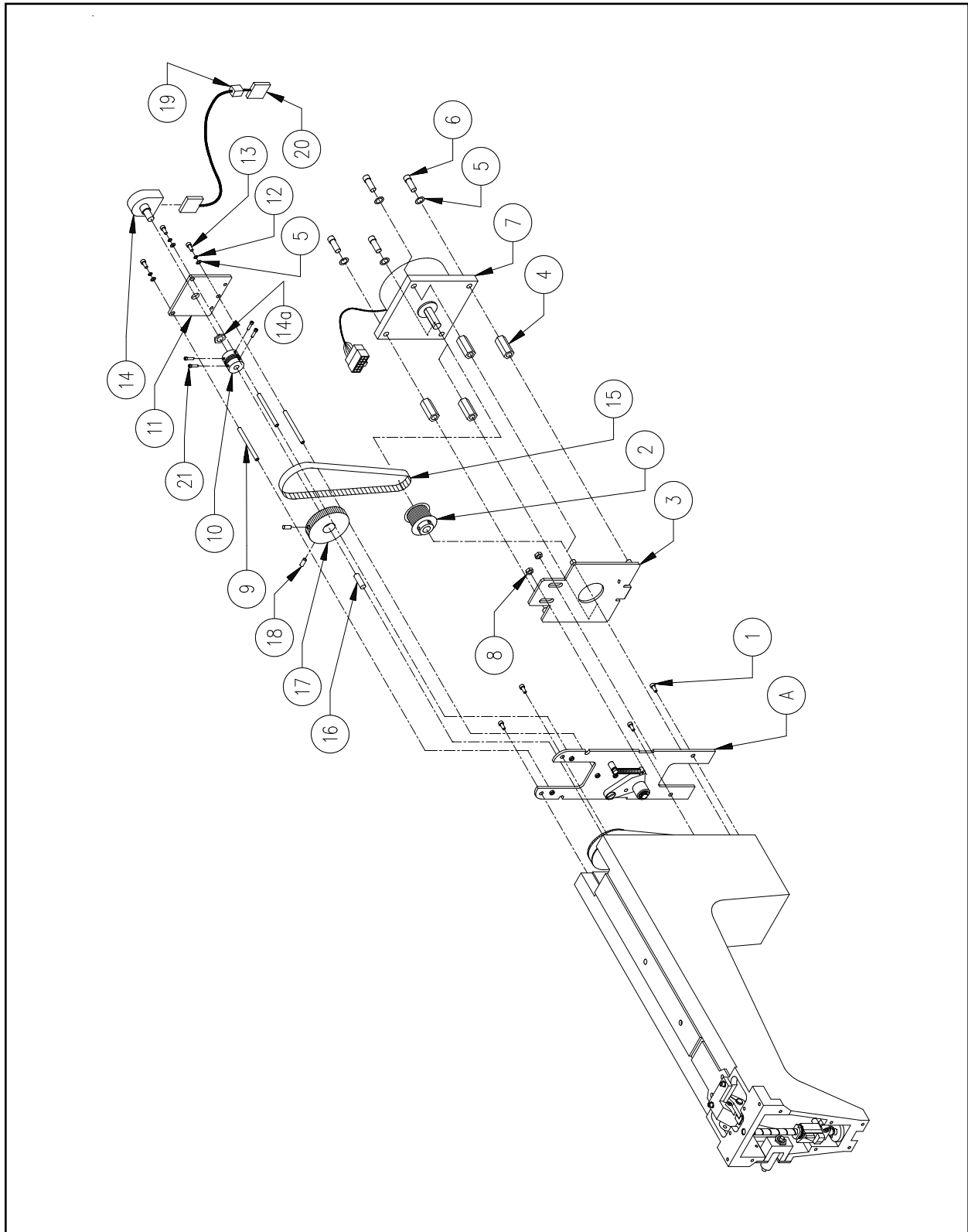


Figure 26

Z-Drive Encoder Assembly**Reference Figure 26**

Item No.	Part Number	Item Description	Comments
A	004504-01S	Bobbin Idler Assembly	See Page 14-1
1	001926-01	Screw, Flat Head Socket, M4 x 0.7 x 12 Lg	
2	340090-01	Pulley, 16T, 3/8" ID, w/Hub	
3	003667-01	Plate Mounting, Z-Drive Motor	
4	714399-16	Standoff, F/F, 1/2" Hex, 1/4-20 x 1" Lg	
5	690439-04	Washer, Flat, M4	
6	670035-08	Screw, Socket Head Cap, 1/4-20 x 1/2"	
7	003688-01	Motor, Z-Drive	
8	005284-01	Nut, Lock, M6	
9	004829-01	Standoff, Encoder, M-F, M4 x 0.7 x 2.01" Lg	
10	003553-01	Coupler, Shaft, Helical, 1/4" x 1/4"	
11	004730-01	Plate, Encoder	
12	690427-04	Washer, Lock, Split, M4	
13	672018-16	Screw, Socket Head Cap, M4 x 0.7 x 16 Lg	
14	004729-01	Encoder, Z-Axis	
14a	-----	Nut, Panel	(Included with Item #14)
15	344394-01	Belt, Timing, 80 Groove, 1/5P, 3/8" Wide	
16	662744-12	Pin, Dowel, 1/4" OD x .750" Lg	
17	001523-01	Pulley, Drive, Bobbin, Top, 32T, 1/5P	
18	001927-12	Screw, Set, Flat Point, M5 x 0.8 x 12 Lg	
19	009311-01	Ferrite, Small	
20	005104-01	Harness, Z-Encoder	
21	670068-06	Screw, Socket Head Cap, 6-32 x 3/8"	

Y-Drive Assembly

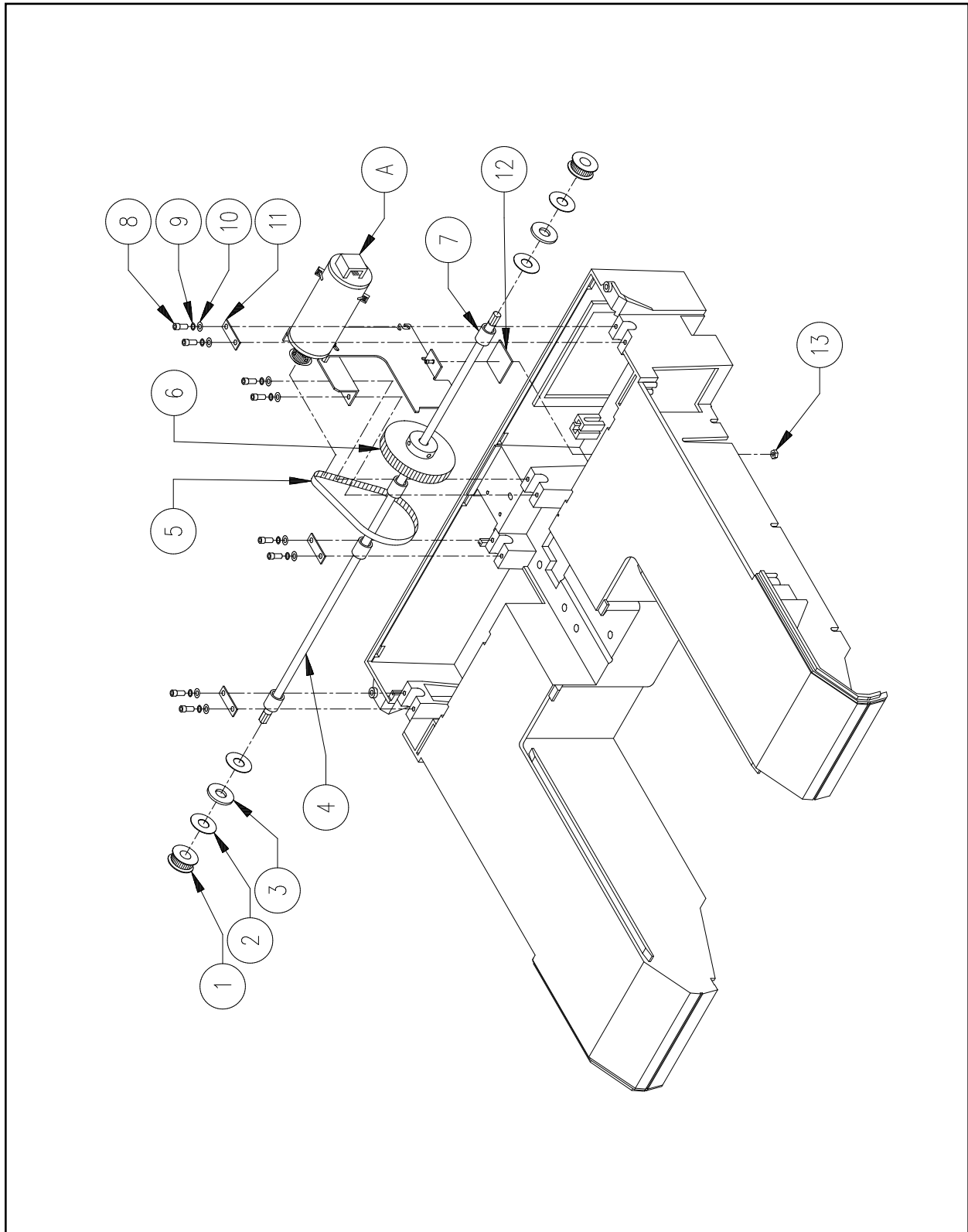


Figure 27

Y-Drive Assembly**Reference Figure 27**

Item No.	Part Number	Item Description	Comments
A	-----	Y-Drive Motor Assembly	See Page 19-1
1	504358-01	Pulley, Idler, Y-Drive	
2	694397-08	Washer, Thrust, .50" x .031"	
3	344402-08	Bearing, Thrust, .50" ID	
4	444404-01	Shaft, Drive, Y-Axis	
5	341781-01	Belt, Timing, 74T, 1/5P, 3/8" Wide	
6	344349-01	Pulley, Timing, 60 Groove, 1/5P, 1/2" Bore	
7	344403-12	Bearing, Roller, 1/2" x 3/4"	
8	670149-06	Screw, Socket Head Cap, 8-32 x 3/8"	
9	690033-38	Washer, Lock, Split, #8	
10	690034-38	Washer, Flat, #8	
11	555325-01	Bracket, Retainer	
12	003666-01	Plate, Tensioner, Y-Belt	
13	680043-38	Nut, Lock, 8-32	

Left Y-Carriage Assembly

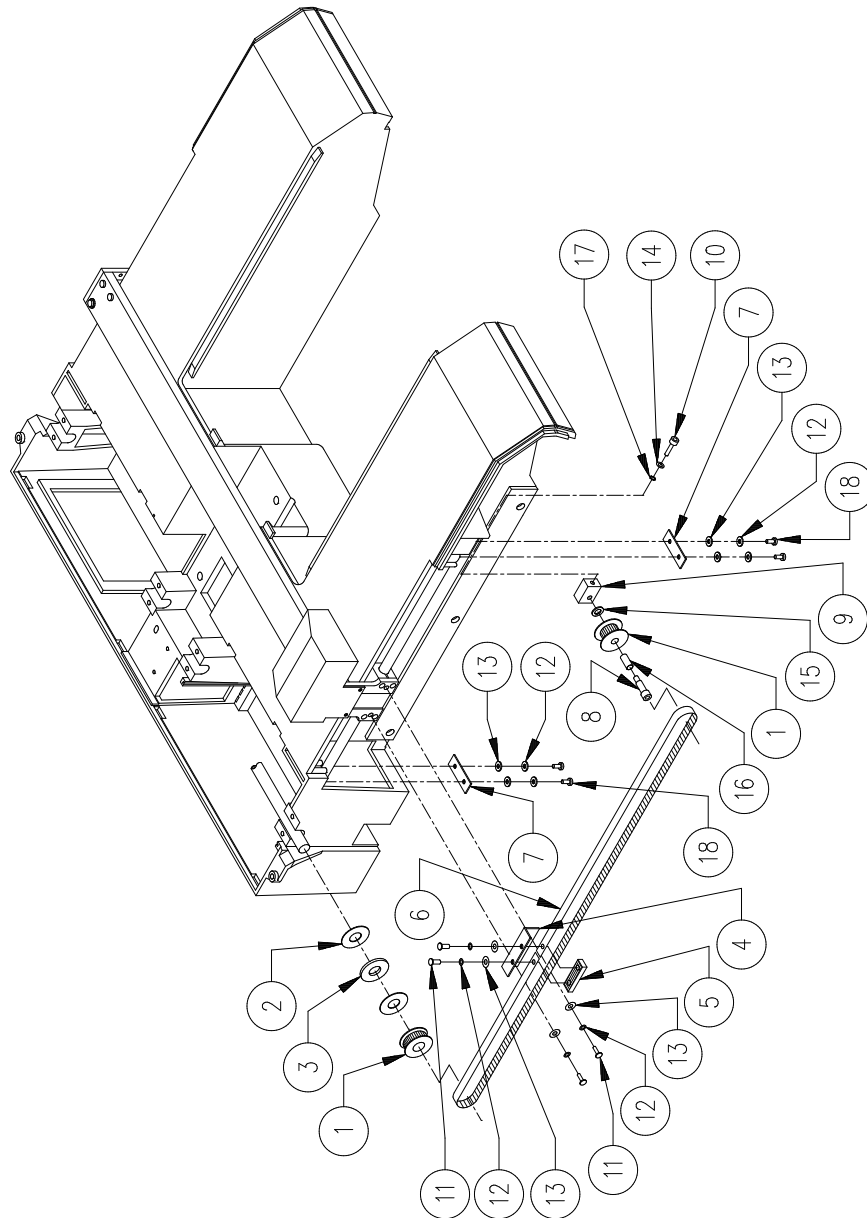


Figure 28

Left Y-Carriage Assembly**Reference Figure 28**

Item No.	Part Number	Item Description	Comments
1*	504358-01	Pulley, Idler, Y-Drive	
2	694397-08	Washer, Thrust, .50" ID x .031"	
3	344402-08	Bearing, Thrust, .50" ID	
4	554329-01	Bracket, Belt	
5	000372-01	Clamp, Belt	
6	504449-01	Belt, Y-Drive, 199 Groove	
7	555325-01	Bracket, Retainer	
8	672852-01	Screw, Shoulder, 1/4-20 x 5/16" x 5/8" Lg	
9	452165-01	Block, Pulley, Idler	
10	670038-14	Screw, Socket Head, Cap, 10-32 x 7/8"	
11	670267-06	Screw, Button Head Cap, 8-32 x 3/8"	
12	690033-38	Washer, Lock, Split, #8	
13	690034-38	Washer, Flat, #8	
14	690034-03	Washer, Flat, #10	
15	693158-03	Washer, Precision, 5/16" ID x .048" Thick	
16*	342877-09	Bearing, Roller, 5/16" ID x 9/16" Lg	
17	690713-03	Washer, Lock, External Star, #10	
18	670149-06	Screw, Socket Head Cap, 8-32 x 3/8"	

Note:

*Items 1 and 16 should be replaced as a factory built assembly: 005289-01 Assembly, Pulley, Idler

Right Y-Carriage Assembly

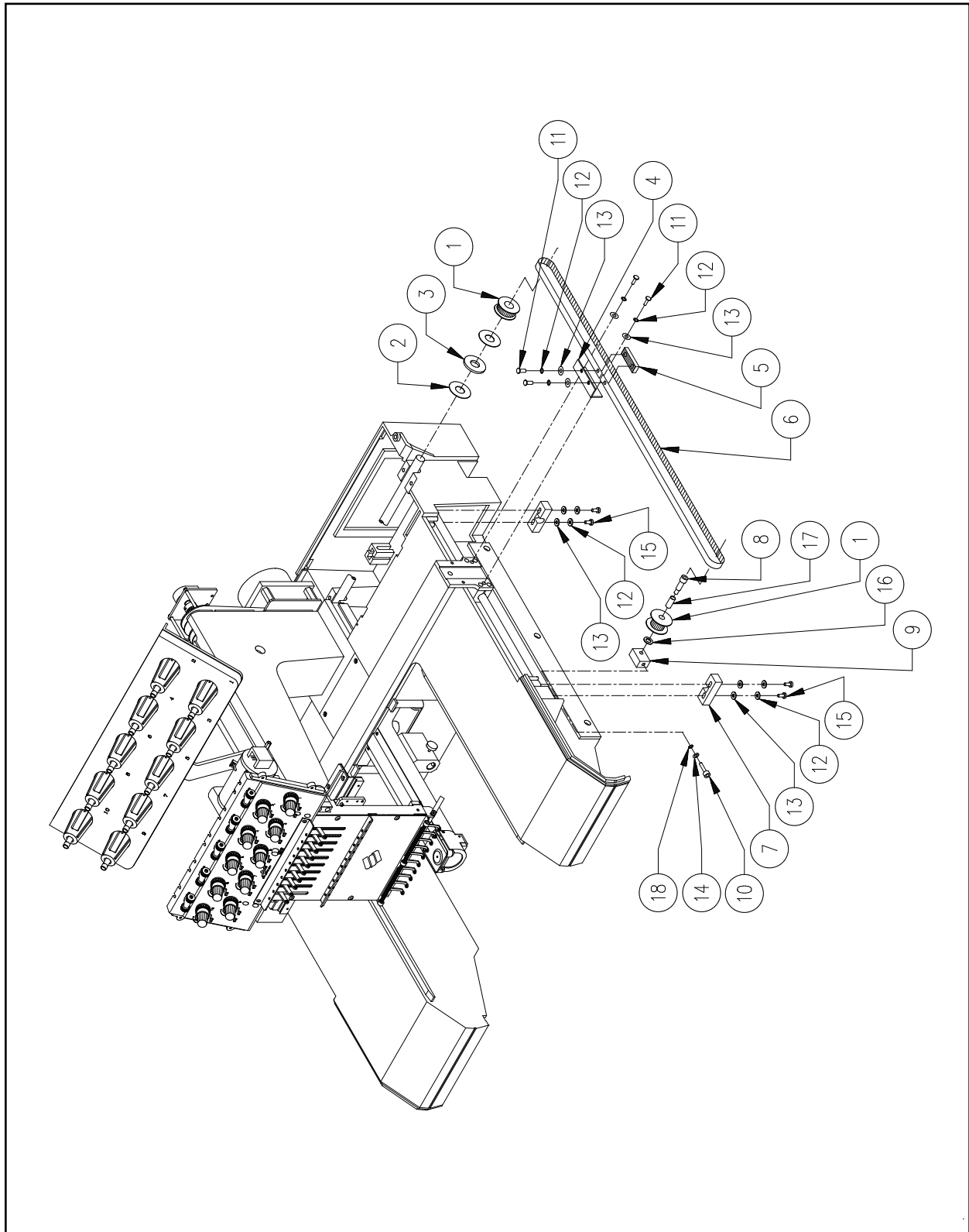


Figure 29

Right Y-Carriage Assembly**Reference Figure 29**

Item No.	Part Number	Item Description	Comments
1*	504358-01	Pulley, Idler, Y-Drive	
2	694397-08	Washer, Thrust, .50" ID x .031"	
3	344402-08	Bearing, Thrust, .50" ID	
4	554329-01	Bracket, Belt	
5	000372-01	Clamp, Belt	
6	504449-01	Belt, Y-Drive, 199 Groove	
7	000530-01	Retainer, Y-Rail	
8	672852-01	Screw, Shoulder, 1/4-20 x 5/16" x 5/8" Lg	
9	452165-01	Block, Pulley, Idler	
10	670038-14	Screw, Socket Head, Cap, 10-32 x 7/8"	
11	670267-06	Screw, Button Head Cap, 8-32 x 3/8"	
12	690033-38	Washer, Lock, Split, #8	
13	690034-38	Washer, Flat, #8	
14	690034-03	Washer, Flat, #10	
15	670149-12	Screw, Socket Head Cap, 8-32 x 3/4"	
16	693158-03	Washer, Precision, 5/16" ID x .048" Thick	
17*	342877-09	Bearing, Roller, 5/16" ID x 9/16" Lg	
18	690713-03	Washer, Lock, External Star, #10	

Note:

*Items 1 and 17 should be replaced as a factory built assembly: 005289-01 Assembly, Pulley, Idler

Cap Frame Mount Assembly

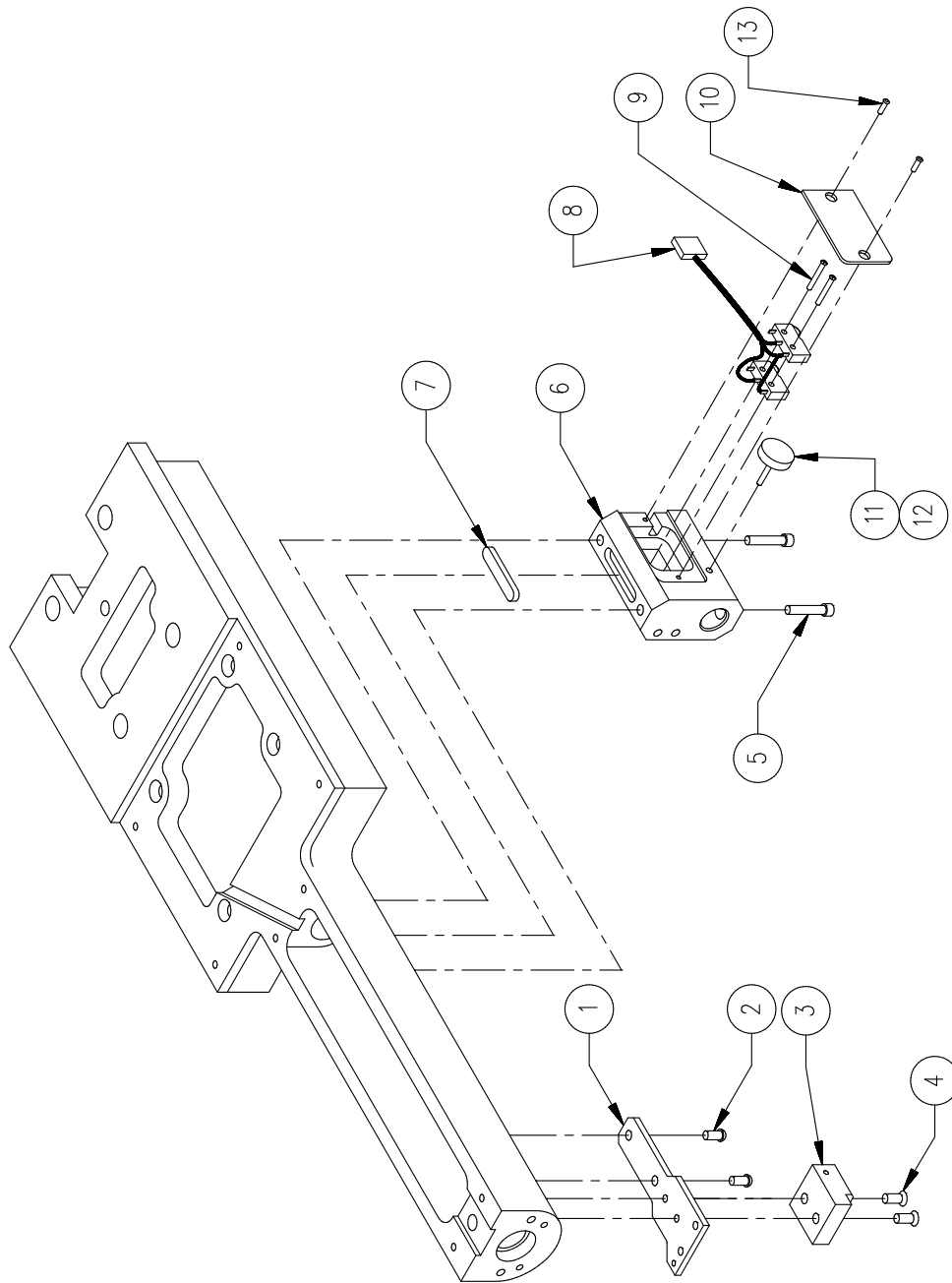


Figure 30

Cap Frame Mount Assembly**Reference Figure 30**

Item No.	Part Number	Item Description	Comments
1	006526-01	Bracket, Picker	
2	003509-08	Screw, Button Head Socket, M4 x 0.7 x 8 Lg	
3	006523-01	Mount, Dove Tail, Cap Frame	
4	001926-12	Screw, Flat Head Socket, M4 x 0.7 x 12 Lg	
5	010171-20	Screw, Socket Head Cap, M4 x 0.7 x 20 Lg	
6*	009861-01	Connector, Dual Cap Frame	
7	006525-01	Key, Shaft, 6mm x 6mm x 32mm	
8*	009031-01	Switch, Miniature, Cap Frame	
9*	003122-10	Screw, Pan Head Phillips, M2 x 0.4 x 10 Lg	
10*	009014-01	Cover, Cap Frame Bracket	
11	010172-10	Screw, Socket Head Cap, M5 x 0.8 x 10 Lg	
12	006538-01	Knob, Knurled, M5, Black	
13*	006558-06	Screw, Pan Head Phillips, M3 x 0.5 x 6 Lg	

Note:

*Items 6, 8-10 and 13 should be replaced as a factory built assembly: 010186-02 Bracket, Cap Frame, Assembly

Cap Frame Drive Assembly

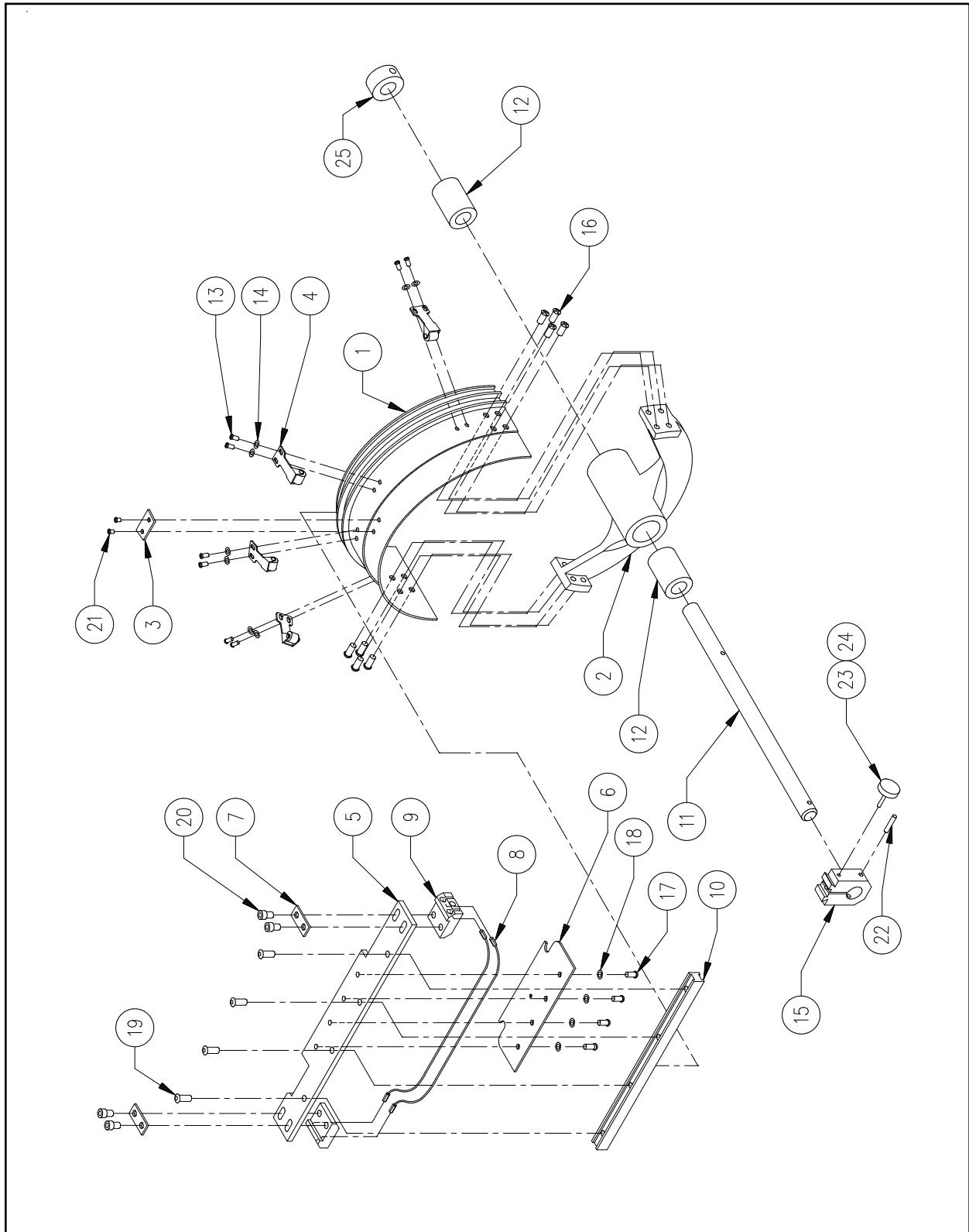


Figure 31

Cap Frame Drive Assembly**Reference Figure 31**

Item No.	Part Number	Item Description	Comments
1*	452732-01	Ring, Drive, Cap Frame	
2*	006496-01	Hub, Cap Driver, Phase II	
3*	552912-01	Locator, Cap Frame	
4*	004229-01	Clip, Roller, Cap Frame Driver, Assembly	
5*	454861-01	Bracket, Drive	
6*	554862-01	Mount, Drive Ring	
7*	552915-01	Washer, Flat, Rectangle	
8*	402913-01	Cable, Drive Ring	
9*	452916-01	Bracket, Cable	
10*	442917-01	Bar, Guide	
11*	006522-01	Shaft, Cap Frame	
12*	005342-08	Bearing, Sleeve, Frelon	
13*	670131-03	Screw, Pan Head Phillips, 4-40 x 3/16"	
14*	690034-34	Washer, Flat, #4	
15*	006521-01	Mount, Male, Cap Frame	
16*	672982-06	Screw, Pan Head Phillips, 8-32 x 3/8"	
17	670174-04	Screw, Pan Head Phillips, 6-32 x 1/4"	
18	690033-36	Washer, Lock, Split, #6	
19*	670267-06	Screw, Button Head Cap, 8-32 x 3/8"	
20*	670149-06	Screw, Socket Head Cap, 8-32 x 3/8"	
21*	670131-02	Screw, Pan Head Phillips, 4-40 x 1/8"	
22	660830-10	Pin, Groove, 1/8" OD x 7/8" Lg	
23•	671852-16	Screw, Socket Head Cap, M5 x 0.8 x 16 Lg	
24•	006538-01	Knob, Knurled, M5, Black	
25	342872-08	Collar, Shaft, 1/2" ID	

Note:

*Items 1-16 and 19-21 should be replaced as a factory built assembly: 006541-01 Ring, Drive, Adv, Assembly

•Items 23 and 24 should be replaced as a factory built assembly: 007401-01 Screw, Thumb, 16mm Lg, Assembly

Melco Cap Frame Assembly

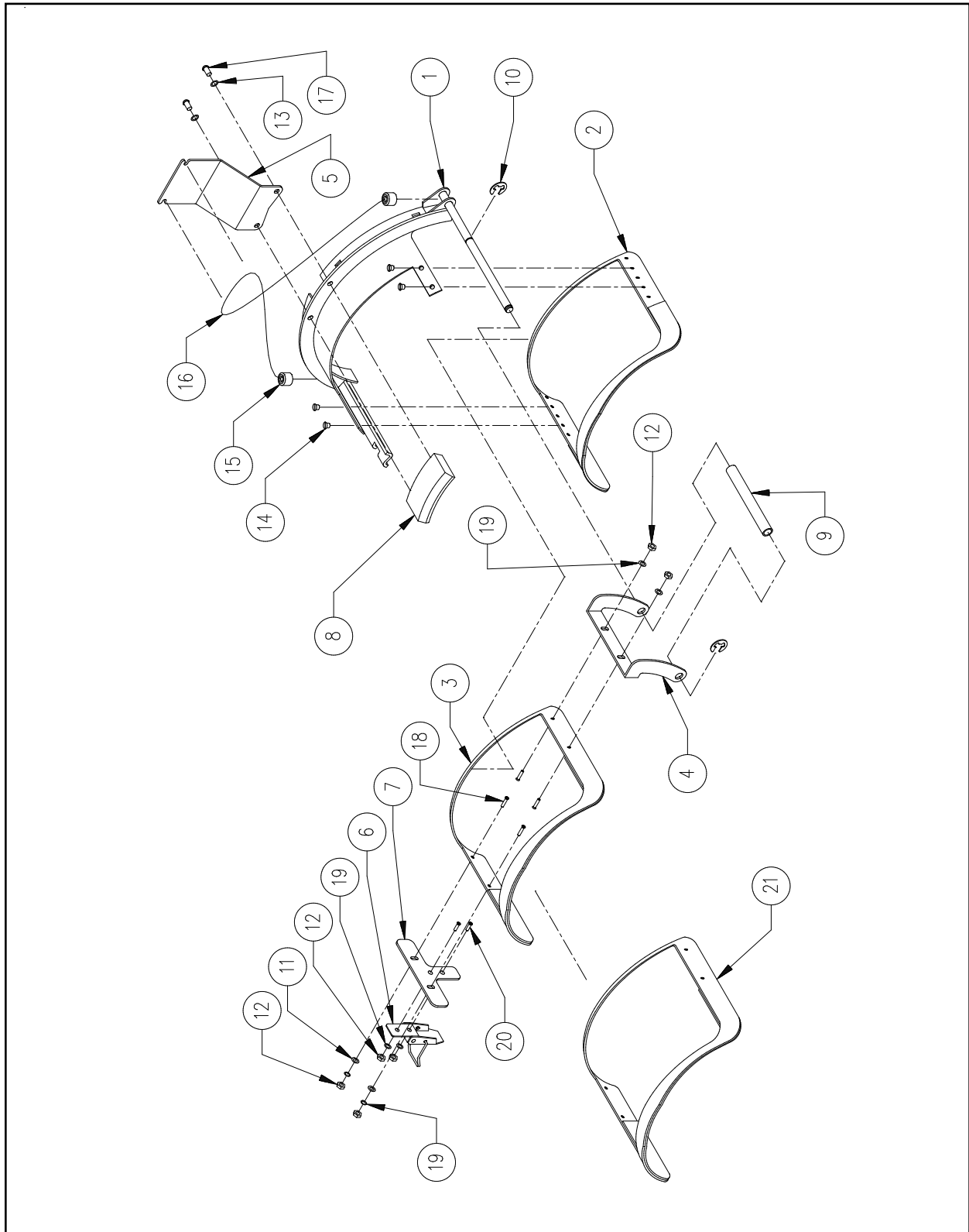


Figure 32

Melco Cap Frame Assembly**Reference Figure 32**

Item No.	Part Number	Item Description	Comments
1	004938-01	Base, Cap Frame, Assembly	
2#	006010-01	Frame, Lower, w/Rubber, 6-Panel	
3*	005949-01	Strap, Clamping, 72mm, 6-Panel	
4•	002629-01	Bracket, Hinge	
5	005071-01	Holder, Cord, Visor Clamp	
6*•	005487-01	Catch, Pull	
7*•	005486-01	Bracket, Latch	
8	004904-01	Block, Locator, Brim	
9	002632-01	Spacer	
10	004240-01	Ring, Retainer, E-Style	
11*•	690439-03	Washer, Flat, M3	
12*•	680430-03	Nut, Hex, M3	
13	690033-36	Washer, Lock, Split, #6	
14	004963-01	Screw, Special, Cap Frame	
15	005068-01	Terminal, Shock Cord	
16	005073-01	Cord, Shock, Cap Frame	
17	670174-06	Screw, Pan Head, Phillips, 6-32 x 3/8"	
18*•	006019-01	Screw, Flat Head Phillips, M3 x 0.5 x 8 Lg	
19*•	003128-03	Washer, Lock, Split, M3	
20*•	005934-01	Screw, Flat Head Phillips, M3 x 0.5 x 6 Lg	
21*•	005948-01	Strap, Clamping, 82mm, 6-Panel	

Note:

*Items 3, 4, 6, 7, 11, 12, 18, 19 and 20 should be replaced as a factory built assembly: 007199-01 Strap, Clamping, 72mm, 6-Panel, Assembly

•Items 4, 6, 7, 11, 12, 18, 19, 20 and 21 should be replaced as a factory built assembly: 007198-01 Strap, Clamping, 82mm, 6-Panel, Assembly

#Item 2, 007198-01, 007199-01 are included in:
006674-01 Capframe, Adjustable, 6-Panel

Harness Assembly (1 of 3)

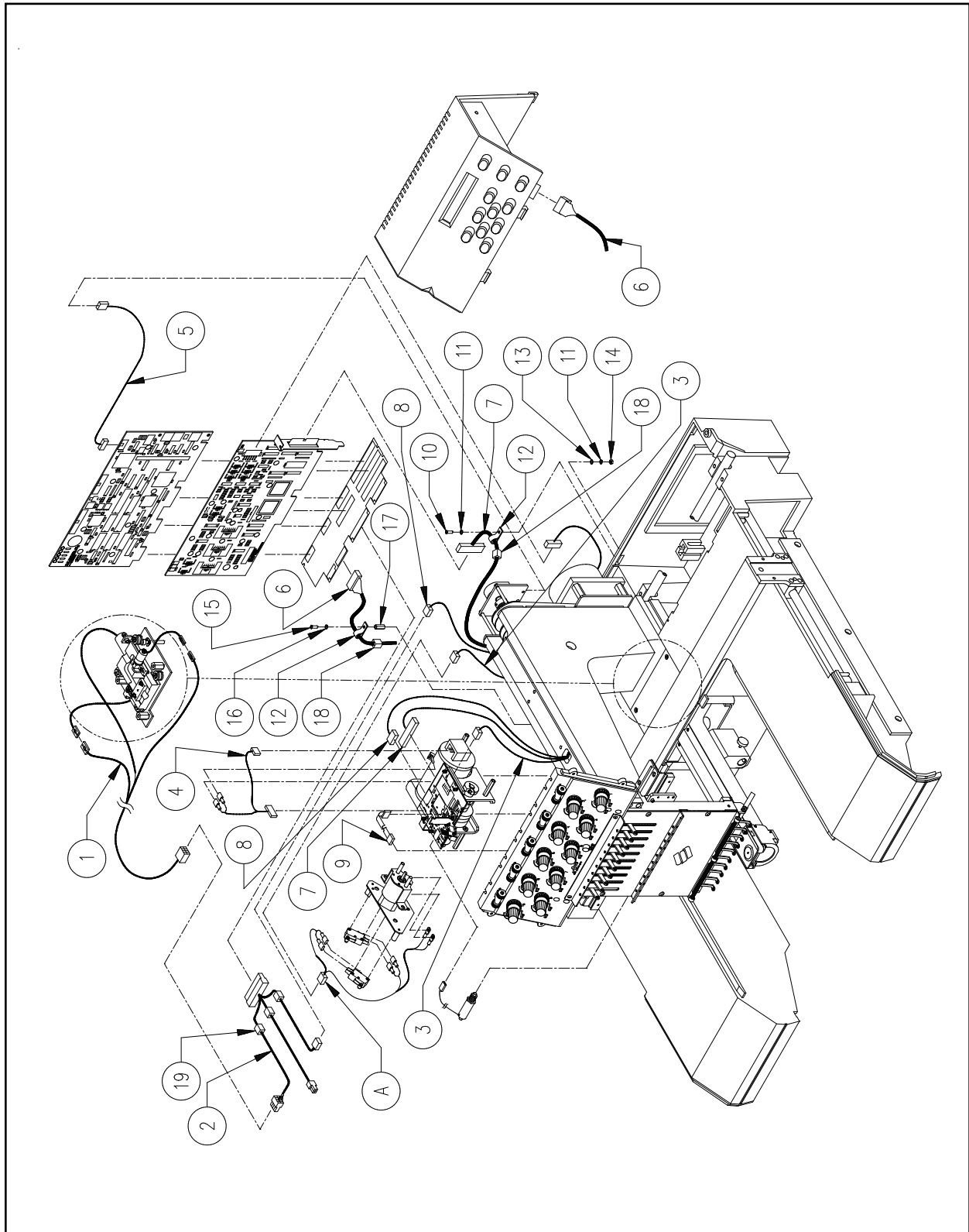


Figure 33

Harness Assembly (1 of 3)**Reference Figure 33**

Item No.	Part Number	Item Description	Comments
A	006726-01	Motor, Grabber, Assembly	
1	007261-01	Trimmer, Picker, Solenoid, Opto, Assembly (See Page 18-1)	
2	009315-01	Harness, Trimmer/Power/10 Needle	
3	006725-01	Harness, Grabber	
4	006584-01	Harness, Color Change Motor	
5	005104-01	Harness, Z-Encoder, 13.5"	
6	009273-02	Harness, Keyboard	
7	009316-01	Harness, Color Change Interface	
8	006476-01	Harness, Power, 10 Needle, Color Change	
9	006582-01	Harness, Thread Break	
10	006558-10	Screw, Pan Head Phillips, M3 x 0.5 x 10 Lg	
11	690439-03	Washer, Flat, M3	
12	009336-01	Clamp, Cable, 1/4"	
13	690713-36	Washer, Lock, External Star, #6	
14	680430-03	Nut, Hex, M3	
15	670131-06	Screw, Pan Head Phillips, 4-40 x 3/8"	
16	690034-34	Washer, Flat, 4-40	
17	710420-10	Standoff, F-F, 4-40 x 5/8"	
18	009311-03	Ferrite, Large	
19	009311-02	Ferrite, Medium	

Harness Assembly (2 of 3)

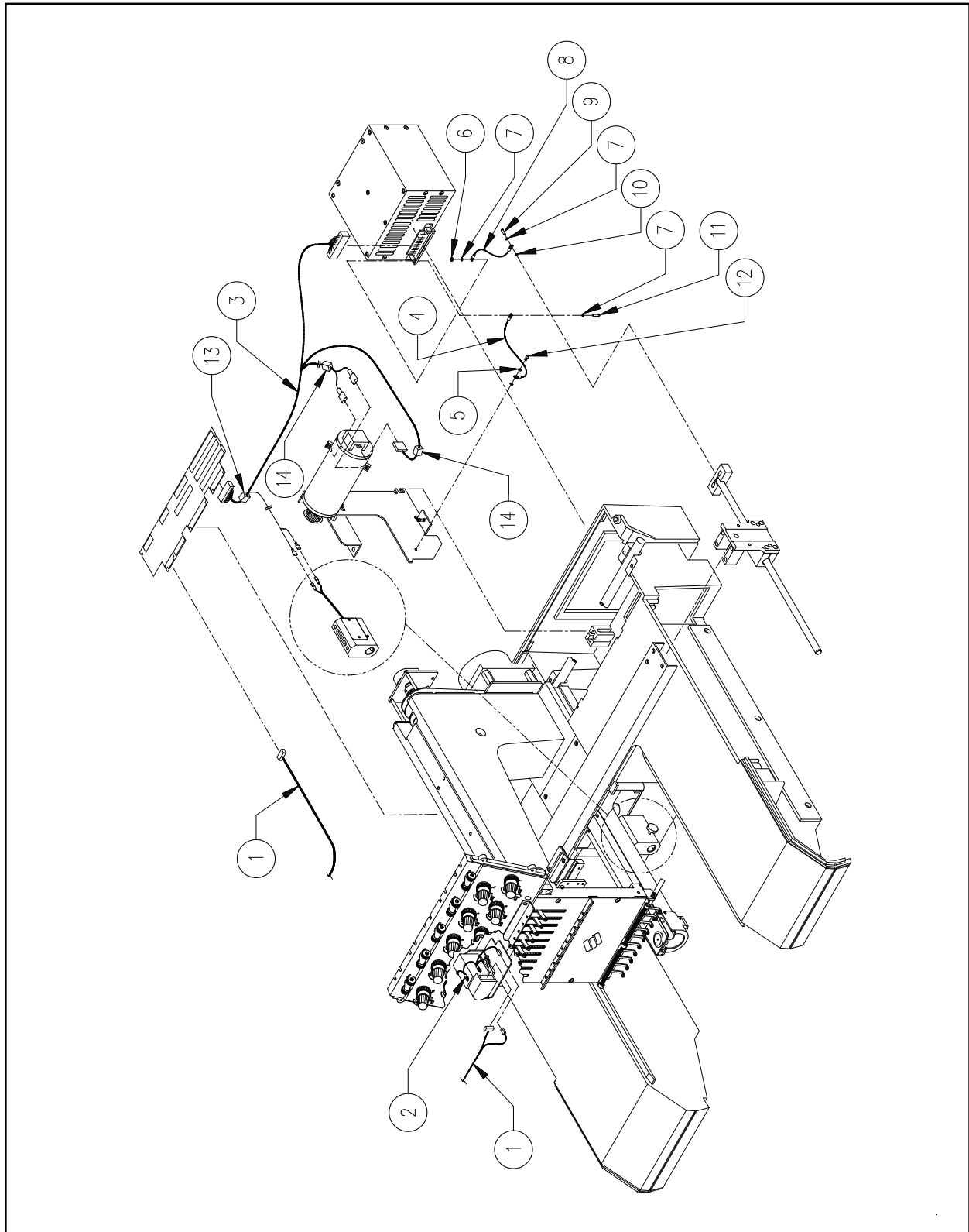


Figure 34

Harness Assembly (2 of 3)**Reference Figure 34**

Item No.	Part Number	Item Description	Comments
1	009652-01	Harness, X-Motor	
2	009676-01	Motor/Encoder, X-Axis	
3	009534-01	Harness, Power	
4	009317-01	Cable, Ground, Pan	
5	690713-38	Washer, Lock, External Star, #8	
6	680043-36	Nut, Lock, 6-32	
7	690713-36	Washer, Lock, External Star, #6	
8	009317-02	Cable, Ground, Pan	
9	670174-12	Screw, Pan Head Phillips, 6-32 x 3/4"	
10	690034-36	Washer, Flat, #6 Nom	
11	670174-07	Screw, Pan Head Phillips, 6-32 x 7/16"	
12	670149-06	Screw, Socket Head Cap, 8-32 x 3/8"	
13	009311-03	Ferrite, Large	
14	009311-01	Ferrite, Small	

Harness Assembly (3 of 3)

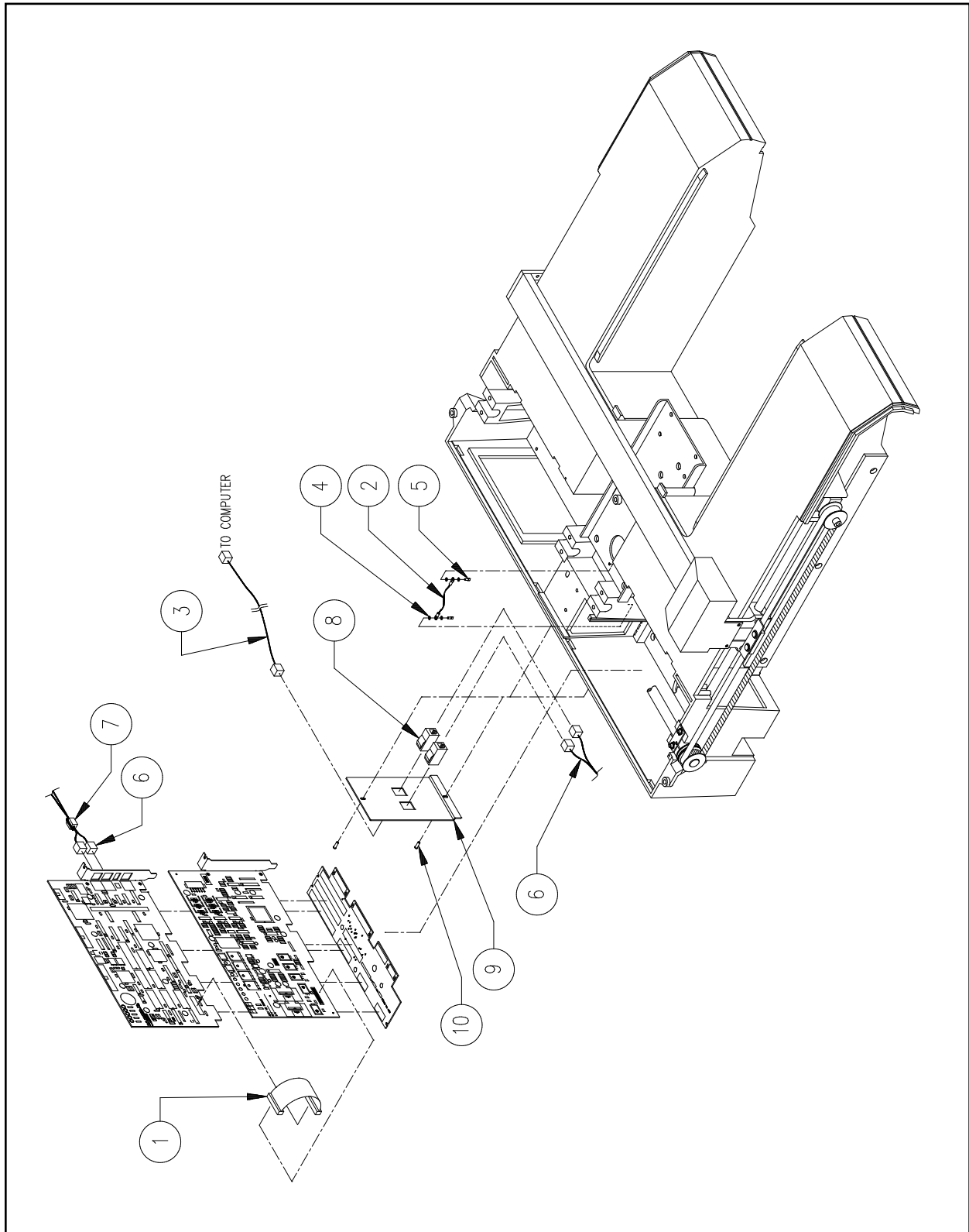


Figure 35

Harness Assembly (3 of 3)**Reference Figure 35**

Item No.	Part Number	Item Description	Comments
1	004722-01	Harness, Jumper, CPU/XYZ	
2	009317-01	Cable, Ground, Pan	
3	345068-25	Cable, Data, 5 Conductor, w/Drain, 25 Ft	
4	690713-38	Washer, Lock, External Star, #8	
5	670149-06	Screw, Socket Head Cap, 8-32 x 3/8"	
6	345068-25	Cable, Data, 5-Conductor, w/Drain, 25 ft.	
7	009311-03	Ferrite, Large	
8	000434-01	Coupler, Inline, 6-Position	
9	009589-01	Cover, Data Cable	
10	670362-06	Screw, Sheet Metal, Pan Head Slotted, #6-20 x 3/8"	

Disk Drive Assembly

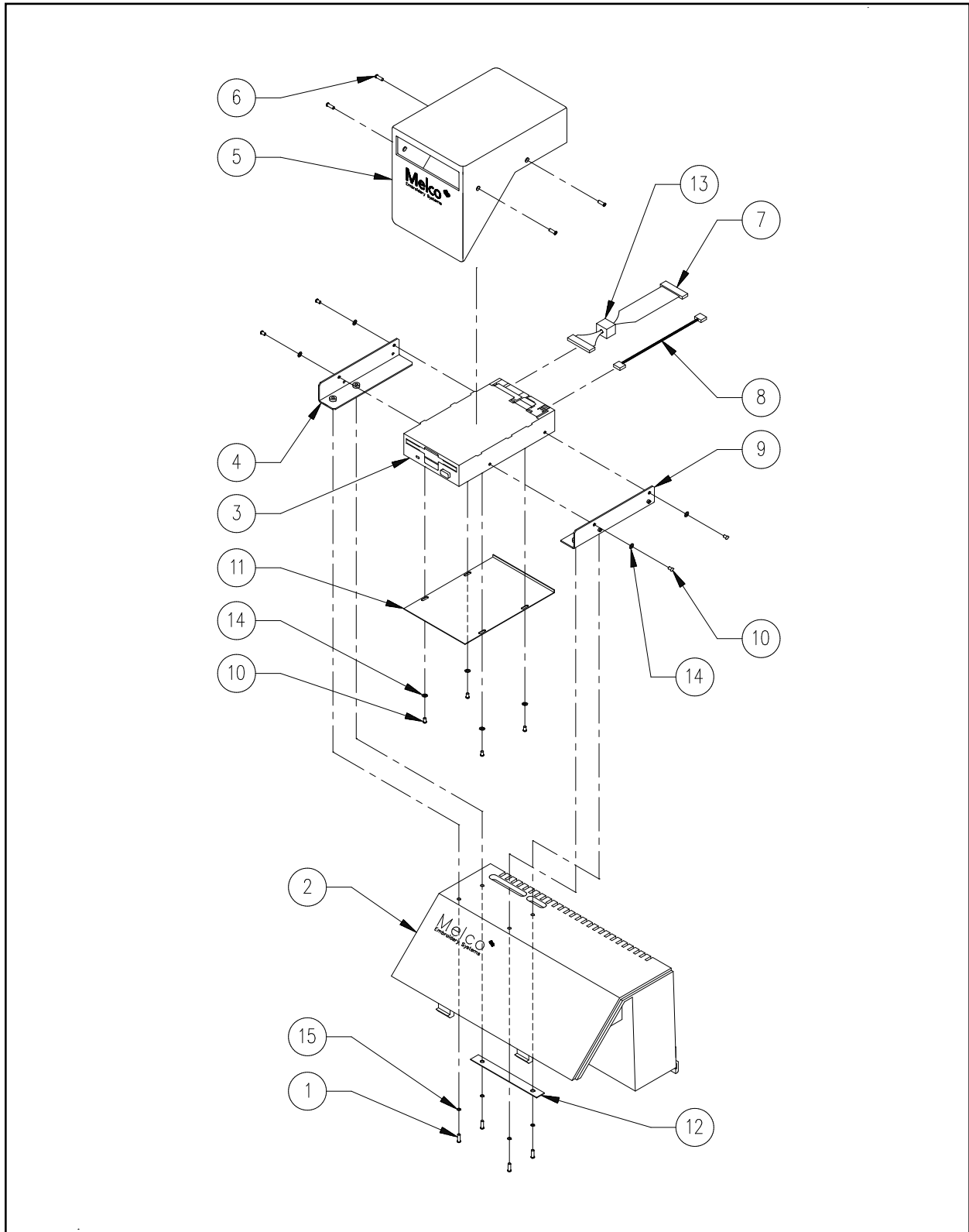


Figure 36

Disk Drive Assembly**Reference Figure 36**

Item No.	Part Number	Item Description	Comments
1	004262-01	Screw, Pan Head Phillips, M4 x 0.7 x 10 Lg	
2*	005112-21	Cover, Electronics, Modified, Grey	
3*	004243-01	Disk Drive, Floppy, 1.44Mb	
4*	005110-01	Mount, Drive, 3.5", Left	
5*	005111-21	Cover, Drive, 3.5", Grey	
6	001935-06	Screw, Flat Head Phillips, M3 x 0.5 x 6 Lg	
7*	005140-01	Cable, Interface, Disk Drive	
8*	005141-01	Cable, Power, Disk Drive	
9*	005110-02	Mount, Drive, 3.5", Right	
10	671855-06	Screw, Pan Head Slotted, M3 x 0.5 x 6 Lg	
11*	009365-01	Shield, Disk Drive	
12*	009364-01	Ground, Strap	
13	009311-03	Ferrite, Large	
14	690811-34	Washer, External Star, 4-40	
15	690439-04	Washer, Flat, M4	

Note: *Items 2-5, 7-9, 11 and 12 are part of and should be replaced as assembly: 009370-01 Option, Disk Drive

Actuator, Hoop Holder	24-2	Belt, Timing, 74T, 1/5P, 3/8" Wide	27-2
Arm, Actuator, Switch	16-2	Belt, Timing, 80 Groove, 1/5P, 3/8" Wide	26-2
Arm, Drive, Grabber	16-2	Belt, Timing, X-Drive, 577 Groove	23-2-25-2
Arm, Drive, Movable Knife	17-2	Belt, Y-Drive, 199 Groove	28-2-29-2
Bar, Grabber	9-2	Blade, Grabber	16-2
Bar, Guide	31-2	Block, Locator, Brim	32-2
Bar, Idler, Assembly	14-2	Block, Pulley, Idler	28-2-29-2
Bar, Needle	9-2	Bolt, Adjuster, Trimmer	18-2
Base, Cap Frame, Assembly	32-2	Bracket, Bed, Cable	17-2
Base, Drive, Lever, Take-Up, PHS II	15-2	Bracket, Belt	28-2-29-2
Base, Picker	17-2	Bracket, Cable	31-2
Base, Tensioner	10-2	Bracket, Connector	23-2
Bearing, Ball, Radial, 15mm ID	11-2	Bracket, Detect, Thread Break	6-2
Bearing, Ball, Radial, 8mm ID	11-2	Bracket, Drive	31-2
Bearing, Ball, Radial, Flanged	23-2	Bracket, Grabber	9-2
Bearing, Cross-Roller	13-2	Bracket, Hinge	32-2
Bearing, Radial, 6mm ID x 13mm OD	13-2	Bracket, Jump Stitch Solenoid	11-2
Bearing, Radial, 9mm ID x 24mm OD	12-2	Bracket, Latch	11-2, 32-2
Bearing, Roller, 1/2" x 3/4"	27-2	Bracket, Mounting, Grabber Drive	16-2
Bearing, Roller, 5/16" ID x 9/16" Lg	28-2-29-2	Bracket, Mounting, Sensor, Thread Break	6-2
Bearing, Sleeve, Frelon	23-2, 25-2, 31-2	Bracket, Mounting, Switch	16-2
Bearing, Thrust, .50" ID	27-2-29-2	Bracket, Mounting, Y-Motor	19-2
Bearing, Thrust, 8mm	6-2	Bracket, Needle Plate	11-2, 17-2
Bearing, X-Drive, Idler	25-2	Bracket, Picker	11-3, 17-2, 30-2
Belt, Timing, 1/5P, 104 Groove, 3/8" Wide	11-2	Bracket, Power Supply	20-2
Belt, Timing, 39T, 1/5P	6-2	Bracket, Pretensioner	10-2
Belt, Timing, 63 Groove, .080P, 1/4" Wide	23-2	Bracket, Retainer	3-2, 27-2-28-2

Bracket, Slot Cover, Single.....	20-2	Cam, Trimmer	11-3
Bracket, Solenoid, Mounting	18-2	Cap, End, Left	1-2
Bracket, Spring, Mount	17-2	Cap, End, Right.....	1-2
Bracket, Stopper, Delrin.....	12-2	Cap, Spring	10-2
Bracket, Stopper, Steel	12-2	Carriage, X-Axis	24-2
Bracket, Support, Take-Up Lever Guide ...	13-2	Carriage, Y-Axis	23-2, 25-2
Bracket, Support, Thread Tree	7-2	Case, 10 Needle.....	9-2
Bracket, Support, Y-Motor.....	19-2	Case, Bobbin.....	11-2
Bracket, Switch, Adjusting.....	18-2	Case, Gear, Drive, Lever, Take-Up	15-2
Bracket, Tensioner	10-2	Catch, Cover, Grey	3-2
Bracket, Transition.....	16-2	Catch, Pull	32-2
Bracket, Wire Guard.....	6-2	Channel, X-Drive.....	23-2, 25-2
Brush, Contact, Thread Break.....	6-2	Chassis.....	1-2
Bumper, Motor Stop.....	16-2	Clamp, Belt.....	28-2-29-2
Bushing, Base, Drive, Lever, Take-Up.....	15-2	Clamp, Belt, X-Drive	24-2
Bushing, Bearing, Lower Guide	12-2	Clamp, Cable, 1/4 "	33-2
Bushing, Cradle, Spring.....	12-2	Clamp, Cable, 1/4 "	23-2
Bushing, Shaft, Needle Bar	12-2	Clamp, Lower	20-2
Bushing, Tensioner	10-2	Clamp, Needle	9-2
Cable, Data, 5 Conductor, ^w /Drain, 25 Ft	35-2	Clamp, Ribbon Cable, 3.31 "	10-2
Cable, Data, 5-Conductor, ^w /Drain, 25 ft.	35-2	Clamp, Split-Hub, 8mm ID	6-2
Cable, Drive Ring	31-2	Clamp, Stop, Needle Bar	9-2
Cable, Ground, Pan.....	2-2-3-2, 34-2-35-2	Clamp, Swivel, Picker	18-2
Cable, Interface, Disk Drive	36-2	Clamp, Upper	20-2
Cable, Power, Disk Drive	36-2	Clip, Fixing, Drive Arm	17-2
Cam, Color Change	6-2	Clip, Roller, Cap Frame Driver, Assembly.....	31-2
Cam, Drive, Take-Up Lever	11-2	Collar, Picker	17-2
		Collar, Shaft, 1/2 " ID.....	31-2

Collar, Shaft, Headup	11-2	Cover, Needle Case, Upper.....	8-2
Collar, Support, Gear.....	11-3	Cover, Rear	14-2
Collar, Tensioner, Assembly.....	10-2	Cover, Rear, Tensioner, Bracket, Left	2-2
Connector, Dual Cap Frame	30-2	Cover, Rear, Tensioner, Bracket, Right.....	2-2
Connector, Header, Straight, 26 Position	20-2	Cover, Solenoid	11-3
Connector, Resistor Array	6-2	Cover, X-Motor	23-2
Cord, Shock, Cap Frame	32-2	Cover, Z-Drive	1-2
Counterweight, Phase II	11-2	Damper, Needle Case	9-2
Coupler, Inline, 6-Position.....	35-2	Damper, Needle Clamp	9-2
Coupler, Shaft, Helical, 1/4" x 1/4"	26-2	Disk Drive, Floppy, 1.44Mb.....	36-2
Cover, Bed, Front	5-2	Disk, Plastic	10-2
Cover, Bed, Rear.....	5-2	Disk, Pretensioner.....	10-2
Cover, Blade, Front.....	16-2	Disk, Tensioner, Thread, Assembly	10-2
Cover, Blade, Rear.....	16-2	Encoder, Z-Axis.....	26-2
Cover, Blade, Top	16-2	Felt, Needle Case	9-2
Cover, Cap Frame Bracket	30-2	Ferrite, Large	33-2-36-2
Cover, Data Cable	35-2	Ferrite, Medium	33-2
Cover, Drive, 3.5", Grey	36-2	Ferrite, Small.....	26-2, 34-2
Cover, Drive, Color Change, Left	5-2	Follower, Assembly.....	15-2
Cover, Drive, Color Change, Right.....	5-2	Foot, Presser, Assembly	9-2
Cover, Drive, Grabber Motor	16-2	Foot, Rubber	4-2
Cover, Electronics, Modified, Grey	36-2	Frame, Lower, w/Rubber, 6-Panel.....	32-2
Cover, Electronics, Sub-assembly	1-2	Frame, Movable, Machined	18-2
Cover, Front, Arm, Left.....	13-2	Gear, Drive, Lever, Take-Up.....	15-2
Cover, Front, Arm, Right	13-2	Grommet, Round, 1-1/8" ID.....	5-2
Cover, Keyboard, Sub-assembly	3-2	Ground, Strap	36-2
Cover, LED, Yellow	10-2	Guide, Grabber	16-2
Cover, Needle Case, Lower.....	8-2	Guide, Take-Up Lever	13-2

Guide, Thread, Lower, w/Eyelet	8-2	Knob, Knurled, M5, Black	30-2-31-2
Guide, Thread, Middle, w/Eyelet	8-2	Knob, Tensioner, Black, Assembly	10-2
Guide, Thread, Thread Tree	5-2, 7-2	Latch, Jump Stitch	11-3
Guide, Thread, Upper, Assembly	10-2	Lever, Drive, Lever, Take-Up	15-2
Harness, Color Change Interface	33-2	Lever, Take-Up, Assembly	9-2
Harness, Color Change Motor	33-2	Link, Connecting	17-2
Harness, Grabber	33-2	Link, Connecting, Picker	17-2
Harness, Jumper, CPU/XYZ	35-2	Locator, Cap Frame	31-2
Harness, Keyboard	33-2	Magnet, Thread Retaining	8-2
Harness, Power	34-2	Motor, Color Change	6-2
Harness, Power, 10 Needle, Color Change	33-2	Motor, Grabber, Assembly	16-2
Harness, Thread Break	6-2, 33-2	Motor, X-Y Servo	19-2
Harness, Trimmer/Power/10 Needle	33-2	Motor, Z-Drive	26-2
Harness, X-Motor	34-2	Motor/Encoder, X-Axis	23-2, 34-2
Harness, Z-Encoder	26-2	Mount, Cable Tie	17-2
Harness, Z-Encoder, 13.5"	33-2	Mount, Dove Tail, Cap Frame	30-2
Holder, Cord, Visor Clamp	32-2	Mount, Drive Ring	31-2
Hook, Rotary, Small Bobbin	11-2	Mount, Drive, 3.5", Left	36-2
Housing, Bearing	23-2, 25-2	Mount, Drive, 3.5", Right	36-2
Housing, Drive, Color Change	6-2	Mount, Male, Cap Frame	31-2
Hub, Cap Driver, Phase II	31-2	Mount, Picker	17-2
Insert, Table Top	1-2	Mount, Solenoid, Trimmer	18-2
Insulator, Thread Break	10-2	Mount, X-Motor	23-2
Key, Color Change Mount	5-2	O-Ring, .187" ID x .06" Thick	11-3
Key, Shaft, 6mm x 6mm x 32mm	30-2	Pad, Felt, .065" Thick	10-2
Knife, Movable	17-2	Pad, Felt, .095" Thick	10-2
Knife, Spring, Fixed	17-2	Pad, Reservoir, Felt	13-2
Knob, Adjust, Pretensioner, Plastic	10-2	Pad, Thread Tree	7-2

Pan, Bottom	1-2	Plate, Link Adjusting.....	18-2
PCB, 4-Axis Driver, Assembly	20-2	Plate, Needle	11-2
PCB, Backplane	20-2	Plate, Needle, Raised	11-2
PCB, Color Change, Assembly.....	6-2	Plate, Position, Machined	13-2
PCB, CPU188/Disk.....	20-2	Plate, Retainer, Bearing, Arm Shaft.....	11-2
PCB, Keyboard	3-2	Plate, Roller, Adjustable	24-2
PCB, Thread Break, Assembly	10-2	Plate, Tensioner, Y-Belt.....	27-2
Picker	17-2	Plate, Thread Tree.....	7-2
Picker, Solenoid, Assembly.....	18-2	Plunger, Ball, 1/4-20	25-2
Pigtail.....	10-2	Post, Guide	10-2
Pin, Dowel, .25" OD x .50" Lg.....	9-2	Post, Pretensioner.....	10-2
Pin, Dowel, .250" OD x 1.5" Lg.....	19-2	Post, Tensioner	10-2
Pin, Dowel, 1/4" OD x .750" Lg.....	26-2	Power Supply	20-2
Pin, Dowel, 1/8" OD x .875" Lg.....	25-2	Presser, Under Thread.....	17-2
Pin, Groove, 1/8" OD x 5/8" Lg	15-2	Pulley, 16T, 3/8" ID, w/Hub.....	26-2
Pin, Groove, 1/8" OD x 7/8" Lg	31-2	Pulley, 5.08mmP, 15 Groove.....	19-2
Pin, Hoop Holder, Actuator	24-2	Pulley, Adjustable, Top, 32T, 1/5P	11-2
Pin, Hoop Holder, Carriage.....	24-2	Pulley, Drive, Bobbin, Bottom, 16T, 1/5P.....	11-2
Pin, Latch	11-3	Pulley, Drive, Bobbin, Top, 32T, 1/5P.....	26-2
Pin, Spring, 3mm	13-2	Pulley, Drive, X-Axis.....	23-2
Pin, Spring, 3mm OD x 14mm Lg.....	11-2	Pulley, Hub, Adjustable.....	11-3
Pin, Swivel, Front.....	17-2	Pulley, Idler, Y-Drive.....	27-2-29-2
Pivot, Hoop Holder.....	24-2	Pulley, Timing, 1/5P, 12 Groove	6-2
Plate Mounting, Z-Drive Motor.....	26-2	Pulley, Timing, 15 Groove, .080P, 1/4" Wide.....	23-2
Plate, Base, Sewing Head	5-2	Pulley, Timing, 15 Groove, .080P, 3/8" Wide.....	23-2
Plate, Bearing, Retainer	13-2	Pulley, Timing, 5.08mmP, 16 Groove	6-2
Plate, Encoder	26-2		
Plate, Guide, Needle Bar	8-2		

Pulley, Timing, 60 Groove, 1/5P, 1/2" Bore	27-2	Shaft, Guide, Needle Bar	12-2
Pulley, X-Drive	25-2	Shaft, Roller, Movable Frame	18-2
Rail, Guide, Lower	9-2	Shaft, Take-Up Lever	9-2
Rail, Y-Axis	23-2, 25-2	Shield, Disk Drive	36-2
Re-inforcement, Self-Adhesive	10-2	Shim, Needle Case	9-2
Reciprocator	12-2	Solenoid, Jump Stitch	11-2
Retainer, Y-Rail	29-2	Solenoid, Trimmer, Assembly	18-2
Ring, Drive, Cap Frame	31-2	Spacer	32-2
Rod, Connecting	11-2	Spacer, Precision, .313" ID x .010" Thick	9-2
Rod, Crank, 90 Deg	11-2	Spacer, Precision, .313" ID x .016" Thick	9-2
Rod, Guide	16-2	Spacer, Shaft, .128" ID x .317" OD x .03" Thick	17-2
Roller, Idler	14-2	Spacer, Shaft, .190" x .310" Lg	25-2
Roller, Movable, Frame	18-2	Spacer, Shaft, .375" ID x .562" OD x .016" Thick	6-2
Roller, X-Carriage	24-2	Spacer, Shaft, 1/4" ID x .002" Thick	9-2
Screw, Needle Plate	11-2	Spacer, Shaft, 1/4" ID x .004" Thick	9-2
Screw, Shoulder, 4-40 x 1/8" OD x 1/8"	17-2	Spacer, Shaft, 1/4" ID x .006" Thick	9-2
Seal, EM-1, 10"	20-2	Spacer, Shaft, 3/16" ID x .010" Thick	23-2
Seat, Cone, Thread, Thread Tree	7-2	Spacer, Shaft, 3/16" x .002"	24-2
Sensor, Under Thread Control, Assembly	11-2	Spacer, Shaft, 3/16" x .004"	24-2
Set, Cover, Rotary Hook	5-2	Spacer, Shaft, 3/16" x .006"	24-2
Shaft, Arm	11-2	Spacer, Shaft, 3/16" x .008"	24-2
Shaft, Bobbin, Phase II	11-2	Spacer, Shaft, 3/16" x .010"	24-2
Shaft, Cam, Color Change	6-2	Spacer, Shaft, 5/16" ID x .016" Thick	14-2
Shaft, Cap Frame	31-2	Spacer, Shaft, Take-Up Lever	9-2
Shaft, Drive, Lever, Take-Up	15-2	Spacer, Support, Velcro	9-2
Shaft, Drive, X-Axis	23-2	Spring, Check, Tensioner, Thread	10-2
Shaft, Drive, Y-Axis	27-2		

Spring, Extension	24-2	Stud, Connecting, Needle Bar	9-2
Spring, Holding, Needle Bar	9-2	Stud, Connector, Reciprocator	12-2
Spring, Idler	14-2	Stud, Press, 1/4" OD x 1/2" Lg.....	14-2
Spring, Jump, Reciprocator.....	12-2	Support, Tensioner Bracket.....	8-2
Spring, Lower Thread Guide.....	8-2	Switch, Limit, Roller.....	16-2
Spring, Picker, Front	17-2	Switch, Miniature, Cap Frame	30-2
Spring, Presser Foot.....	9-2	Switch, Optical, Assembly	18-2
Spring, Pretensioner	10-2	Swivel, Wire	16-2
Spring, Return, Solenoid.....	18-2	Tab, Tensioner	10-2
Spring, Tensioner, Thread	10-2	Tensioner, Belt, X-Axis	25-2
Spring, Trimmer Home	18-2	Terminal, Shock Cord	32-2
Standoff, 10mm Hex, M-F, M5 x 0.8 x 16 Lg	18-2	Thread, Bobbin, White	11-2
Standoff, Encoder, M-F, M4 x 0.7 x 2.01" Lg	26-2	Trimmer, Picker, Solenoid, Opto, Assembly.....	33-2
Standoff, F-F, 4-40 x 5/8"	33-2	Tube, Guide, Thread, Thread Tree	7-2
Standoff, F-F, 6-32 x 7/8"	20-2	Tubing, .125" ID x .187" OD	5-2
Standoff, F/F, 1/2" Hex, 1/4-20 x 1" Lg	26-2	V-Rail, Arm.....	13-2
Standoff, Female, 10-32 x 1" Lg, 3/8" Hex	19-2	V-Rail, Needle Case	13-2
Standoff, Female, 4-40 x 15/16" Lg, 1/4" Hex	20-2	Velcro, Wiper, Pile	9-2
Standoff, Hex, M-F, M4 x 0.7 x 22 Lg.....	6-2	Wall, Shielding, RFI.....	20-2
Standoff, Hex, M-F, M4 x 0.7 x 35 Lg.....	6-2	Washer, Flat, Rectangle	31-2
Standoff, M-F, 3/16" Round	10-2	Washer, Thrust, .50" ID x .031"	28-2-29-2
Strap, Clamping, 72mm, 6-Panel	32-2	Washer, Thrust, .50" x .031"	27-2
Strap, Clamping, 82mm, 6-Panel	32-2	Washer, Thrust, 1.00mm Thick	6-2
Strap, Ground	25-2	Washer, Thrust, 2.75mm Thick	6-2
Stud, Bearing, Retainer.....	13-2	Washer, Wave, 22mm OD	11-2
		Washer, Wave, 35mm OD	11-2