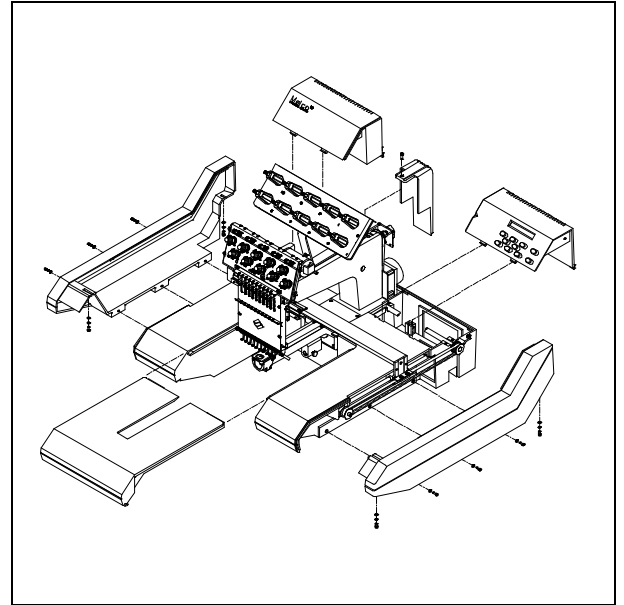


# Illustrated Parts Manual for the EMC 10 embroidery peripheral



- A Complete Illustrated Parts Manual
- Advanced Trimmer System
- Under Thread Control

110235-01, Revision A

**Melco**   
Embroidery Systems

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Printed in the United States of America

Revision A November, 1995

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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.**

## **Special Parts Handling**

If care is not taken in handling certain parts of the sewing head, there is a good probability the sewing head will not function properly or the parts will fail prematurely.

These parts are to have special handling considerations from the vendor, through quality control inspection, into spare parts inventories, then on to packaging for shipping, and finally to installation.

Handling of these parts (and for that matter all parts), is not limited to the considerations below. Please use common sense, good judgment, and accepted handling practices in handling all parts. If you have any questions or concerns, please call your area service department.

### **General Considerations**

- \* Painted and coated surfaces need to be protected from dirt, other foreign matter, nicks, and scratches.
- \* Non-painted and coated surfaces must not be touched by the human hand, to prevent corrosive body oils, dirt, and other foreign matter from contaminating the surfaces.
- \* Protect all bearings, bushings, cams, rails, gears, rollers, needle bars, pins, studs, connecting rods, guide shafts, and other surface finishes from dirt, other foreign matter, marring, scratches, and nicks, etc.
- \* Bearing surfaces and shaft bore surfaces need to be thoroughly cleaned and mating parts oiled before assembly.

### **Special Packaging**

Several parts are packaged in specially sealed packages. These packages keep lubricant on the parts and protect them from contamination during shipment. To install these parts, clean your hands and place a small amount of sewing machine oil on your fingers to keep the integrity of the part intact.

## Machine Assemblies (Covers) (1 of 2)

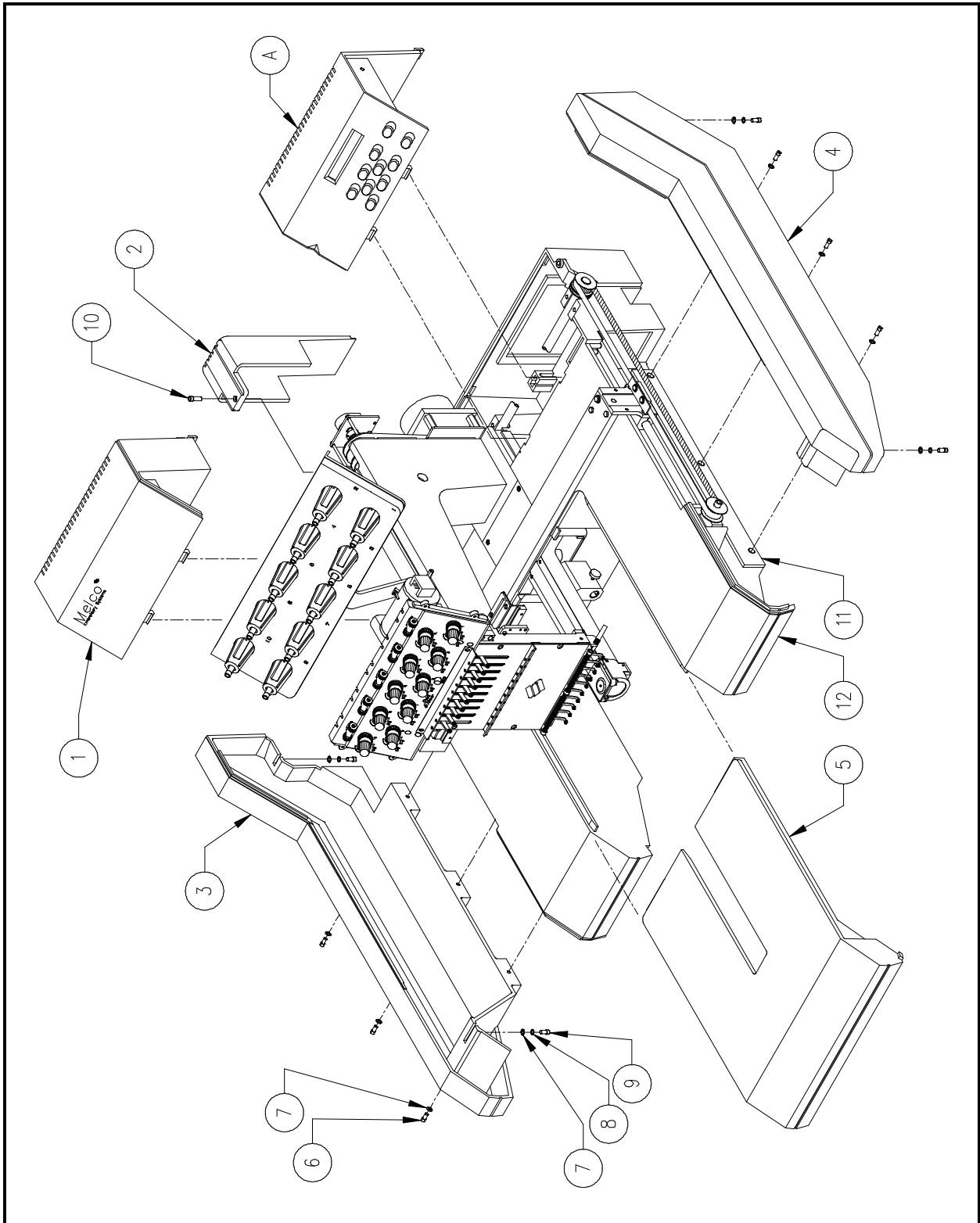


Figure 1



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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
A	-----	Keyboard Cover Assembly	See Page 3-1
1	004748-21	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	003825-21	Chassis	

## Machine Assemblies (Covers) (2 of 2)

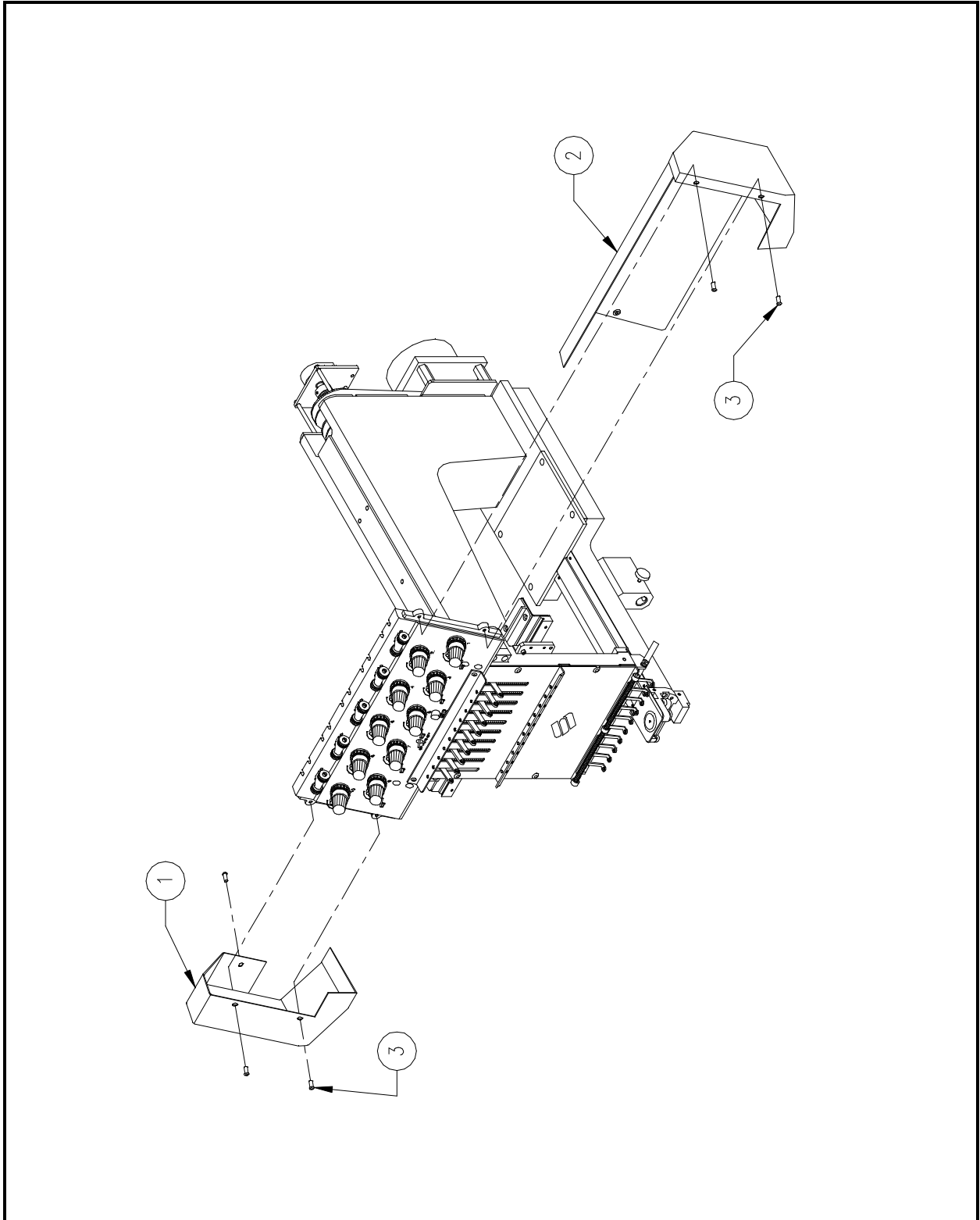


Figure 2

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

---

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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	

# Keyboard Cover Assembly

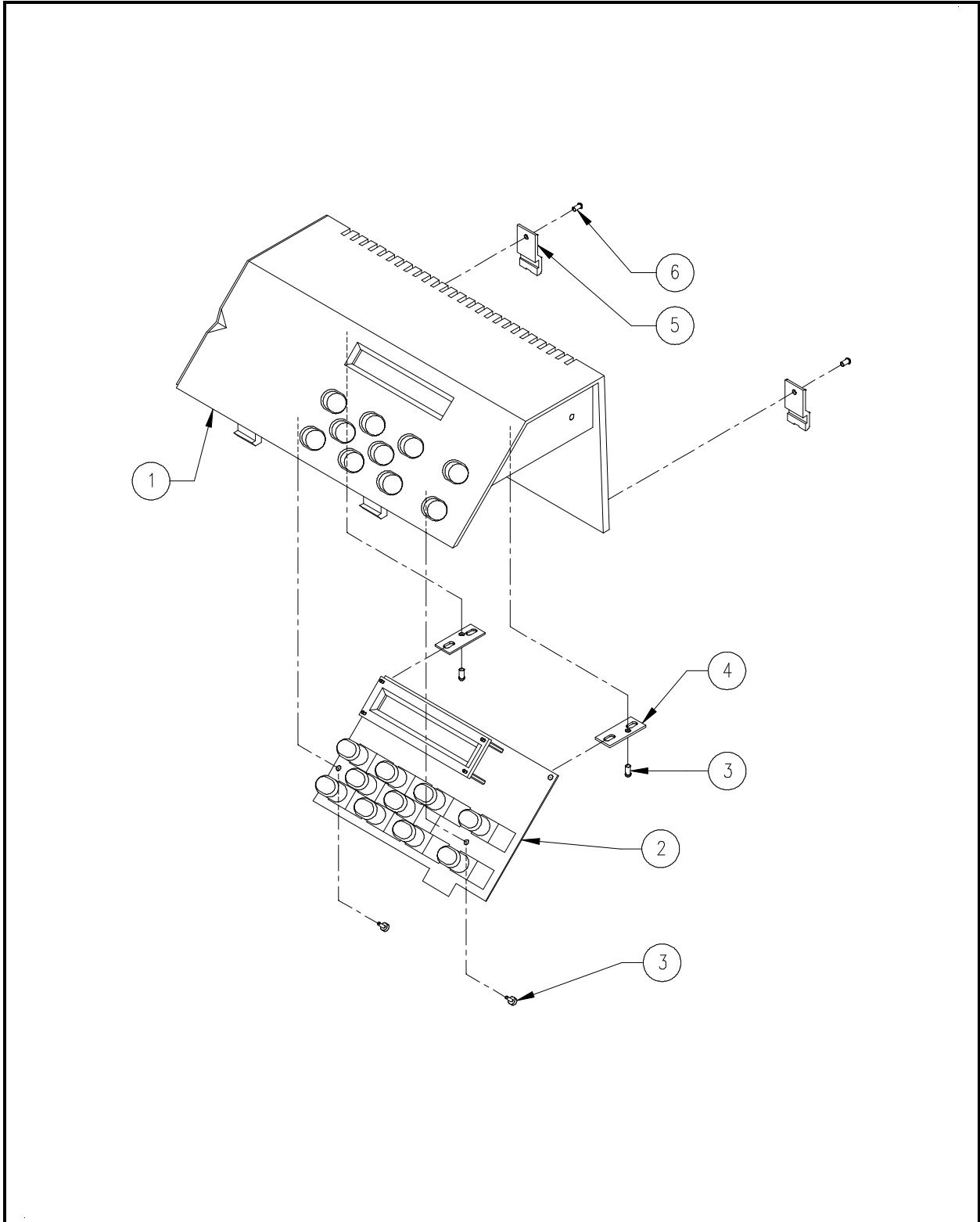


Figure 3

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**Keyboard Cover Assembly****Reference Figure 3**

---

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
1	004747-21	Cover, Keyboard, Sub-assembly	
2	384309-21	PCB, Keyboard	
3	674433-06	Screw, Thread Forming, #6 x 3/8"	
4	555325-01	Bracket, Retainer	
5	003846-21	Catch, Cover, Grey	
6	670406-04	Screw, Button Head Cap, 4-40 x 1/4"	

## Machine Assemblies (General)

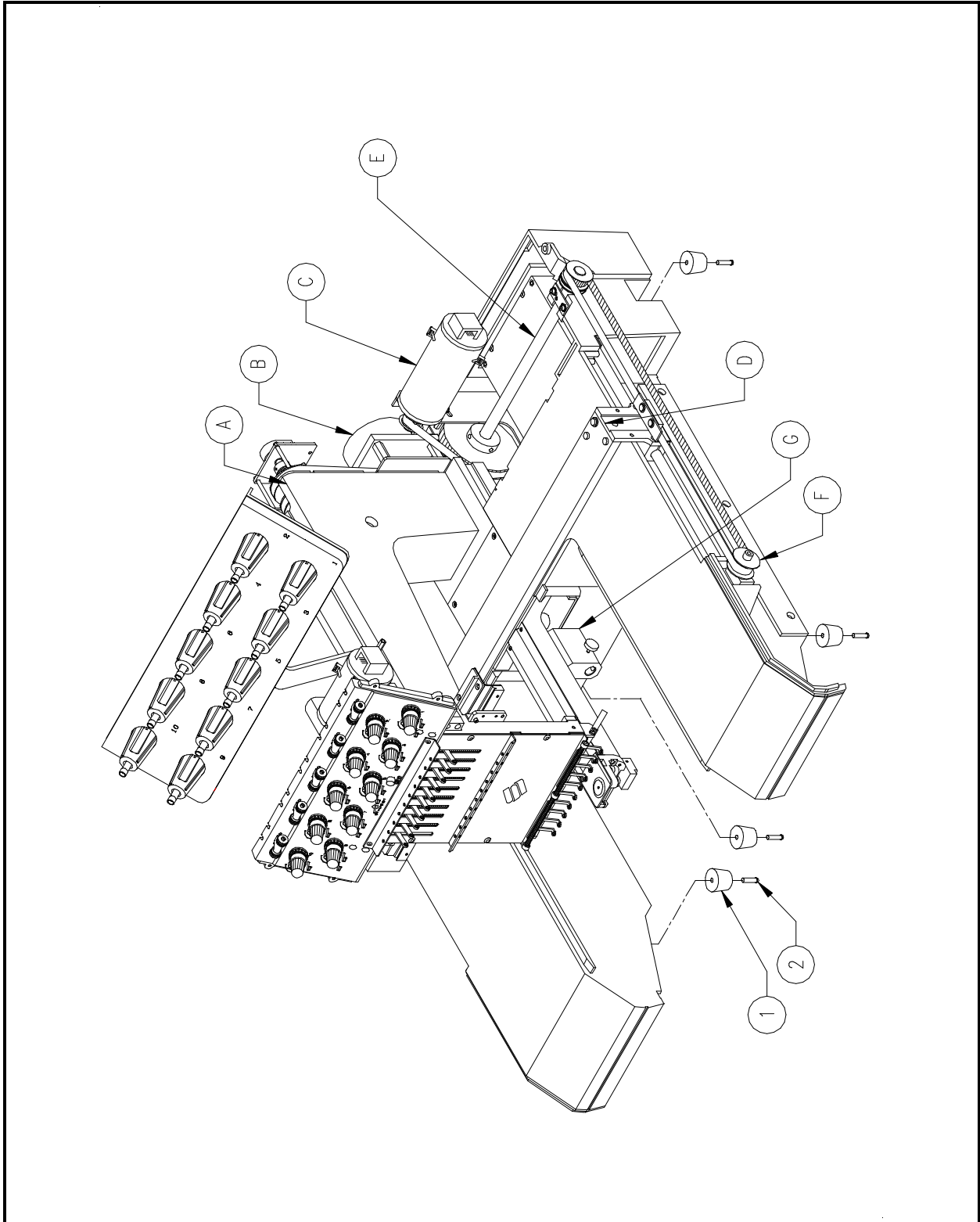


Figure 4

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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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

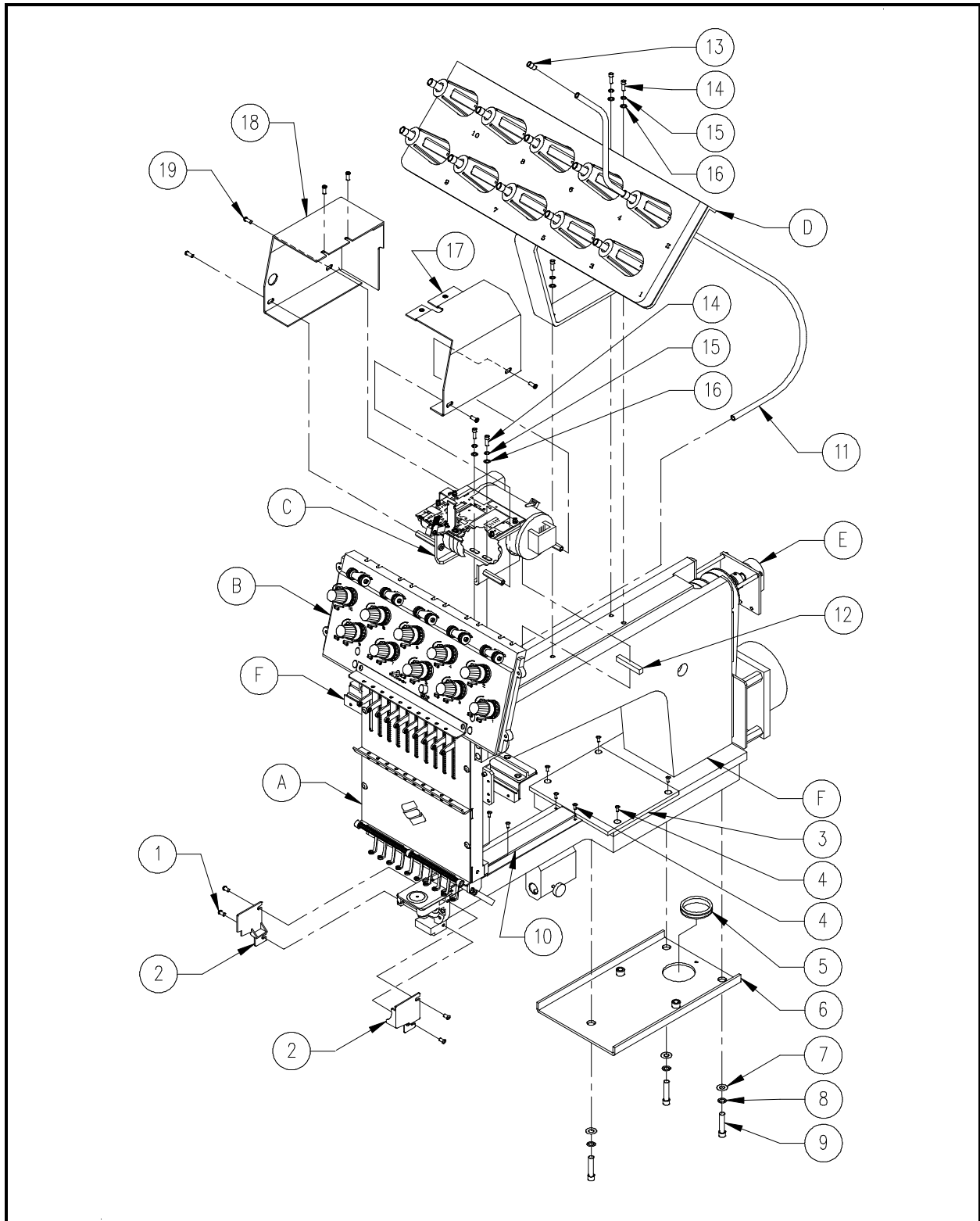


Figure 5



**Sewing Head Assemblies****Reference Figure 5**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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	



**Color Change Assembly****Reference Figure 6**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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	001922-08	Screw, Socket Head Cap, 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	008056-01	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	

# Thread Tree Assembly

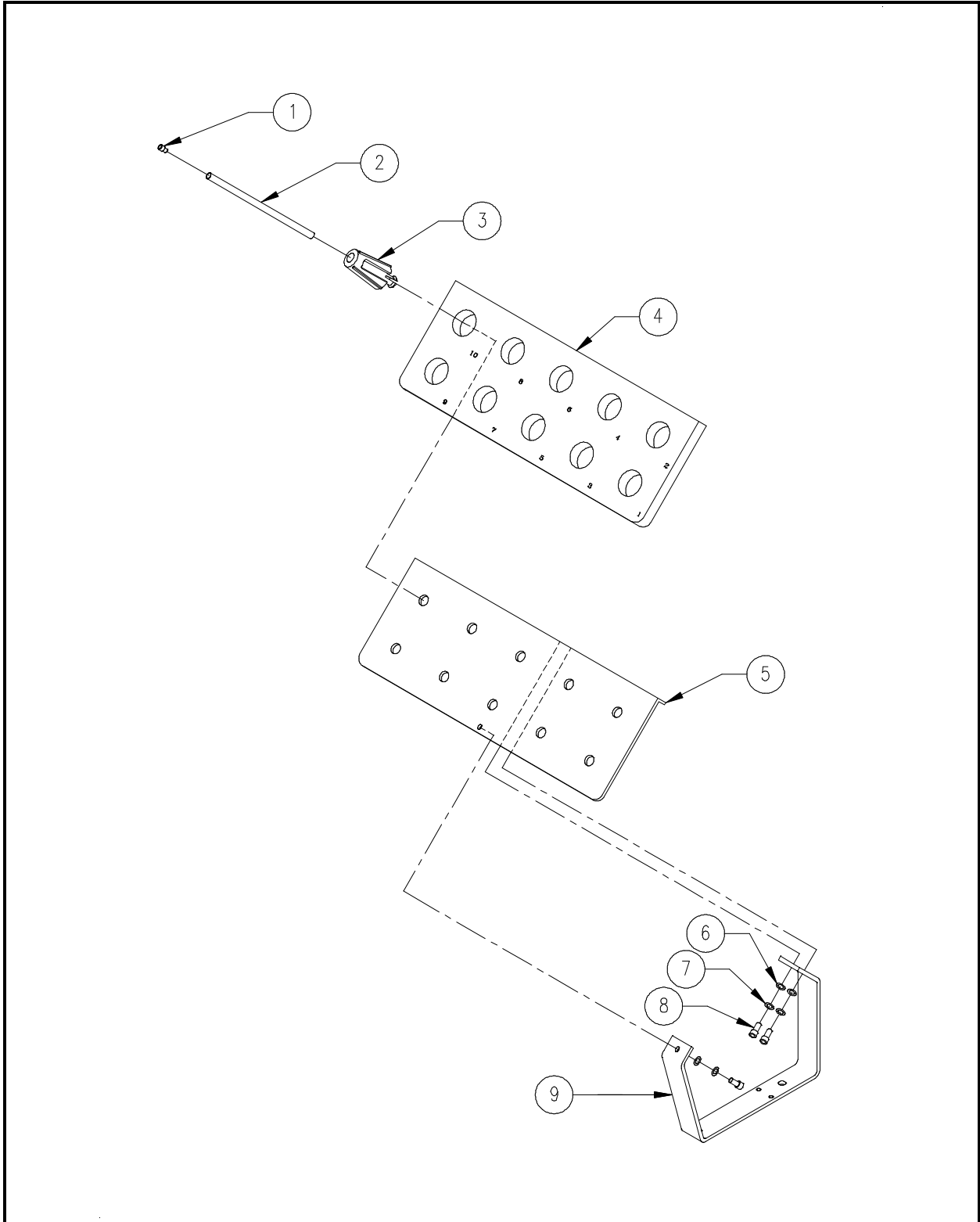


Figure 7

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**Thread Tree Assembly****Reference Figure 7**

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<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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	

## Needle Case Assembly (1 of 2)

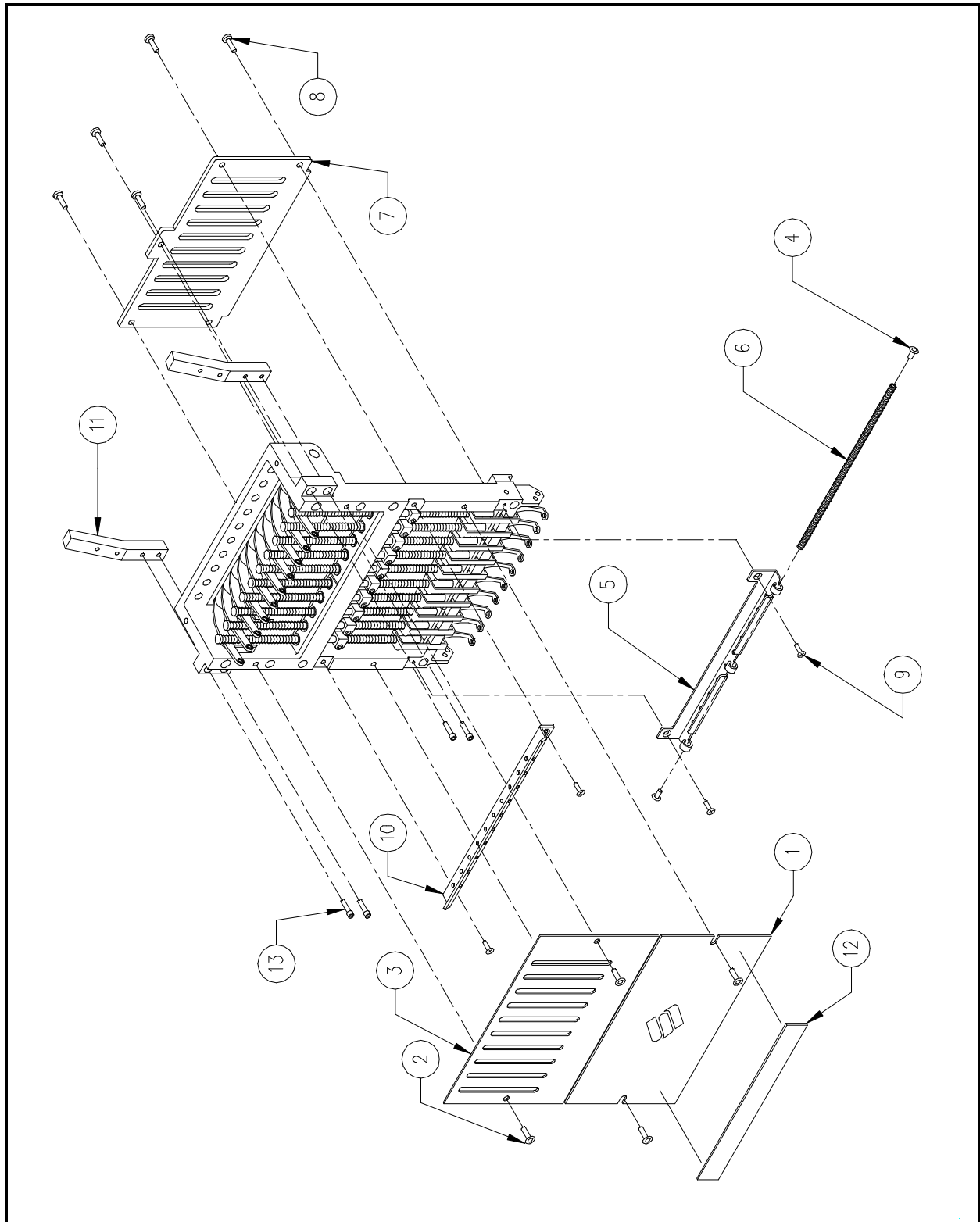


Figure 8

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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
1	007511-01	Cover, Needle Case, Lower	
2	003509-06	Screw, Button Head Cap, M4 x 0.7 x 6 Lg	
3	007510-01	Cover, Needle Case, Upper	
4	003509-10	Screw, Button Head Cap, M4 x 0.7 x 10 Lg	
5	007509-01	Guide, Thread, Lower	
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	007508-01	Guide, Thread, Middle	
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	006347-01	Blade, Sensor, Interruptor	
15	690439-04	Washer, Flat, M4	
16	672018-06	Screw, Socket Head Cap, M4 x 0.7 x 6 Lg	

## Needle Case Assembly (2 of 2)

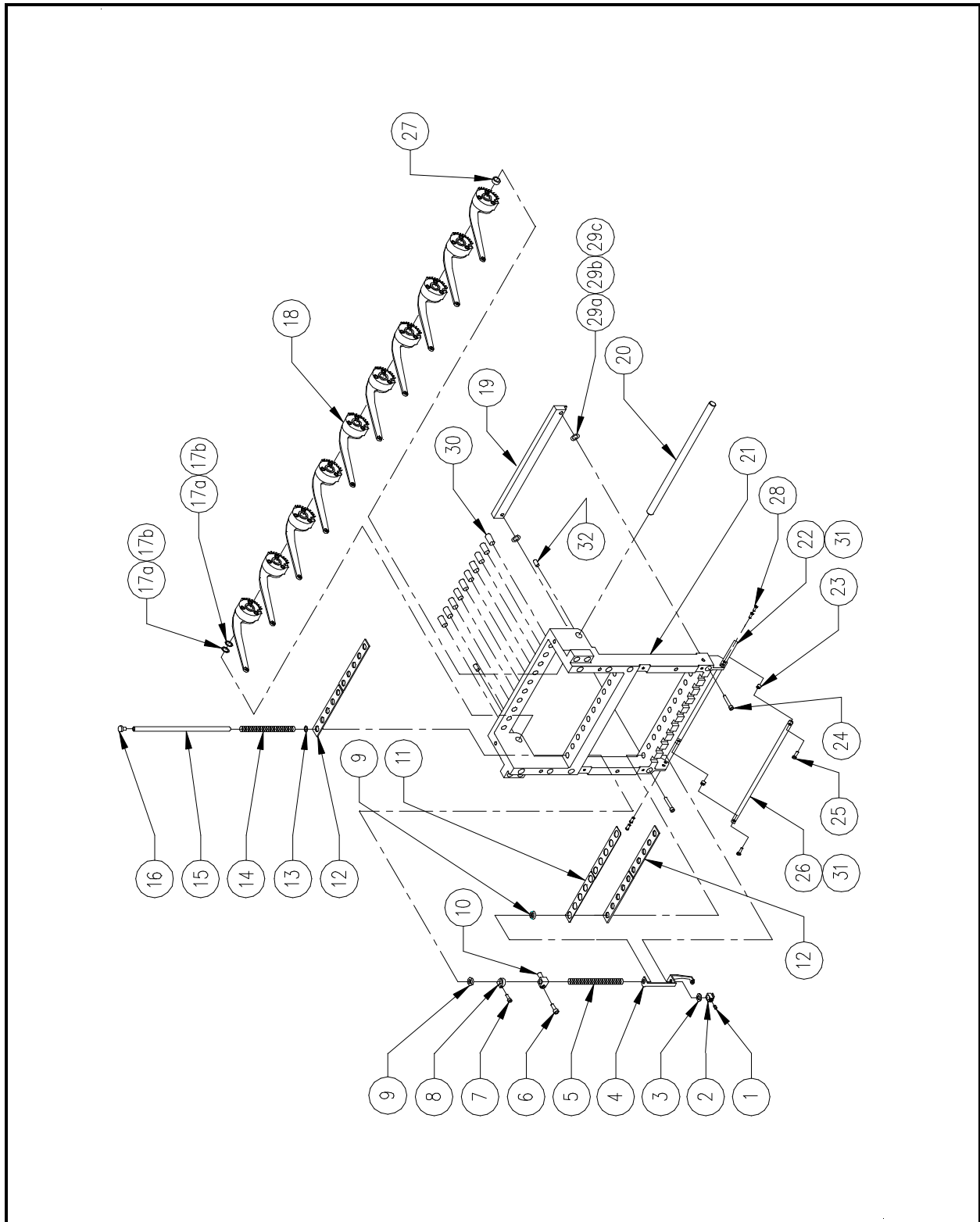


Figure 9



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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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	001868-01	Lever, Take-Up, Assembly	
19	007502-01	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 26 and 31 should be replaced as a factory built assembly:  
008070-01 Grabber Bar Assembly

Items 22 and 31 should be replaced as a factory built assembly:  
008071-01 Grabber Bracket Assembly

# Thread Tensioner Assembly

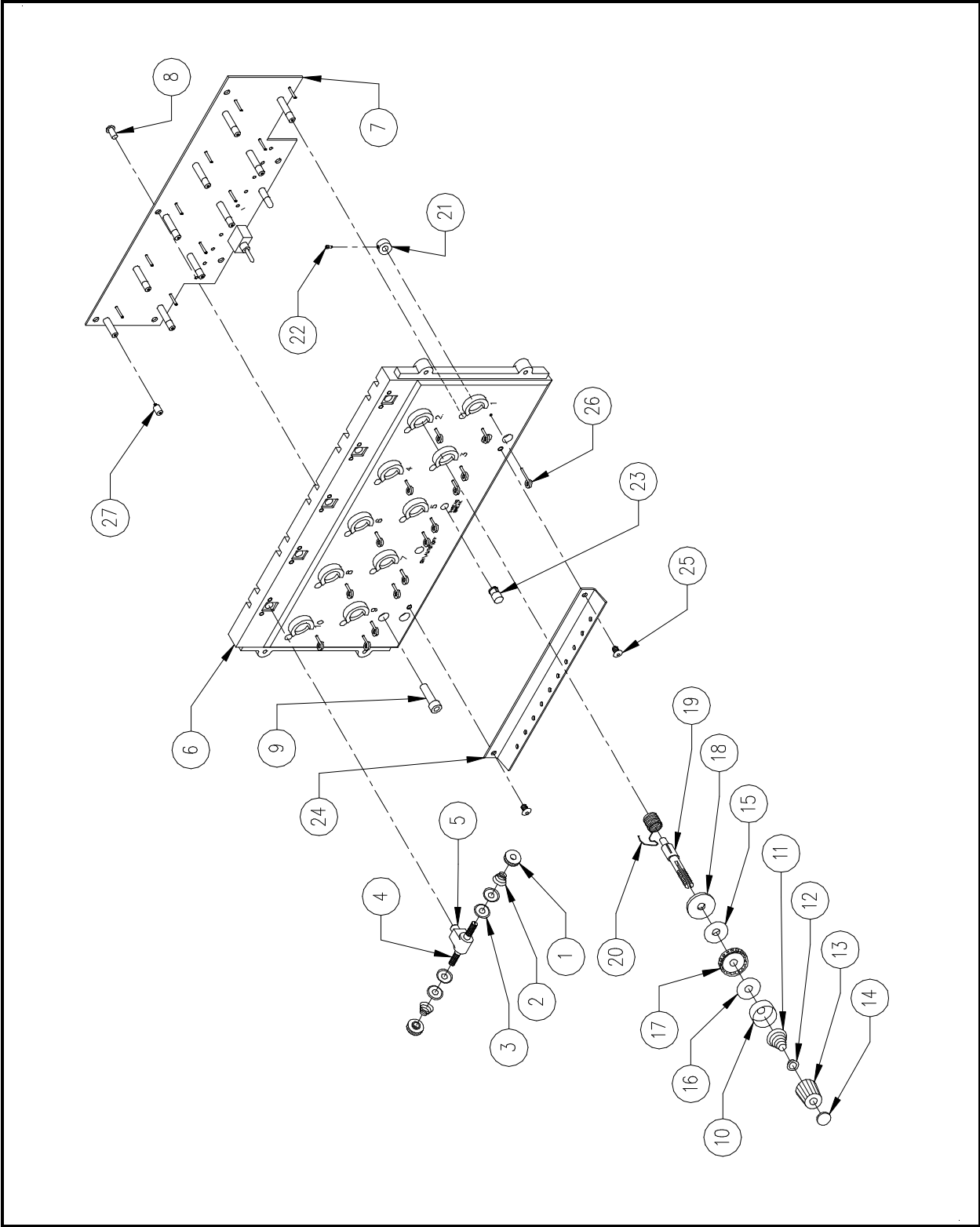


Figure 10

**Thread Tensioner Assembly****Reference Figure 10**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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	007523-01	Bracket, Tensioner	
7	005531-01	PCB, Thread Break, Assembly	
8	001924-06	Screw, Cheese Head, Slotted, M4 x 0.7 x 6 Lg	
9	672018-16	Screw, Socket Head Cap, M4 x 0.7 x 16 Lg	
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	001922-10	Screw, Socket Head Cap, M3 x 0.5 x 10 Lg	
23	007548-01	Cover, LED	
24	007525-01	Guide, Thread, Upper	
25	003509-06	Screw, Button Head Cap, M4 x 0.7 x 6 Lg	
26	002897-01	Post, Guide	
27	007659-02	Standoff, M-F, 3/16" Round	

\*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)

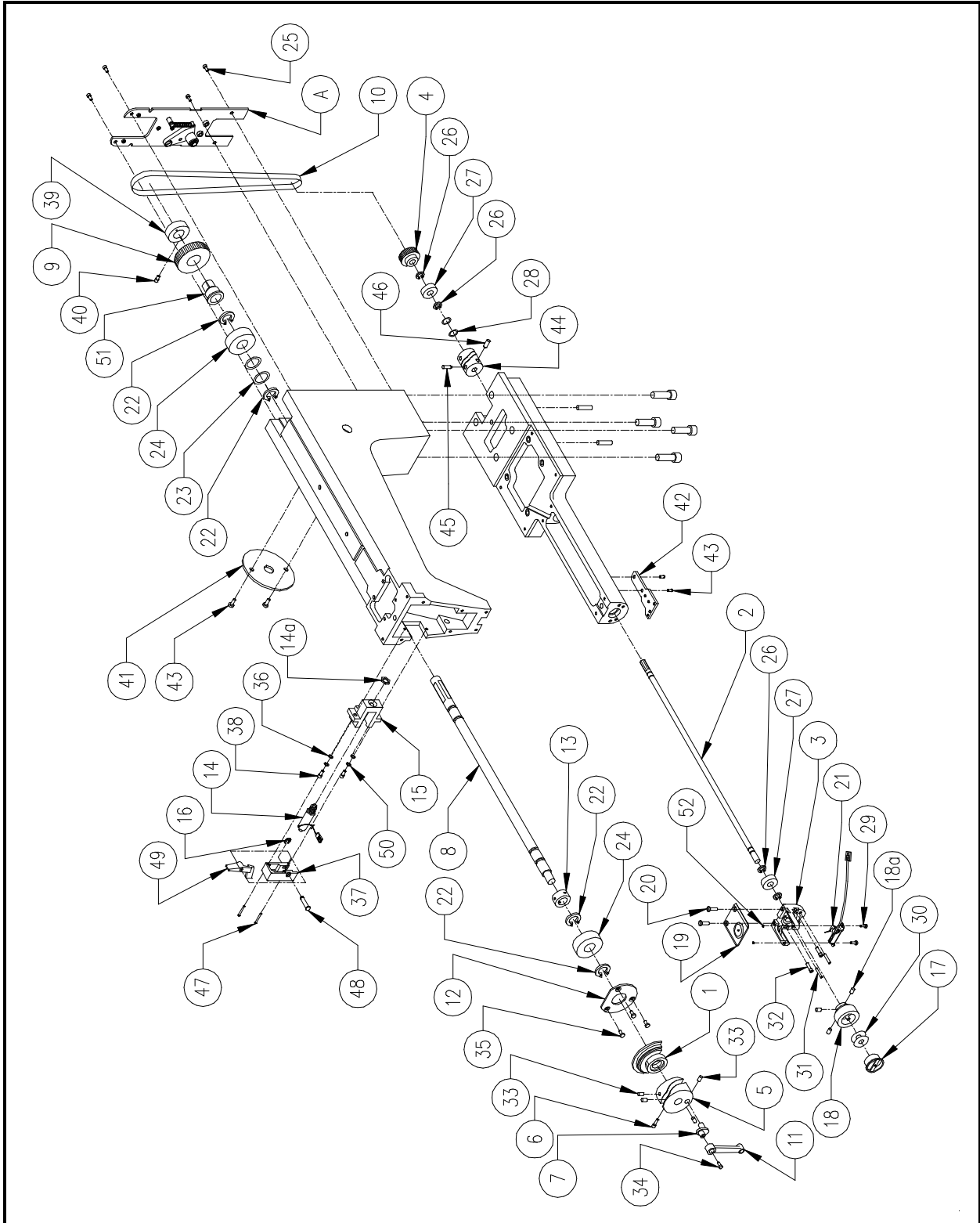


Figure 11

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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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	
20	004643-01	Screw, Needle Plate	
21	001916-01	Support, Rotary Hook	
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) (cont)****Reference Figure 11**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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)

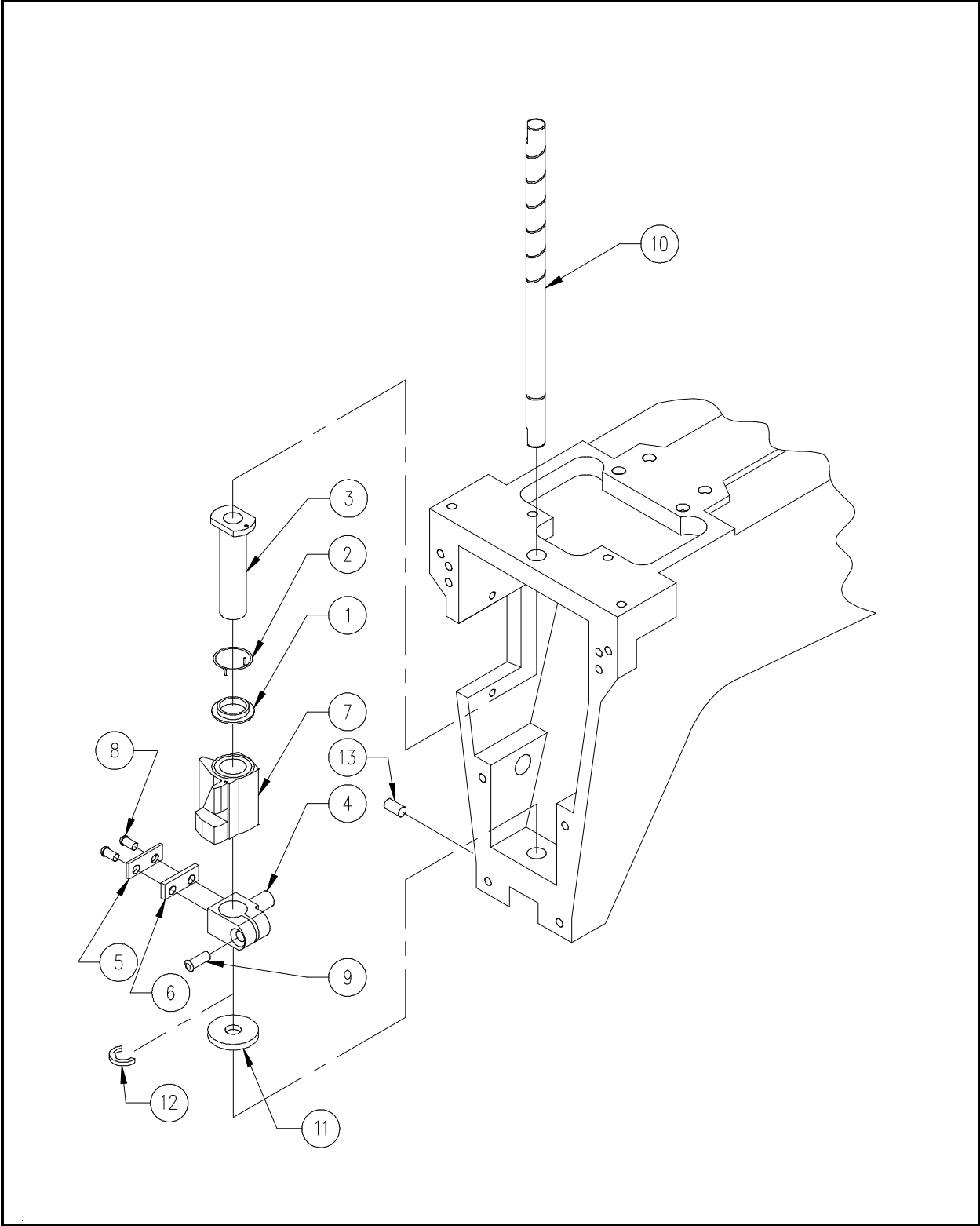


Figure 12



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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
1*	001845-01	Bushing, Spring Cradle	
2*	001864-01	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	001858-01	Shaft, Guide, Needle Bar	
11	001875-01	Bearing, Shaft, Guide	
12	001955-18	Ring, Retainer, External, 5/16" ID	
13	004264-08	Screw, Set, Cone Point, M4 x 0.7 x 8 Lg	

\*NOTE: Items 1-9 should be replaced as a factory built assembly:  
001990-01S Assembly, Reciprocator

# Sewing Head Components (3 of 3)

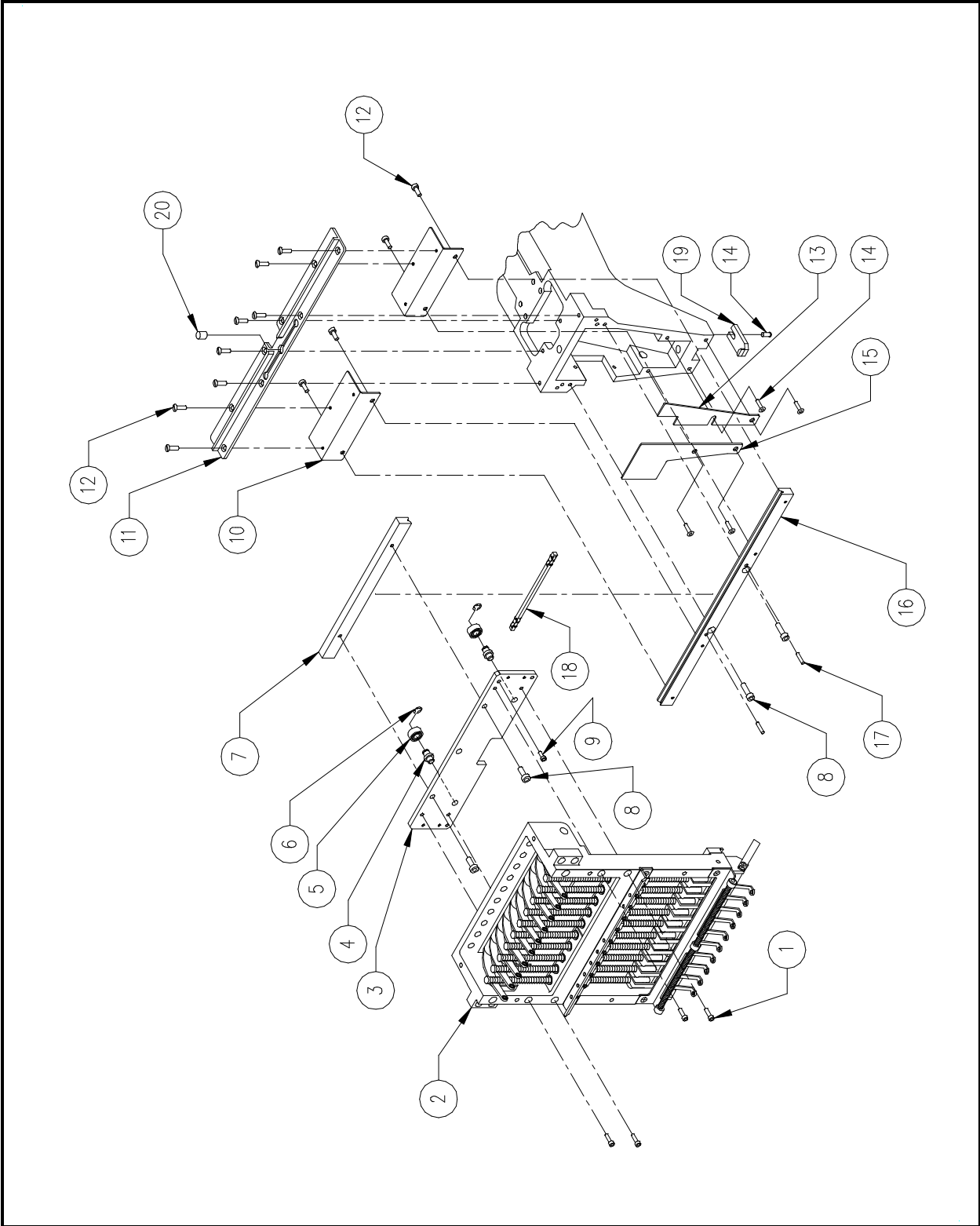


Figure 13

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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
1	672018-16	Screw, Socket Head Cap, M4 x 0.7 x 16 Lg	
2	-----	Needle Case Assemblies	See Pages 15-1 & 16-1
3*	007515-01	Plate, Bearing, Retainer	
4*	007516-01	Stud, Bearing, Retainer	
5	007517-01	Bearing, Radial, 4mm ID x 9mm 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

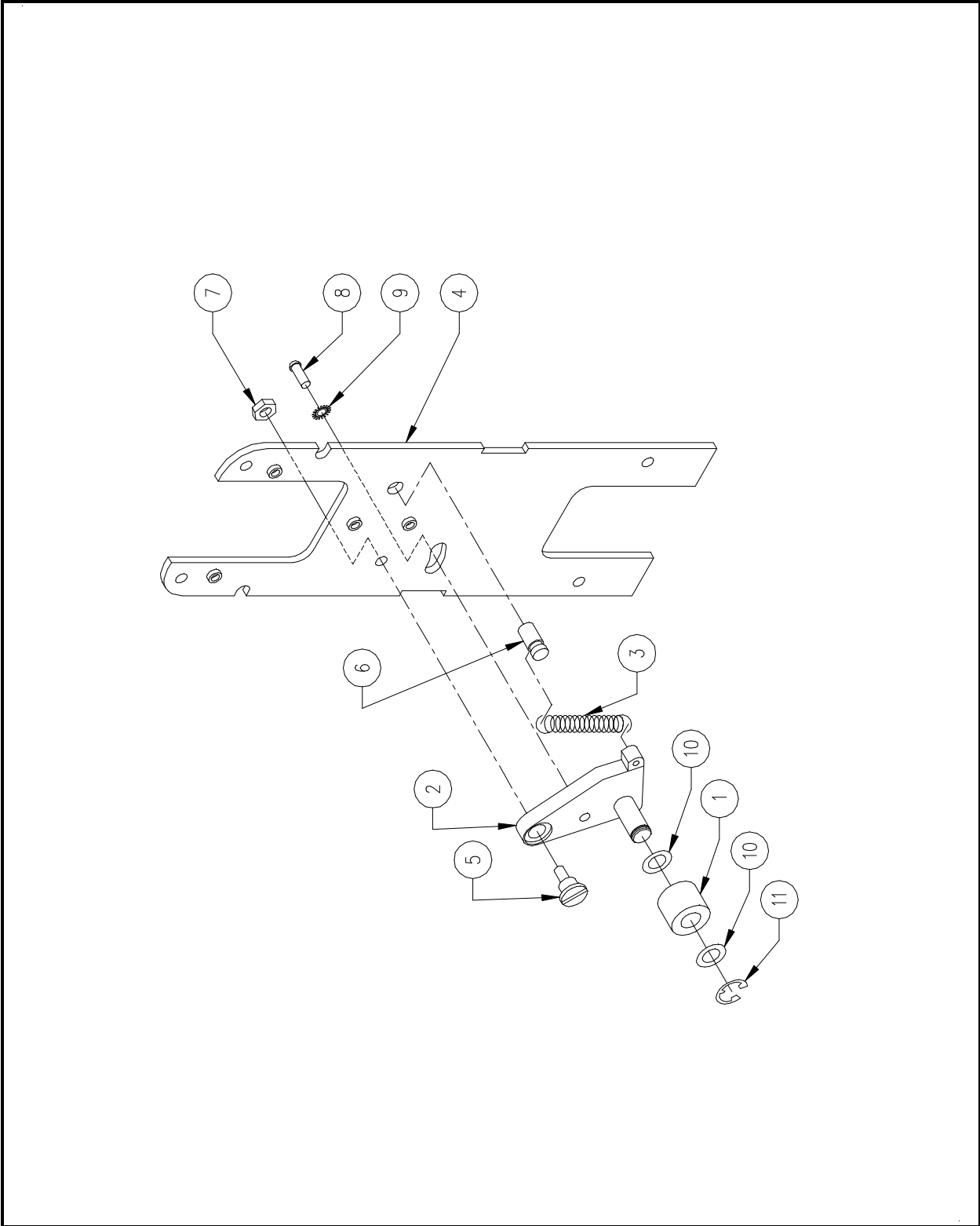


Figure 14

**Bobbin Idler Assembly (004504-01S)****Reference Figure 14**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
1	003593-01	Roller, Idler	
2	002817-01	Bar, Idler, Assembly	
3	002816-06	Spring, Idler	
4	003668-01	Cover, Head, Rear	
5	003188-01	Screw, Shoulder, M5 x 0.7 x 0.8 Lg	
6	660278-01	Stud, Press, 1/4" 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

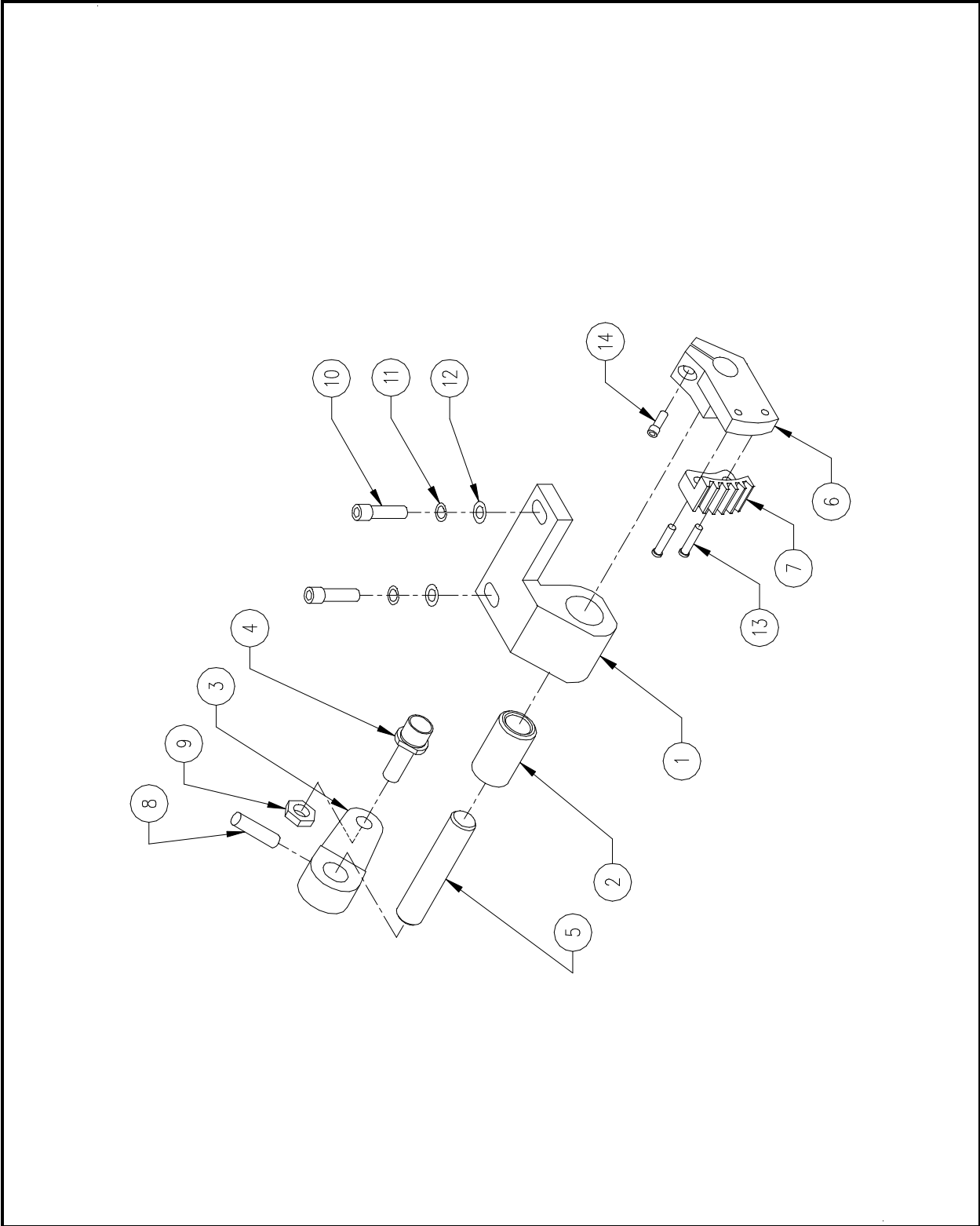


Figure 15

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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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	672018-14	Screw, Socket Head Cap, M4 x 0.7 x 14 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)

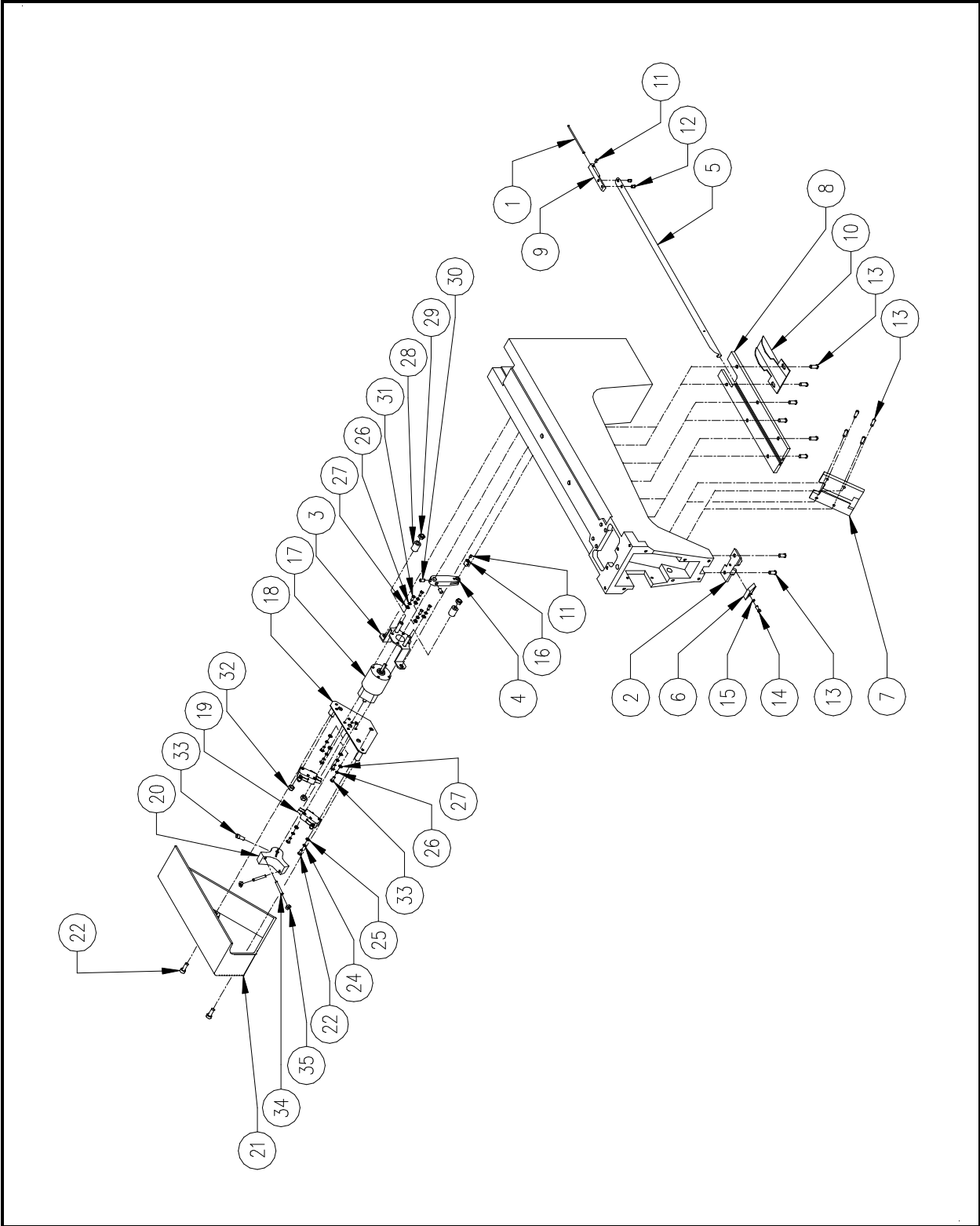


Figure 16



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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
1	003185-01	Rod, Guide	
2	002892-01	Mount, Conduit, Front	
3	003676-01	Bracket, Mounting, Grabber Drive	
4	003692-01	Arm, Drive, Grabber	
5	003586-01	Blade, Grabber	
6	003587-01	Guide, Blade	
7	003588-01	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	003509-08	Screw, Button Head Socket, M4 x 0.7 x 8 Lg	
14	672018-10	Screw, Socket Head Cap, M4 x 0.7 x 10 Lg	
15	690439-04	Washer, Flat, M4	
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	670068-08	Screw, Socket Head Cap, 6-32 x 1/2"	
34	004709-01	Screw, Set, 8-32 x 1", Brass Tip	
35	680032-38	Nut, Hex, 8-32	

# Trimmers, Head Level Parts (2 of 2)

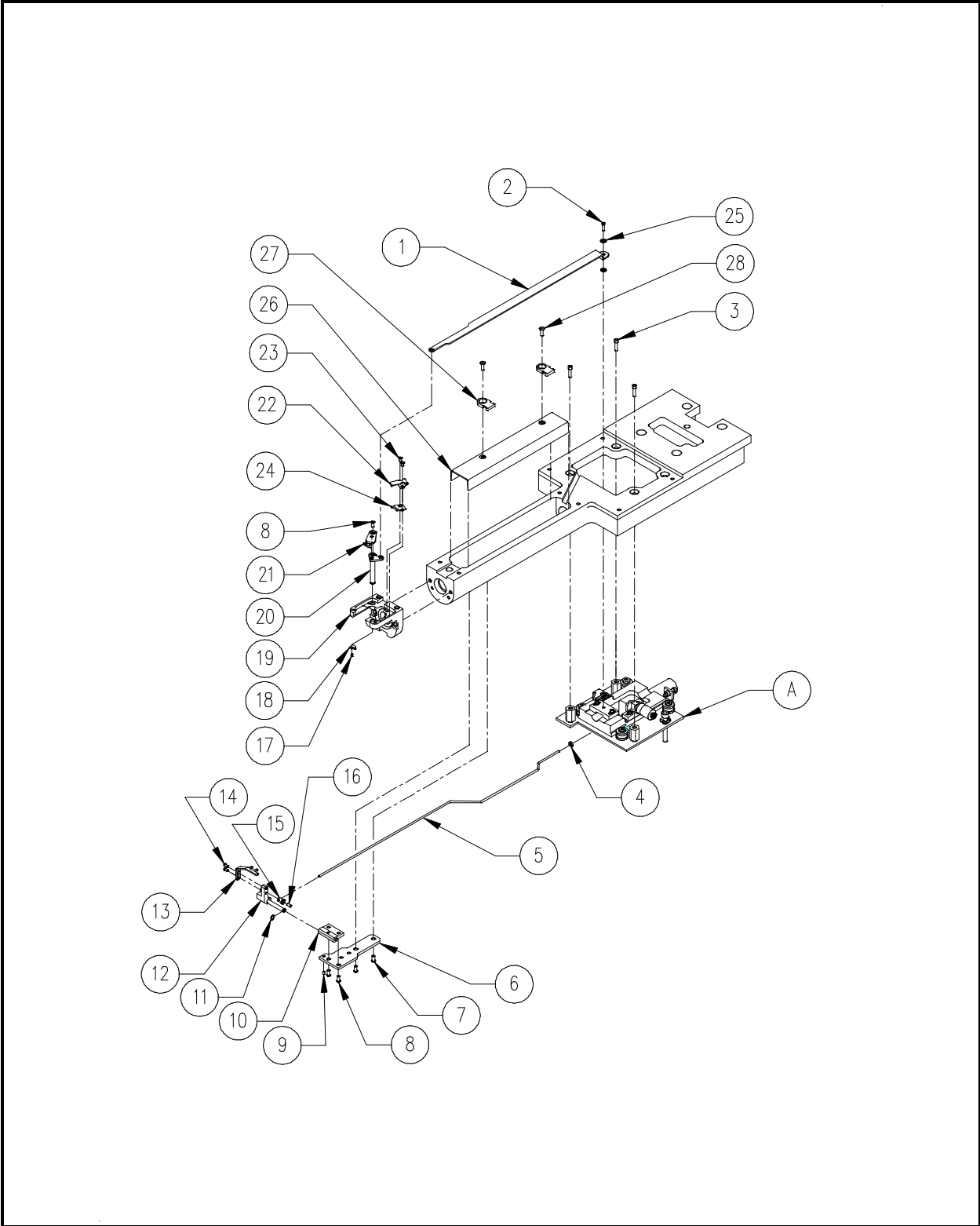


Figure 17

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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
A	007265-01	Assembly, Lower Trimmer Drive	See Page 18-1
1	005610-01	Link, Connecting	
2	003679-01	Screw, Shoulder, 4-40 x 1/8" OD x 1/8" Lg	
3	671852-16	Screw, Socket Head Cap, M5 x 0.8 x 16 Lg	
4	690364-32	Washer, Flat, #2, .032" Thick	
5	005616-01	Link, Picker	
6	006526-01	Bracket, Picker	
7	003509-08	Screw, Button Head Socket, M4 x 0.7 x 8 Lg	
8	007443-06	Screw, Flat Head Socket, M3 x 0.5 x 6 Lg	
9	001962-06	Screw, Set, Flat Point, M3 x 0.5 x 6 Lg	
10	003511-01	Mount, Picker	
11	001955-08	Ring, Retainer, External, .125"	
12	003141-01	Base, Picker	
13	005615-01	Picker	
14	003136-06	Screw, Button Head Socket, M3 x 0.5 x 6 Lg	
15	003131-01	Pin, Swivel, Front	
16	001962-03	Screw, Set, Flat Point, M3 x 0.5 x 3 Lg	
17	006305-01	Screw, Cheese Head, M2 x 0.4 x 3 Lg	
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 4 Lg	
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 10 Lg	

# Trimmer Drive Assembly

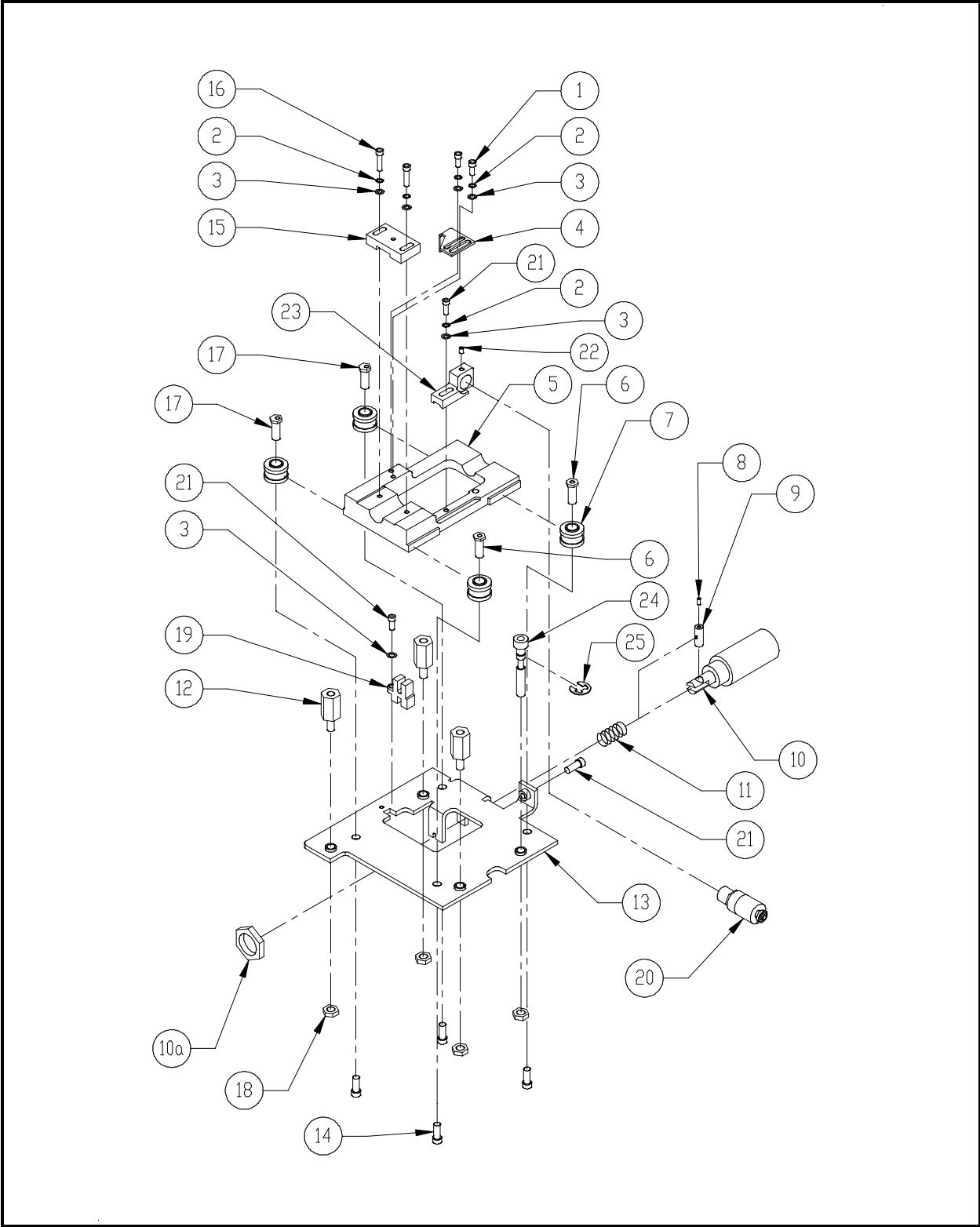


Figure 18

**Trimmer Drive Assembly****Reference Figure 18**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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"	

\*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

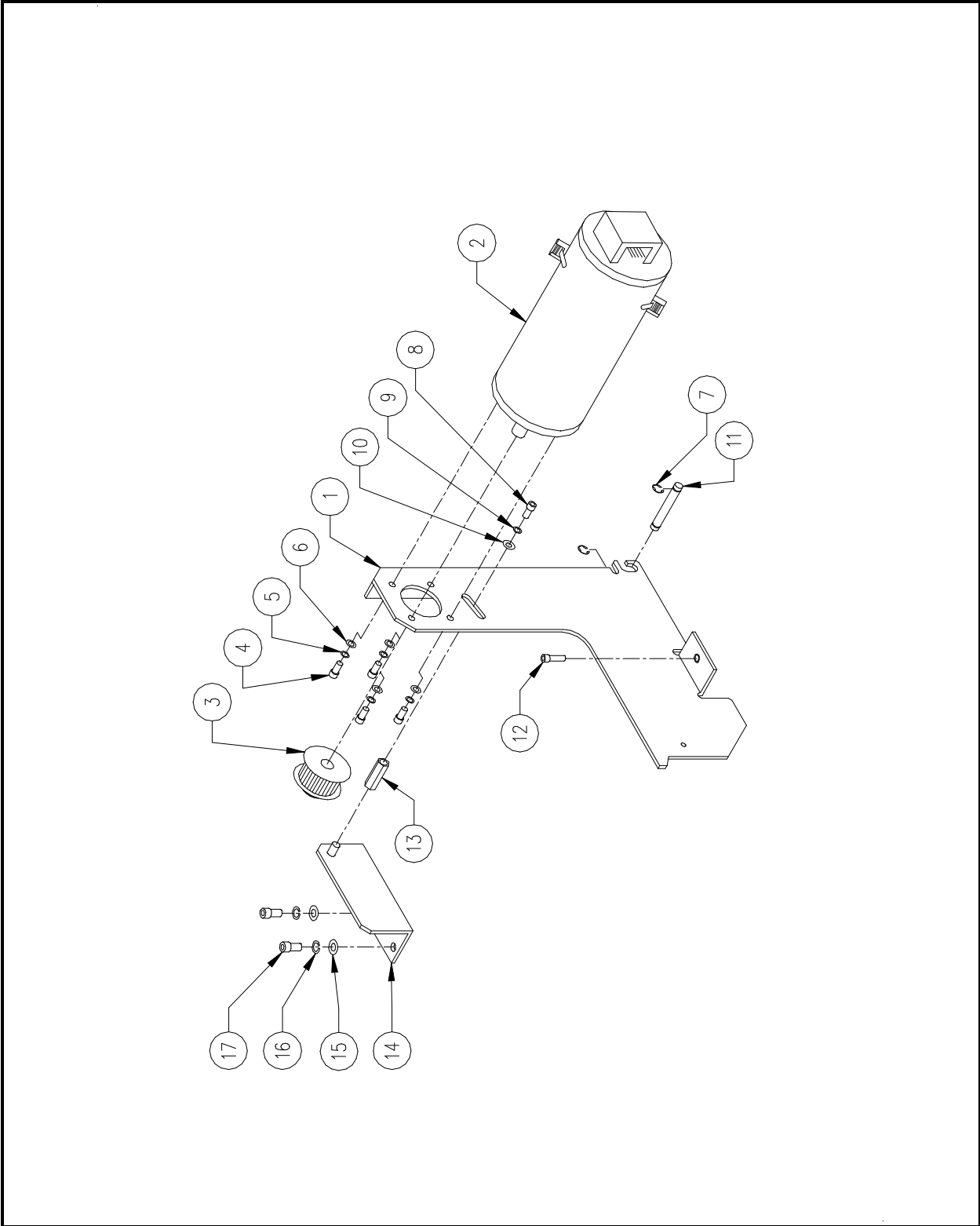


Figure 19

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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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

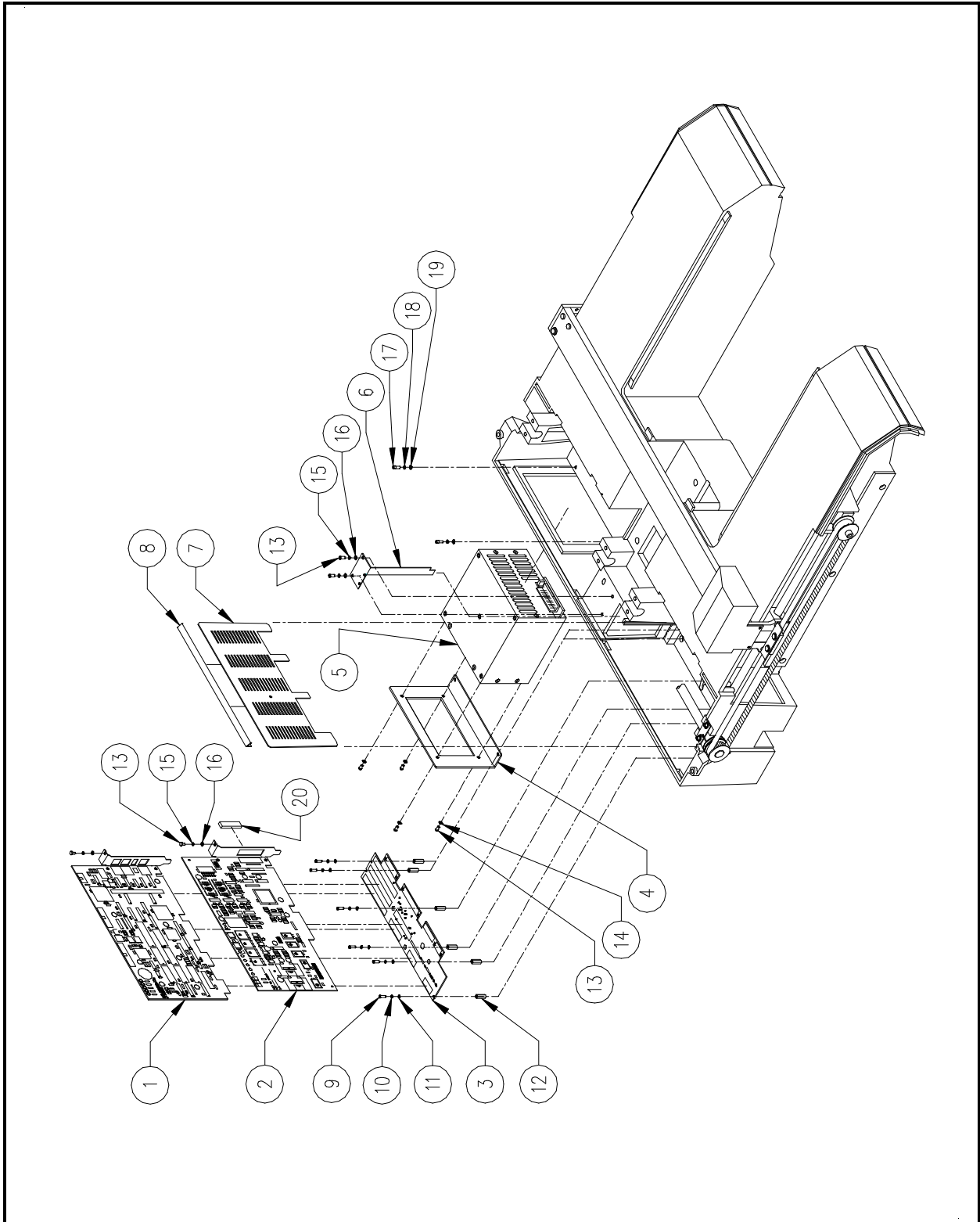


Figure 20



**Electronics****Reference Figure 20**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
1	005106-01	PCB, CPU188/Disk	
2	006838-01	PCB, 4-Axis Driver, Assembly	
3	005631-01	PCB, Backplane	
4	004523-01	Bracket, Power Supply	
5	005570-01	Power Supply	
6	004526-01	Bracket, Slot Cover, Single	
7	004525-01	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	690034-38	Washer, Flat, #8	
20	190709-01	Connector, Header, Straight, 26 Position	

## X-Drive System (1 of 5)

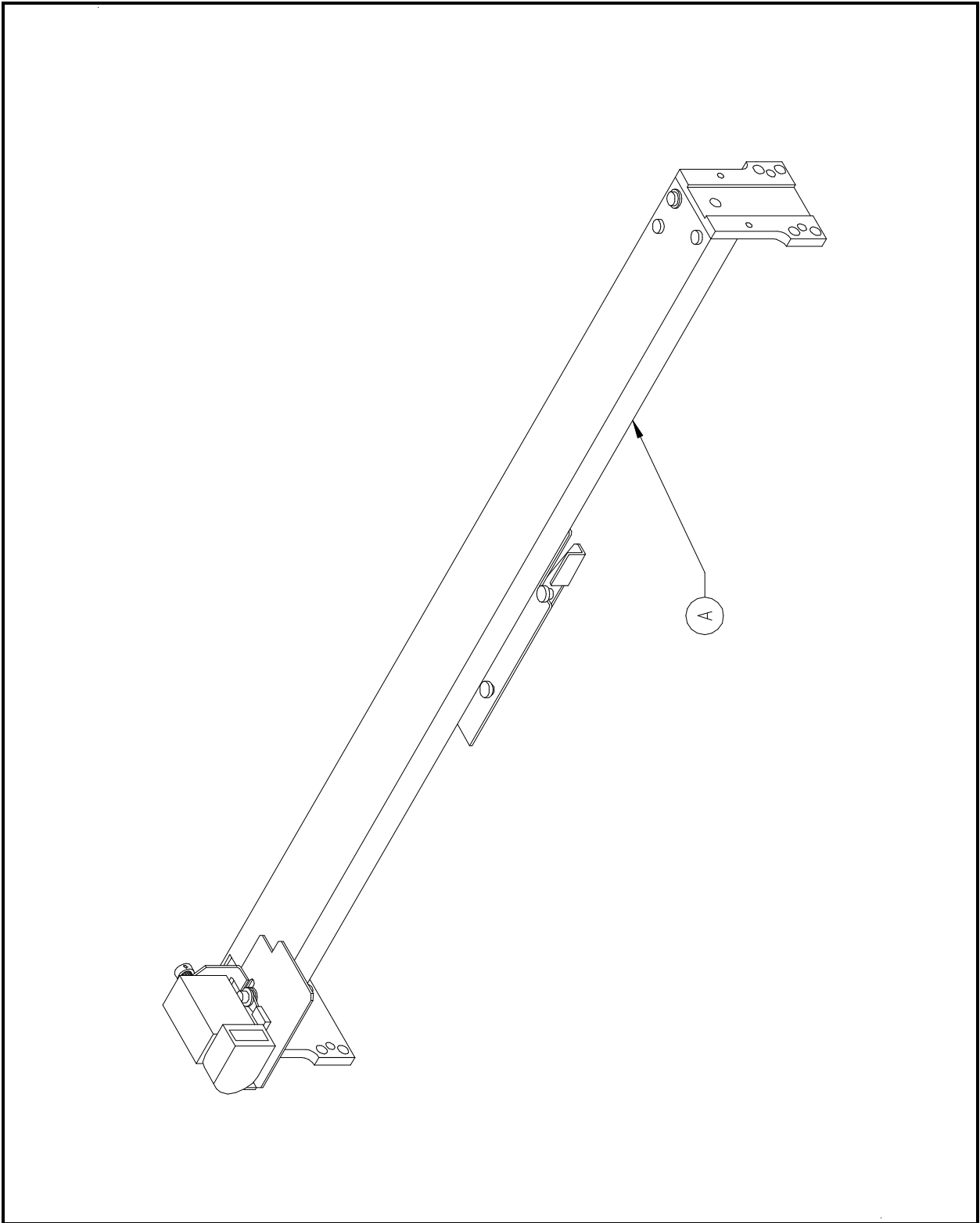


Figure 21

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

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<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
A	006758-01	X-Drive Assembly	See Page 22-1

## X-Drive System (2 of 5)

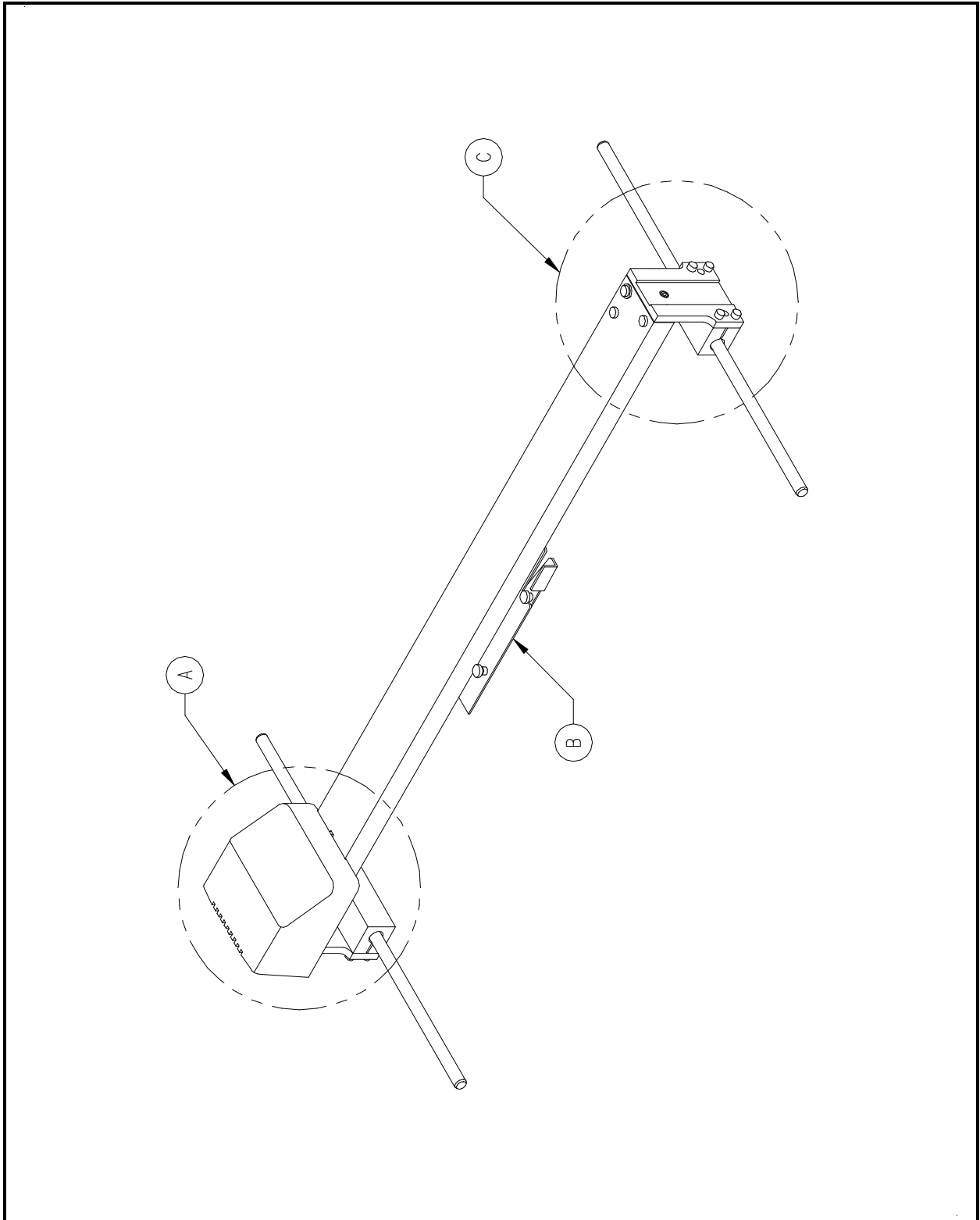


Figure 22

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

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<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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)****Reference Figure 23**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
1	004813-01	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	005070-01	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	003804-01	Harness, X-Beam	
16	005121-01	Motor/Encoder, X-Axis	
17	690713-38	Washer, Lock, External Star, #8	
18	672386-04	Screw, Pan Head Phillips, 2-56 x 1/4"	
19	690033-32	Washer, Lock, Split, #2	
20	690034-32	Washer, Flat, #2	
21	670149-08	Screw, Socket Head Cap, 8-32 x 1/2"	
22*	702875-05	Spacer, Shaft, 3/16" ID x .010" Thick	
23*	670166-03	Screw, Set, Knurled Cup Point, 4-40 x 3/16"	
24	670406-04	Screw, Button Head Cap, 4-40 x 3/16"	
25	003814-01	Bracket, Connector	
26	670174-06	Screw, Pan Head Phillips, 6-32 x 3/8"	
27	004725-01	Strain Relief	
28	670131-04	Screw, Pan Head Phillips, 4-40 x 1/4"	
29	670267-06	Screw, Button Head Cap, 8-32 x 3/8"	
30	441423-02	Rail, Y-Axis	

\*NOTE: Items 2, 6, 9, 10, 12, 13, 22 and 23 should be replaced as factory built assembly: 006419-01 Assembly, Carriage, Y-Axis

## X-Drive System (4 of 5)

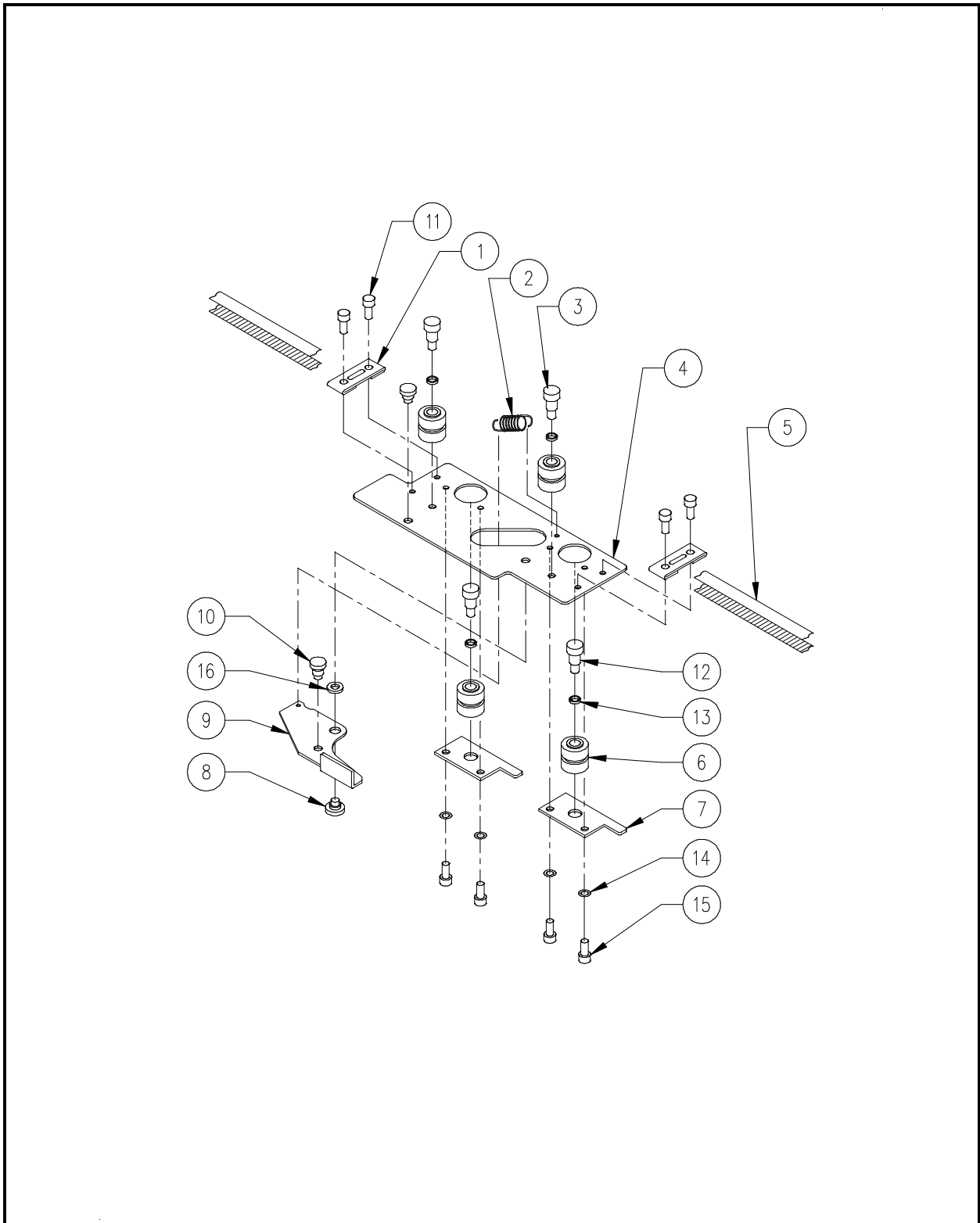


Figure 24



**X-Drive System (4 of 5) (004835-01S)****Reference Figure 24**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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)

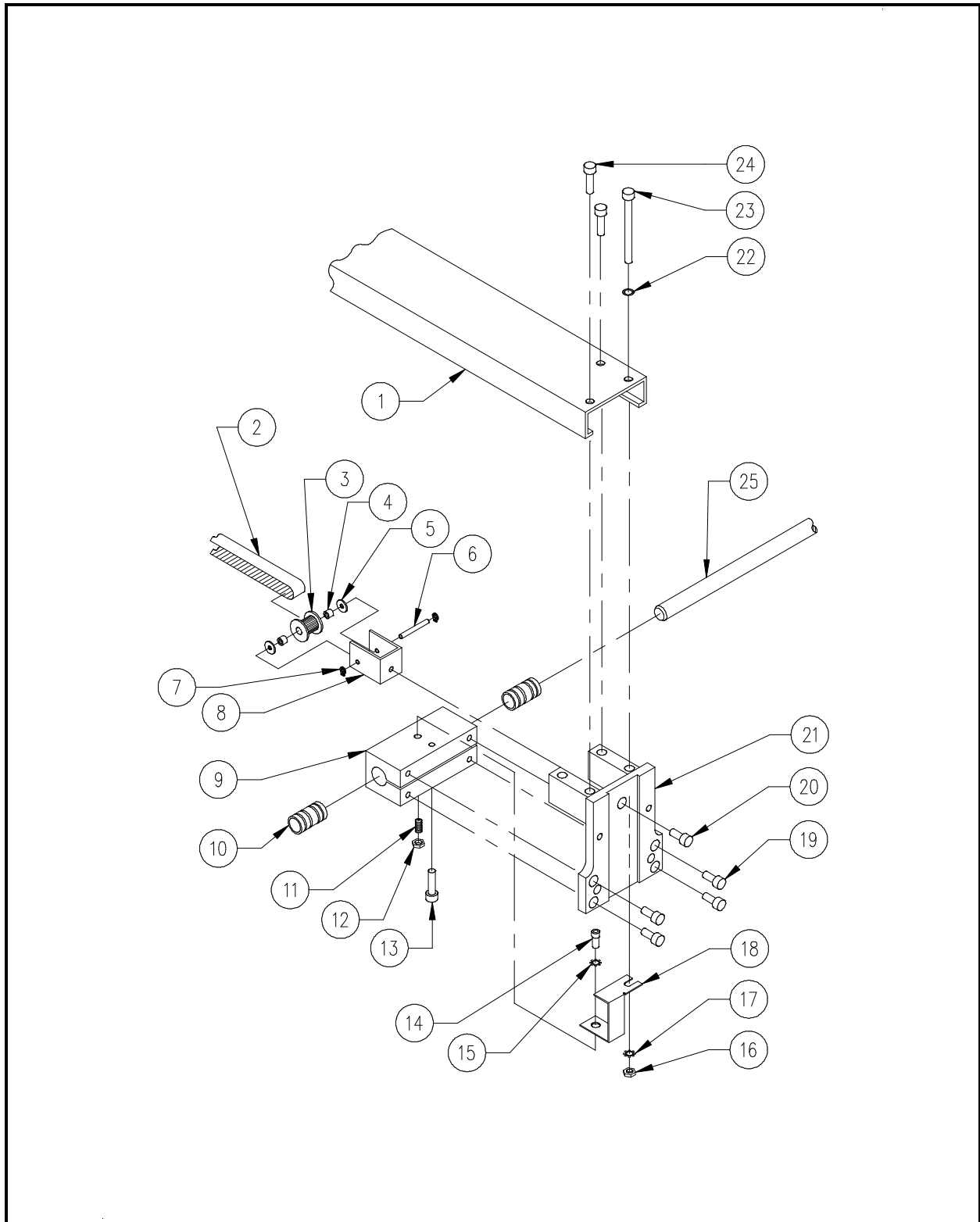


Figure 25

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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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

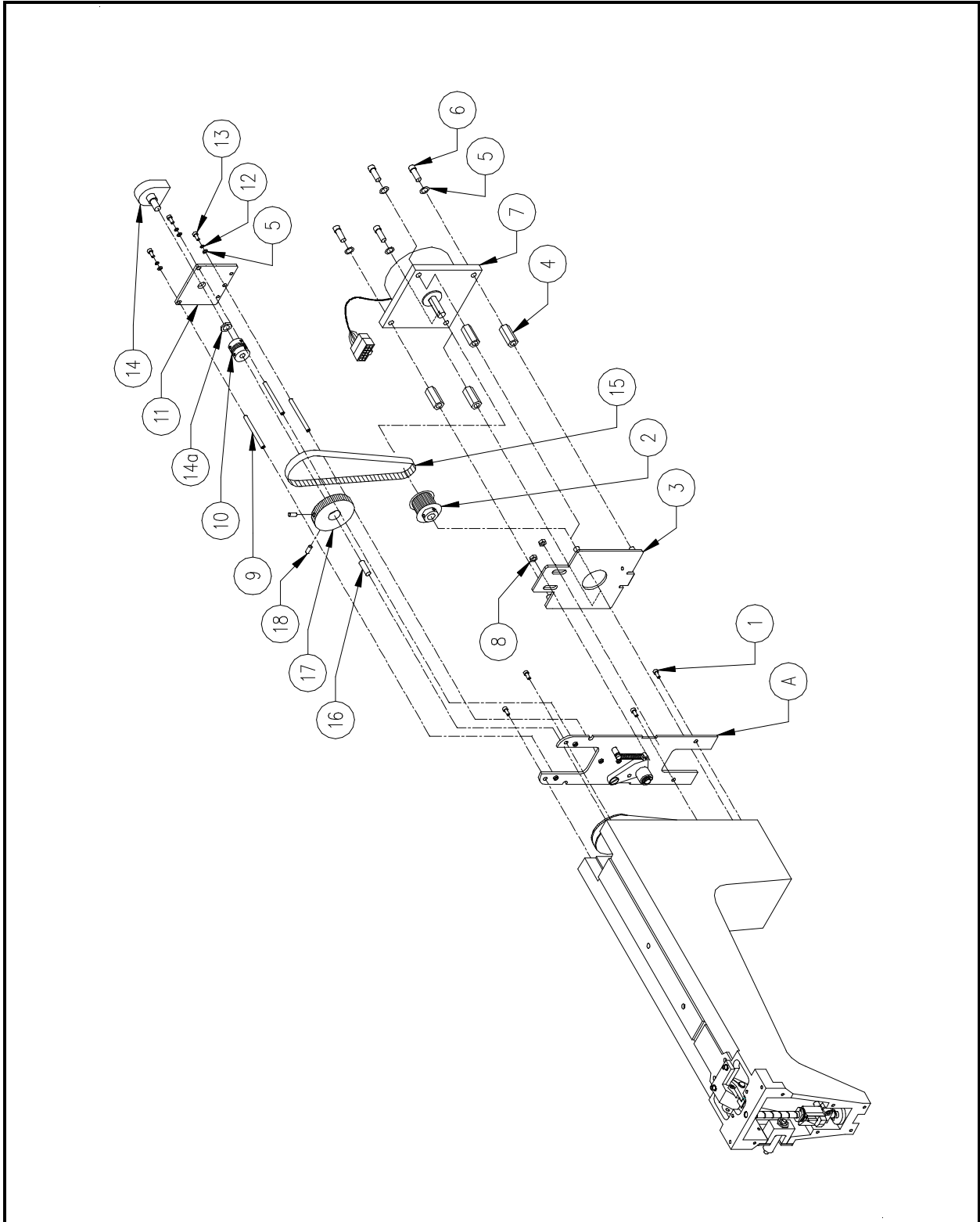


Figure 26

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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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, <sup>W</sup> /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	

# Y-Drive Assembly

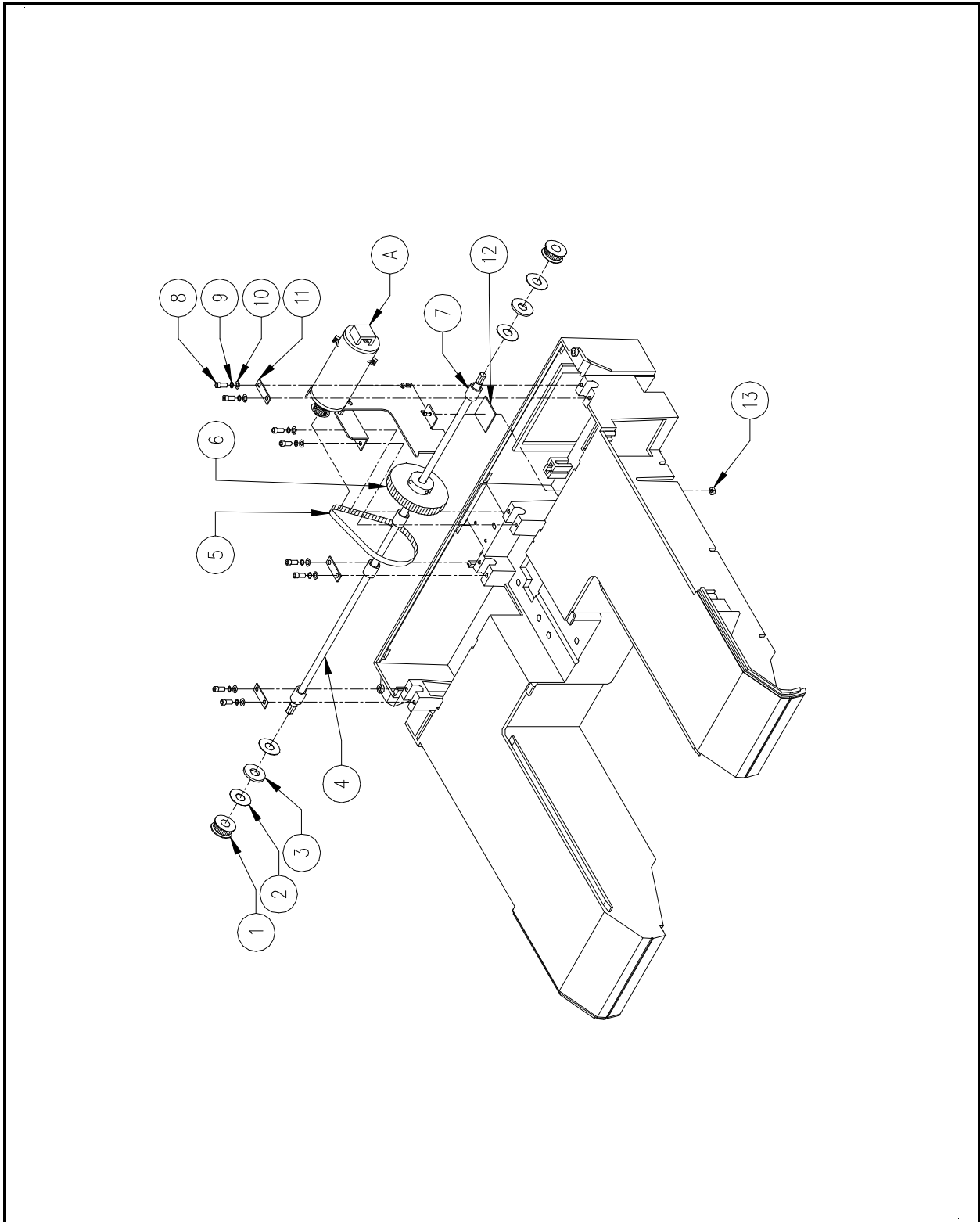


Figure 27

**Y-Drive Assembly****Reference Figure 27**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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

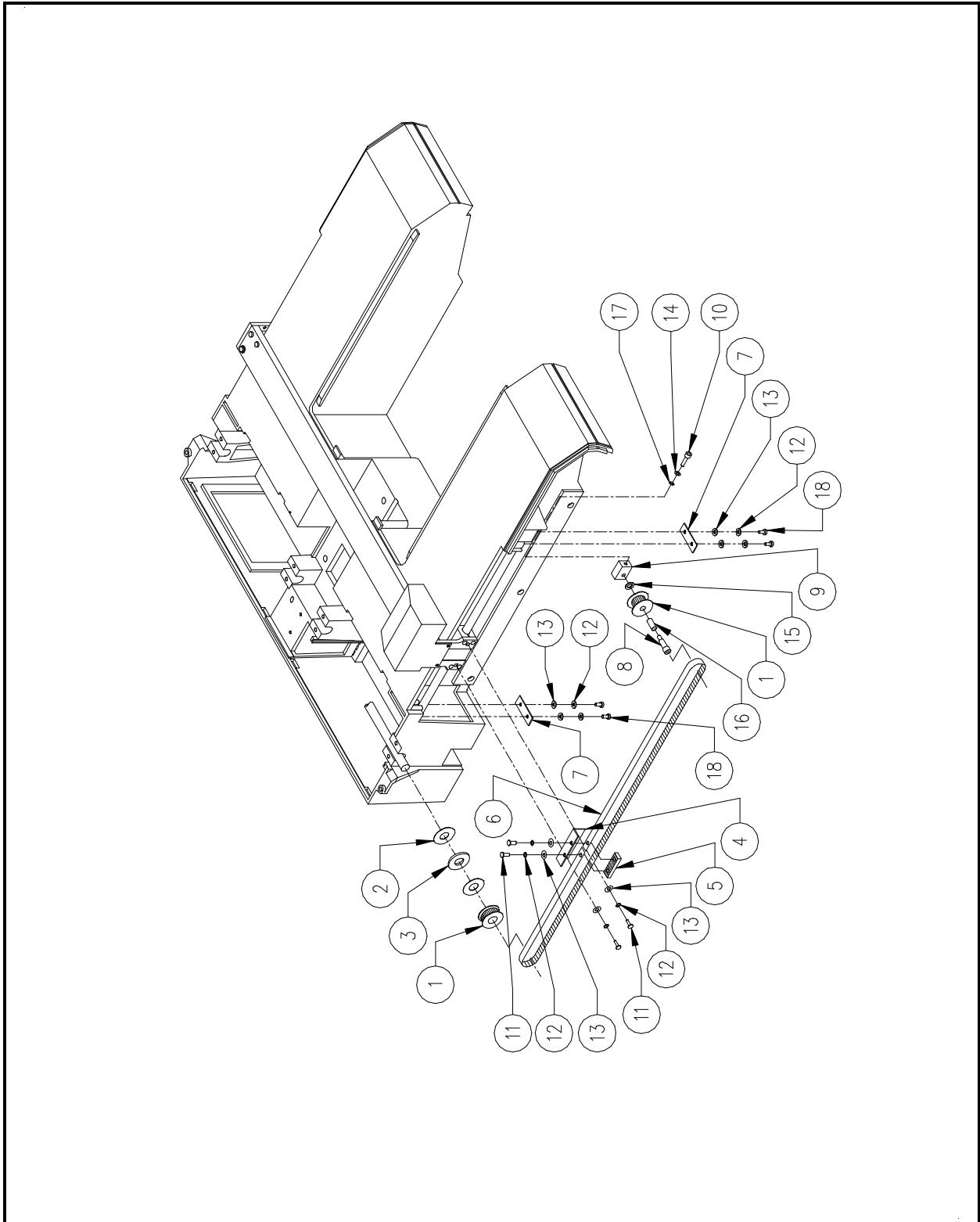


Figure 28



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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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:  
005294-01 Assembly, Pulley, Idler

## Right Y-Carriage Assembly

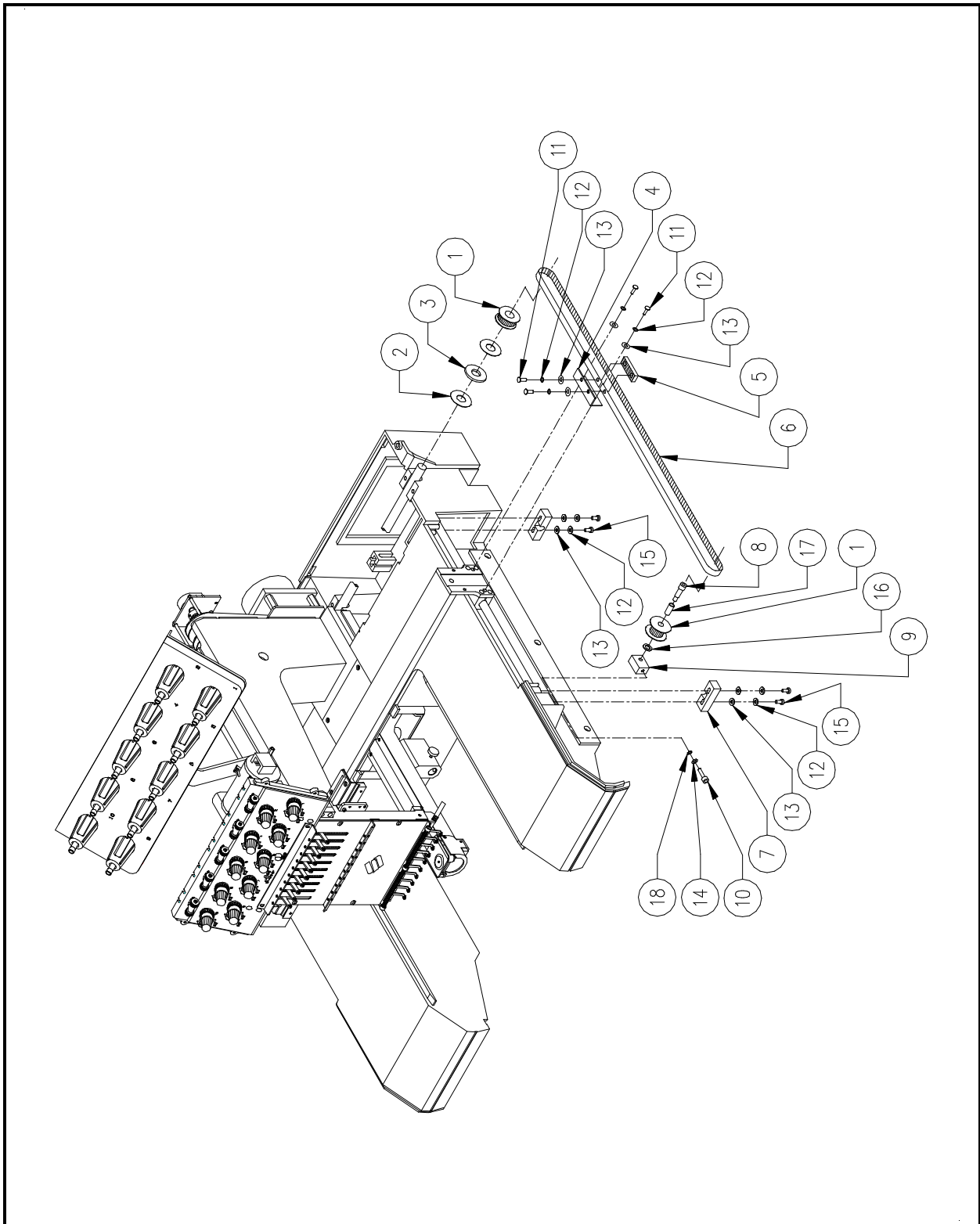


Figure 29

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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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:  
005294-01 Assembly, Pulley, Idler

# Cap Frame Mount Assembly

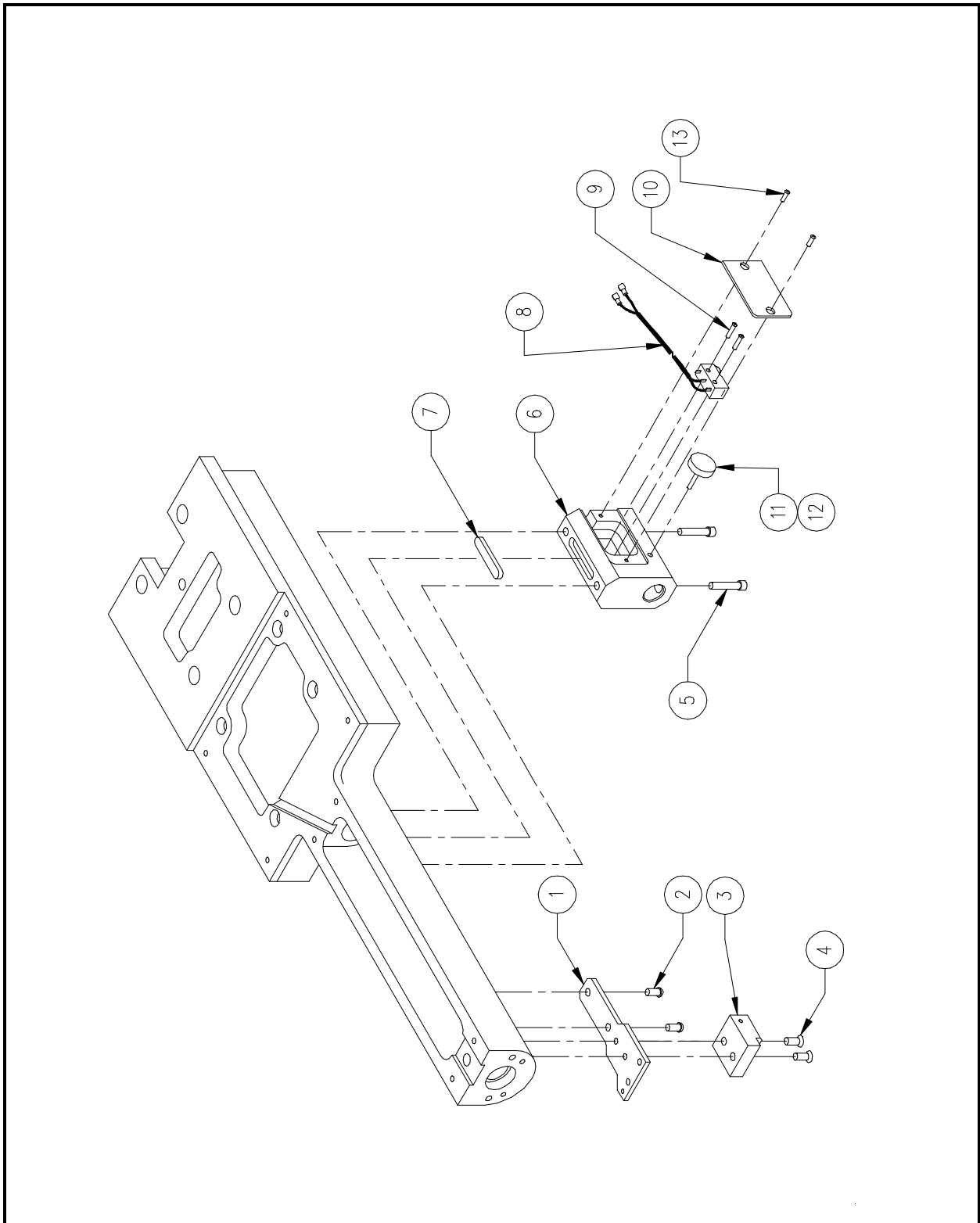


Figure 30

**Cap Frame Mount Assembly****Reference Figure 30**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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	672018-20	Screw, Socket Head Cap, M4 x 0.7 x 20 Lg	
6*	009013-01	Bracket, Cap Frame, Rear	
7	006525-01	Key, Shaft, 6mm x 6mm x 32mm	
8*	009033-01	Cap Frame Switch, Assembly	
9*	003122-10	Screw, Pan Head Phillips, M2 x 0.4 x 10 Lg	
10*	009014-01	Cover, Cap Frame Bracket	
11	671852-10	Screw, Socket Head Cap, M5 x 0.8 x 10 Lg	
12	006538-01	Knob, Knurled, M5, Black	
13*	003136-06	Screw, Button Head Socket, M3 x 0.5 x 6 Lg	

\*NOTE: Items 6, 8-10 and 13 should be replaced as a factory built assembly:  
009075-01 Bracket, Cap Frame, Assembly

# Cap Frame Drive Assembly

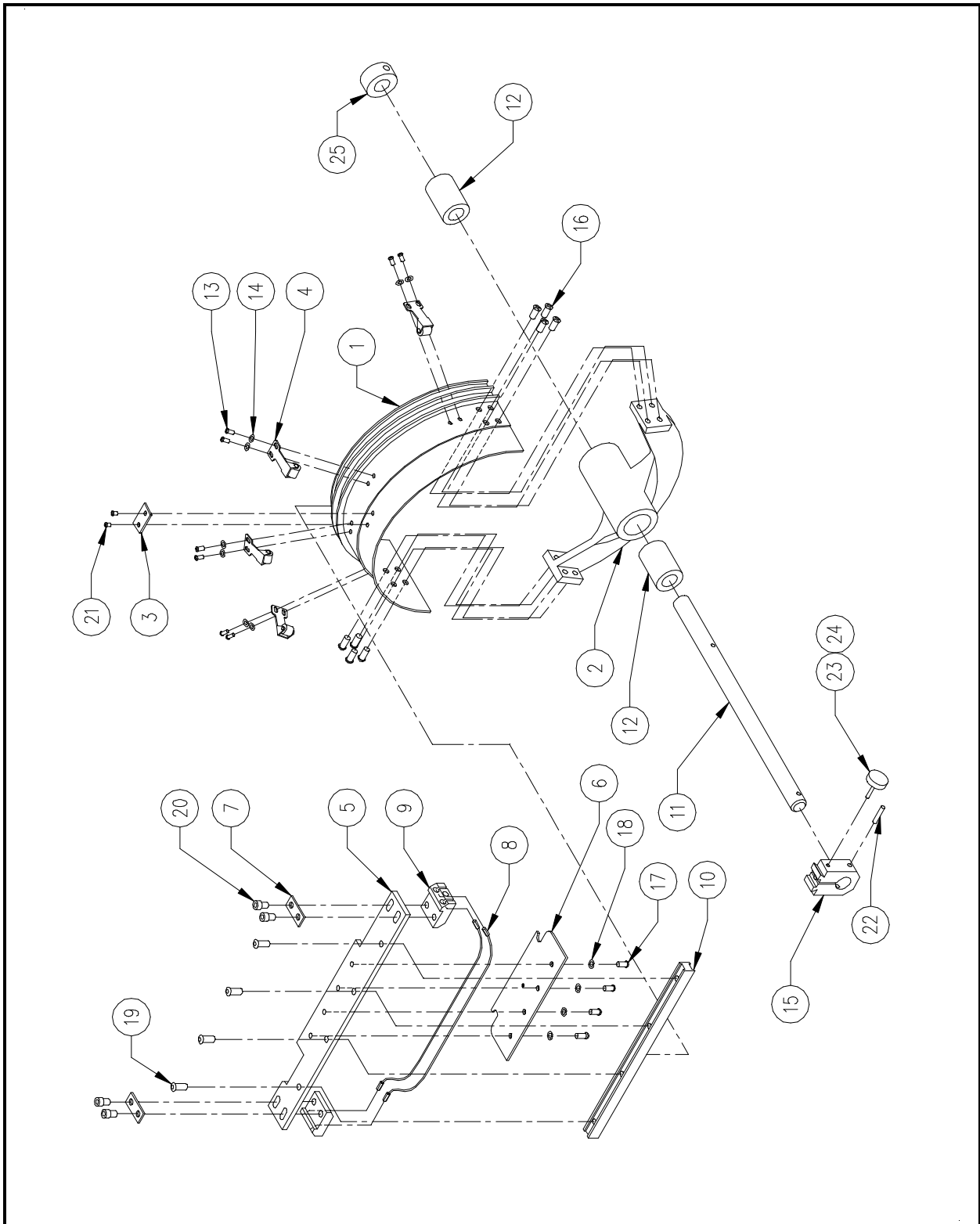


Figure 31

**Cap Frame Drive Assembly****Reference Figure 31**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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

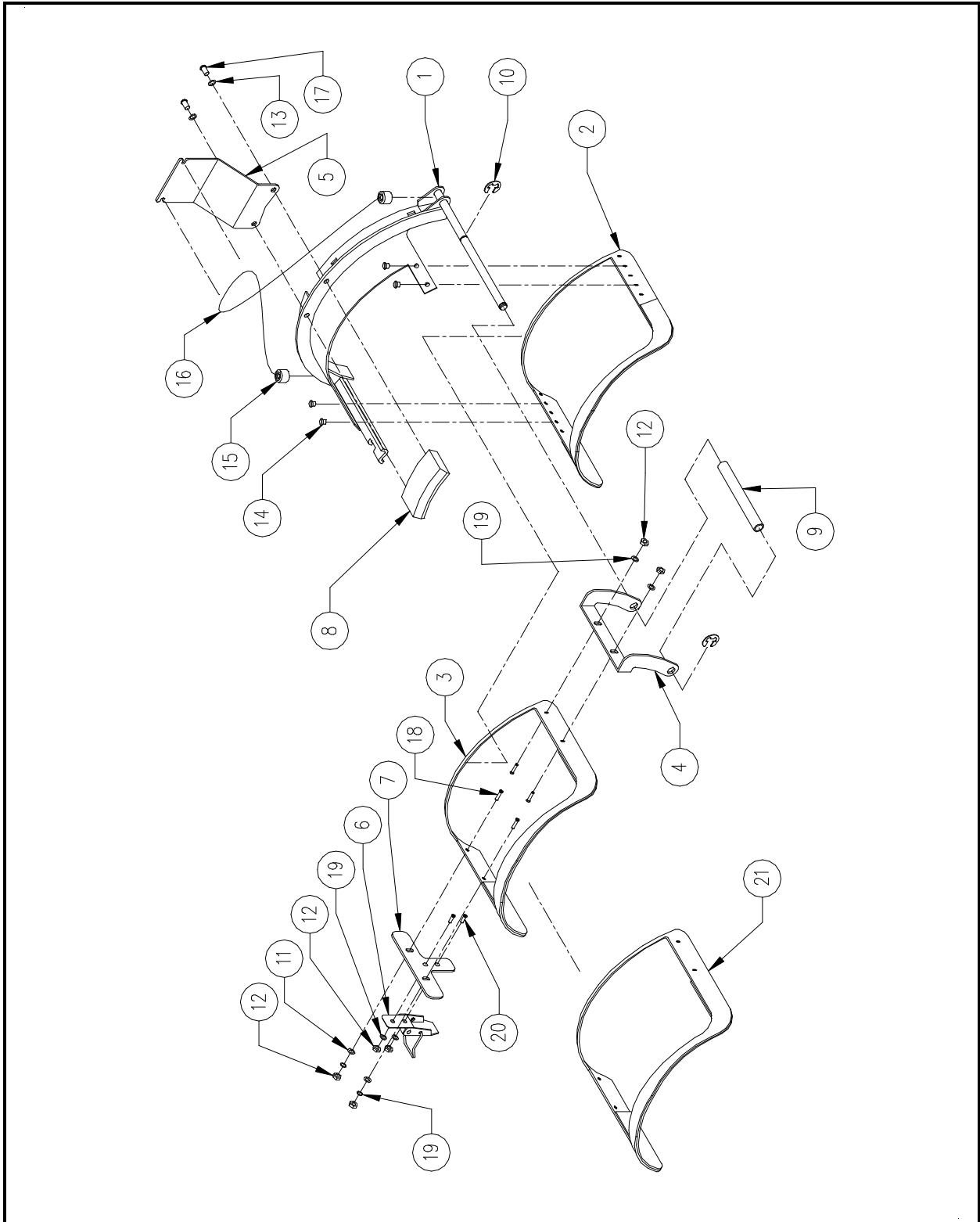


Figure 32



**Melco Cap Frame Assembly (006674-01)****Reference Figure 32**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
1	004938-01	Base, Cap Frame, Assembly	
2*	006010-01	Frame, Lower, <sup>w</sup> /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)

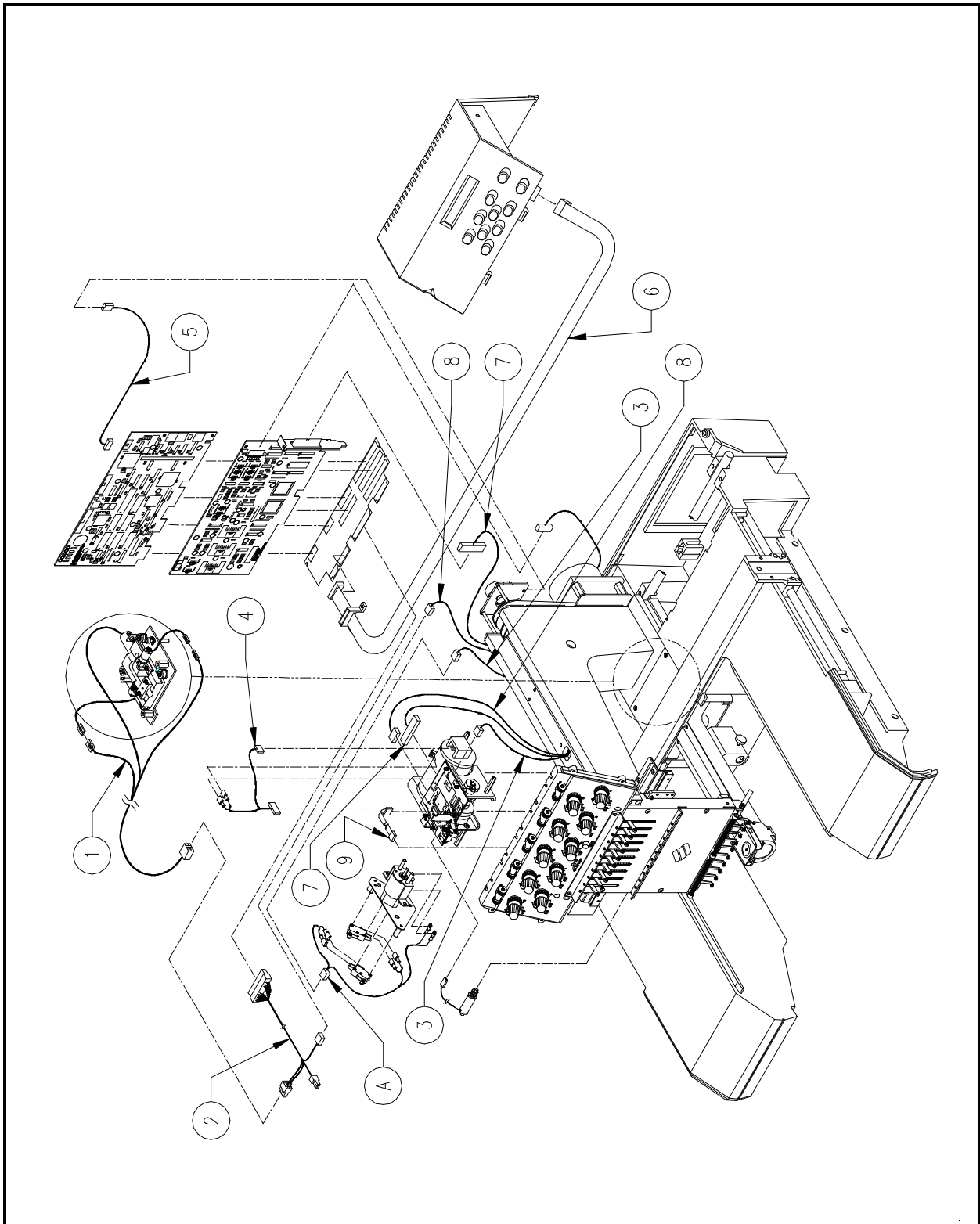


Figure 33

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

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<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
A	006726-01	Motor, Grabber, Assembly	
1	007261-01	Trimmer, Picker, Solenoid, Opto, Assembly (See Page 18-1)	
2	006475-01	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	003807-01	Harness, Keyboard	
7	005821-01	Harness, 18 Color Interface	
8	006476-01	Harness, Power, 10 Needle, Color Change	
9	006582-01	Harness, Thread Break	

## Harness Assembly (2 of 3)

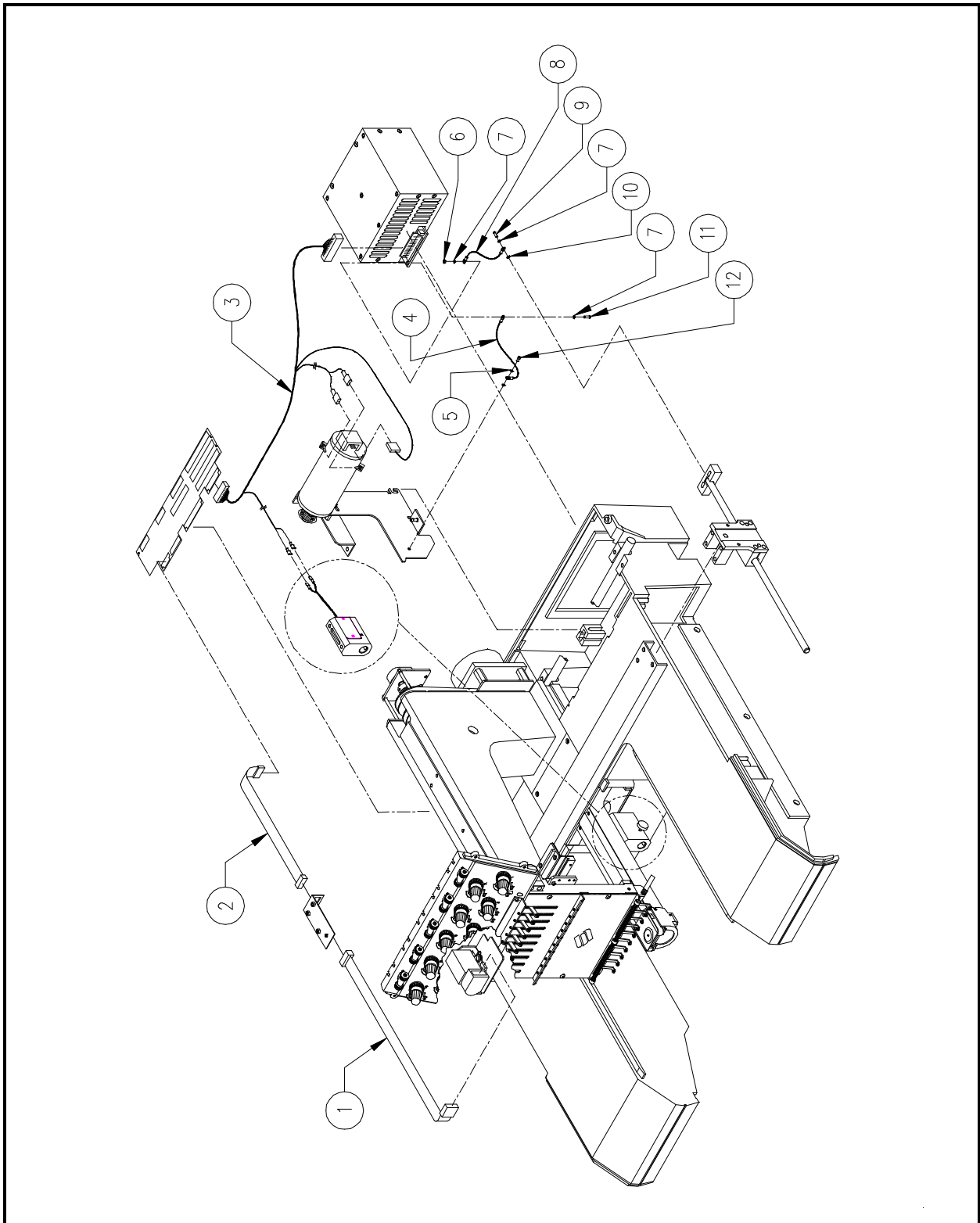


Figure 34

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

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
1	003804-01	Harness, X-Beam	
2	003809-01	Harness, X-Drive	
3	003805-01	Harness, Power	
4	004720-01	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	004720-02	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"	

## Harness Assembly (3 of 3)

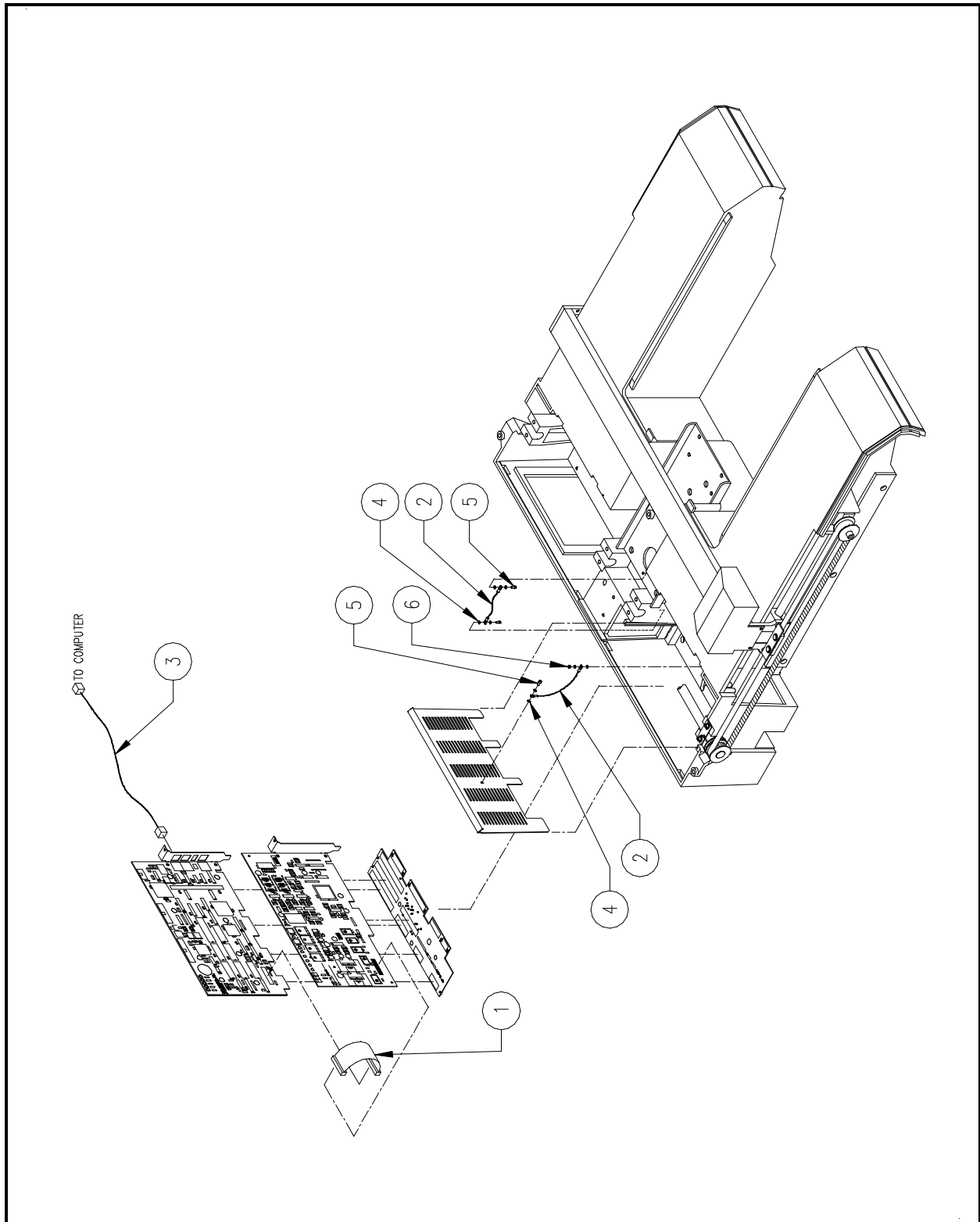


Figure 35

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

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<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
1	004722-01	Harness, Jumper, CPU/XYZ	
2	004720-01	Cable, Ground, Pan	
3	345068-25	Cable, Data, 5 Conductor, <sup>W</sup> /Drain, 25 Ft.	
4	690713-38	Washer, Lock, External Star, #8	
5	670149-06	Screw, Socket Head Cap, 8-32 x 3/8"	
6	680043-38	Nut, Lock, 8-32	

## Disk Drive Option Assembly

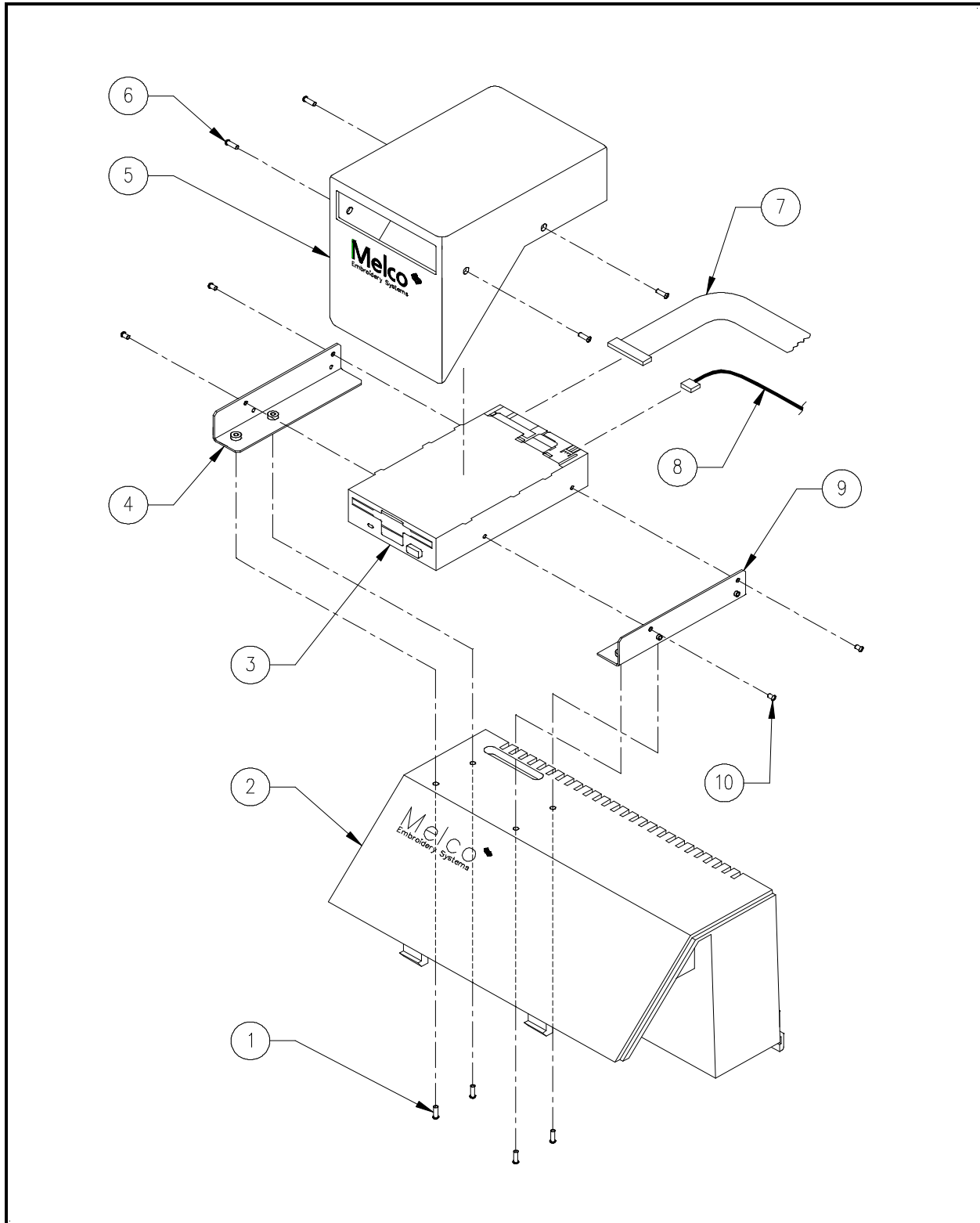


Figure 36



**Disk Drive Option Assembly****Reference Figure 36**

<b>Item No.</b>	<b>Part Number</b>	<b>Item Description</b>	<b>Comments</b>
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	

\*NOTE: Items 2-5 and 7-9 are part of and should be replaced as assembly:  
006534-21 Option, Disk Drive