

# Illustrated Parts Manual for the EMT 10T embroidery peripheral



- A Complete Illustrated Parts Manual
- Tubular
- CE

Part Number 10946, Revision B

**Melco**   
Embroidery Systems  
A Saurer Group Company

1575 West 124th Avenue  
Denver, Colorado 80234  
United States of America  
E-mail: publications@melco.com

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## **Table of Contents**

| <b>Description</b>        | <b>Page Number</b> |
|---------------------------|--------------------|
| Table Top/Machine Covers  | 1-1                |
| Sewing Head Covers        | 2-1                |
| Keyboard (1 of 2)         | 3-1                |
| Keyboard (2 of 2)         | 4-1                |
| Bobbin Winder             | 5-1                |
| Light Fixture             | 6-1                |
| Sewing Head               | 7-1                |
| Color Change              | 8-1                |
| Thread Tree               | 9-1                |
| Needle Case (1 of 2)      | 10-1               |
| Needle Case (2 of 2)      | 11-1               |
| Needle Case Linear Drive  | 12-1               |
| Thread Tensioner          | 13-1               |
| Arm and Bed               | 14-1               |
| Reciprocator              | 15-1               |
| Bobbin Idler              | 16-1               |
| Take-Up Drive Lever       | 17-1               |
| Grabber Motor             | 18-1               |
| Cutter/Picker             | 19-1               |
| Trimmer Drive             | 20-1               |
| Electronics Cage (1 of 2) | 21-1               |
| Electronics Cage (2 of 2) | 22-1               |
| Power Distribution        | 23-1               |
| X-Beam (1 of 2)           | 24-1               |
| X-Beam (2 of 2)           | 25-1               |
| Z-Drive/Encoder           | 26-1               |
| Y-Drive                   | 27-1               |
| Left Y-Carriage           | 28-1               |

| <b>Description</b>            | <b>Page Number</b> |
|-------------------------------|--------------------|
| Right Y-Carriage              | 29-1               |
| Cap Frame Mounts              | 30-1               |
| Harnesses (1 of 3)            | 31-1               |
| Harnesses (2 of 3)            | 32-1               |
| Harnesses (3 of 3)            | 33-1               |
| <br>                          |                    |
| <b>Options</b>                |                    |
| Cap Frame Drive               | 34-1               |
| Melco Cap Frame               | 35-1               |
| Melco Cap Frame Gauge         | 36-1               |
| Wide-Angle Cap Frame (1 of 7) | 37-1               |
| Wide-Angle Cap Frame (2 of 7) | 38-1               |
| Wide-Angle Cap Frame (3 of 7) | 39-1               |
| Wide-Angle Cap Frame (4 of 7) | 40-1               |
| Wide-Angle Cap Frame (5 of 7) | 41-1               |
| Wide-Angle Cap Frame (6 of 7) | 42-1               |
| Wide-Angle Cap Frame (7 of 7) | 43-1               |
| Wide-Angle Cap Frame Gauge    | 44-1               |
| Tubular Hoop (1 of 2)         | 45-1               |
| Tubular Hoop (2 of 2)         | 46-1               |
| Mobile Cart                   | 47-1               |
| Hoop Interface                | 48-1               |
| Sash Frame                    | 49-1               |
| Sash Hoops (21cm, 25cm)       | 50-1               |

**Index**

# 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 phases of the Melco EMT 10T Sewing Peripheral. This manual represents only the second phase of this product. The part number is 10508 and is for both 115V and 230V.

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 lower right front of the chassis, directly above the voltage and signal identification plate.

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.

### **Index**

Hardware not listed can be found by identifying a related part and referring to that page.

**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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# Table Top/Machine Covers

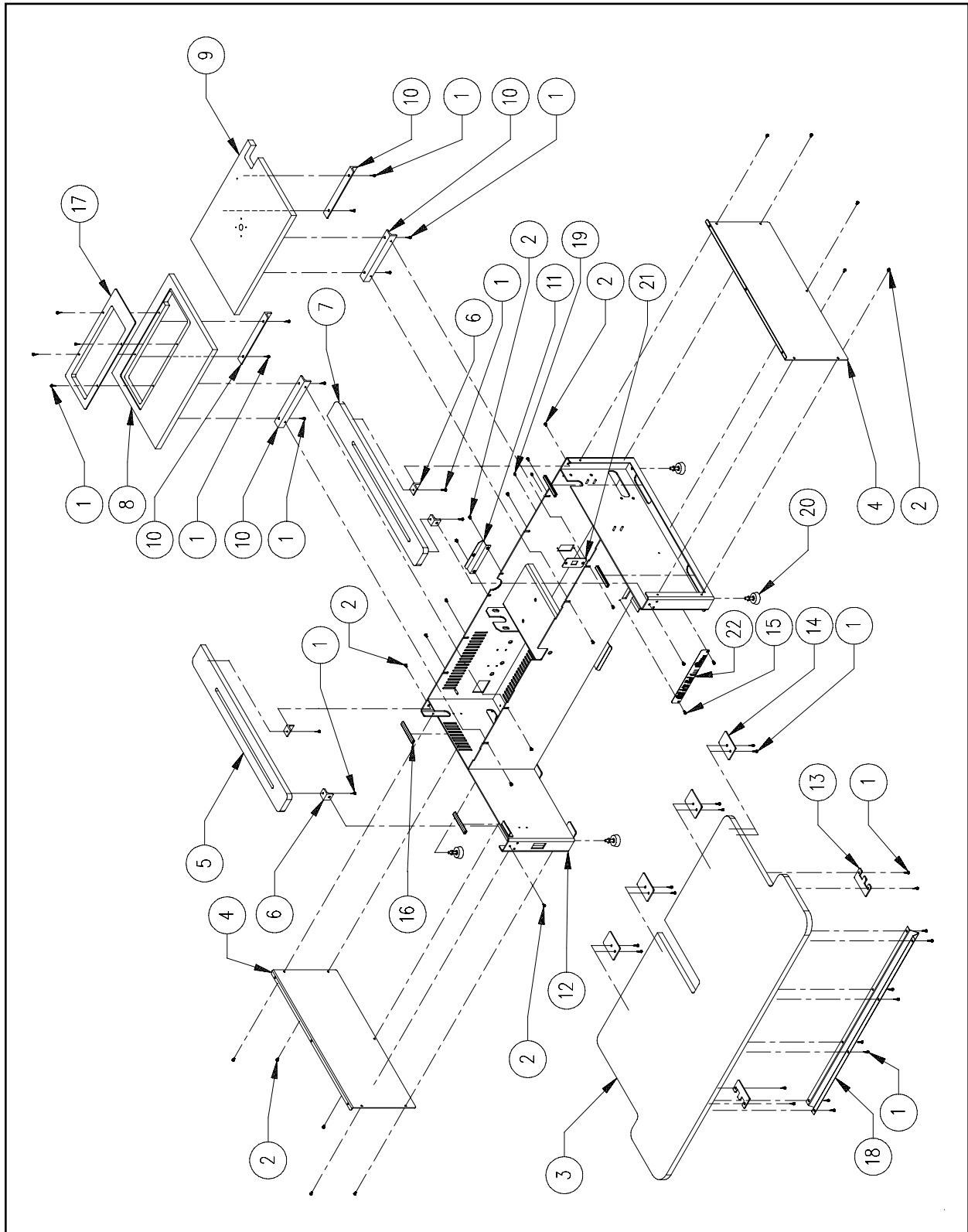


Figure 1

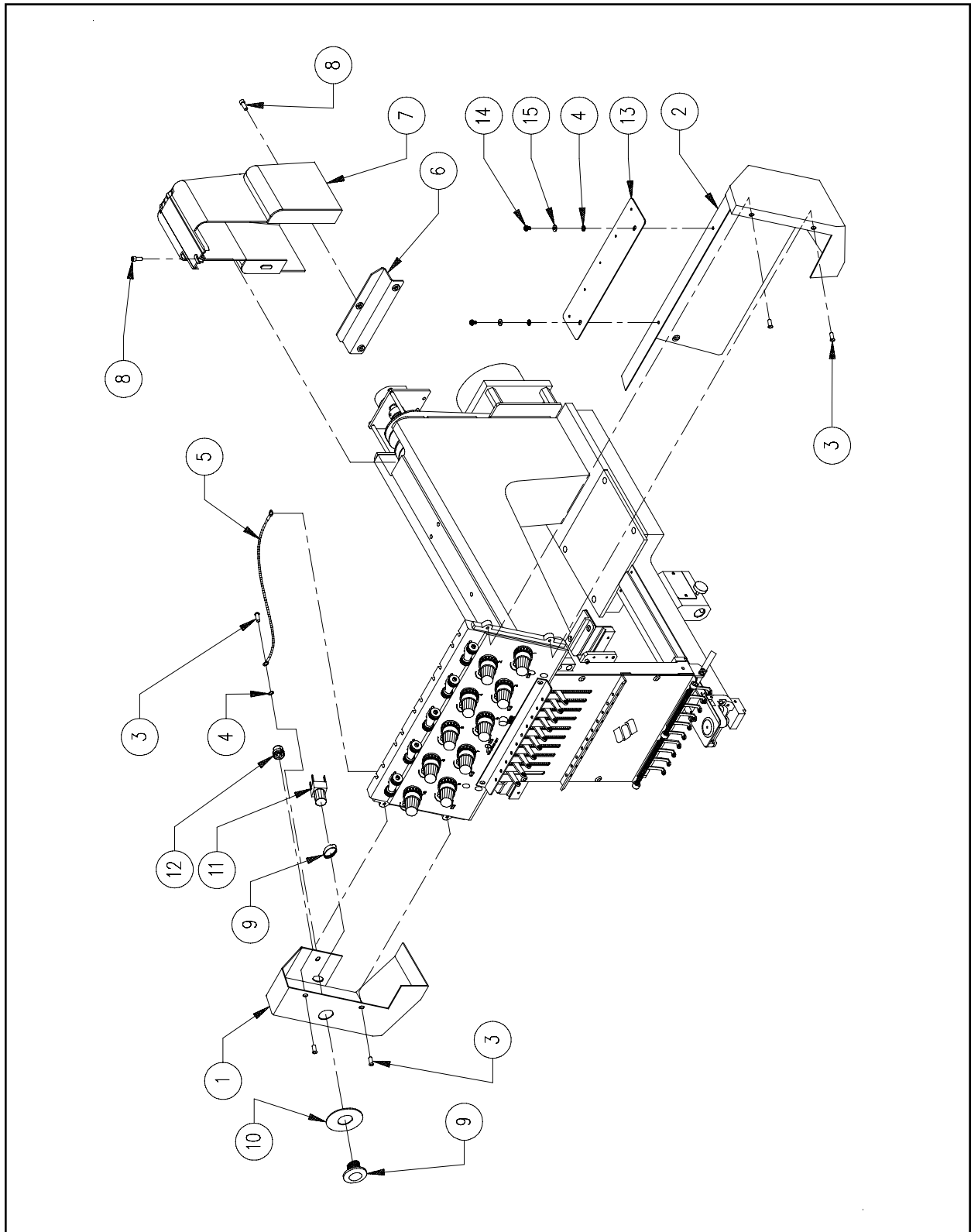


**Table Top/Machine Covers****Reference Figure 1**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                            | <b>Comments</b> |
|-----------------|--------------------|--|-----------------|
| 1               | 671910-10          | Screw, Self-Tapping, Pan Head Phillips, #10 x 5/8" |                 |
| 2               | 010309-10          | Screw, Truss Head Phillips, M5 x 0.8 x 10mm        |                 |
| 3               | 009351-02          | Table Top, Main                                    |                 |
| 4               | 009342-01          | Cover, Side  |                 |
| 5               | 009348-02          | Table Top, Side, Right                             |                 |
| 6               | 009344-01          | Bracket, Angle, Table Top, Short                   |                 |
| 7               | 010617-02          | Table Top, Side, Left                              |                 |
| 8               | 009349-01          | Table Top, Rear, Left                              |                 |
| 9               | 009350-02          | Table Top, Rear, Right                             |                 |
| 10              | 009346-01          | Bracket, Angle, Table Top, Long                    |                 |
| 11              | 009814-02          | Bracket, Mounting, Z-Cover                         |                 |
| 12              | 10600              | Frame, Assembly                                    |                 |
| 13              | 009361-01          | Plate, Table Top, Locator, Side                    |                 |
| 14              | 009362-01          | Plate, Table Top, Locator, Rear                    |                 |
| 15              | 010172-06          | Screw, Socket Head Cap, M5 x 0.8 x 6mm, Zinc Plate |                 |
| 16              | 010398-01          | Trim, Hand Hold                                    |                 |
| 17              | 010437-01          | Tray, Table  |                 |
| 18              | 005340-01          | Stiffener, Table Insert                            |                 |
| 19              | 009862-06          | Screw, Pan Head Phillips, w/Star, M3 x 0.5 x 6mm   |                 |
| 20*             | 009533-02          | Pad, Leveling                                      |                 |
| 21              | 009955-01          | Plate, Coupler                                     |                 |
| 22              | 009851-01          | Cover, LEDs  |                 |

Note: \*This item is optional and if used requires a quantity of four

# Sewing Head Covers



**Figure 2**

**Sewing Head Covers****Reference Figure 2**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1               | 010109-02          | Cover, Rear, Tensioner, Bracket, Left               |                 |
| 2               | 006564-02          | Cover, Rear, Tensioner, Bracket, Right              |                 |
| 3               | 010171-06          | Screw, Socket Head Cap, M4 x 0.7 x 6mm, Zinc Plate  |                 |
| 4               | 690713-38          | Washer, Lock, External Star, #8                     |                 |
| 5               | 009317-01          | Cable, Ground, Pan, 4.75"                           |                 |
| 6               | 009814-02          | Bracket, Mounting, Z-Cover                          | (See Page 1-1)  |
| 7               | 010201-01          | Cover, Z-Motor                                      |                 |
| 8               | 010171-14          | Screw, Socket Head Cap, M4 x 0.7 x 14mm, Zinc Plate |                 |
| 9               | 010104-01          | Switch, E-Stop, 24mm                                |                 |
| 10              | 010110-01          | Plate, E-Stop                                       |                 |
| 11              | 010105-01          | Switch, E-Stop Block, 24mm                          |                 |
| 12              | 007852-01          | Bushing, Strain Relief                              |                 |
| 13              | 010622-02          | Bracket, Tube, Thread                               |                 |
| 14              | 003509-06          | Screw, Button Head Socket, M4 x 0.7 x 6mm           |                 |
| 15              | 690439-04          | Washer, Flat, M4                                    |                 |

# Keyboard (1 of 2)

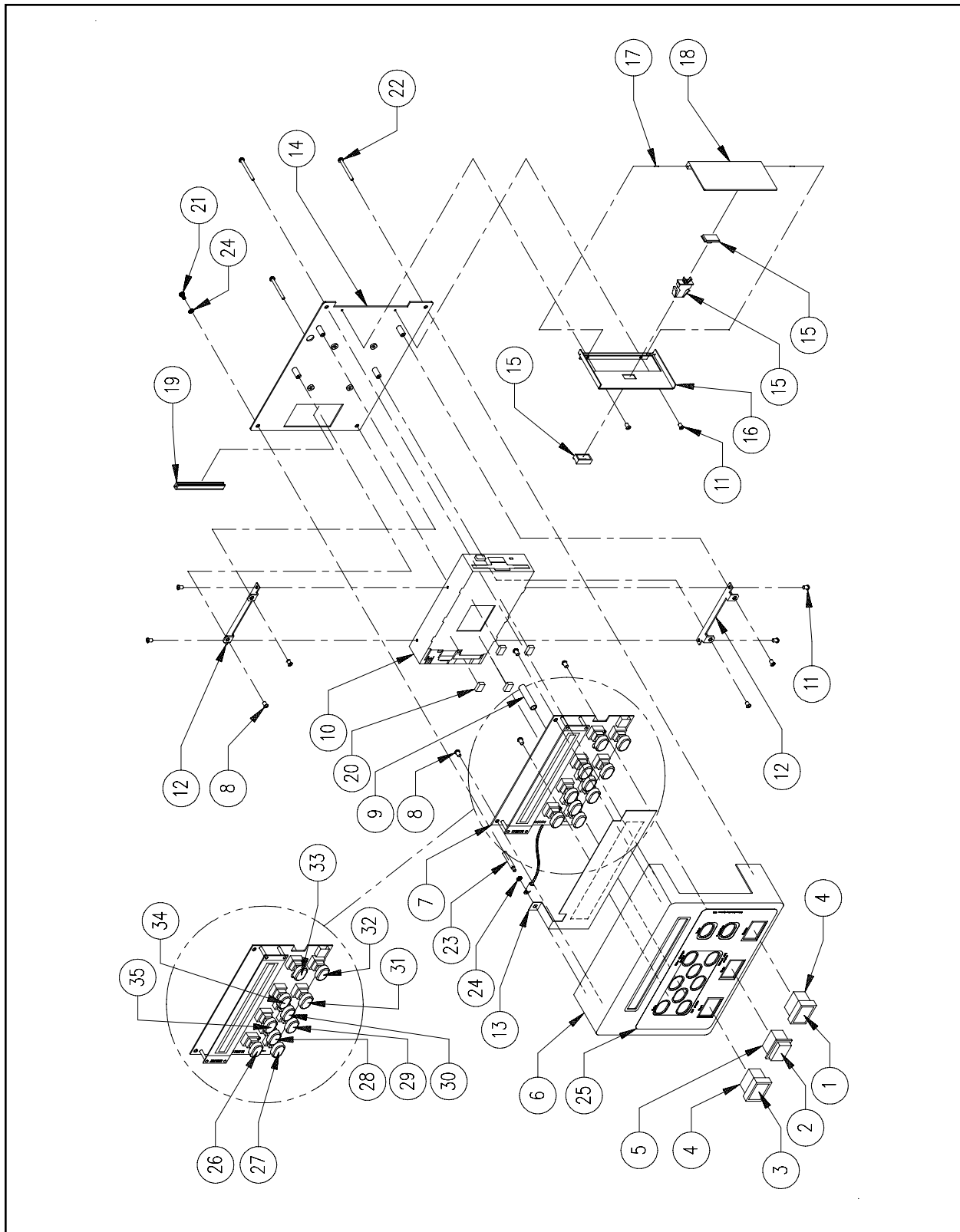


Figure 3

**Keyboard (1 of 2) (\*010612-01)****Reference Figure 3**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                   | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1               | 009081-03          | Lens, Pushbutton, Grey w/Legend           |                 |
| 2               | 009081-02          | Lens, Pushbutton, Black w/Legend          |                 |
| 3               | 009081-01          | Lens, Pushbutton, White w/Legend          |                 |
| 4               | 010339-01          | Switch, Momentary, w/Full Guard           |                 |
| 5               | 010338-01          | Switch, Pushbutton, Momentary             |                 |
| 6               | 010153-02          | Cover, Operator Interface                 |                 |
| 7               | 009448-04          | PCB, EMT Operator Interface, Assembly     |                 |
| 8               | 004262-06          | Screw, Pan Head Phillips, M4 x 0.7 x 6mm  |                 |
| 9               | 009878-01          | Knob, Extension, Pot                      |                 |
| 10              | 004243-01          | Drive, Disk, 3-1/2"                       |                 |
| 11              | 675310-01          | Screw, Pan Head Phillips, M3 x 0.5 x 6mm  |                 |
| 12              | 009391-01          | Bracket, Mounting, Disk Drive             |                 |
| 13              | 011126-01          | Tape, Static, LCD                         |                 |
| 14              | 010348-02          | Plate, Base, Operator Interface           |                 |
| 15              | 009389-01          | Latch, Touch                              |                 |
| 16              | 010349-01          | Bracket, Enclosure, Disk Drive            |                 |
| 17              | 009390-01          | Pin, Pivot, Door                          |                 |
| 18              | 010199-01          | Door, Disk Drive                          |                 |
| 19              | 862294-01          | Grommet, 3.3"                             |                 |
| 20              | 005004-01          | Pad, Cushion, Disk Drive                  |                 |
| 21              | 004262-25          | Screw, Pan Head Phillips, M4 x 0.7 x 25mm |                 |
| 22              | 004262-08          | Screw, Pan Head Phillips, M4 x 0.7 x 8mm  |                 |
| 23              | 009894-31          | Standoff, M/F, M4 x 0.7 x 31mm            |                 |
| 24              | 010167-04          | Washer, Lock, External Star, M4           |                 |
| 25              | 010918-01          | Template, Panel                           |                 |
| 26              | 009017-03          | Keycap, Menu                              |                 |
| 27              | 009017-04          | Keycap, Alt                               |                 |
| 28              | 009017-01          | Keycap, Horizontal Arrow, Left            |                 |
| 29              | 009017-02          | Keycap, Vertical Arrow, Down              |                 |
| 30              | 009017-01          | Keycap, Horizontal Arrow, Right           |                 |
| 31              | 009017-05          | Keycap, Jog                               |                 |
| 32              | 009017-07          | Keycap, Fast/Slow                         |                 |
| 33              | 009017-08          | Keycap, Enter                             |                 |
| 34              | 009017-06          | Keycap, Color Change                      |                 |
| 35              | 009017-02          | Keycap, Vertical Arrow, Up                |                 |

Note:

\*The keyboard as a unit (part number 010612-01) is shown on pages 3-1 and 4-1. On this page only item 25 is excluded.

# Keyboard (2 of 2)

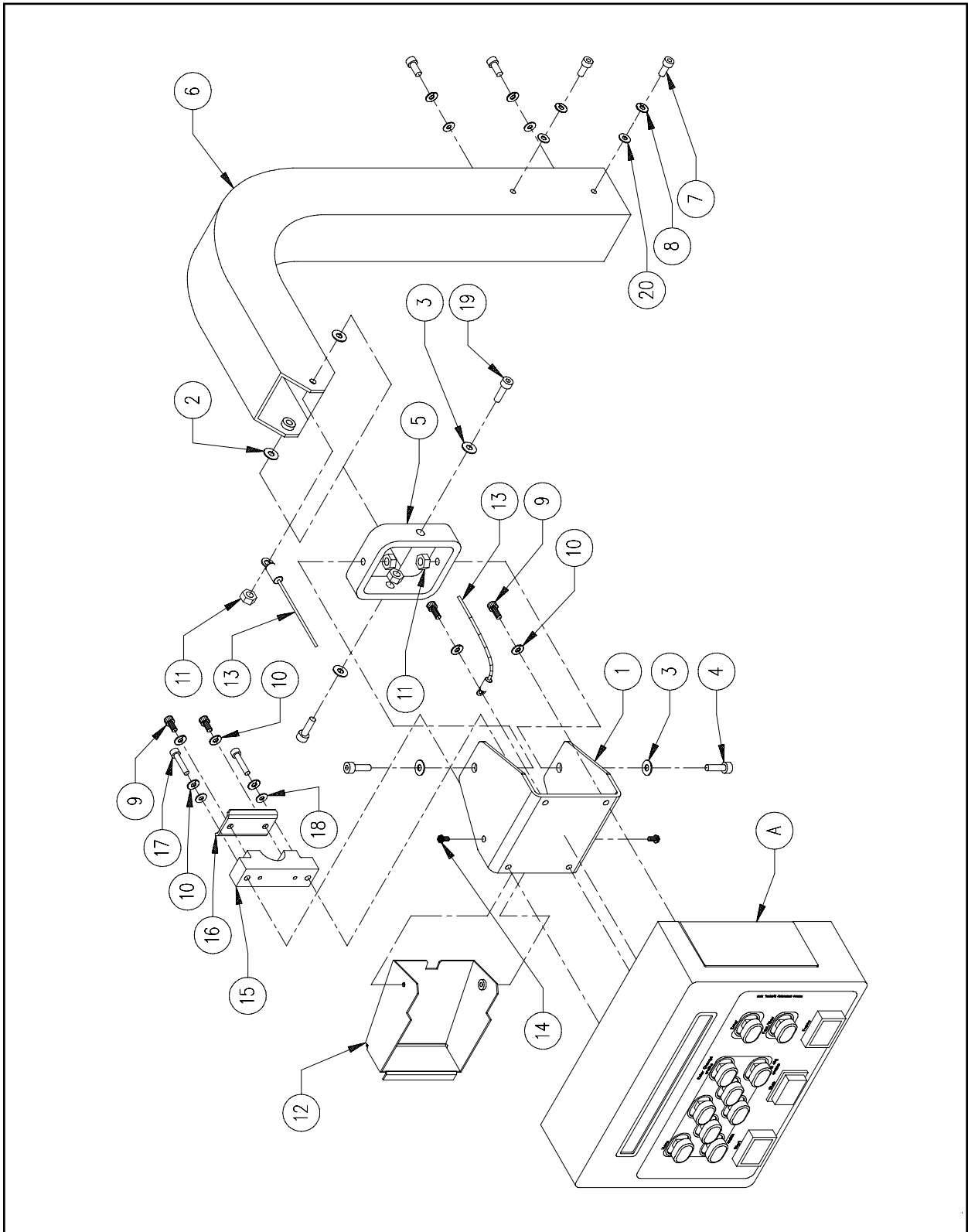


Figure 4

**Keyboard (2 of 2) (\*010612-01)****Reference Figure 4**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| A               | -----              | Keyboard  | See Page 3-1    |
| 1               | 009392-01          | Bracket, Mounting, Display                          |                 |
| 2               | 690439-06          | Washer, Flat, M6                                    |                 |
| 3               | 010535-01          | Washer, Bellville, M6                               |                 |
| 4               | 010173-16          | Screw, Socket Head Cap, M6 x 1.0 x 16mm, Zinc Plate |                 |
| 5               | 009393-01          | Bracket, Pivot, Display                             |                 |
| 6               | 009343-02          | Pedestal, Control Interface                         |                 |
| 7               | 010172-10          | Screw, Socket Head Cap, M5 x 0.8 x 10mm, Zinc Plate |                 |
| 8               | 690427-05          | Washer, Lock, Split, M5                             |                 |
| 9               | 010171-12          | Screw, Socket Head Cap, M4 x 0.7 x 12mm, Zinc Plate |                 |
| 10              | 690427-04          | Washer, Lock, Split, M4                             |                 |
| 11              | 010627-06          | Nut, Hex, Low Profile, M6                           |                 |
| 12              | 010721-01          | Cover, Cable, Operator I/F                          |                 |
| 13              | 011006-01          | Cable, Ground, Braid, 6.5"                          |                 |
| 14              | 004262-06          | Screw, Pan Head Phillips, M4 x 0.7 x 6mm            |                 |
| 15              | 010928-01          | Base, Strain Relief, Operator I/F                   |                 |
| 16              | 010929-01          | Plate, Strain Relief, Operator I/F                  |                 |
| 17              | 010171-20          | Screw, Socket Head Cap, M4 x 0.7 x 20mm, Zinc Plate |                 |
| 18              | 690439-04          | Washer, Flat, M4                                    |                 |
| 19              | 010173-20          | Screw, Socket Head Cap, M6 x 1.0 x 20mm, Zinc Plate |                 |
| 20              | 690439-05          | Washer, Flat, M5                                    |                 |

Note: \*The keyboard as a unit (part number 010612-01) is shown on pages 3-1 and 4-1. On this page only items 7, 8 and 20 are excluded.

# Bobbin Winder

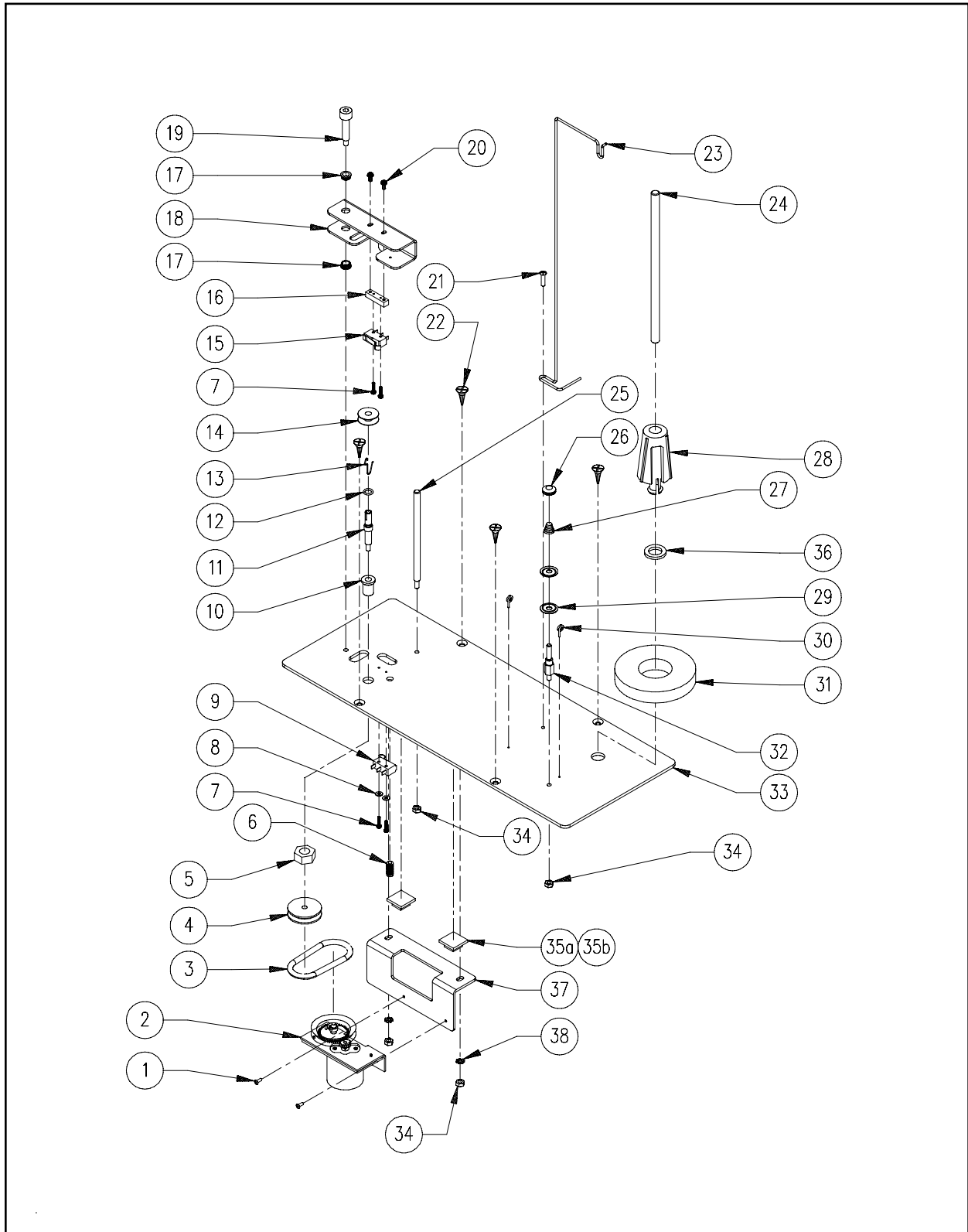


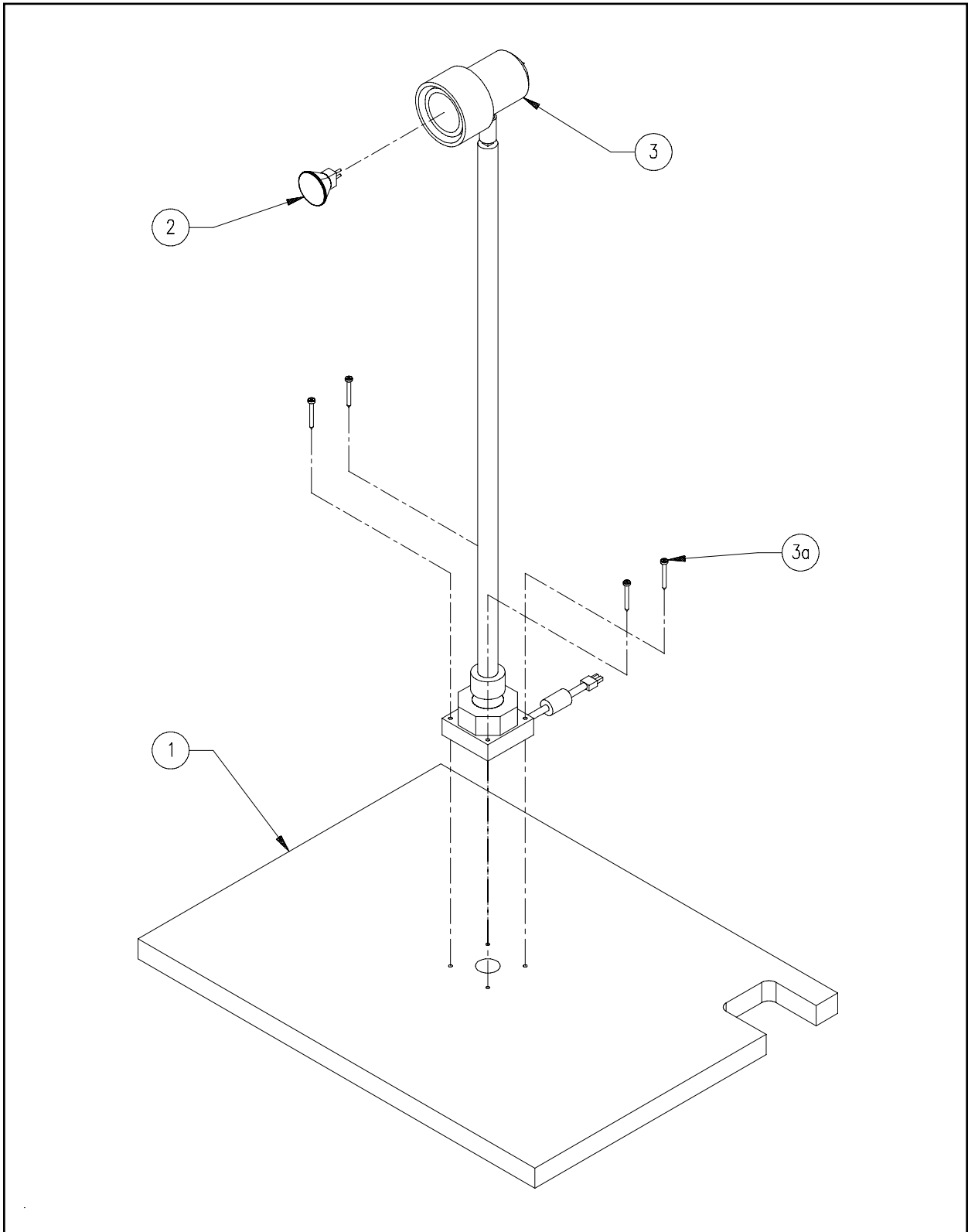
Figure 5



**Bobbin Winder****Reference Figure 5**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                        | <b>Comments</b> |
|-----------------|--------------------|--|-----------------|
| 1               | 006558-04          | Screw, Pan Head Phillips, M3 x 0.5 x 4mm       |                 |
| 2               | 011022-01          | Motor, Modified, Winder                        |                 |
| 3               | 010625-04          | O-Ring, 2-7/16" ID x 3/16" Dia.                |                 |
| 4               | 009686-01          | Hub, Shaft, Arm, Winder                        |                 |
| 5               | 010627-08          | Nut, Hex, Low Profile, M10                     |                 |
| 6               | 005875-02          | Plunger, Ball, 1/4-20, 7lbs.                   |                 |
| 7               | 003122-10          | Screw, Pan Head Phillips, M2 x 0.4 x 10mm      |                 |
| 8               | 690034-32          | Washer, Flat, #2                               |                 |
| 9               | 010630-01          | Switch, Winder, On/Off, Assembly               |                 |
| 10              | 010628-01          | Bushing, Shaft, Bobbin Winder                  |                 |
| 11              | 10856              | Shaft, Arm, Winder                             |                 |
| 12              | 005738-08          | O-Ring, 3/16" ID x 5/16" OD x 1/16" Thick      |                 |
| 13              | 009688-01          | Spring, Shaft, Arm, Winder                     |                 |
| 14              | 008499-01          | Bobbin, Aluminum                               |                 |
| 15              | 010371-01          | Switch, Full, Bobbin, Assembly                 |                 |
| 16              | 009821-01          | Block, Mounting, Switch                        |                 |
| 17              | 007905-01          | Grommet, Actuator Lever                        |                 |
| 18              | 010626-02          | Lever, Actuator, Bobbin Winder                 |                 |
| 19              | 674395-16          | Screw, Shoulder, Hex Socket, 1/4" Dia. x 1.00" |                 |
| 20              | 006558-06          | Screw, Pan Head Phillips, M3 x 0.5 x 6mm       |                 |
| 21              | 004262-06          | Screw, Pan Head Phillips, M4 x 0.7 x 6mm       |                 |
| 22              | 010281-04          | Screw, Flat Head Phillips, Wood, #10 x 1/2"    |                 |
| 23              | 009372-01          | Guide, Thread, Winder                          |                 |
| 24              | 009373-01          | Post, Thread, Winder                           |                 |
| 25              | 009380-01          | Post, Bobbin, Storage                          |                 |
| 26              | 007080-01          | Knob, Adjust, Pretensioner, Plastic            |                 |
| 27              | 010735-01          | Spring, Tensioner                              |                 |
| 28              | 005701-01          | Seat, Cone, Thread                             |                 |
| 29              | 006385-01          | Disc, Tensioner                                |                 |
| 30              | 002897-01          | Post, Guide                                    |                 |
| 31              | 009379-01          | Pad, Cone, Thread                              |                 |
| 32              | 009376-01          | Post, Tensioner, Winder                        |                 |
| 33              | 009374-02          | Plate, Base, Winder                            |                 |
| 34              | 001963-05          | Nut, Hex, M4                                   |                 |
| 35a             | 340138-01          | Holder, Cable Tie, .75" Square                 |                 |
| 35b             | 340139-01          | Tie, Cable, 3.1"                               | (not shown)     |
| 36              | 011112-01          | Washer, Neoprene                               |                 |
| 37              | 009375-01          | Bracket, Base, Winder                          |                 |
| 38              | 010167-04          | Washer, External Star, M4                      |                 |

# Light Fixture



**Figure 6**

---

| <b>Light Fixture</b> |                    |   | <b>Reference Figure 6</b> |
|----------------------|--------------------|---|---------------------------|
| <b>Item No.</b>      | <b>Part Number</b> | <b>Item Description</b>   | <b>Comments</b>           |
| 1                    | 009350-01          | TableTop, Rear, Right   | (see page 1-1)            |
| 2                    | 011350-01          | Bulb, 12V/12W   |                           |
| 3                    | 011349-01          | Lamp, Flexible, w/Switch, 12V/12W                                   |                           |
| 3a                   | -----              | Screw, Pan Head Phillips, Self-Tapping, #6 x 1.25" (part of item 3) |                           |

# Sewing Head

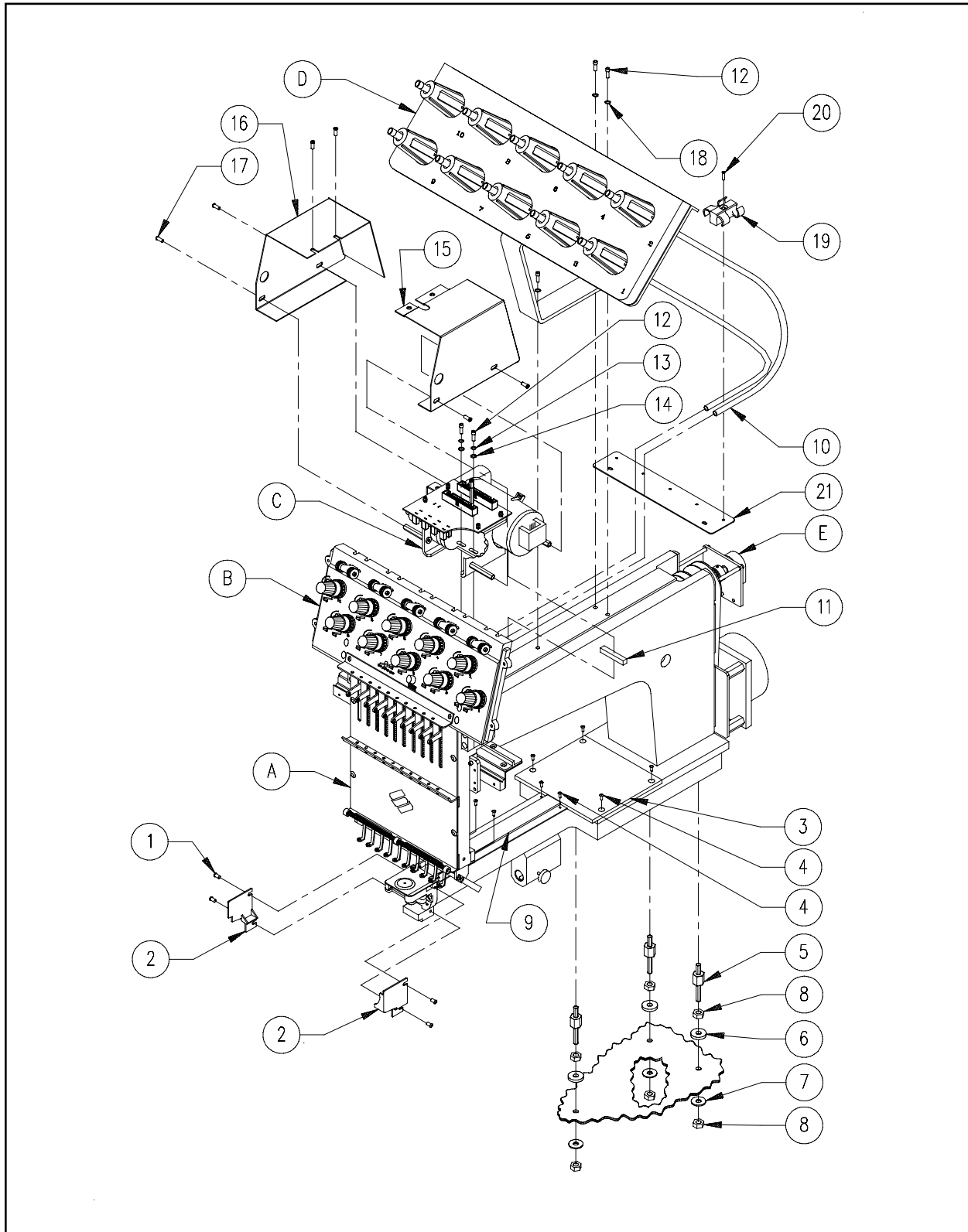


Figure 7

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**Sewing Head** **Reference Figure 7**


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| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                                      | <b>Comments</b>       |
|-----------------|--------------------|--|-----------------------|
| A               | -----              | Needle Case  | See Pages 10-1 & 11-1 |
| B               | -----              | Thread Tensioner   | See Page 13-1         |
| C               | -----              | Color Change   | See Page 8-1          |
| D               | -----              | Thread Tree  | See Page 9-1          |
| E               | -----              | Z-Drive/Encoder  | See Page 26-1         |
| 1               | 003136-06          | Screw, Button Head Socket, M3 x 0.5 x 6mm                    |                       |
| 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 8mm                    |                       |
| 5               | 008241-01          | Pillar, Head, Support  |                       |
| 6               | 10547-08           | Washer, Head   |                       |
| 7               | 690439-08          | Washer, Flat, M8   |                       |
| 8               | 010178-08          | Nut, Hex, M8   |                       |
| 9               | 007526-01          | Cover, Bed, Front  |                       |
| 10              | 005704-01          | Tubing, .125" ID x .187" OD                                  |                       |
| 11              | 004779-01          | Key, Color Change Mount                                      |                       |
| 12              | 010171-10          | Screw, Socket Head Cap, M4 x 0.7 x 10mm, Zinc Plate          |                       |
| 13              | 690427-04          | Washer, Lock, Split, M4                                      |                       |
| 14              | 690439-04          | Washer, Flat, M4   |                       |
| 15              | 10320              | Cover, Drive, Color Change, Right                            |                       |
| 16              | 10321              | Cover, Drive, Color Change, Left                             |                       |
| 17              | 009863-08          | Screw, Pan Head Phillips, <sup>w</sup> /Star, M4 x 0.7 x 8mm |                       |
| 18              | 690713-38          | Washer, Lock, External Star, #8                              |                       |
| 19              | 005707-01          | Clip, Tubing   |                       |
| 20              | 001935-10          | Screw, Flat Head Phillips, M3 x 0.5 x 10mm                   |                       |
| 21              | 010622-02          | Bracket, Tube, Thread  | (see page 2-1)        |

# Color Change

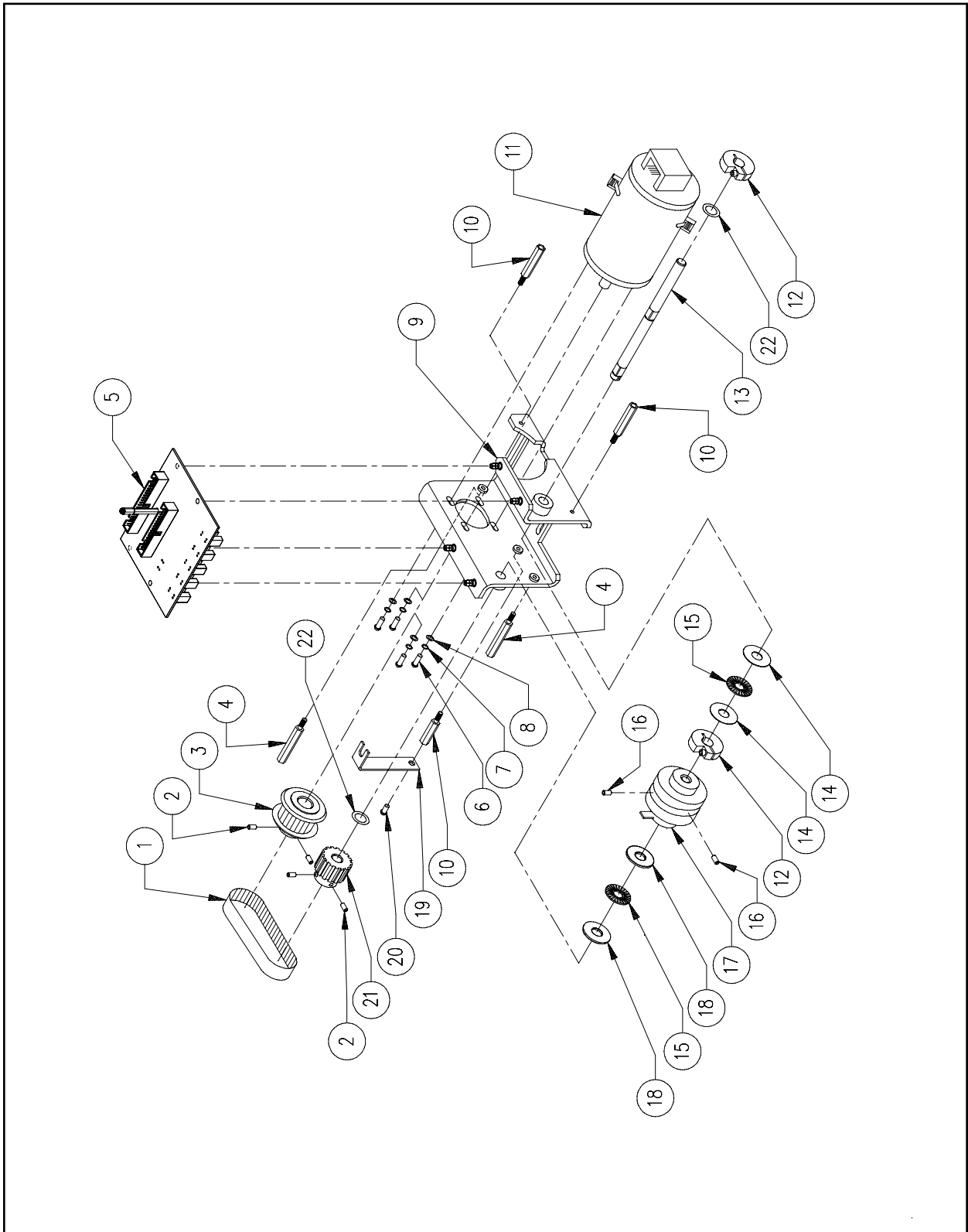


Figure 8

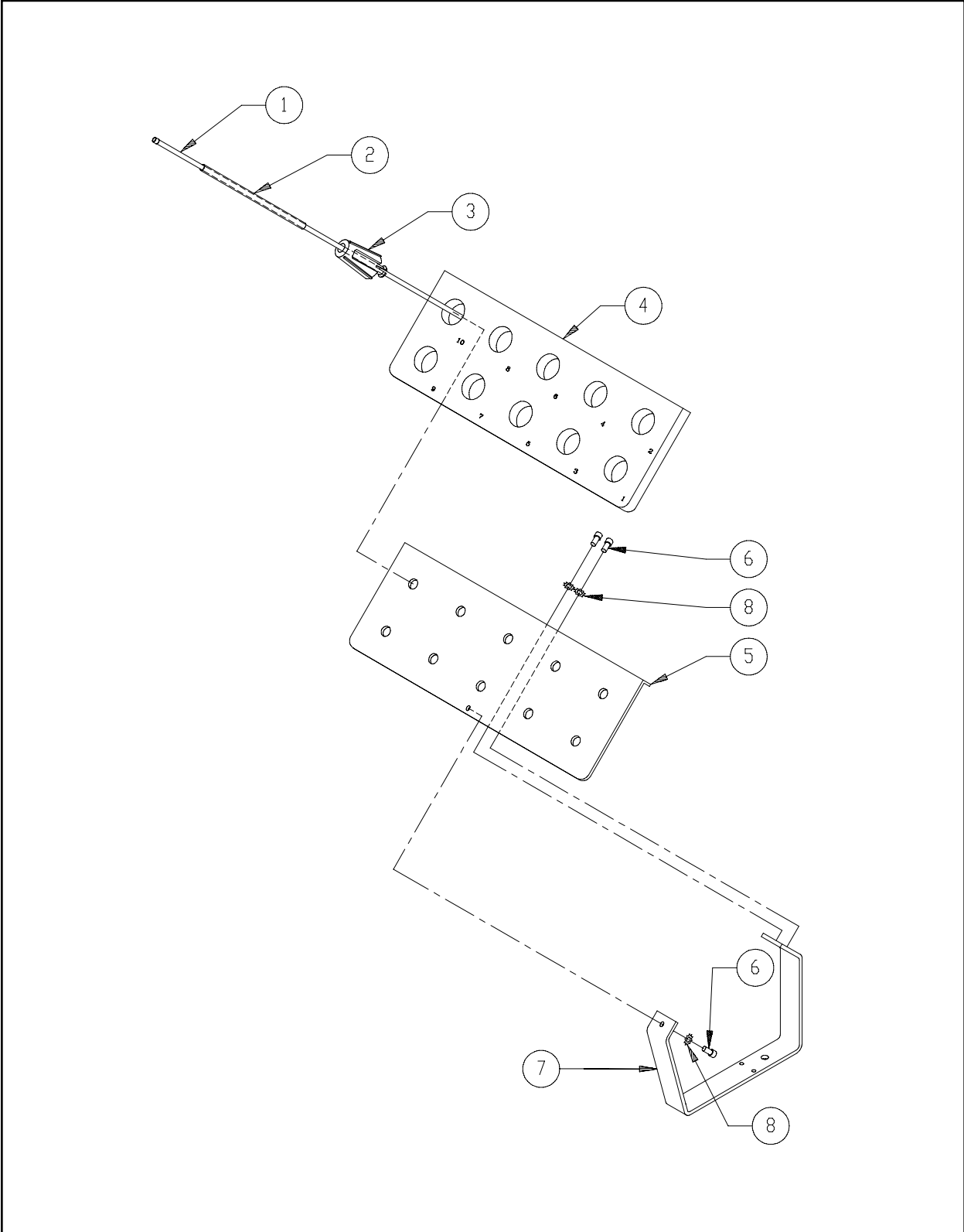
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**Color Change** **Reference Figure 8**


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| <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 4mm           |                 |
| 3               | 006855-01          | Pulley, Timing, 1/5P, 12 Groove                  |                 |
| 4               | 008129-35          | Standoff, Hex, M-F, M4 x 0.7 x 35mm              |                 |
| 5               | 009411-02          | PCB, EMT, Color Change, Assembly                 |                 |
| 6               | 670174-08          | Screw, Pan Head Phillips, 6-32 x 1/2 "           |                 |
| 7               | 690033-36          | Washer, Lock, Split, #6                          |                 |
| 8               | 690034-36          | Washer, Flat, #6                                 |                 |
| 9               | 006340-01          | Housing, Drive, Color Change                     |                 |
| 10              | 008129-22          | Standoff, Hex, M-F, M4 x 0.7 x 22mm              |                 |
| 11              | 006570-01          | Motor, Color Change                              |                 |
| 12              | 008062-01          | Clamp, Split-Hub, 8mm ID                         |                 |
| 13              | 006485-01          | Shaft, Cam, Color Change                         |                 |
| 14              | 007574-01          | Washer, Thrust, 1.00mm Thick                     |                 |
| 15              | 008061-01          | Bearing, Thrust, 8mm                             |                 |
| 16              | 001927-06          | Screw, Set, Socket, M5 x 0.8 x 6mm               |                 |
| 17              | 007077-01          | Cam, Color Change                                |                 |
| 18              | 007573-01          | Washer, Thrust, 2.75mm Thick                     |                 |
| 19              | 006782-01          | Bracket, Wire Guard                              |                 |
| 20              | 009863-06          | Screw, Pan Head Phillips, w/Star, M4 x 0.7 x 6mm |                 |
| 21              | 008060-01          | Pulley, Timing, 5.08mmP, 16 Groove               |                 |
| 22              | 003235-08          | Spacer, Shaft, .375" ID x .562" OD x .016" Thick |                 |

# Thread Tree



**Figure 9**



---

| <b>Thread Tree</b> |                    | <b>Reference Figure 9</b>                           |                 |
|--------------------|--------------------|---|-----------------|
| <b>Item No.</b>    | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b> |
| 1                  | 006937-01          | Tubing, Thread Tree, Assembly                       |                 |
| 2                  | 005703-01          | Tube, Guide, Thread, Thread Tree, 9.7"              |                 |
| 3                  | 005701-01          | Seat, Cone, Thread, Thread Tree                     |                 |
| 4                  | 006482-01          | Pad, Thread Tree                                    |                 |
| 5                  | 006481-01          | Plate, Thread Tree                                  |                 |
| 6                  | 010172-10          | Screw, Socket Head Cap, M5 x 0.8 x 10mm, Zinc Plate |                 |
| 7                  | 006798-02          | Bracket, Support, Thread Tree                       |                 |
| 8                  | 690713-03          | Washer, Lock, External Star, #10                    |                 |

# Needle Case (1 of 2)

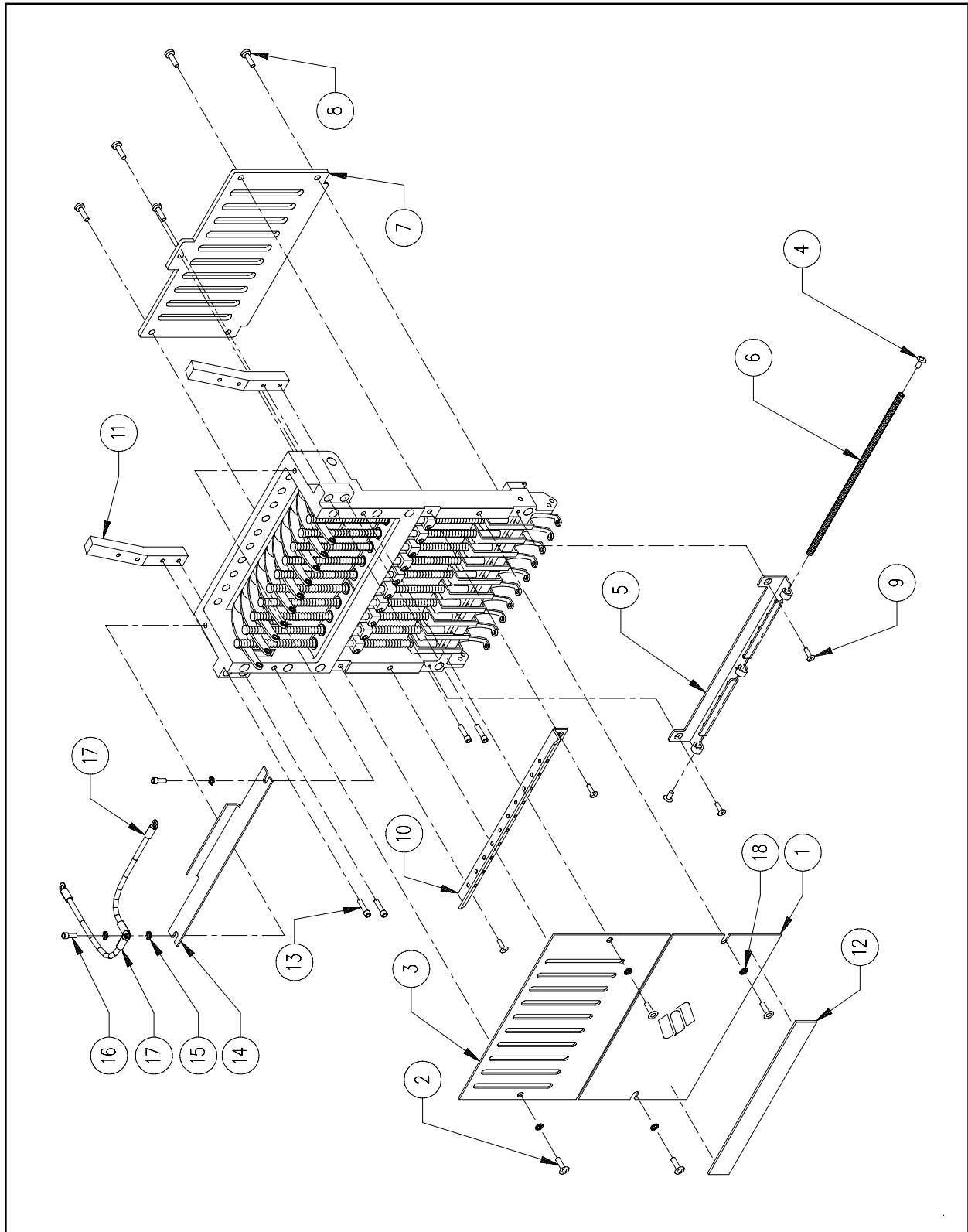


Figure 10

**Needle Case (1 of 2)****Reference Figure 10**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1               | 007511-01          | Cover, Needle Case, Lower                           |                 |
| 2               | 010171-06          | Screw, Socket Head Cap, M4 x 0.7 x 6mm, Zinc Plate  |                 |
| 3               | 007510-02          | Cover, Needle Case, Upper                           |                 |
| 4               | 003509-10          | Screw, Button Head Cap, M4 x 0.7 x 10mm             |                 |
| 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 6mm         |                 |
| 9               | 001935-06          | Screw, Flat Head Phillips, M3 x 0.5 x 6mm           |                 |
| 10              | 008482-01          | Guide, Thread, Middle, w/Eyelet                     |                 |
| 11              | 007528-01          | Support, Tensioner Bracket                          |                 |
| 12              | 007527-01          | Magnet, Thread Retaining                            |                 |
| 13              | 010171-16          | Screw, Socket Head Cap, M4 x 0.7 x 16mm, Zinc Plate |                 |
| 14              | 006347-01          | Blade, Sensor, Interruptor                          |                 |
| 15              | 690439-04          | Washer, Flat, M4                                    |                 |
| 16              | 010171-10          | Screw, Socket Head Cap, M4 x 0.7 x 10mm, Zinc Plate |                 |
| 17              | 009317-01          | Cable, Ground, Pan, 4.75"                           |                 |
| 18              | 690811-38          | Washer, Lock, Internal Star, #8                     |                 |

# Needle Case (2 of 2)

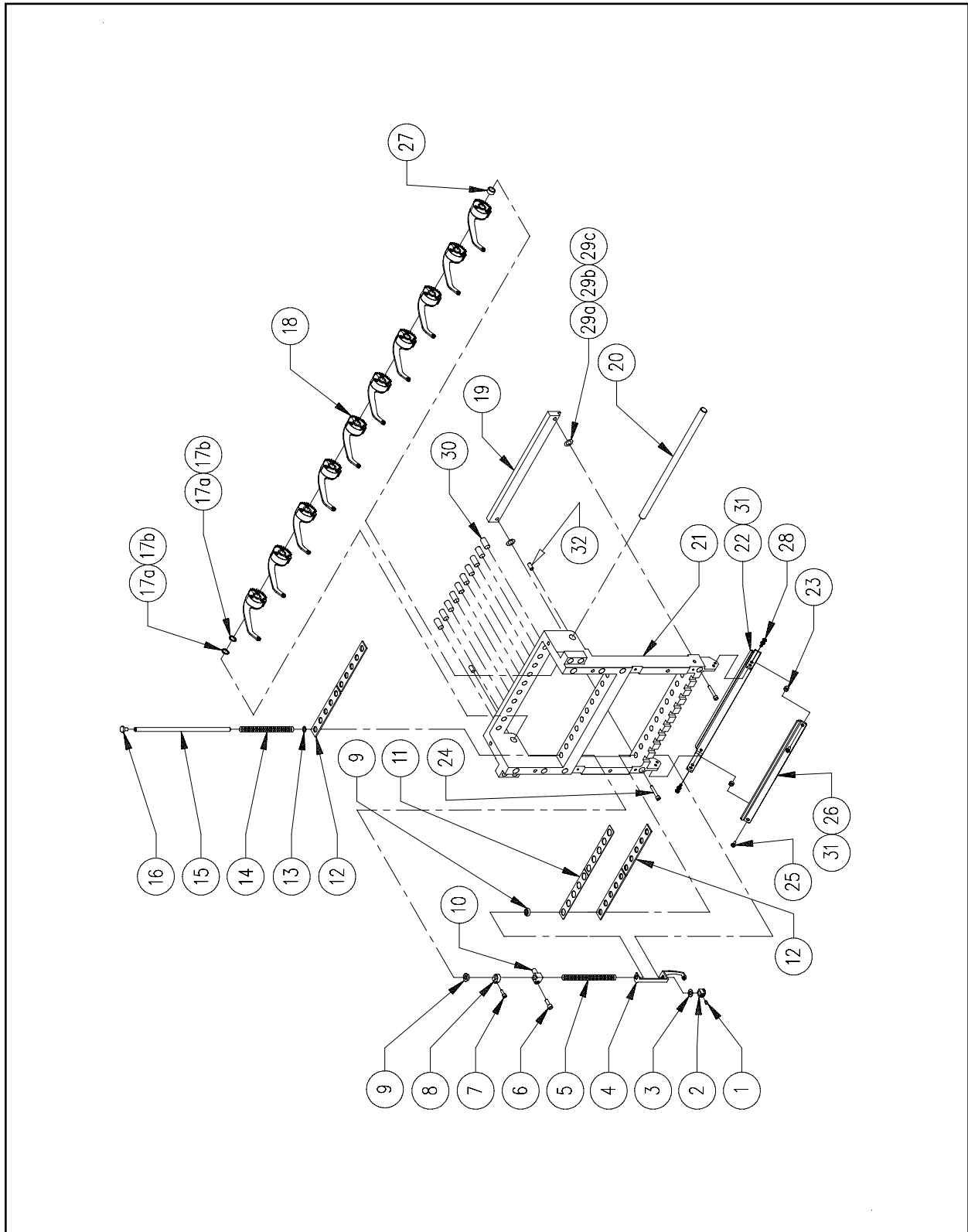


Figure 11

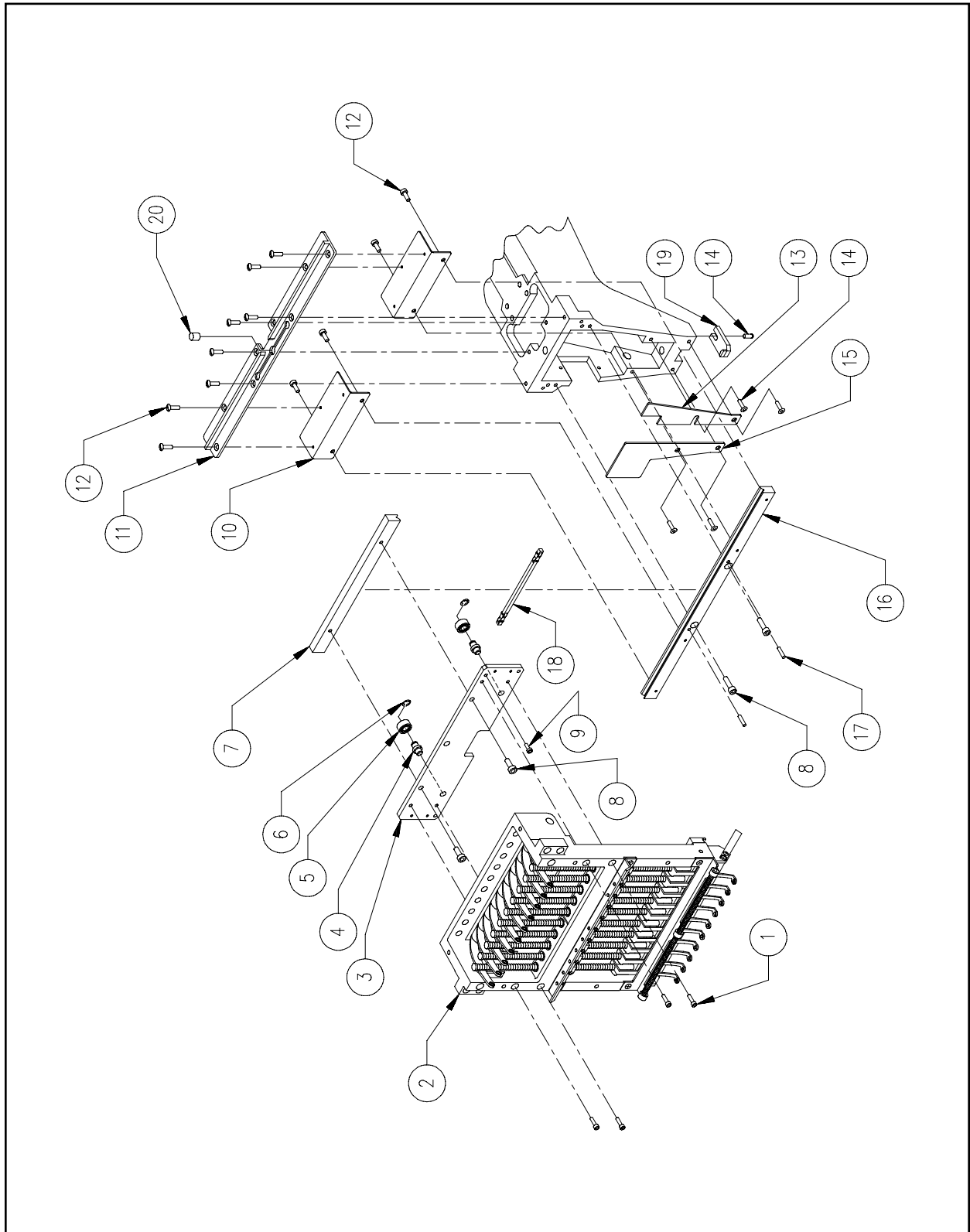
**Needle Case (2 of 2)****Reference Figure 11**

| <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 8mm              |                   |
| 7               | 001922-10          | Screw, Socket Head Cap, M3 x 0.5 x 10mm             |                   |
| 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 8mm    |                   |
| 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*             | 008474-01          | Bracket, Grabber, Lower, Flared                     |                   |
| 23*             | 002884-01          | Spacer, Support, Velcro                             |                   |
| 24              | 010171-20          | Screw, Socket Head Cap, M4 x 0.7 x 20mm, Zinc Plate |                   |
| 25              | 671855-08          | Screw, Pan Head Slotted, M3 x 0.5 x 8mm             |                   |
| 26*             | 008472-01          | Bar, Grabber  |                   |
| 27              | 007518-01          | Spacer, Shaft, Take-Up Lever                        |                   |
| 28              | 671855-06          | Screw, Pan Head Slotted, M3 x 0.5 x 6mm             |                   |
| 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"                          |                   |
| 31*             | 008471-01          | Velcro, Wiper, Pile, Flared                         |                   |
| 32              | 001960-06          | Screw, Set, Flat Point, M4 x 0.7 x 6mm              |                   |

Note: The following can be replaced as a factory built assembly:

\*008491-01 Grabber Bracket/Bar, Assembly

# Needle Case Linear Drive



**Figure 12**

**Needle Case Linear Drive****Reference Figure 12**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b>       |
|-----------------|--------------------|---|-----------------------|
| 1               | 010171-16          | Screw, Socket Head Cap, M4 x 0.7 x 16mm, Zinc Plate |                       |
| 2               | -----              | Needle Case   | See Pages 10-1 & 11-1 |
| 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               | 010171-12          | Screw, Socket Head Cap, M4 x 0.7 x 12mm, Zinc Plate |                       |
| 9               | 010171-06          | Screw, Socket Head Cap, M4 x 0.7 x 6mm, Zinc Plate  |                       |
| 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 6mm             |                       |
| 13              | 007473-01          | Cover, Front, Arm, Right                            |                       |
| 14              | 003509-08          | Screw, Button Head Socket, M4 x 0.7 x 8mm           |                       |
| 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: The following can be replaced as a factory built assembly:

\*007558-01 Plate, Retainer, Bearing, Assembly

# Thread Tensioner

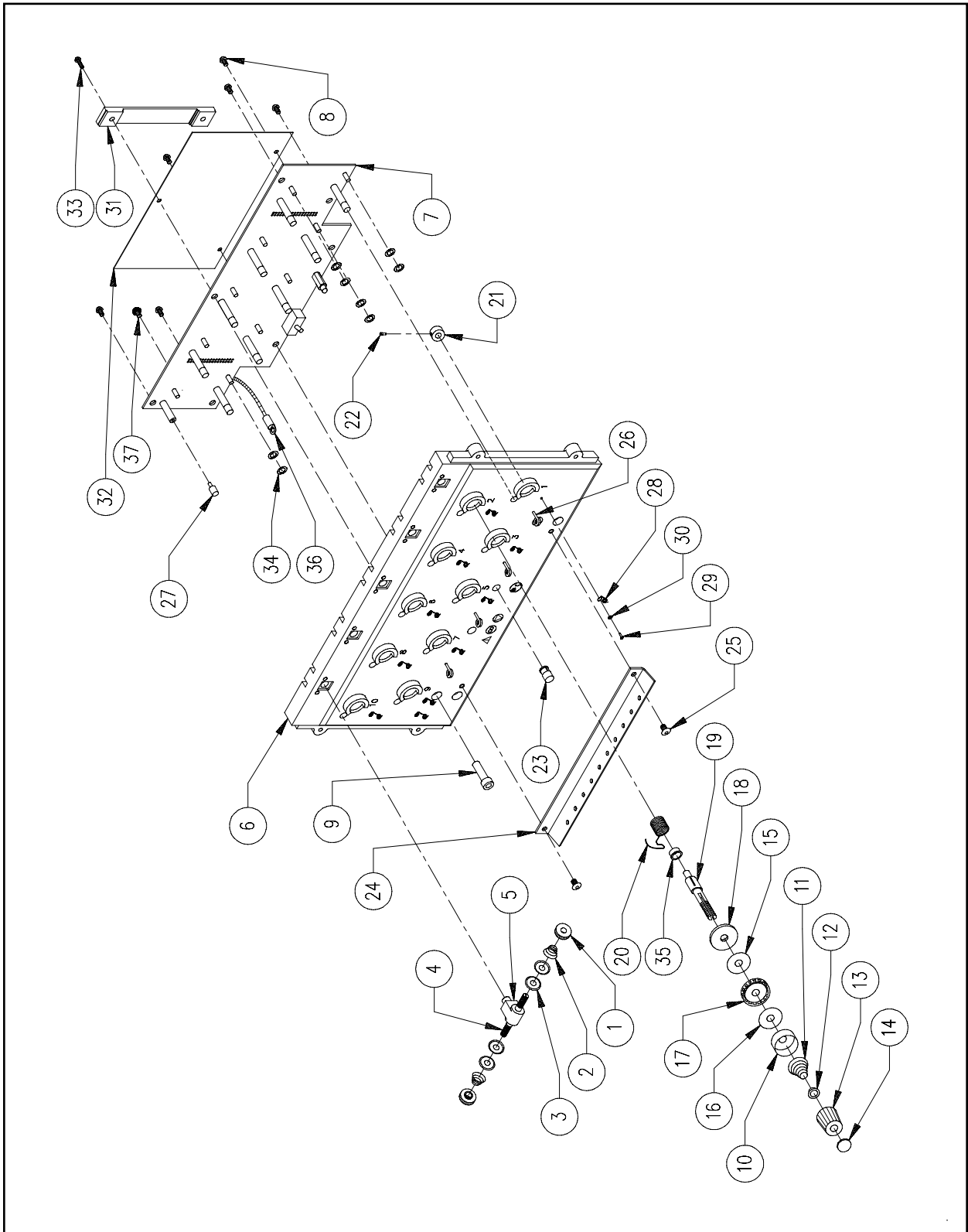


Figure 13



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**Thread Tensioner** **Reference Figure 13**


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| 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#       | 009401-01   | Bracket, Tensioner                                  |          |
| 7#       | 009415-04   | PCB, Thread Break, Assembly                         |          |
| 8#       | 001924-06   | Screw, Cheese Head, Slotted, M4 x 0.7 x 6mm         |          |
| 9        | 010171-20   | Screw, Socket Head Cap, M4 x 0.7 x 20mm, 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#      | 001922-10   | 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#      | 010568-01   | Screw, Plastifast, 2-32 x 1/4"                      |          |
| 30#      | 690034-32   | Washer, Flat #2                                     |          |
| 31#      | 010577-02   | Clamp, Ribbon Cable, 3.31"                          |          |
| 32#      | 010620-01   | Insulator, Thread Break                             |          |
| 33       | 001924-10   | Screw, Cheese Head Slotted, M4 x 0.7 x 10mm         |          |
| 34       | 010917-01   | Re-inforcement, Self-Adhesive                       |          |
| 35       | 011351-01   | Bushing, Tensioner                                  |          |
| 36#      | 009317-01   | Cable, Ground, Pan, 4.75"                           |          |
| 37#      | 009863-10   | Screw, Pan Head Phillips, ⁂/Star, M4 x 0.7 x 10mm   |          |

Note: The following can be replaced as a factory built assembly:

- \*007547-01 Tensioner, Thread, Main, Black, Assembly
- 007530-01 Pretensioner, Assembly
- #10869 Tensioner, ⁂/Insulator, Assembly  
(includes 007547-01 and 007530-01)

# Arm and Bed

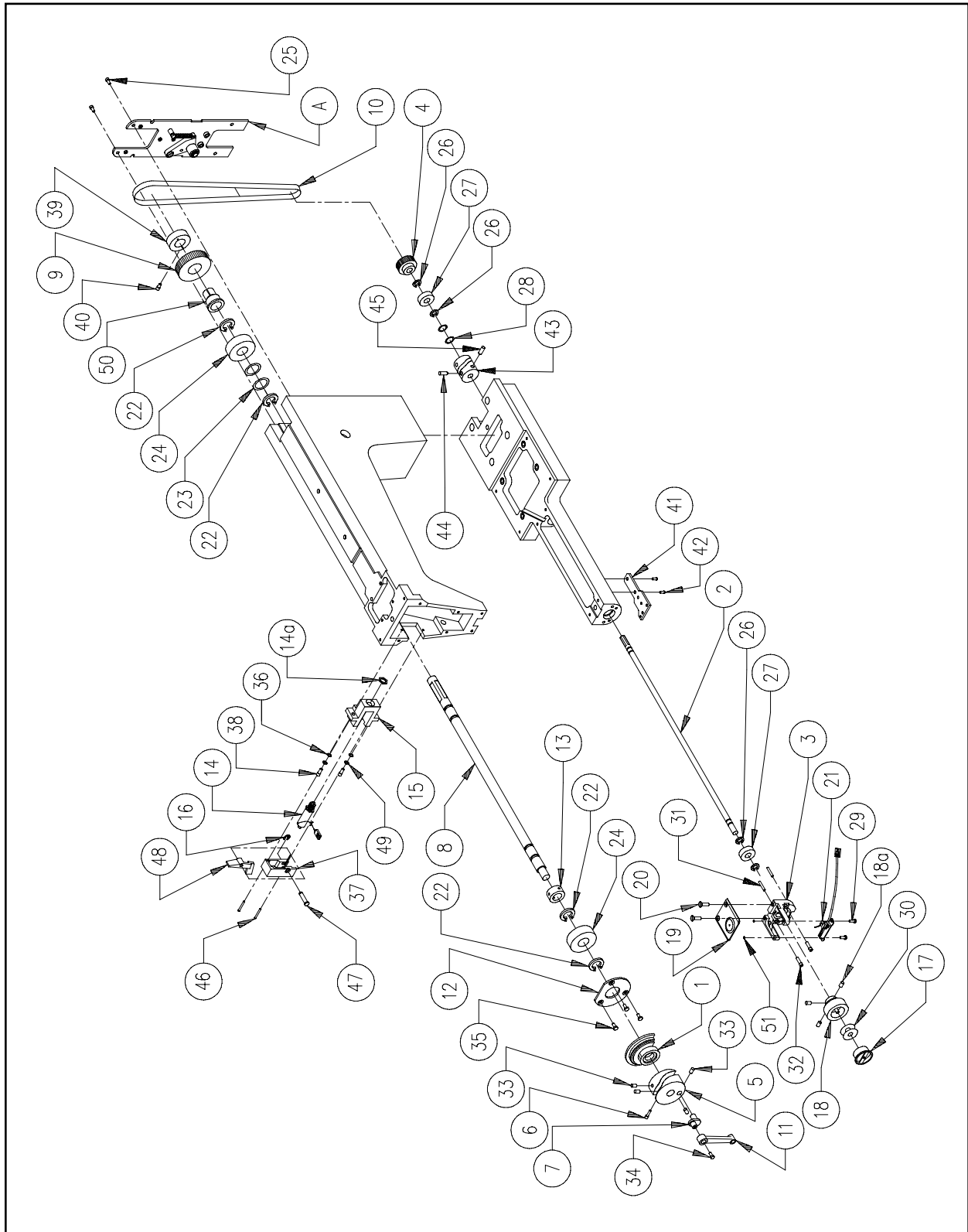


Figure 14

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**Arm and Bed** **Reference Figure 14**


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| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b>      |
|-----------------|--------------------|---|----------------------|
| A               | 004504-01S         | Bobbin Idler  | See Page 16-1        |
| 1               | 003539-01          | Counterweight, Phase II                             |                      |
| 2               | 003535-01          | Shaft, Bobbin, Phase II                             |                      |
| 3               | 10181              | Bracket, Needle Plate                               |                      |
| 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              | 008395-01          | 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, <sup>wo</sup> /Spring                 |                      |
| 18              | 009000-01          | Hook, Rotary, Small Bobbin                          |                      |
| 18a             | 341992-06          | Screw, Rotary Hook                                  |                      |
| 19              | 10246              | Plate, Needle, Pocketed                             |                      |
| 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 12mm            |                      |
| 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 6mm             |                      |
| 30              | 761002-11          | Thread, Bobbin, White                               |                      |
| 31              | 006390-12          | Pin, Dowel, 3mm OD x 12mm Long                      |                      |
| 32              | 010171-16          | Screw, Socket Head Cap, M4 x 0.7 x 12mm, Zinc Plate |                      |
| 33              | 001971-06          | Screw, Set, Flat Point, M6 UNF x 6mm                |                      |
| 34              | 002637-10          | Screw, Socket Head Cap, Low Head, M5 x 0.8 x 10mm   |                      |
| 35              | 001926-12          | Screw, Flat Socket, M4 x 0.7 x 12mm                 |                      |
| 36              | 702946-30          | Spacer, Shaft, .187" ID x .312" OD x .03" Thick     |                      |
| 37•             | 006560-01          | Bracket, Latch                                      |                      |
| 38              | 010171-12          | Screw, Socket Head Cap, M4 x 0.7 x 12mm, Zinc Plate |                      |
| 39              | 002668-01          | Collar, Support, Gear                               |                      |
| 40              | 670038-10          | Screw, Socket Head Cap, 10-32 x 5/8"                |                      |

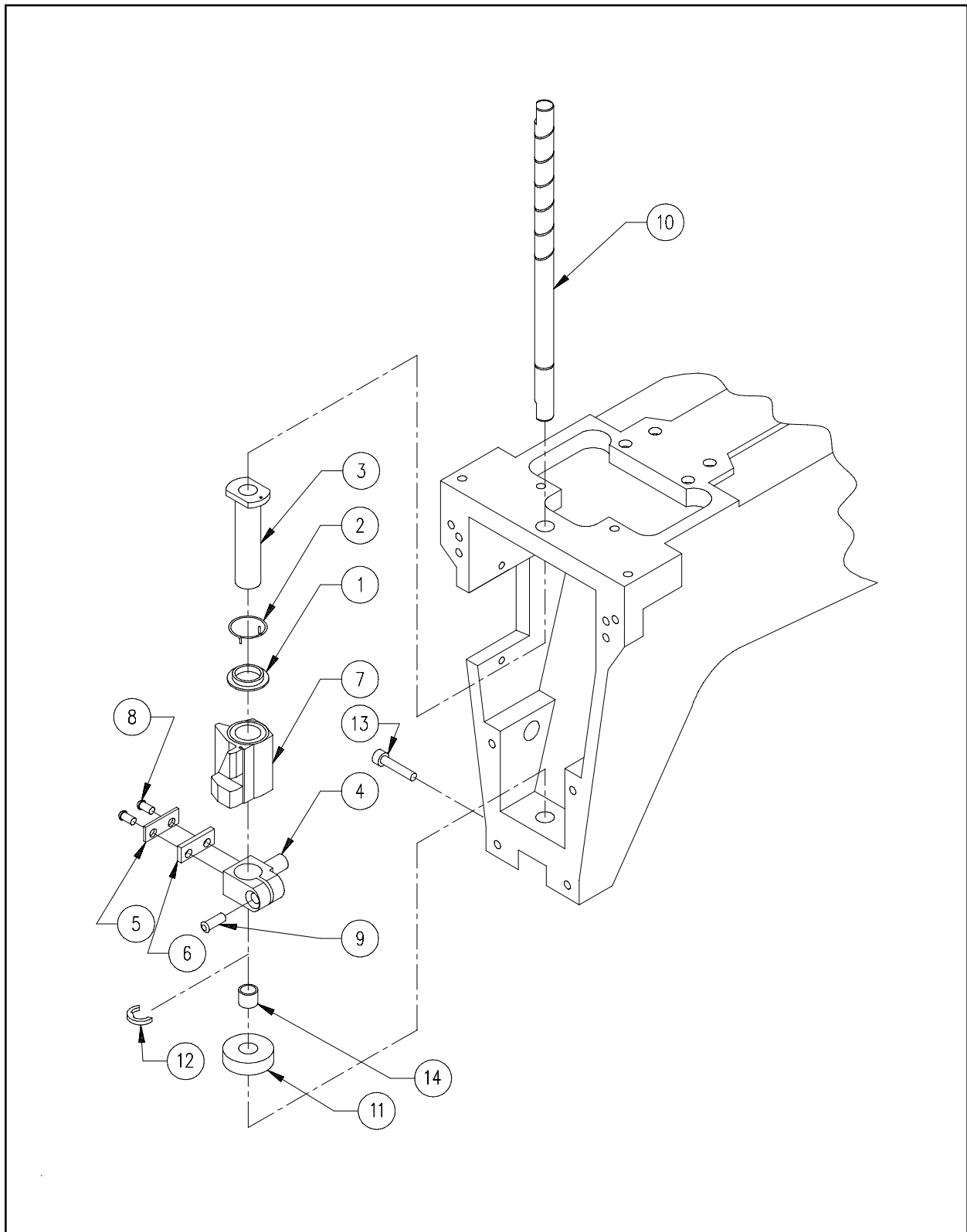
| <b>Arm and Bed</b> |                    |   | <b>Reference Figure 14</b> |
|--------------------|--------------------|---|----------------------------|
| <b>Item No.</b>    | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b>            |
| 41                 | 006526-01          | Bracket, Picker                                     |                            |
| 42                 | 003509-08          | Screw, Button Head Socket, M4 x 0.7 x 8mm           |                            |
| 43                 | 007257-01          | Cam, Trimmer  | (#up to s/n 17033)         |
|                    | 10183              | Cam, Trimmer  | (#s/n 17034 and above)     |
| 44                 | 001927-10          | Screw, Set, Flat Point, M5 x 0.8 x 10mm             |                            |
| 45                 | 007272-10          | Screw, Set, Cone Point, M5 x 0.8 x 10mm             |                            |
| 46                 | 010170-20          | Screw, Socket Head Cap, M3 x 0.5 x 20mm, Zinc Plate |                            |
| 47•                | 006559-01          | Pin, Latch  |                            |
| 48•                | 002876-21          | Latch, Jump Stitch                                  |                            |
| 49                 | 690427-04          | Washer, Lock, Split, M4                             |                            |
| 50*                | 005331-01          | Pulley, Hub, Adjustable                             |                            |
| 51                 | 006549-03          | O-Ring, .187" ID x .06" Thick                       |                            |

Note: The following can be replaced as a factory built assembly:

- \*005191-01 Pulley, Adjustable, Assembly
  - 007340-01 Bracket, Latch, Jump Stitch, Assembly
- #These serial numbers are for the head only, not the machine.

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# Reciprocator



**Figure 15**

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**Reciprocator** **Reference Figure 15**

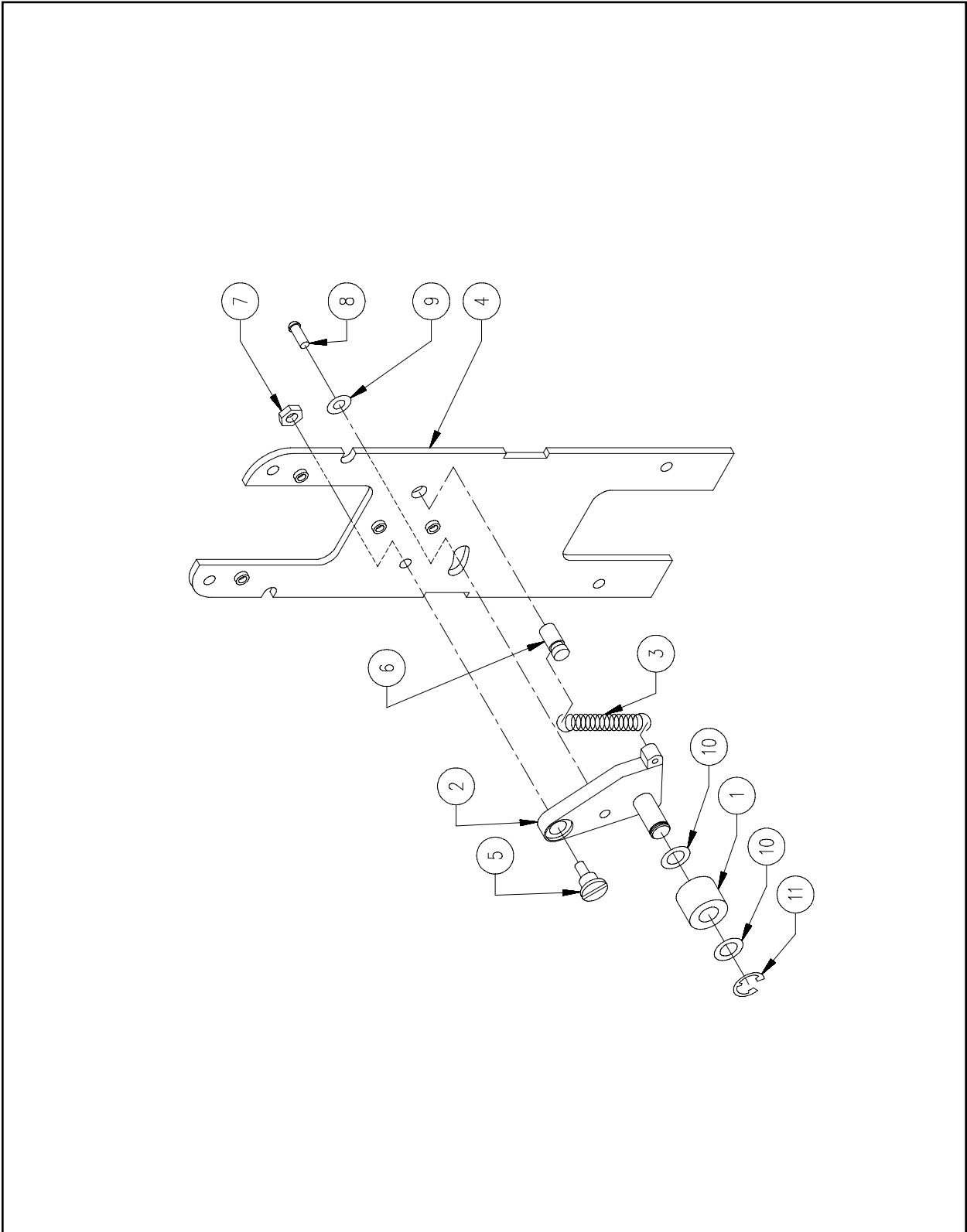

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| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1*              | 007449-01          | Bushing, Cradle, Spring                             |                 |
| 2*              | 007448-01          | Spring, Jump, Reciprocator                          |                 |
| 3*              | 001865-01          | Bushing, Shaft, Needle Bar                          |                 |
| 4*              | 11027              | 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 6mm             |                 |
| 9               | 010171-10          | Screw, Socket Head Cap, M4 x 0.7 x 10mm, Zinc Plate |                 |
| 10              | 11029              | Shaft, Guide, Needle Bar                            |                 |
| 11              | 10209              | Bearing, Shaft, Guide                               |                 |
| 12              | 001955-18          | Ring, Retainer, External, 5/16" ID                  |                 |
| 13              | 010171-20          | Screw, Socket Head Cap, M4 x 0.7 x 20mm             |                 |
| 14              | 10208              | Bushing, Bearing, Lower Guide                       |                 |

Note: The following can be replaced as a factory built assembly:

\*001990-01S Assembly, Reciprocator

# Bobbin Idler



**Figure 16**

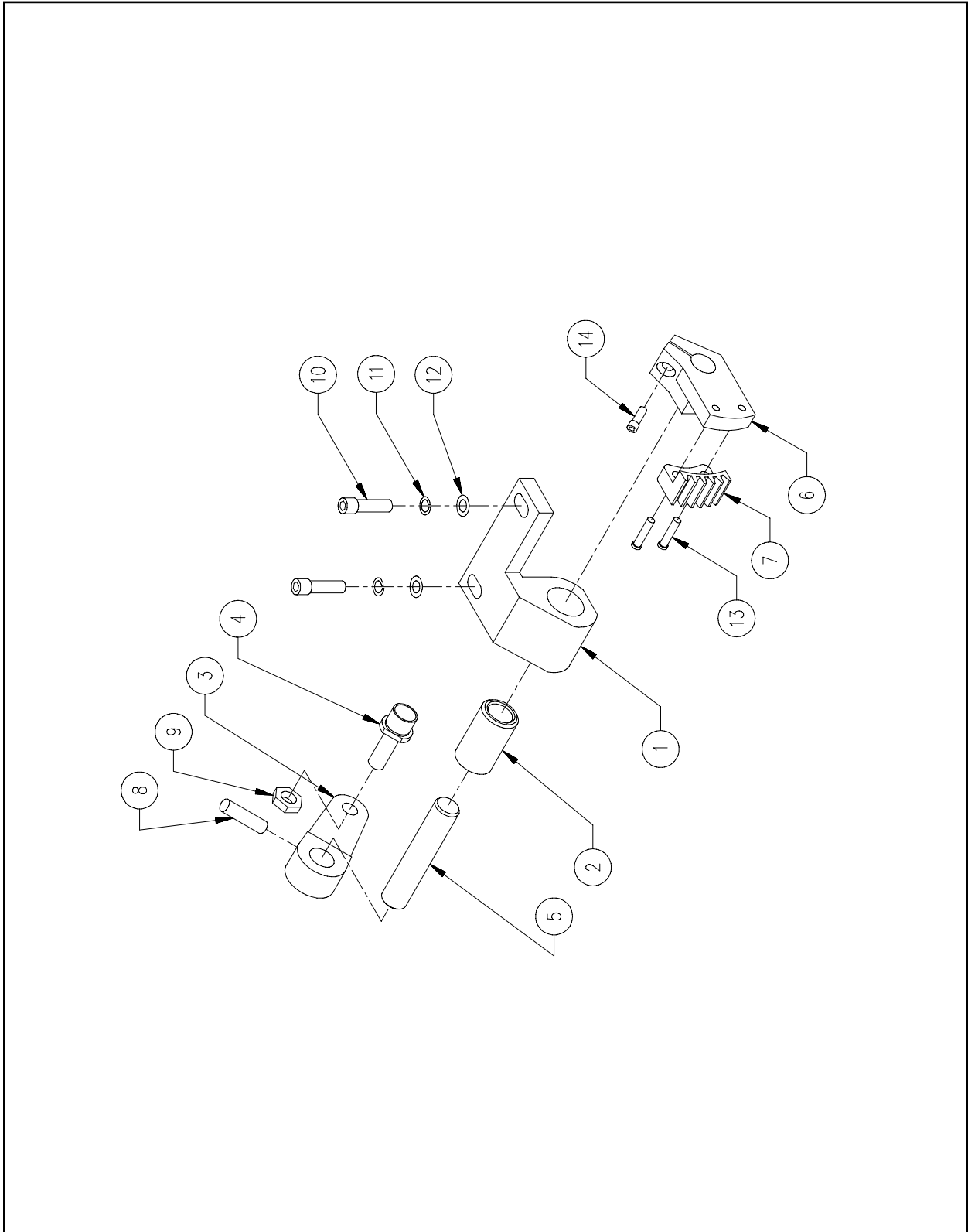


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**Bobbin Idler** **Reference Figure 16**

| <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, Rear                             |                 |
| 5               | 003188-01          | Screw, Shoulder, M5 x 7mm OD x 0.8mm    |                 |
| 6               | 660278-01          | Stud, Press, 1/4" OD x 1/2"             |                 |
| 7               | 003543-05          | Nut, Jam, Hex, M5                       |                 |
| 8               | 672036-10          | Screw, Button Head Cap, M5 x 0.8 x 10mm |                 |
| 9               | 690427-05          | Washer, Lock, Split, M5                 |                 |
| 10              | 702876-08          | Spacer, Shaft, 5/16" ID x .016" Thick   |                 |
| 11              | 001955-18          | Ring, Retainer, External, 5/16" ID      |                 |
| 12              | 690439-05          | Washer, Flat, M5                        |                 |

# Take-Up Drive Lever



**Figure 17**

**Take-Up Drive Lever****Reference Figure 17**

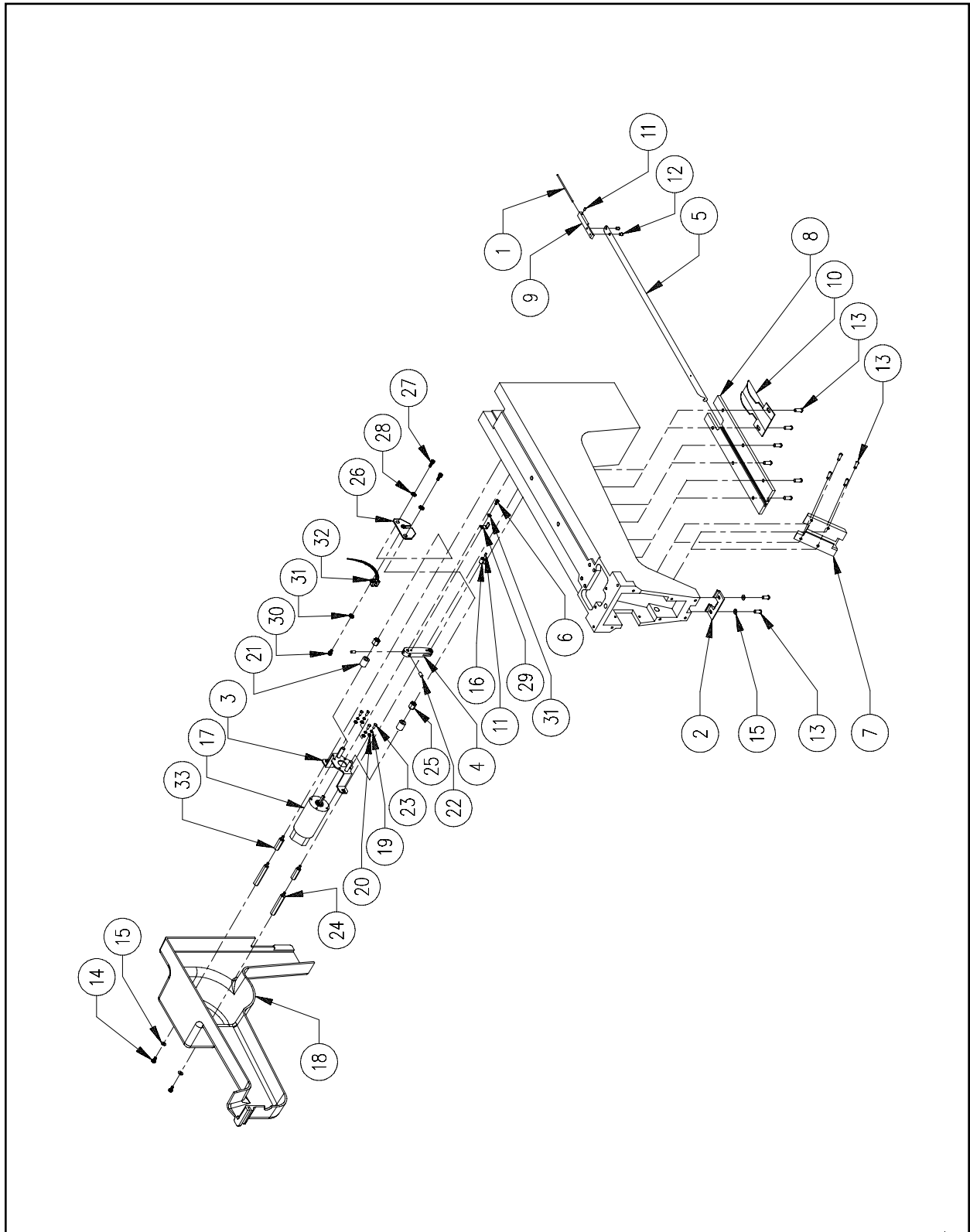
| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1*              | 003567-01          | Base, Drive, Lever, Take-Up, PHS II                 |                 |
| 2*              | 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"                         |                 |
| 9               | 003543-05          | Nut, Jam, Hex, M5                                   |                 |
| 10              | 010171-16          | Screw, Socket Head Cap, M4 x 0.7 x 16mm, Zinc Plate |                 |
| 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 6mm             |                 |
| 14              | 010171-10          | Screw, Socket Head Cap, M4 x 0.7 x 10mm, Zinc Plate |                 |

Note:

The following can be replaced as a factory built assembly:

- \*005362-01 Assembly, Bushing, Take-Up Lever
- 004768-01 Lever, Drive, Lever, Take-up, Assembly

# Grabber Motor



**Figure 18**

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**Grabber Motor** **Reference Figure 18**


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| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                            | <b>Comments</b> |
|-----------------|--------------------|--|-----------------|
| 1               | 003185-01          | Rod, Guide   |                 |
| 2               | 10156              | Guide, Grabber                                     |                 |
| 3               | 10837              | Bracket, Mounting, Grabber Drive                   |                 |
| 4               | 003692-01          | Arm, Drive, Grabber                                |                 |
| 5               | 003586-01          | Blade, Grabber                                     |                 |
| 6               | 003136-06          | Screw, Button Head Cap, M3 x 0.5 x 6mm             |                 |
| 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 3mm             |                 |
| 12              | 670406-02          | Screw, Button Head Cap, 4-40 x 1/8"                |                 |
| 13              | 003509-08          | Screw, Button Head Socket, M4 x 0.7 x 8mm          |                 |
| 14              | 010171-08          | Screw, Socket Head Cap, M4 x 0.7 x 8mm, Zinc Plate |                 |
| 15              | 690439-04          | Washer, Flat, M4                                   |                 |
| 16              | 003155-01          | Swivel, Wire                                       |                 |
| 17              | 10819              | Motor/Encoder, Assembly                            |                 |
| 18              | 10326              | Cover, Drive, Grabber Motor                        |                 |
| 19              | 690033-36          | Washer, Lock, Split, #2                            |                 |
| 20              | 690034-36          | Washer, Flat, #2                                   |                 |
| 21              | 003176-01          | Bumper, Motor Stop                                 |                 |
| 22              | 001960-04          | Screw, Set, Flat Point, M4 x 0.7 x 4mm             |                 |
| 23              | 670174-04          | Screw, Pan Head Phillips, 6-32 x 1/4"              |                 |
| 24              | 009894-48          | Standoff, M/F, Hex, M4 x 0.7 x 48mm                |                 |
| 25              | 009893-14          | Standoff, F/F, Hex, M5 x 0.8 x 10mm                |                 |
| 26              | 009816-01          | Plate, Mounting, Grabber Home                      |                 |
| 27              | 010172-08          | Screw, Socket Head Cap, M5 x 0.8 x 8mm, Zinc Plate |                 |
| 28              | 690427-05          | Washer, Lock, Split, M5                            |                 |
| 29              | 009817-01          | Flag, Home, Grabber                                |                 |
| 30              | 010170-08          | Screw, Socket Head Cap, M3 x 0.5 x 8mm, Zinc Plate |                 |
| 31              | 690427-03          | Washer, Lock, Split, M3                            |                 |
| 32              | 010380-01          | Switch, Optical, Assembly                          |                 |
| 33              | 009894-25          | Standoff, M/F, Hex, M4 x 0.7 x 25mm                |                 |

# Cutter/Picker

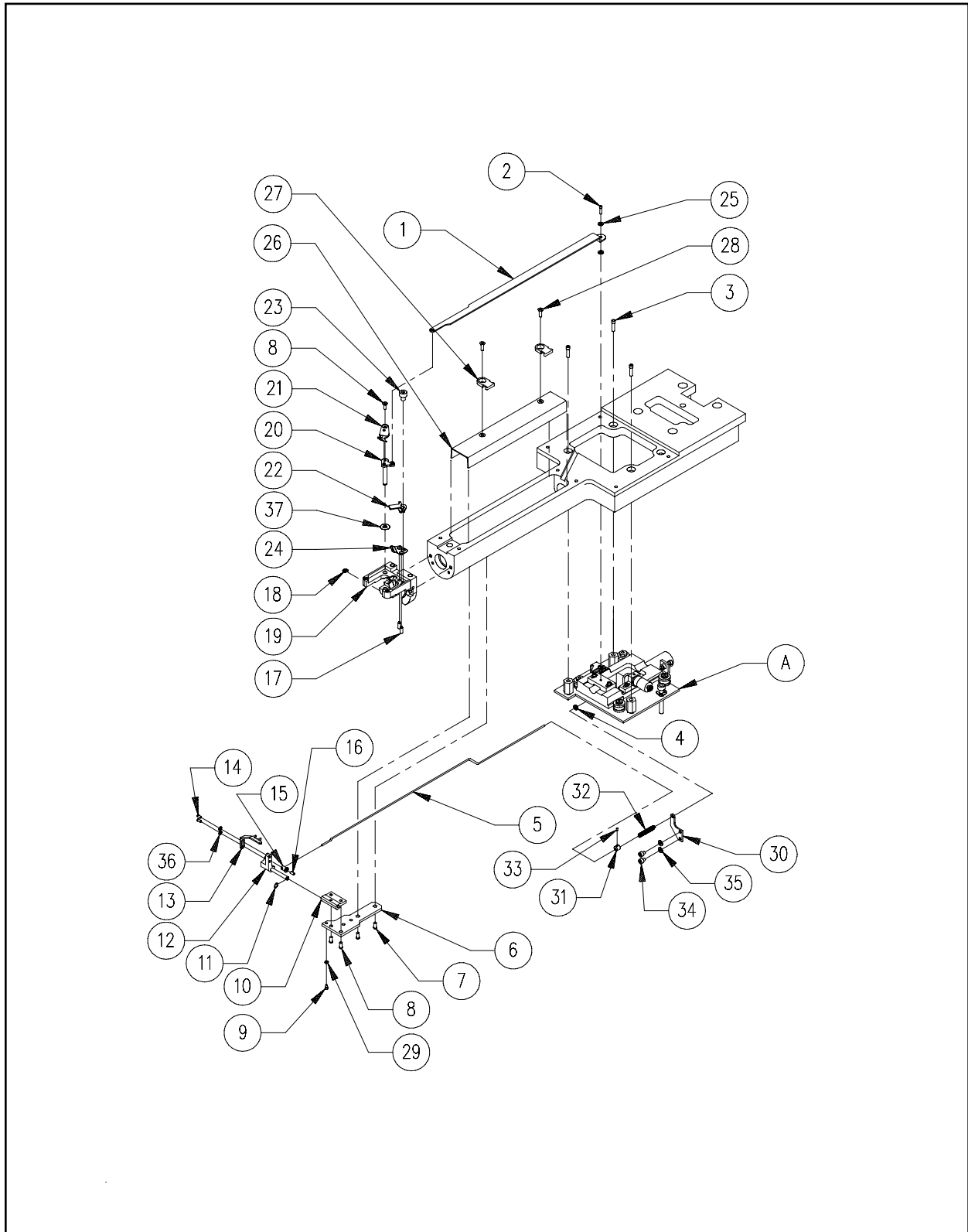


Figure 19

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**Cutter/Picker** **Reference Figure 19**


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| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 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              | 10188-06           | Screw, Set, Cone Point, M3 x 0.5 x 6mm              |                 |
| 18              | 001955-15          | Clip, Retaining, External, .188" ID                 |                 |
| 19              | 10181              | Bracket, Needle Plate                               |                 |
| 20              | 10185              | Arm, Drive, Movable Knife                           |                 |
| 21              | 10186              | Knife, Movable                                      |                 |
| 22              | 10187              | Knife, Adjustable                                   |                 |
| 23              | 001922-08          | Screw, Socket Head Cap, M3 x 0.5 x 8mm              |                 |
| 24              | 10184              | 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                           |                 |
| 37              | 11481              | Washer, Stainless Steel                             | (see note)      |

Note: minimum of 1 required, up to four can be used

# Trimmer Drive

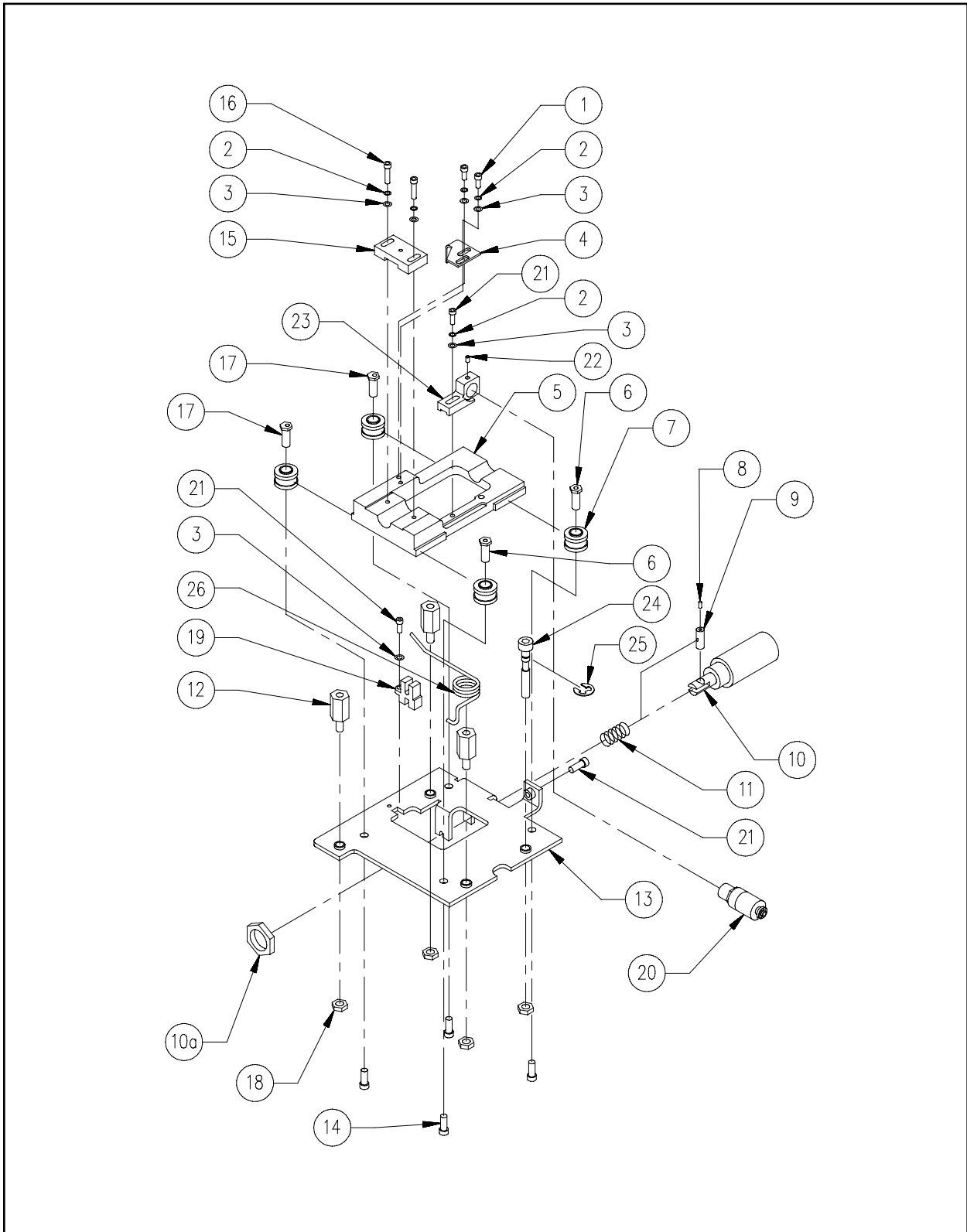


Figure 20



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**Trimmer Drive** **Reference Figure 20**


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| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b>         |
|-----------------|--------------------|---|-------------------------|
| 1               | 010170-06          | Screw, Socket Head Cap, M3 x 0.5 x 6mm, Zinc Plate  |                         |
| 2               | 690427-03          | Washer, Lock, Split, M3                             |                         |
| 3               | 690439-03          | Washer, Flat, M3                                    |                         |
| 4               | 010693-01          | 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 6mm              |                         |
| 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 16mm            |                         |
| 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              | 010170-14          | Screw, Socket Head Cap, M3 x 0.5 x 14mm, Zinc Plate |                         |
| 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              | 010170-10          | Screw, Socket Head Cap, M3 x 0.5 x 10mm, Zinc Plate |                         |
| 22              | 001962-03          | Screw, Set, Flat Point, M3 x 0.5 x 3mm              |                         |
| 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: The following can be replaced as a factory built assembly:

\*007261-01 Trimmer, Picker, Solenoid, Opto, Assembly

# Electronics Cage (1 of 2)

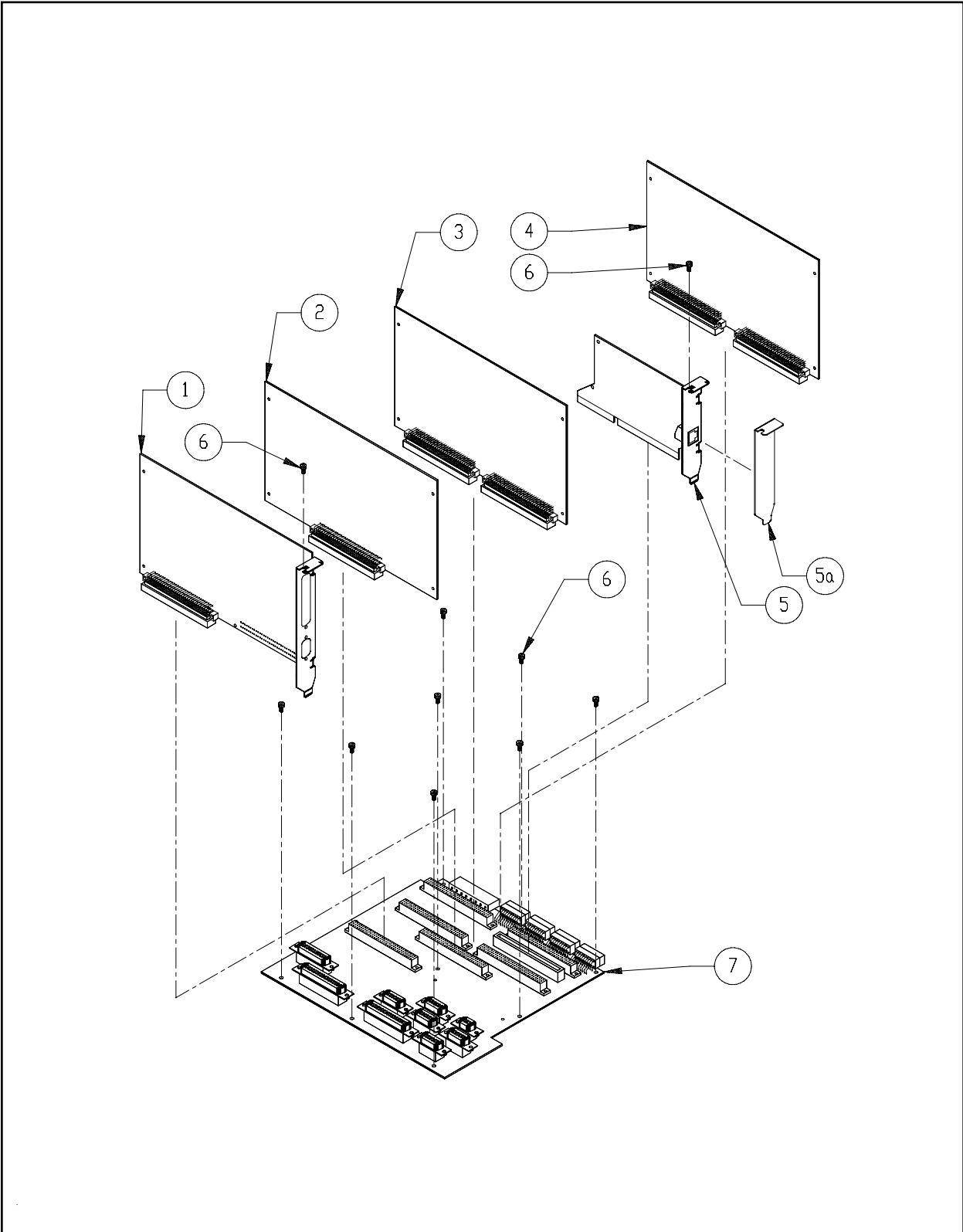


Figure 21

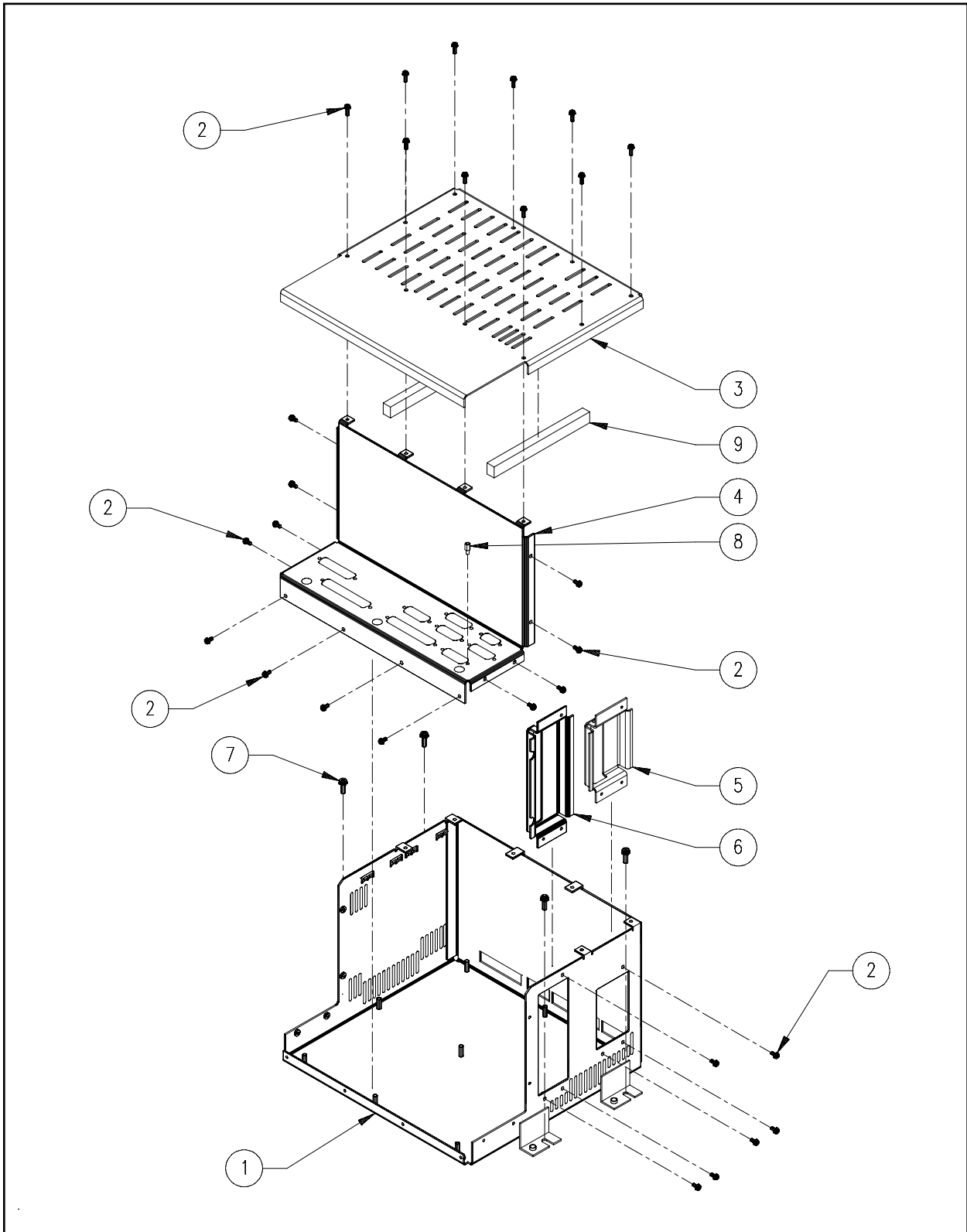
**Electronics Cage (1 of 2)****Reference Figure 21**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                           | <b>Comments</b>                |
|-----------------|--------------------|---|--------------------------------|
| 1*              | 009419-01          | PCB, Motor Driver, Assembly                       |                                |
| 2*              | 009846-05          | PCB, LV Drivers, Assembly                         |                                |
| 3*              | 009407-06          | PCB, Interface, Assembly                          |                                |
| 4*              | 10711              | PCB, CPU, Assembly                                |                                |
| 5               | 010192-01          | PCB, Network, Intel, Pro 10                       | (Option)                       |
| 5a*             | 010657-01          | Bracket, Blank, PC                                | (used if item 5 not installed) |
| 6*              | 009862-10          | Screw, Pan Head Phillips, w/Star, M3 x 0.5 x 10mm |                                |
| 7*              | 10716              | PCB, Backplane, Assembly                          |                                |

## Note:

\*Items 1-4 and 5a-7 on this page and items 1-6, 10 and 11 on page 22-2 can be replaced as a factory built assembly:  
10661 Card Cage, EMT, Assembly

## Electronics Cage (2 of 2)



**Figure 22**

**Electronics Cage (2 of 2)****Reference Figure 22**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>   | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1*              | 10230              | Card Cage, Bottom Cover   |                 |
| 2*              | 009862-06          | Screw, Pan Head Phillips, <sup>w</sup> /Star, M3 x 0.5 x 6mm              |                 |
| 3*              | 009833-01          | Card Cage, Top Cover  |                 |
| 4*              | 009848-01          | Card Cage, Front Cover, Single Head                                       |                 |
| 5*              | 009837-01          | Bracket, Ethernet Card Connector  |                 |
| 6*              | 009836-01          | Bracket, Motor Board Connector  |                 |
| 7               | 11057              | Screw, Pan Head Phillips, <sup>w</sup> /Star, M5 x 0.8 x 12mm, Zinc Plate |                 |
| 8*              | 000609-03          | Screwlock, 4-40 ID x 5/16"  | (x18)           |
| 9*              | 010545-01          | Seal, Rubber, 3/8" x 1/2"   |                 |

Note: \*Items 1-6, 8 and 9 on this page and items 1-4 and 5a-7 on page 21-2 can be replaced as a factory built assembly:  
10661 Card Cage, EMT, Assembly

# Power Distribution

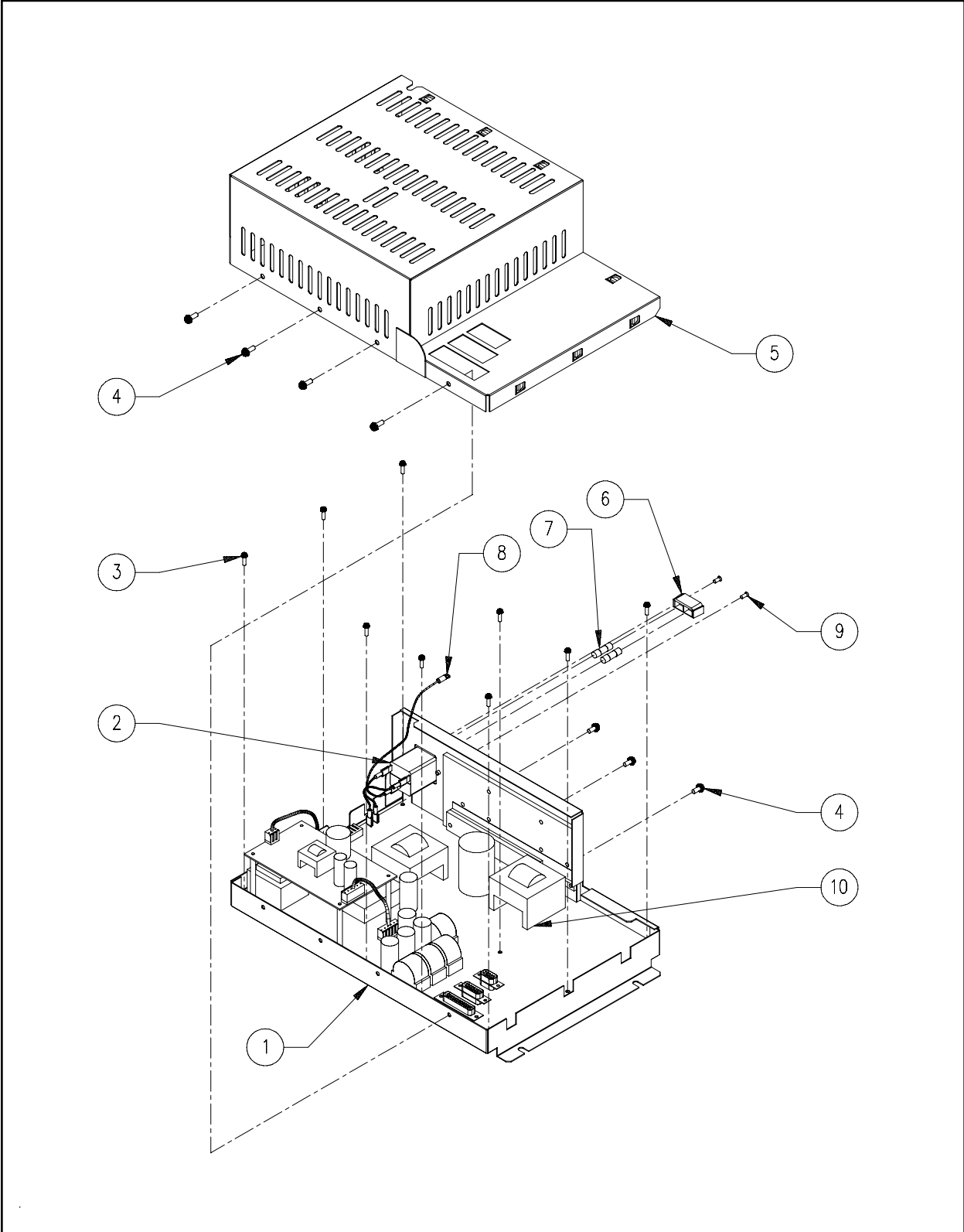


Figure 23

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**Power Distribution** **Reference Figure 23**


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| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                           | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1*              | 10274              | Base, Power Supply                                |                 |
| 2*              | 010682-01          | Power Entry Module, Filtered, 6A                  |                 |
| 3*              | 009862-10          | Screw, Pan Head Phillips, w/Star, M3 x 0.5 x 10mm |                 |
| 4*              | 009863-08          | Screw, Pan Head Phillips, w/Star, M4 x 0.5 x 8mm  |                 |
| 5*              | 10273              | Cover, Power Supply                               |                 |
| 6*              | 009090-01          | Holder, Fuse                                      |                 |
| 7*              | 010162-05          | Fuse, 5A, TD                                      |                 |
| 8*              | 10307              | Harness, Power Entry, PC                          |                 |
| 9*              | 001935-06          | Screw, Flat Head Phillips, M3 x 0.5 x 6mm         |                 |
| 10*             | 10033              | PCB, E-Stop-Power Supply, Assembly                |                 |

Note: The following can be replaced as a factory built assembly:

\*10512      Power Supply, Universal, EMT 10

# X-Beam (1 of 2)

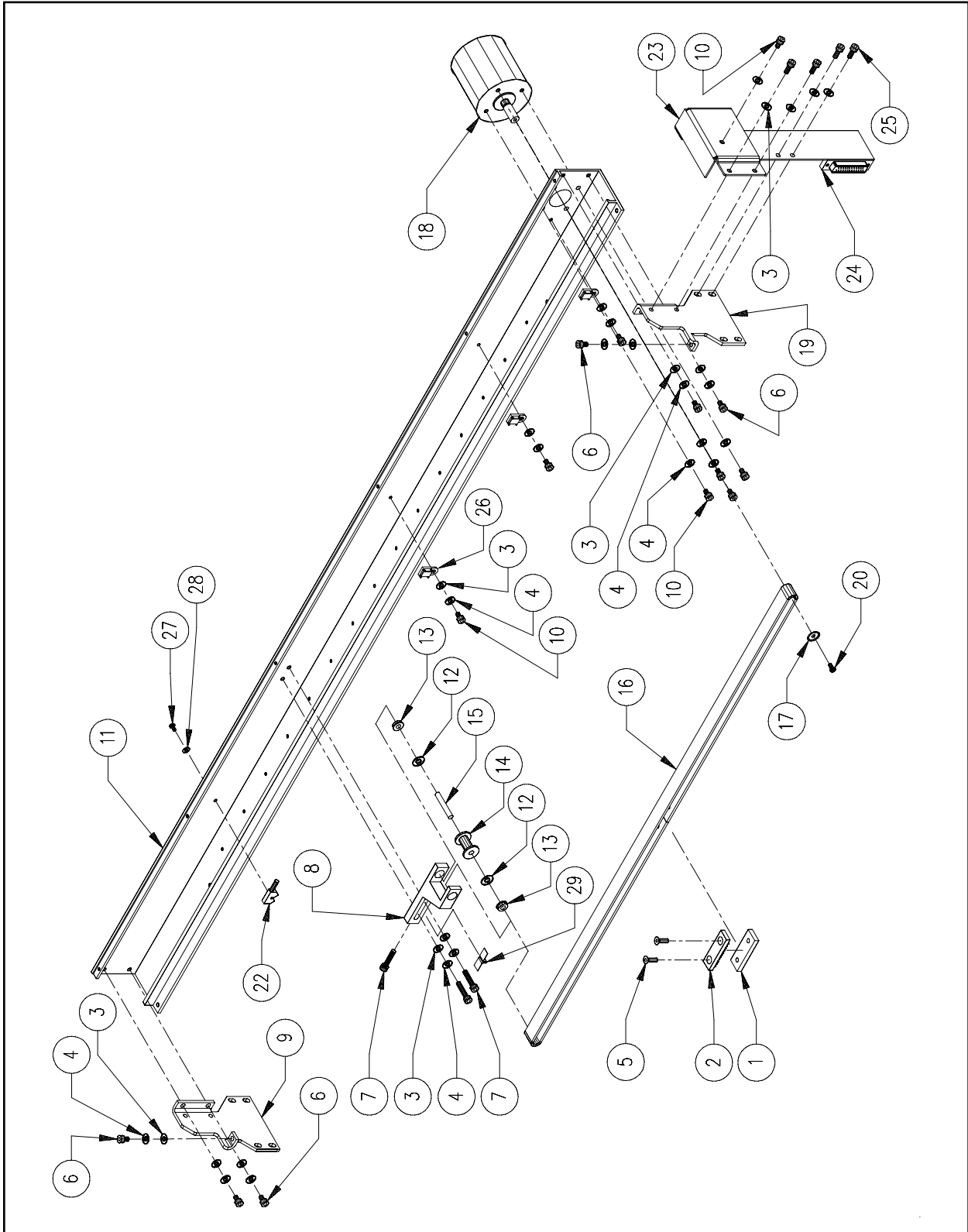


Figure 24



**X-Beam (1 of 2)****Reference Figure 24**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1               | 009476-01          | Spacer, Belt  |                 |
| 2               | 009475-01          | Clamp, Belt   |                 |
| 3               | 690439-04          | Washer, Flat, M4                                    |                 |
| 4               | 690427-04          | Washer, Lock, Split, M4                             |                 |
| 5               | 001926-16          | Screw, Flat Head Socket, M4 x 0.7 x 16mm            |                 |
| 6               | 010171-08          | Screw, Socket Head Cap, M4 x 0.7 x 8mm, Zinc Plate  |                 |
| 7*              | 010171-16          | Screw, Socket Head Cap, M4 x 0.7 x 16mm, Zinc Plate |                 |
| 8*              | 009471-01          | Block, Return                                       |                 |
| 9               | 009474-02          | Bracket, Left                                       |                 |
| 10              | 010171-06          | Screw, Socket Head Cap, M4 x 0.7 x 6mm, Zinc Plate  |                 |
| 11              | 009479-02          | Extrusion, Base                                     |                 |
| 12*             | 690364-03          | Washer, AIN   |                 |
| 13*             | 006416-01          | Bearing, Ball, Radial, Flanged, 3/16" ID            |                 |
| 14*             | 010750-01          | Pulley, Return                                      |                 |
| 15*             | 009466-01          | Shaft, Return, X-Axis                               |                 |
| 16              | 009467-02          | Belt, X-Axis  |                 |
| 17              | 010477-02          | Flange, Pulley, X-Axis Motor                        |                 |
| 18              | 009462-01          | Motor, X-Axis                                       |                 |
| 19              | 009473-02          | Bracket, Right                                      |                 |
| 20              | 006558-06          | Screw, Pan Head Phillips, M3 x 0.5 x 6mm            |                 |
| 21*             | 010958-01          | Velcro Pile, Dust Wiper                             |                 |
| 22              | 011073-01          | Sensor, Optical Switch, Assembly                    |                 |
| 23              | 010896-02          | Cover, X-Beam, PCB                                  |                 |
| 24              | 010359-02          | PCB, X-Beam, X-Rack, Assembly                       |                 |
| 25              | 010171-14          | Screw, Socket Head Cap, M4 x 0.7 x 14mm, Zinc Plate |                 |
| 26              | 011336-01          | Mount, Cable Tie, Nylon                             |                 |
| 26a             | 340139-01          | Tie, Cable, 3.1"                                    | (not shown)     |
| 27              | 009862-10          | Screw, Pan Head Phillips, *Star, M3 x 0.5 x 10mm    |                 |
| 28              | 690439-03          | Washer, Flat, M3                                    |                 |

Note: The following can be replaced as a factory built assembly:

\*010941-02 Assembly, Idler, X-Axis, Belt

# X-Beam (2 of 2)

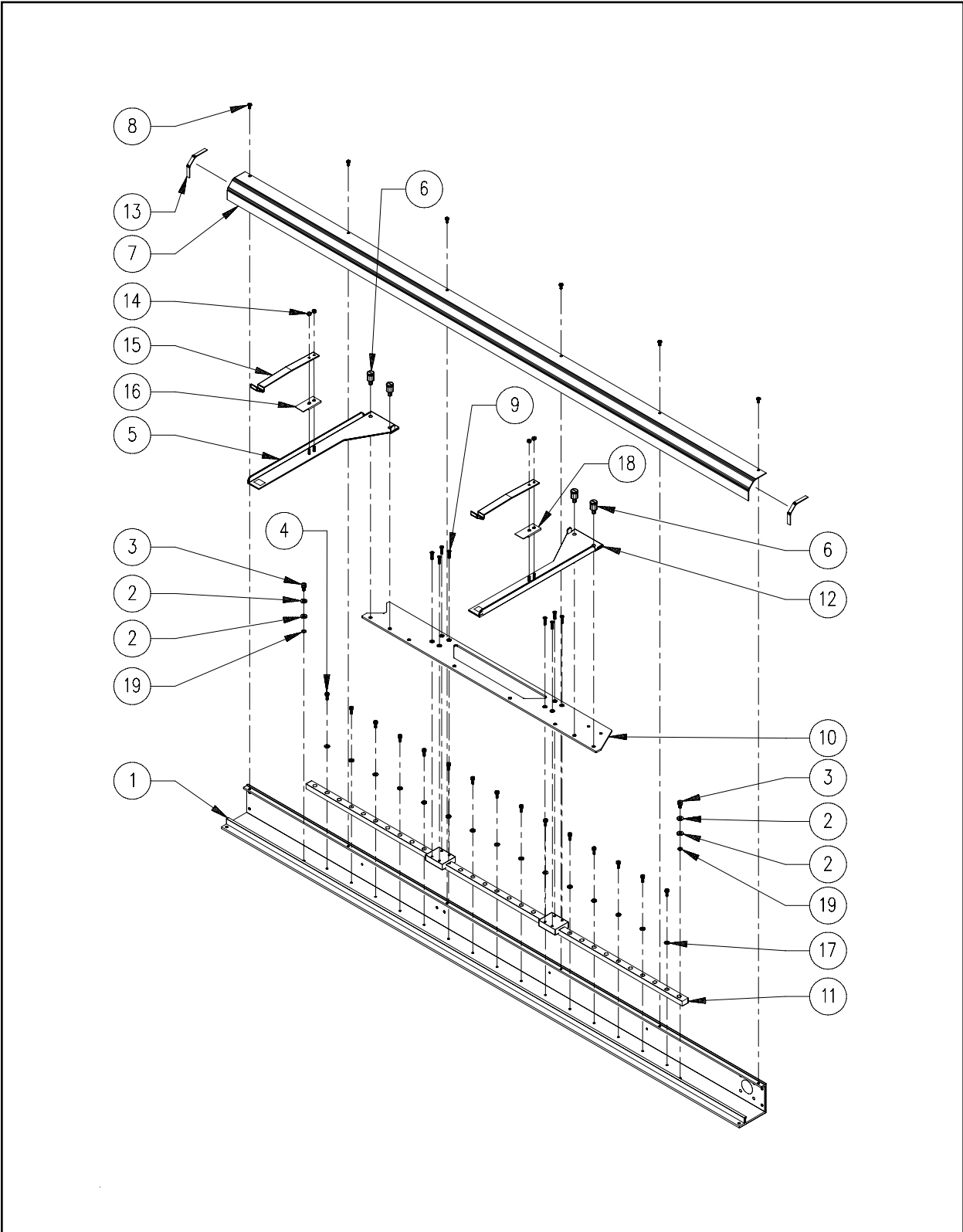


Figure 25

**X-Beam (2 of 2)****Reference Figure 25**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                            | <b>Comments</b> |
|-----------------|--------------------|--|-----------------|
| 1               | 009479-02          | Extrusion, Base                                    |                 |
| 2               | 690427-04          | Washer, Lock, Split, M4                            |                 |
| 3               | 010171-06          | Screw, Socket Head Cap, M4 x 0.7 x 6mm, Zinc Plate |                 |
| 4               | 010170-08          | Screw, Socket Head Cap, M3 x 0.5 x 8mm, Zinc Plate |                 |
| 5*              | 010618-01          | Bracket, Tubular Frame, Left                       |                 |
| 6               | 010410-03          | Screw, Thumb, Knurl, 8mm                           |                 |
| 7               | 009480-01          | Extrusion, Cover                                   |                 |
| 8               | 010170-06          | Screw, Socket Head Cap, M3 x 0.5 x 6mm             |                 |
| 9               | 005934-01          | Screw, Flat Head Phillips, M3 x 0.5 x 6mm          |                 |
| 10              | 009478-02          | Carriage, X-Axis Rack                              |                 |
| 11              | 009464-01          | Rail, X-Drive                                      |                 |
| 12•             | 009395-01          | Bracket, Tubular Frame, Right                      |                 |
| 13              | 009889-01          | Gasket, Rack, X-Axis                               |                 |
| 14*•            | 003573-03          | Nut, Nylock, M3                                    |                 |
| 15*•            | 010256-02          | Clip, Spring, Tubular                              |                 |
| 16*             | 008214-01          | Locator, Left                                      |                 |
| 17              | 690427-03          | Washer, Lock, Split, M3                            |                 |
| 18•             | 008213-01          | Locator, Right                                     |                 |
| 19              | 702875-09          | Spacer, 3/16" ID x .25" OD x .031" Thick           |                 |

Note:

The following can be replaced as a factory built assembly:

- \*010305-01 Bracket, Tubular, Left, Assembly
- 010306-01 Bracket, Tubular, Right, Assembly

# Z-Drive Encoder

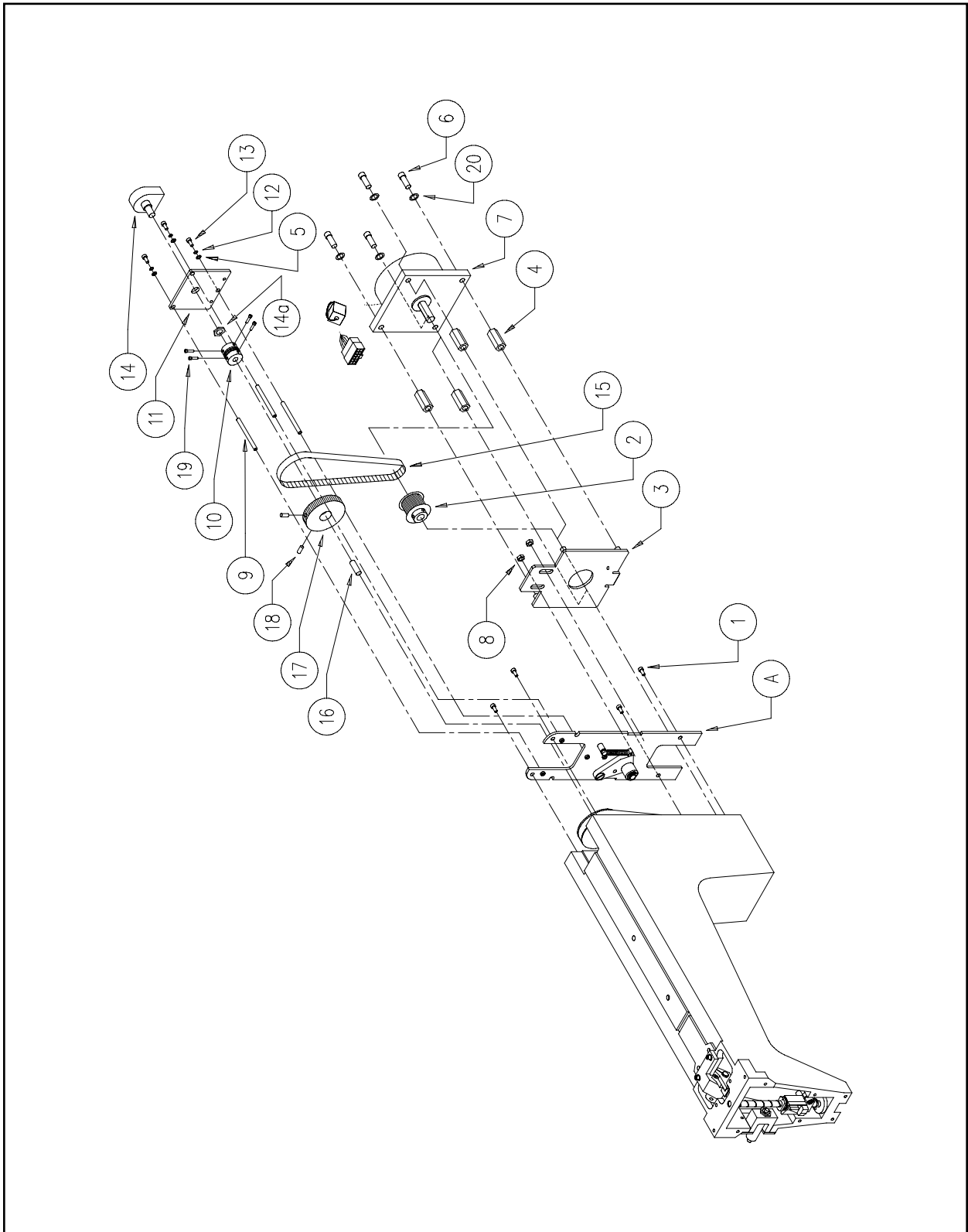


Figure 26

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


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| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b>          |
|-----------------|--------------------|---|--------------------------|
| A               | 004504-01S         | Bobbin Idler  | See Page 16-1            |
| 1               | 001926-01          | Screw, Flat Head Socket, M4 x 0.7 x 12mm            |                          |
| 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"                |                          |
| 5               | 690439-04          | Washer, Flat, M4                                    |                          |
| 6               | 670035-08          | Screw, Socket Head Cap, 1/4-20 x 1/2"               |                          |
| 7               | 010694-02          | Motor, Z-Drive                                      |                          |
| 8               | 005284-01          | Nut, Lock, M6                                       |                          |
| 9               | 004829-01          | Standoff, Encoder, M-F, M4 x 0.7 x 2.01"            |                          |
| 10              | 003553-01          | Coupler, Shaft, Helical, 1/4" x 1/4"                |                          |
| 11              | 004730-01          | Plate, Encoder                                      |                          |
| 12              | 690427-04          | Washer, Lock, Split, M4                             |                          |
| 13              | 010171-16          | Screw, Socket Head Cap, M4 x 0.7 x 16mm, Zinc Plate |                          |
| 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"                         |                          |
| 17              | 001523-01          | Pulley, Drive, Bobbin, Top, 32T, 1/5P               |                          |
| 18              | 001927-12          | Screw, Set, Flat Point, M5 x 0.8 x 12mm             |                          |
| 19              | 670068-06          | Screw, Socket Head Cap, 6-32 x 3/8"                 |                          |
| 20              | 690034-04          | Washer, Flat, 1/4"                                  |                          |



| <b>Y-Drive</b>  |                    | <b>Reference Figure 27</b>                                    |                 |
|-----------------|--------------------|---|-----------------|
| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                                       | <b>Comments</b> |
| 1               | 009463-02          | Motor, Y-Axis   |                 |
| 2               | 670050-03          | Screw, Set, Knurled Cup, 8-32 x 3/16" (Included with item 13) |                 |
| 3               | 690439-05          | Washer, Flat, M5  |                 |
| 4               | 690427-05          | Washer, Lock, Split, M5                                       |                 |
| 5               | 010172-10          | Screw, Socket Head Cap, M5 x 0.8 x 10mm, Zinc Plate           |                 |
| 6               | 10599              | Plate, Motor Mount #2   |                 |
| 7               | 690439-04          | Washer, Flat, M4  |                 |
| 8               | 690427-04          | Washer, Lock, Split, M4                                       |                 |
| 9               | 010172-30          | Screw, Socket Head Cap, M5 x 0.8 x 30mm, Zinc Plate           |                 |
| 10              | 004962-01          | Pulley, Pinion, Y-Axis  |                 |
| 11              | 344349-01          | Pulley, Drive   |                 |
| 12              | 010399-01          | Belt, 80T, 1/5P   |                 |
| 13              | 011159-01          | Pulley, Drive, Y-Raill  |                 |
| 14              | 009484-01          | Shaft, Drive  |                 |
| 15              | 010174-25          | Screw, Socket Head Cap, M8 x 1.25 x 25mm, Zinc Plate          |                 |
| 16              | 690439-08          | Washer, Flat, M8  |                 |
| 17              | 343054-08          | Bearing, Flange Cartridge, 2-Hole                             |                 |
| 18              | 690427-08          | Washer, Lock, Split, M8                                       |                 |
| 19              | 001963-09          | Nut, Hex, M8  |                 |
| 20              | 009465-01          | Washer, AIN   |                 |
| 21              | 005034-02          | Screw, Set, Cup Point, M4 x 0.7 x 4mm                         |                 |
| 22              | 010171-10          | Screw, Socket Head Cap, M4 x 0.7 x 10mm, Zinc Plate           |                 |
| 23              | 670872-06          | Screw, Set, Knurled Cup, 1/4-20 x 3/8"                        |                 |

# Left Y-Carriage

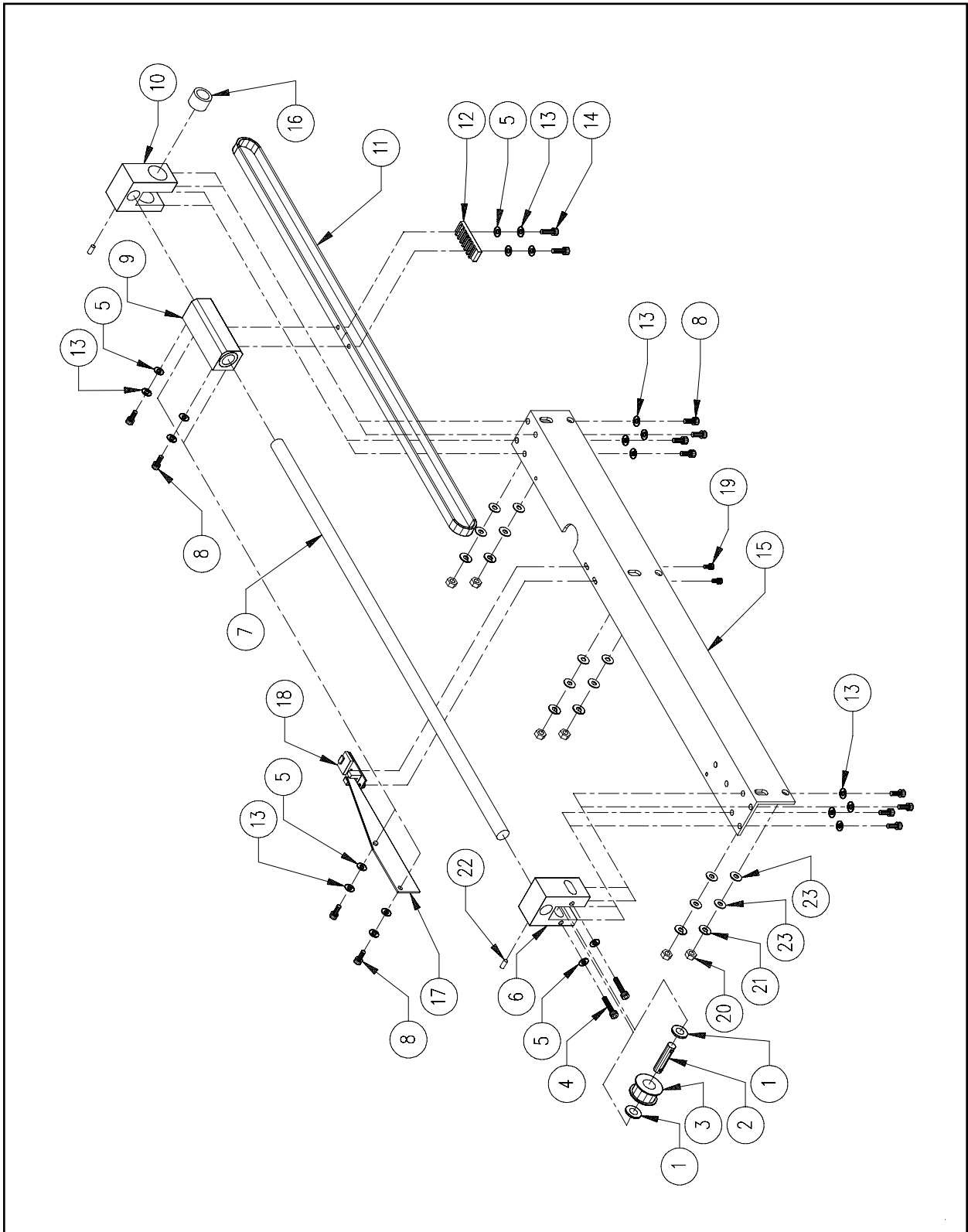


Figure 28



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


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| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1               | 009465-01          | Washer, AIN   |                 |
| 2               | 009483-01          | Shaft, Return                                       |                 |
| 3               | 005289-01          | Pulley, Idler, Return, Assembly                     |                 |
| 4               | 010171-20          | Screw, Socket Head Cap, M4 x 0.7 x 20mm, Zinc Plate |                 |
| 5               | 690439-04          | Washer, Flat, M4                                    |                 |
| 6               | 009481-01          | Block, Return, Y-Rack                               |                 |
| 7               | 009486-01          | Rail, Y-Carriage                                    |                 |
| 8               | 010171-10          | Screw, Socket Head Cap, M4 x 0.7 x 10mm, Zinc Plate |                 |
| 9               | 010198-01          | Block, Carriage, Y-Axis                             |                 |
| 10*             | 009482-02          | Block, Drive  |                 |
| 11              | 010751-01          | Belt, Y-Axis  |                 |
| 12              | 009890-01          | Clamp, Y-Belt                                       |                 |
| 13              | 690427-04          | Washer, Lock, Split, M4                             |                 |
| 14              | 010171-14          | Screw, Socket Head Cap, M4 x 0.7 x 14mm, Zinc Plate |                 |
| 15              | 009485-04          | Bracket, Mount Rack                                 |                 |
| 16*             | 010740-02          | Bearing, Roller, 1/2" ID x 1/2"                     |                 |
| 17              | 009891-02          | Flag, Y-Limit                                       |                 |
| 18              | 010277-04          | PCB, Y-Home, Assembly                               |                 |
| 19              | 010170-06          | Screw, Socket Head Cap, M3 x 0.5 x 6mm, Zinc Plate  |                 |
| 20              | 003573-05          | Nut, Hex, M5  |                 |
| 21              | 690427-05          | Washer, Lock, Split, M5                             |                 |
| 22              | 001960-08          | Screw, Set, Flat Point, M4 x 0.7 x 8mm              |                 |
| 23              | 690439-05          | Washer, Flat , M5                                   |                 |

Note: The following can be replaced as a factory built assembly:

\*010310-01 Block, Y-Drive, Rear, Assembly

# Right Y-Carriage

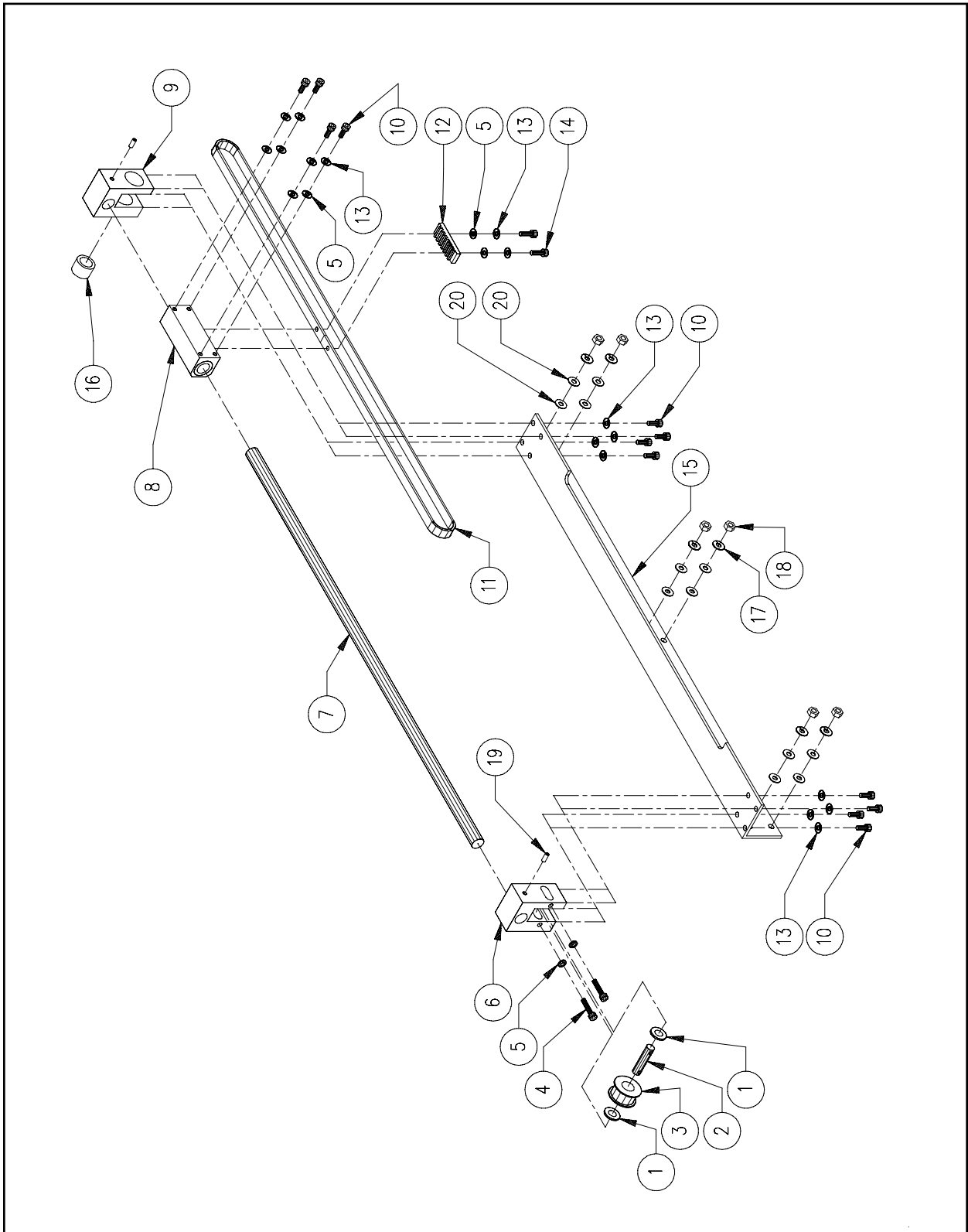


Figure 29

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

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1               | 009465-01          | Washer, AIN   |                 |
| 2               | 009483-01          | Shaft, Return                                       |                 |
| 3               | 005289-01          | Pulley, Idler, Return, Assembly                     |                 |
| 4               | 010171-20          | Screw, Socket Head Cap, M4 x 0.7 x 20mm, Zinc Plate |                 |
| 5               | 690439-04          | Washer, Flat, M4                                    |                 |
| 6               | 009481-01          | Block, Return, Y-Rack                               |                 |
| 7               | 009486-01          | Rail, Y-Carriage                                    |                 |
| 8               | 010198-01          | Block, Carriage, Y-Axis                             |                 |
| 9*              | 009482-02          | Block, Drive  |                 |
| 10              | 010171-10          | Screw, Socket Head Cap, M4 x 0.7 x 10mm, Zinc Plate |                 |
| 11              | 010751-01          | Belt, Y-Axis  |                 |
| 12              | 009890-01          | Clamp, Y-Belt                                       |                 |
| 13              | 690427-04          | Washer, Lock, Split, M4                             |                 |
| 14              | 010171-14          | Screw, Socket Head Cap, M4 x 0.7 x 14mm, Zinc Plate |                 |
| 15              | 010361-03          | Bracket, Mount, Right Rack                          |                 |
| 16*             | 010740-02          | Bearing, Roller, 1/2" ID x 1/2"                     |                 |
| 17              | 690427-05          | Washer, Lock, Split, M5                             |                 |
| 18              | 003573-05          | Nut, Hex, M5  |                 |
| 19              | 001960-08          | Screw, Set, Flat Point, M4 x 0.7 x 8mm              |                 |
| 20              | 690439-05          | Washer, Flat, M5                                    |                 |

Note: The following can be replaced as a factory built assembly:

\*010310-01 Block, Y-Drive, Rear, Assembly

# Cap Frame Mounts

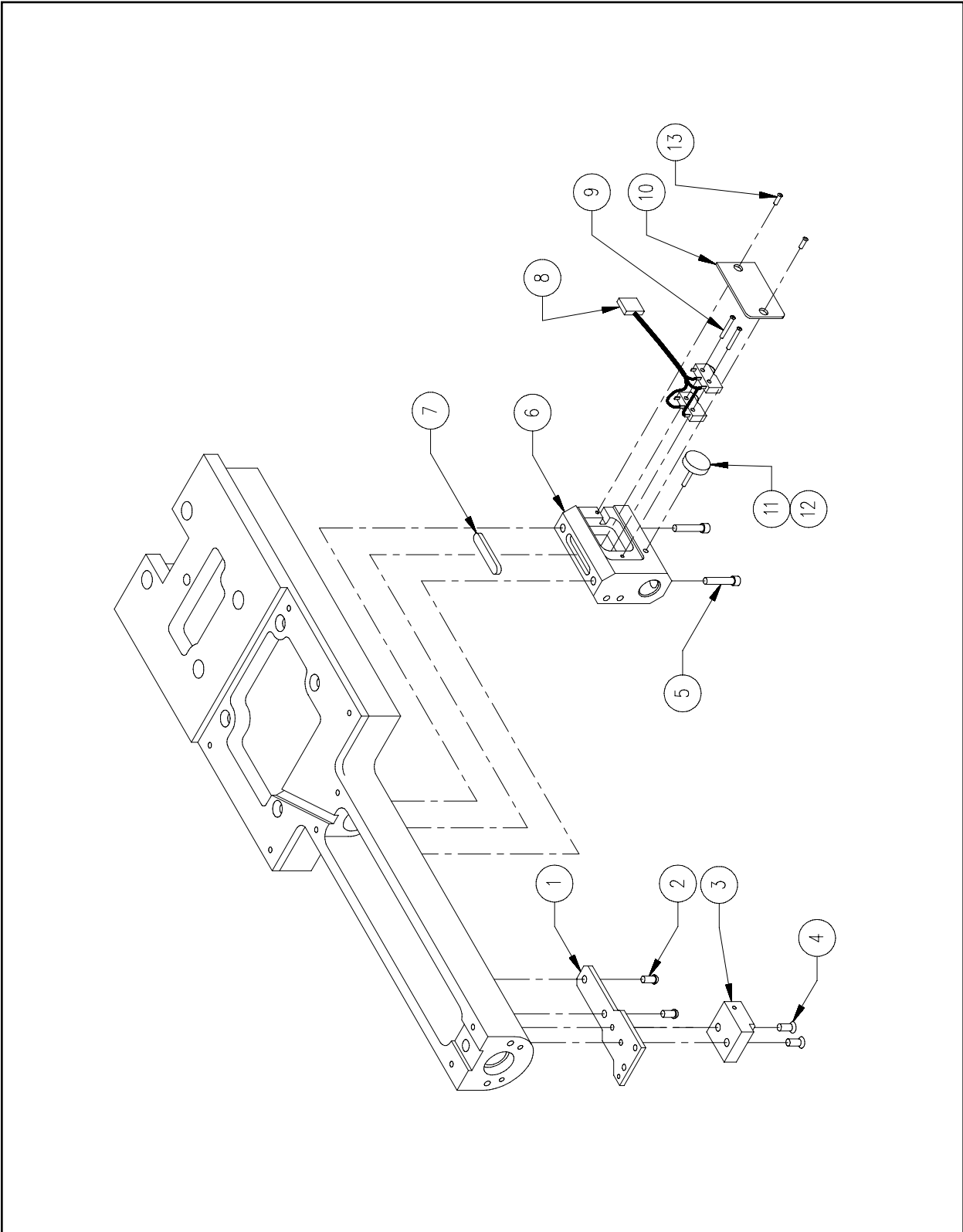


Figure 30

**Cap Frame Mounts****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 8mmg          |                 |
| 3               | 006523-02          | Mount, Dove Tail, Cap Frame                         |                 |
| 4               | 001926-12          | Screw, Flat Head Socket, M4 x 0.7 x 12mm            |                 |
| 5               | 010171-20          | Screw, Socket Head Cap, M4 x 0.7 x 20mm, Zinc Plate |                 |
| 6*              | 009861-01          | Connector, Dual Cap Frame                           |                 |
| 7               | 006525-01          | Key, Shaft, 6mm x 6mm x 32mm                        |                 |
| 8*              | 11516              | Switch, Cap Frame, Dual                             |                 |
| 9*              | 003122-16          | Screw, Pan Head Phillips, M2 x 0.4 x 16mm           |                 |
| 10*             | 009014-01          | Cover, Cap Frame Bracket                            |                 |
| 11              | 010172-10          | Screw, Socket Head Cap, M5 x 0.8 x 10mm, Zinc Plate |                 |
| 12              | 006538-01          | Knob, Knurled, M5, Black                            |                 |
| 13*             | 006558-06          | Screw, Pan Head Phillips, M3 x 0.5 x 6mm            |                 |

Note:

The following can be replaced as a factory built assembly:

\*010186-02 Bracket, Cap Frame, Assembly

# Harnesses (1 of 3)

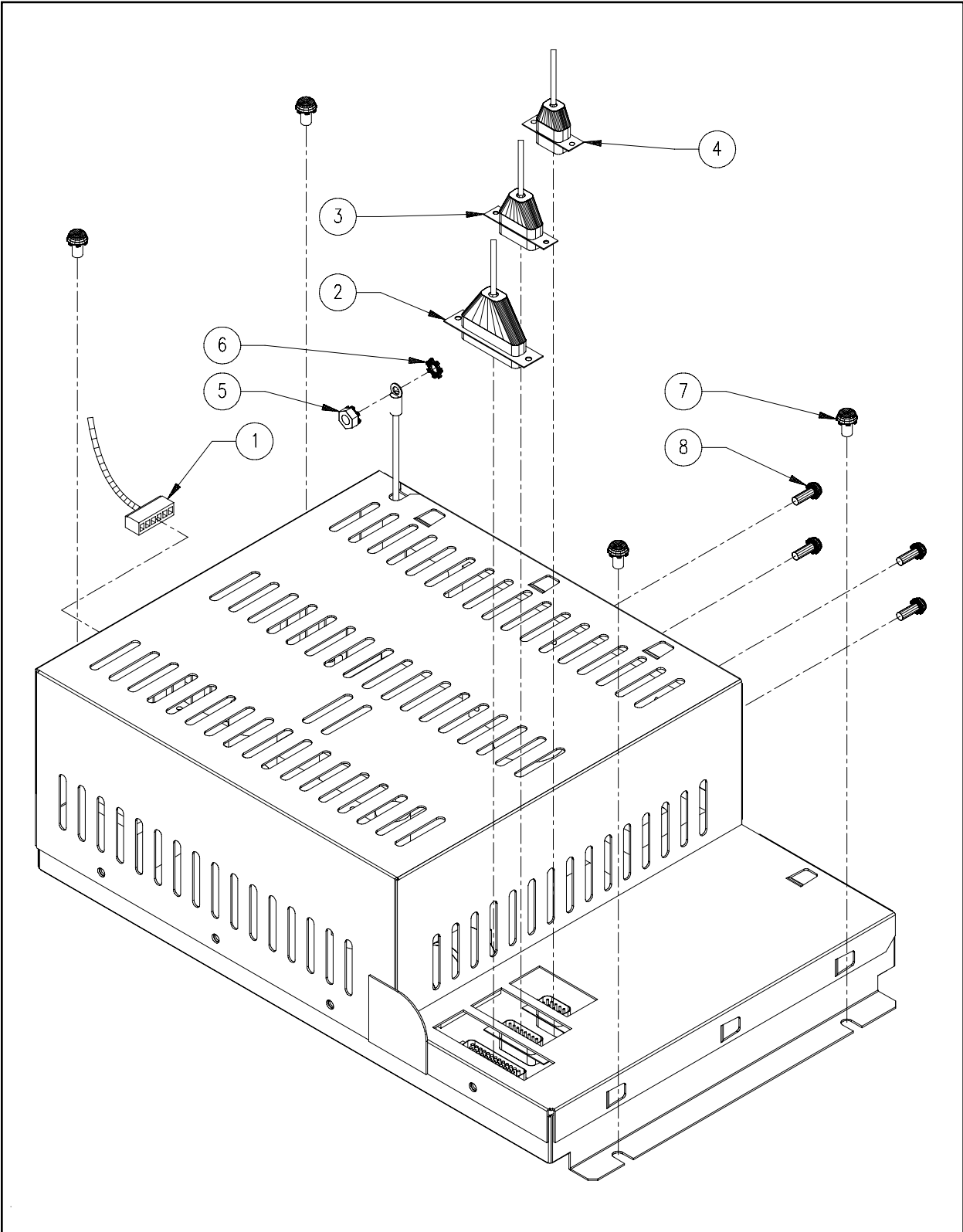
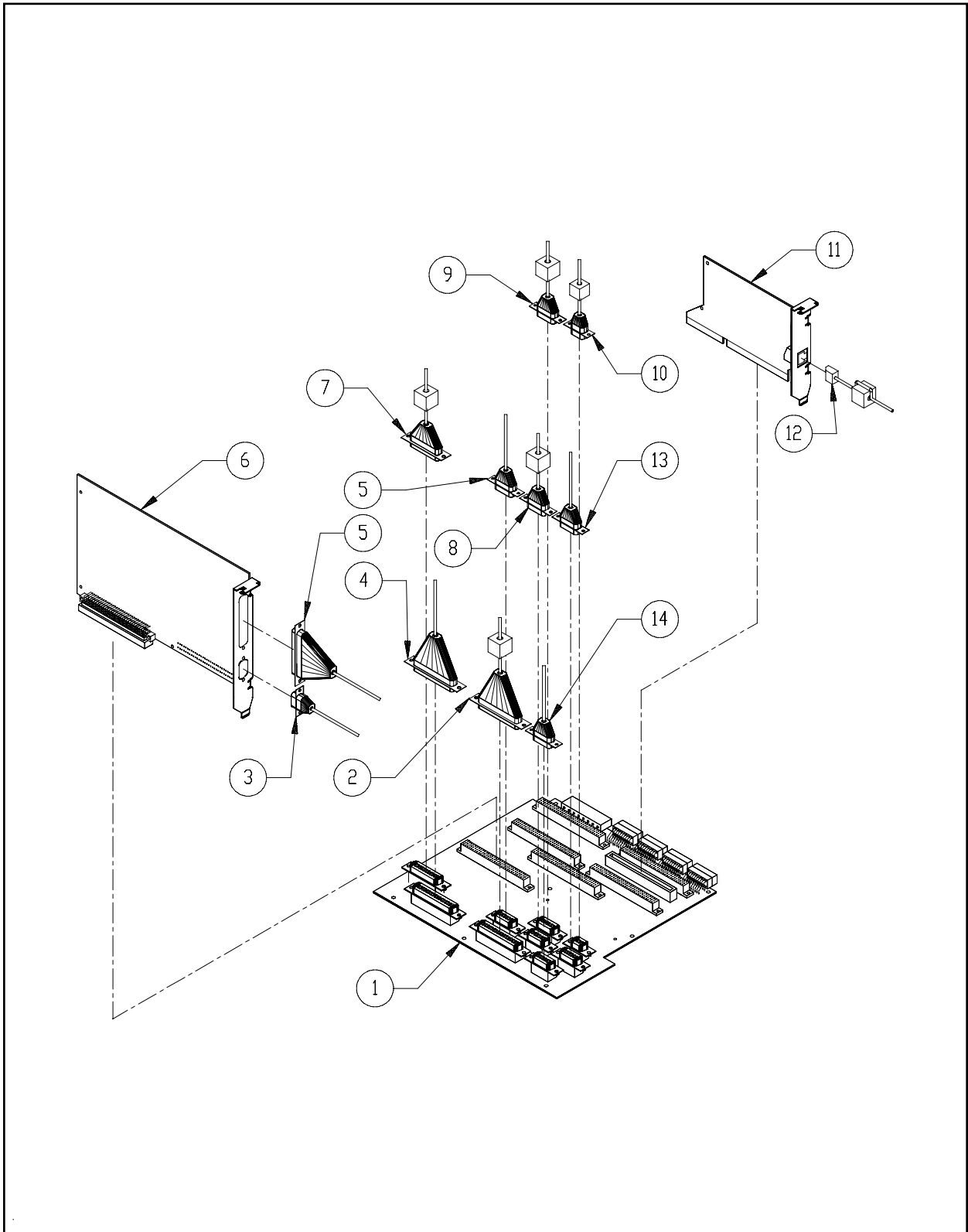


Figure 31

**Harnesses (1 of 3)****Reference Figure 31**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                           | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1               | 10270              | Harness, Circuit Breaker                          |                 |
| 2               | 10148              | Harness, Bobbin Winder                            |                 |
| 3               | 009970-01          | Cable, Power, Backplane                           |                 |
| 4               | 009961-02          | Cable, Low Voltage Power                          |                 |
| 5               | 009561-05          | Nut, Kep, M5                                      |                 |
| 6               | 010167-05          | Washer, Lock, External Star, M5                   |                 |
| 7               | 11057              | Screw, Pan Head Phillips, w/Star, M5 x 0.8 x 8mm  |                 |
| 8               | 009863-10          | Screw, Pan Head Phillips, w/Star, M4 x 0.7 x 10mm |                 |

## Harnesses (2 of 3)



**Figure 32**



**Harnesses (2 of 3)****Reference Figure 32**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>              | <b>Comments</b> |
|-----------------|--------------------|--------------------------------------|-----------------|
| 1               | 10716              | PCB, Backplane, Assembly             |                 |
| 2               | 010951-01          | Cable, Thread/Color Change           |                 |
| 3               | 009961-02          | Cable, Low Voltage Power             |                 |
| 4               | 010992-01          | Cable, Floppy Drive                  |                 |
| 5               | 010523-03          | Harness, X-Axis Collector            |                 |
| 6               | 009419-01          | PCB, Motor Drive, Assembly           |                 |
| 7               | 011087-01          | Harness, Keyboard/Display            |                 |
| 8               | 010952-01          | Harness, Color/Grabber-Encoder/Motor |                 |
| 9               | 011092-02          | Harness, Head                        |                 |
| 10              | 009969-03          | Cable, Jump Stitch                   |                 |
| 11              | 010192-01          | PCB, Network, Intel, Pro 10          |                 |
| 12              | 010369-01          | Cable, Ethernet, Network, Interface  |                 |
| 13              | 009968-01          | Harness, Y-Z Axis                    |                 |
| 14              | 009970-02          | Cable, Power, Backplane              |                 |

# Harnesses (3 of 3)

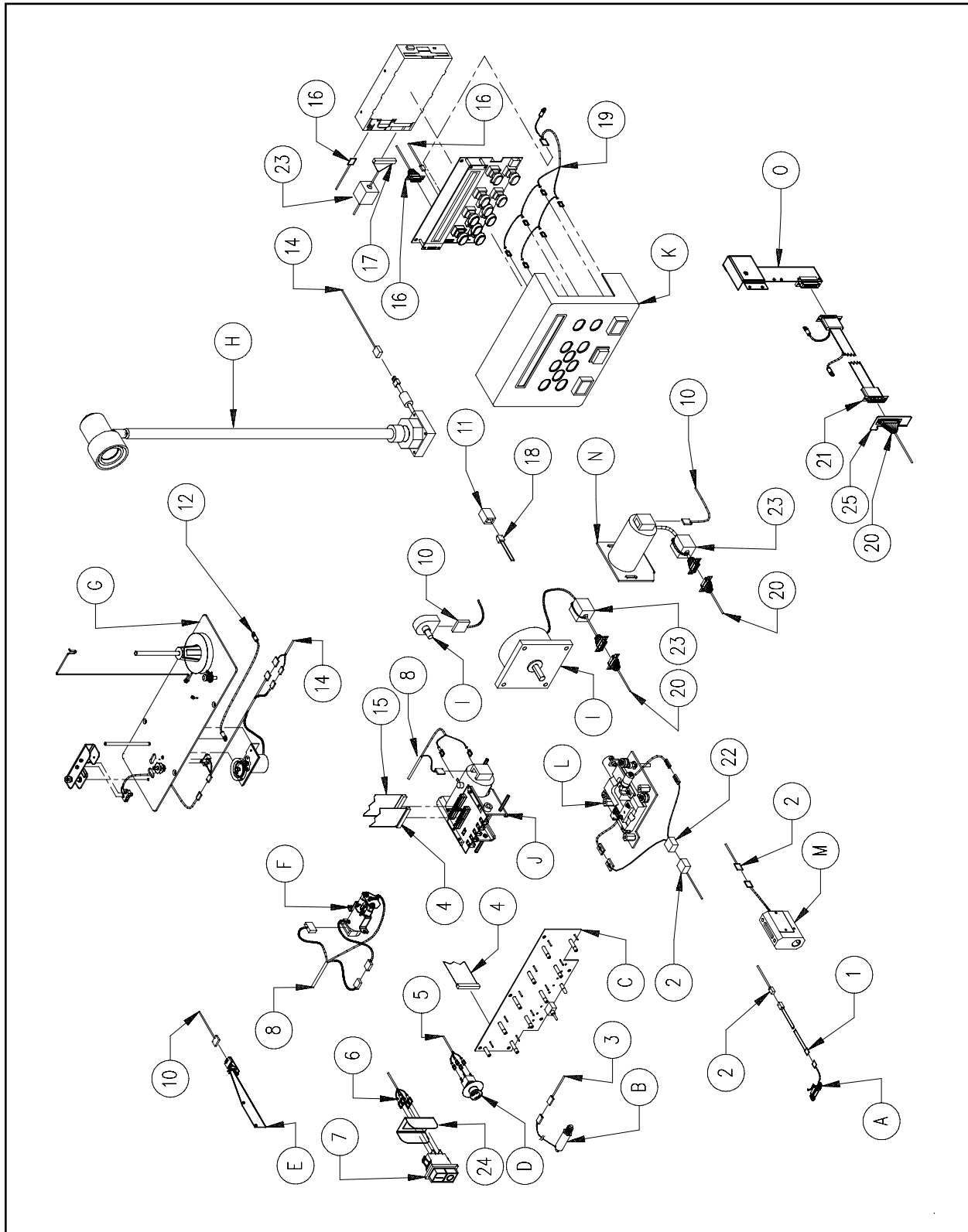


Figure 33

**Harnesses (3 of 3)****Reference Figure 33**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                   | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| A               | -----              | Under Thread Control                      | (See page 14-1) |
| B               | -----              | Jump Stitch                               | (See page 14-1) |
| C               | -----              | Thread Tensioner                          | (See page 13-1) |
| D               | -----              | E-Stop Switch                             | (See page 2-1)  |
| E               | -----              | Y-Limit Flag                              | (See page 28-1) |
| F               | -----              | Grabber Motor                             | (See page 18-1) |
| G               | -----              | Bobbin Winder                             | (See page 5-1)  |
| H               | -----              | Light Fixture                             | (See page 6-1)  |
| I               | -----              | Z-Motor/Encoder                           | (See page 26-1) |
| J               | -----              | Color Change                              | (See page 8-1)  |
| K               | -----              | Keyboard                                  | (See page 3-1)  |
| L               | -----              | Trimmer Drive                             | (See page 20-1) |
| M               | -----              | Cap Frame Mounts                          | (See page 30-1) |
| N               | -----              | Y-Drive Motor                             | (See page 27-1) |
| O               | -----              | X-Beam                                    | (See page 24-1) |
| 1               | 009972-01          | Harness, Bed, Under Thread Control        |                 |
| 2               | 009910-05          | Harness, Head                             |                 |
| 3               | 009969-02          | Cable, Jump Stitch                        |                 |
| 4               | 011094-02          | Cable, Jumper, Thread Break               |                 |
| 5               | 009971-03          | Cable, E-Stop                             |                 |
| 6               | 10270              | Harness, Circuit Breaker                  |                 |
| 7               | 009879-04          | Breaker, On/Off, 4A                       |                 |
| 8               | 010952-01          | Harness, Color/Grabber-Encoder/Motor      |                 |
| 9               | 10307              | Harness, Power Entry, PC                  |                 |
| 10              | 009968-01          | Harness, Y-Z Axis                         |                 |
| 11              | 000434-02          | Coupler, In-Line, 6 Position              |                 |
| 12              | 011006-01          | Cable, Ground, Braid, 6.5"                |                 |
| 13              | 010682-01          | Power Entry Module, Filtered, 6A          |                 |
| 14              | 10148              | Harness, Bobbin Winder                    |                 |
| 15              | 010951-01          | Cable, Thread/Color Change                |                 |
| 16              | 009918-02          | Harness, Keyboard/Display                 |                 |
| 17              | 010992-02          | Cable, Floppy Drive                       |                 |
| 18              | 010369-01          | Cable, Ethernet, Network, Interface       |                 |
| 19              | 009913-02          | Harness, Start/Stop/Frame                 |                 |
| 20              | 010523-03          | Harness, X-Axis Collector                 |                 |
| 21              | 010922-02          | Cable, X-Axis Flex                        |                 |
| 22              | 007261-01          | Trimmer, Picker, Solenoid, Opto, Assembly |                 |
| 23              | 009311-01          | Ferrite, Split, Large                     |                 |
| 24              | 10173              | Guard, Switch                             |                 |
| 25              | 10944              | Bracket, Mount, D-Sub                     |                 |

# Cap Frame Drive

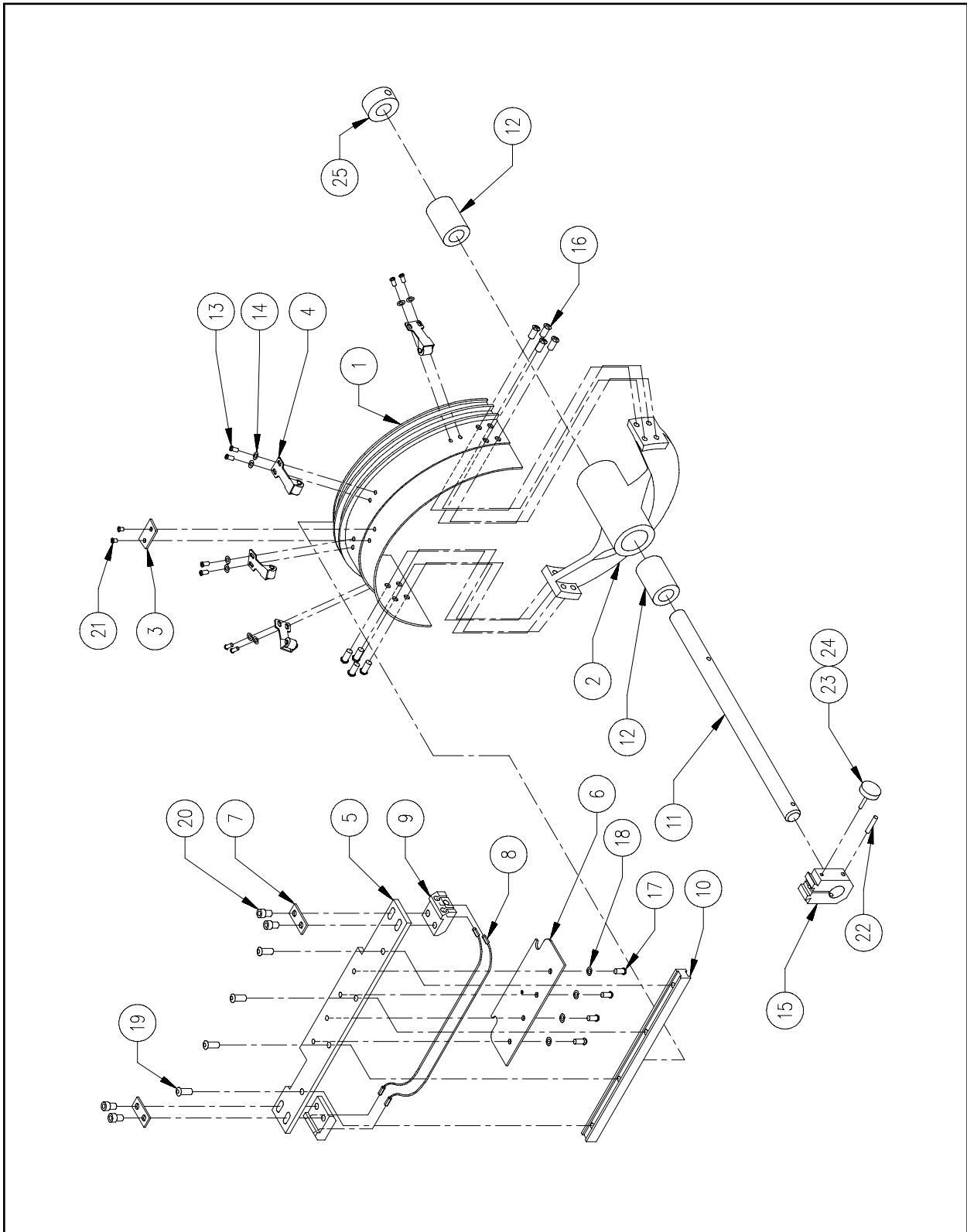


Figure 34

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**Cap Frame Drive** **Reference Figure 34**


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| 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 "                       |          |
| 23#      | 010172-16   | Screw, Socket Head Cap, M5 x 0.8 x 16mm, Zinc Plate |          |
| 24#      | 006538-01   | Knob, Knurled, M5, Black                            |          |
| 25       | 342872-08   | Collar, Shaft, 1/2 " ID                             |          |

Note: The following can be replaced as a factory built assembly:

- \*006667-01 Ring, Drive, Sub-Assembly
- 006541-01 Ring, Drive, Assembly (includes 006667-01)
- #007401-01 Screw, Thumb, 16mm Lg, Assembly

# Melco Cap Frame

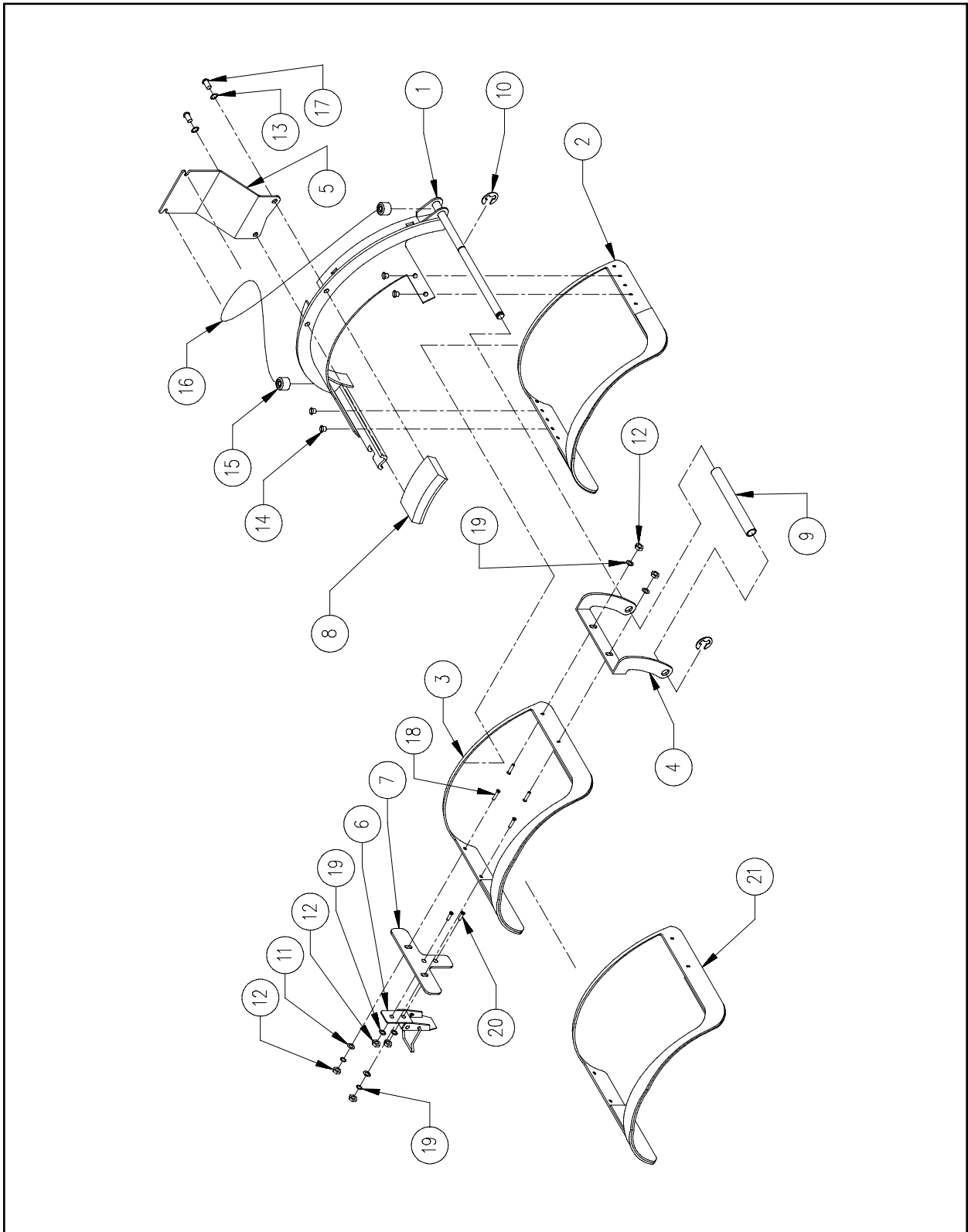


Figure 35

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**Melco Cap Frame** **Reference Figure 35**


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| 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 8mm |          |
| 19*•     | 003128-03   | Washer, Lock, Split, M3                   |          |
| 20*•     | 005934-01   | Screw, Flat Head Phillips, M3 x 0.5 x 6mm |          |
| 21•      | 005948-01   | Strap, Clamping, 82mm, 6-Panel            |          |

**Note:**

The following can be replaced as a factory built assembly:

- \*007199-01 Strap, Clamping, 72mm, 6-Panel, Assembly
- 007198-01 Strap, Clamping, 82mm, 6-Panel, Assembly
- #006674-01 Cap Frame, Adjustable, 6-Panel (includes 007198-01 and 007199-01)

# Melco Cap Frame Gauge

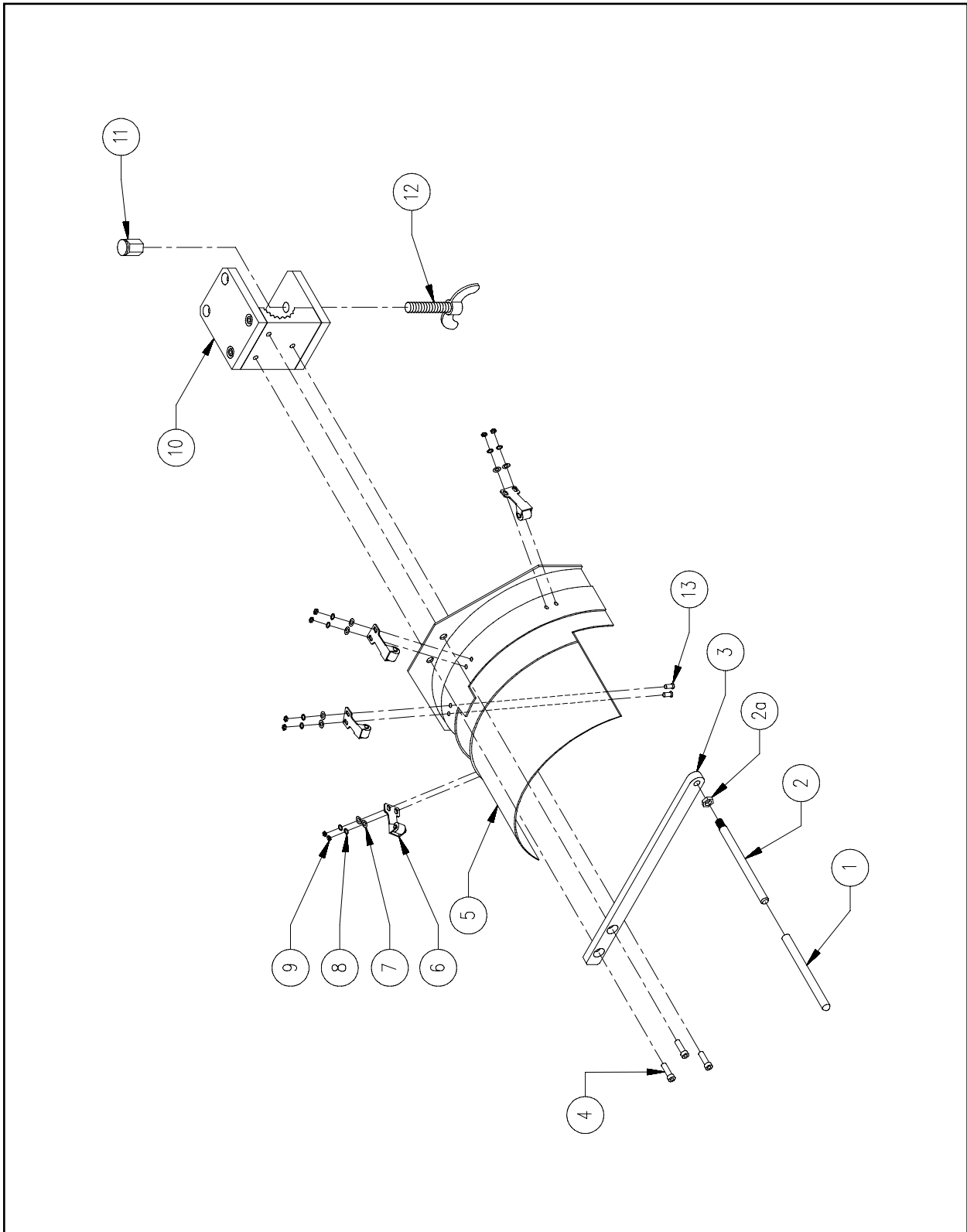


Figure 36



**Melco Cap Frame Gauge****Reference Figure 36**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                  | <b>Comments</b> |
|-----------------|--------------------|--|-----------------|
| 1*              | 005100-01          | Shaft Cover, Frame Holder                |                 |
| 2*              | 004958-01          | Shaft, Frame Holder, Gauge Set           |                 |
| 2a*             | 680032-04          | Nut, Hex, 1/4-20                         |                 |
| 3*              | 004957-01          | Bracket, Frame Holder, Gauge Set         |                 |
| 4#              | 670038-08          | Screw, Socket Head Cap, 10-32 x 1/2 "    |                 |
| 5#              | 005051-01          | Gauge, Cap Frame, Weldment               |                 |
| 6#              | 004229-01          | Clip, Roller, Cap Frame Driver, Assembly |                 |
| 7#              | 690034-34          | Washer, Flat, #4                         |                 |
| 8#              | 690033-34          | Washer, Lock, Split, #4                  |                 |
| 9#              | 680032-34          | Nut, Hex, 4-40                           |                 |
| 10#             | 004949-01          | Block, Mounting, Cap Gauge, Assembly     |                 |
| 11•             | 004952-01          | Nut, Swivel, 3/8-16                      |                 |
| 12•             | 004950-01          | Screw, Thumb, Wing-Head, 3/8-16 x 1.5"   |                 |
| 13#             | 670828-06          | Screw, Flat Head Socket, 4-40 x 3/8"     |                 |

Note:

The following can be replaced as a factory built assembly:

- \*004956-01 Holder, Frame, Gauge Set, Assembly
- #005050-01 Gauge, Cap Frame, Assembly
- 004949-01 Block, Mounting, Cap Gauge, Assembly (part of Item 10)

# Wide Angle Cap Frame (1 of 7)

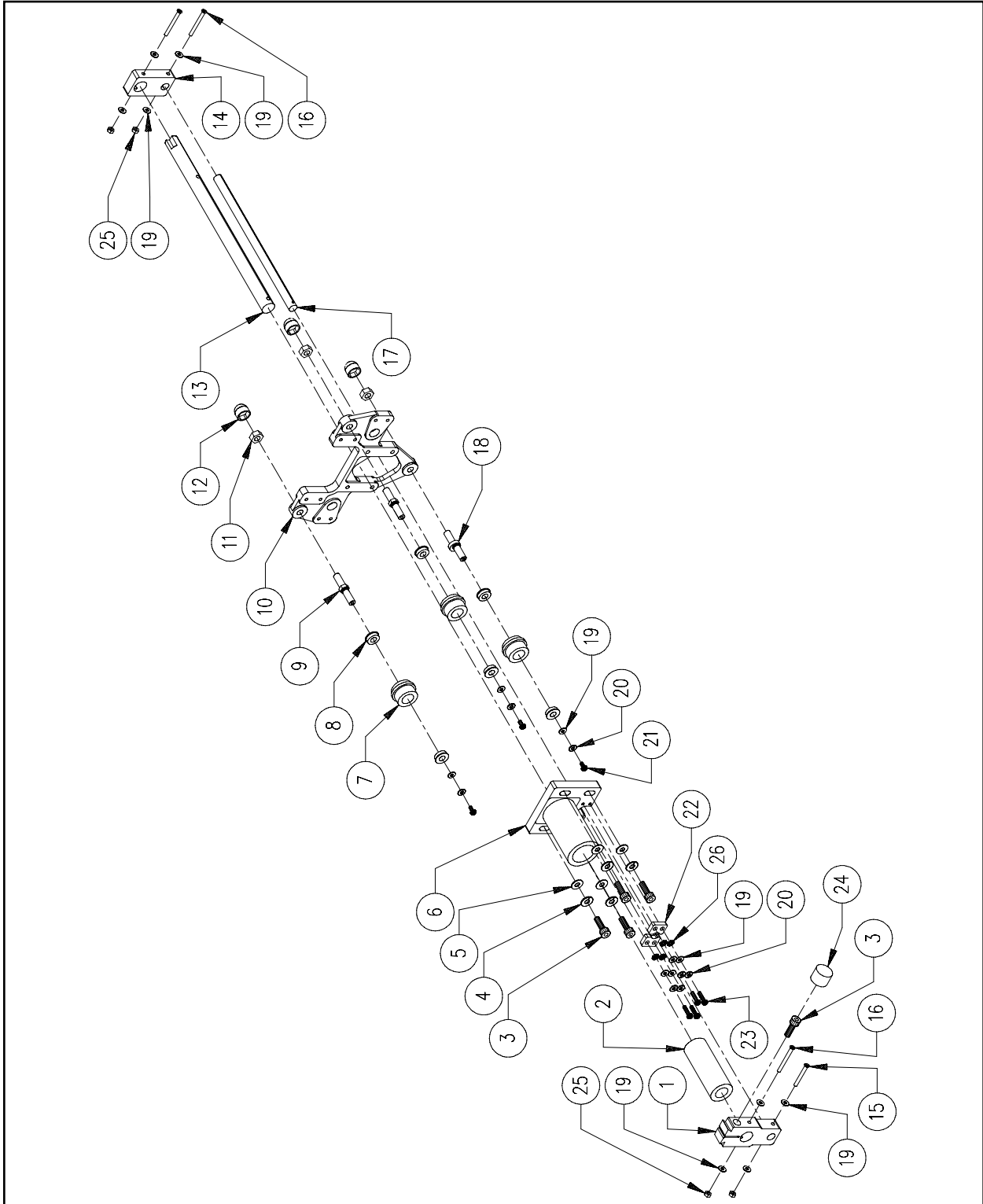


Figure 37

**Wide Angle Cap Frame (1 of 7)****Reference Figure 37**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b>        |
|-----------------|--------------------|---|------------------------|
| 1               | 009602-03          | Mount, Front, Drive Ring                            |                        |
| 2               | 009618-01          | Bearing, Linear                                     |                        |
| 3               | 010172-16          | Screw, Socket Head Cap, M5 x 0.8 x 16mm, Zinc Plate |                        |
| 3a*             | 010468-01          | Wrench, Hex, 4mm                                    | (see Note) (not shown) |
| 4               | 690427-05          | Washer, Lock, Split, M5                             |                        |
| 5               | 690439-05          | Washer, Flat, M5                                    |                        |
| 6               | 009594-01          | Housing, Bearing                                    |                        |
| 7               | 009597-01          | Roller, Drive Ring                                  |                        |
| 8               | 009623-01          | Bearing, Flanged                                    |                        |
| 9               | 009599-02          | Shaft, Roller                                       |                        |
| 10              | 009601-01          | Base, Drive Ring                                    |                        |
| 11              | 680430-06          | Nut, Hex, M6  |                        |
| 12              | 006913-06          | Cover, Cap, Hex, M6                                 |                        |
| 13              | 010099-02          | Shaft, Drive Ring                                   |                        |
| 14              | 009596-02          | Support, Shaft, Rear                                |                        |
| 15              | 006558-25          | Screw, Pan Head Phillips, M3 x 0.5 x 25mm           |                        |
| 16              | 006558-30          | Screw, Pan Head Phillips, M3 x 0.5 x 30mm           |                        |
| 17              | 009615-02          | Shaft, Guide, Drive Ring                            |                        |
| 18              | 009598-02          | Shaft, Roller, Eccentric                            |                        |
| 19              | 690439-03          | Washer, Flat, M3                                    |                        |
| 20              | 690427-03          | Washer, Lock, Split, M3                             |                        |
| 21              | 675310-01          | Screw, Pan Head Phillips, M3 x 0.5 x 6mm            |                        |
| 22              | 009595-02          | Pad, Guide, Shaft                                   |                        |
| 23              | 010170-16          | Screw, Socket Head Cap, M3 x 0.5 x 16mm             |                        |
| 24              | 006538-03          | Knob, Knurled, Black, M5                            |                        |
| 25              | 003573-03          | Nut, M3, Locking                                    |                        |
| 26              | 010167-03          | Washer, External Star, M3                           |                        |

Note:

\*Used with Item 3 and supplied with the Wide-Angle Cap Frame Option

# Wide Angle Cap Frame (2 of 7)

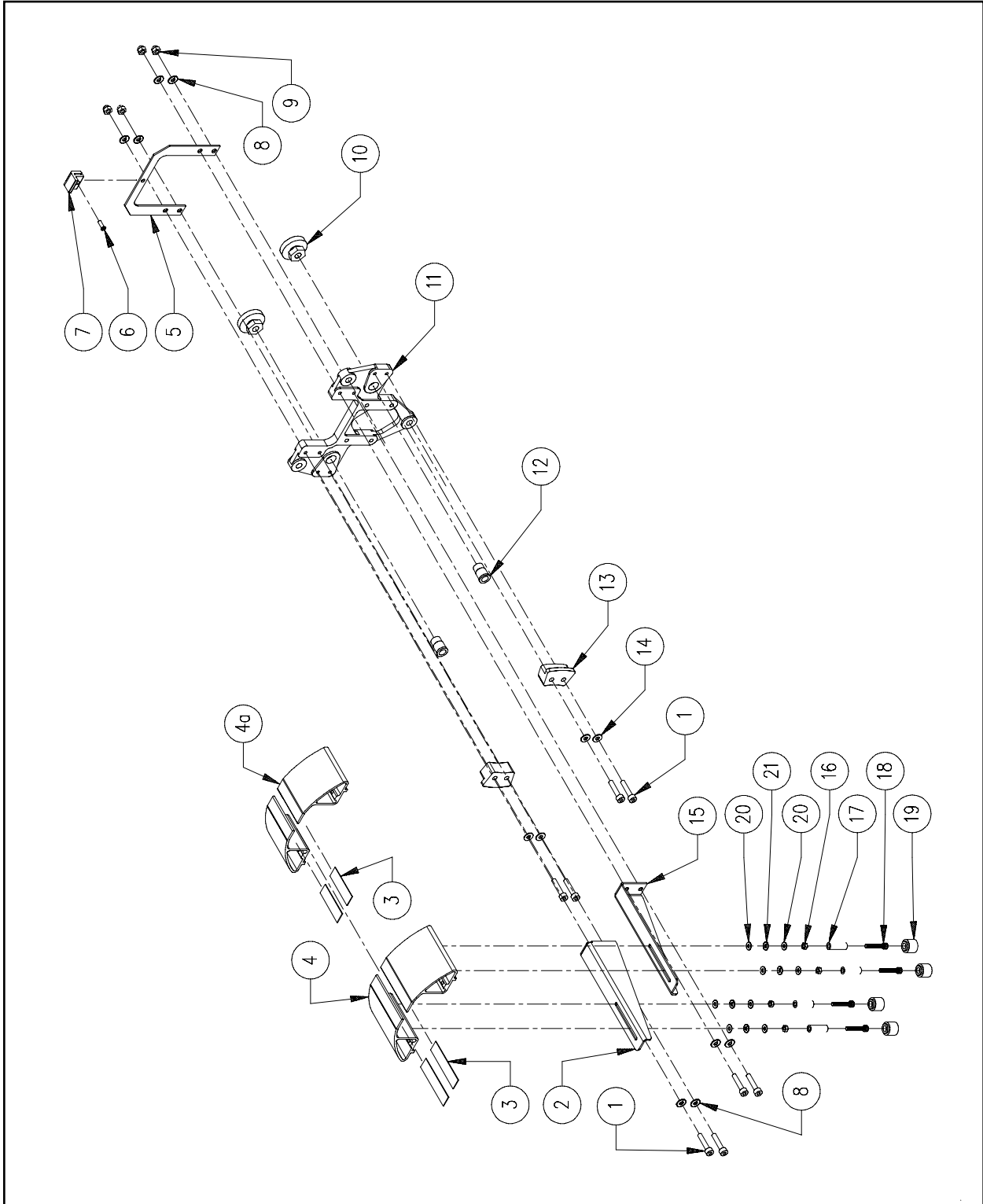


Figure 38

**Wide Angle Cap Frame (2 of 7)****Reference Figure 38**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1               | 010171-20          | Screw, Socket Head Cap, M4 x 0.7 x 20mm, Zinc Plate |                 |
| 2               | 011057-01          | Bracket, Support, Left Hand                         |                 |
| 3               | 011062-01          | Tape, Adhesive, 2.25"                               |                 |
| 4*              | 009604-01          | Support, Cap, Large, Machined                       |                 |
| 4a*             | 10773              | Support, Cap, Small, Machined                       |                 |
| 5               | 009621-01          | Bracket, Holder, Bar                                |                 |
| 6               | 010406-08          | Screw, Flat Head Phillips, M2.5 x 0.4 x 8mm         |                 |
| 7               | 009857-02          | Pad, Holder, Bar                                    |                 |
| 8               | 690427-04          | Washer, Lock, Split, M4                             |                 |
| 9               | 010407-04          | Nut, Acorn, M4                                      |                 |
| 10              | 009659-01          | Lock, Shaft, .25" ID                                |                 |
| 11              | 009601-01          | Base, Drive Ring                                    |                 |
| 12              | 009616-01          | Nipple, Support, Tensioner Disk                     |                 |
| 13              | 009600-02          | Pad, Support, Cylinder                              |                 |
| 14              | 010668-01          | Washer, Flat, Fender, M4                            |                 |
| 15              | 011056-01          | Bracket, Support, Right Hand                        |                 |
| 16              | 680430-03          | Nut, Hex, M3  |                 |
| 17              | 700134-12          | Spacer, Nylon, .14" ID x .25" OD x .75"             |                 |
| 18              | 010170-30          | Screw, Socket Head Cap, M3 x 0.5 x 30mm, Zinc Plate |                 |
| 19              | 006538-03          | Knob, Knurled, Black, M3                            |                 |
| 20              | 006303-04          | Washer, Plain, Type 3                               |                 |
| 21              | 690427-03          | Washer, Lock, Split, M3                             |                 |

Note: \*When replacing items 4 or 4a item 3 must also be replaced and trimmed to fit



**Wide Angle Cap Frame (3 of 7)****Reference Figure 39**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                              | <b>Comments</b> |
|-----------------|--------------------|--|-----------------|
| 1               | 005934-08          | Screw, Flat Head Phillips, M3 x 0.5 x 8mm            |                 |
| 2               | 005934-01          | Screw, Flat Head Phillips, M3 x 0.5 x 6mm            |                 |
| 3               | 010171-10          | Screw, Socket Head, Cap, M4 x 0.7 x 10mm, Zinc Plate |                 |
| 4               | 690427-04          | Washer, Lock, Split, M4                              |                 |
| 5               | 690439-04          | Washer, Flat, M4                                     |                 |
| 6               | 009624-02          | Clamp, Hold Down, Left Hand                          |                 |
| 7               | 680430-03          | Nut, Hex, M3   |                 |
| 8               | 690439-03          | Washer, Flat, M3                                     |                 |
| 9               | 004229-01          | Clip, Roller, Assembly                               |                 |
| 10              | 009608-02          | Bracket, Drive Ring                                  |                 |
| 11              | 009625-01          | Spring, Compression                                  |                 |
| 12              | 009610-01          | Nut, Tensioner, Drive Ring                           |                 |
| 13              | 009626-01          | Cable, Drive Ring, Assembly                          |                 |
| 14              | 011058-01          | Bracket, Clamp, Right Hand                           |                 |
| 15              | 009811-01          | Washer, Holder, Cable                                |                 |
| 16              | 011059-01          | Bracket, Clamp, Left Hand                            |                 |
| 17              | 009619-02          | Cylinder, Drive Ring                                 |                 |
| 18              | 009624-01          | Clamp, Hold Down, Right Hand                         |                 |
| 19              | 674900-10          | Screw, Hex Head, 8-32 x 5/8"                         |                 |

# Wide Angle Cap Frame (4 of 7)

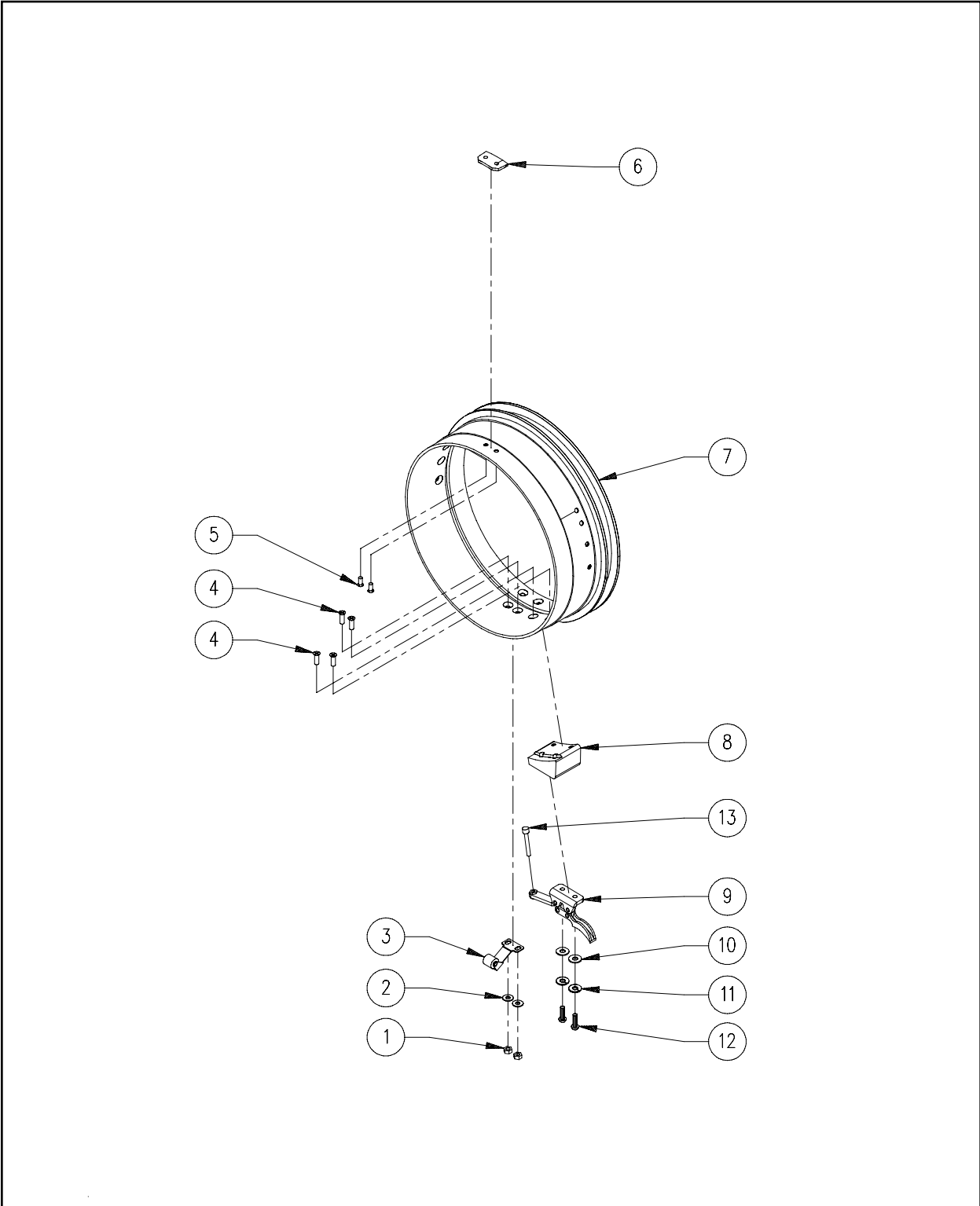


Figure 40



**Wide Angle Cap Frame (4 of 7)****Reference Figure 40**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                               | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1               | 680430-03          | Nut, Hex, M3  |                 |
| 2               | 690439-03          | Washer, Flat, M3                                      |                 |
| 3               | 004229-01          | Clip, Roller, Assembly                                |                 |
| 4               | 005934-08          | Screw, Flat Head Phillips, M3 x 0.5 x 8mm, Zinc Plate |                 |
| 5               | 010406-04          | Screw, Flat Head Socket, M2.5 x 0.4 x 4mm             |                 |
| 6               | 009620-01          | Locator, Drive Ring                                   |                 |
| 7               | 009619-02          | Cylinder, Drive Ring                                  |                 |
| 8               | 011059-01          | Bracket, Clamp, Left Hand                             |                 |
| 9               | 009624-02          | Clamp, Hold Down, Left Hand                           |                 |
| 10              | 690439-04          | Washer, Flat, M4                                      |                 |
| 11              | 690427-04          | Washer, Lock, Split, M4                               |                 |
| 12              | 001924-10          | Screw, Cheese Head, Slotted, M4 x 0.7 x 10mm          |                 |
| 13              | 674900-10          | Screw, Hex Head, 8-32 x 5/8"                          |                 |

# Wide Angle Cap Frame (5 of 7)

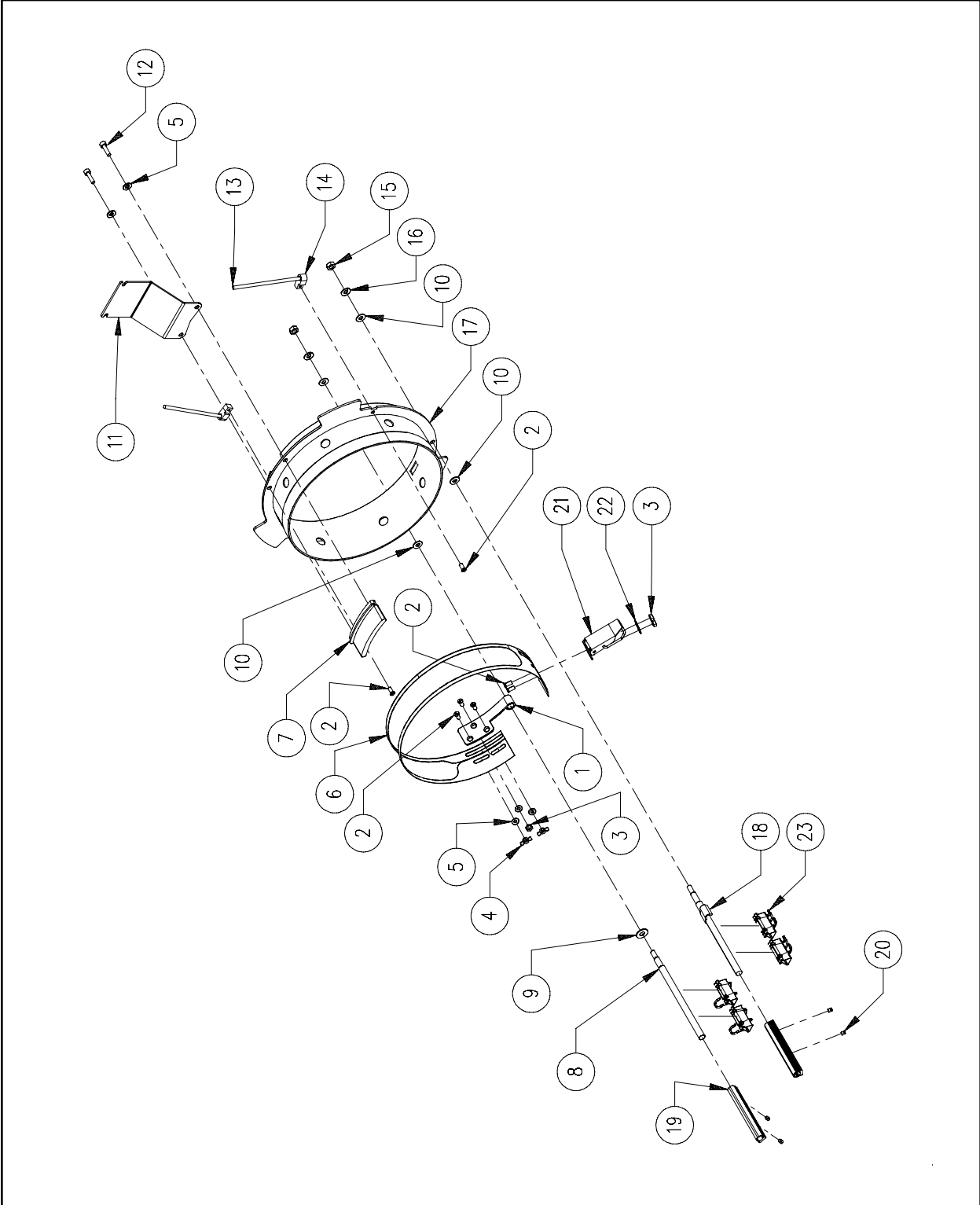


Figure 41

**Wide Angle Cap Frame (5 of 7)****Reference Figure 41**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1•              | 010074-01          | Hinge, Cap Frame                                    |                 |
| 2•*             | 010133-06          | Screw, Small Flat Head, M3 x 0.5 x 6mm              |                 |
| 3*              | 680430-03          | Nut, Hex, M3  |                 |
| 4*              | 006021-01          | Nut, Wing, M3                                       |                 |
| 5•*             | 690439-03          | Washer, Flat, M3                                    |                 |
| 6*              | 010151-01          | Strap, Clamping, Cap Frame, w/Rubber                |                 |
| 7•              | 010191-02          | Locator, Brim, Cap Frame                            |                 |
| 8•              | 010075-01          | Post, Cap Frame                                     |                 |
| 9•              | 690439-05          | Washer, Flat, M5                                    |                 |
| 10•             | 690439-04          | Washer, Flat, M4                                    |                 |
| 11•             | 005071-02          | Holder, Visor                                       |                 |
| 12•             | 010170-10          | Screw, Socket Head Cap, M3 x 0.5 x 10mm, Zinc Plate |                 |
| 13*             | 005073-01          | Cord, Shock, Cap Frame                              |                 |
| 14•             | 010079-01          | Bracket, Strap, Rubber                              |                 |
| 15•             | 001963-05          | Nut, Hex, M4  |                 |
| 16•             | 690427-04          | Washer, Lock, Split, M4                             |                 |
| 17*             | 010077-01          | Weldment, Cap Frame, w/Rubber                       |                 |
| 18•             | 010078-02          | Post, Cap Frame, Weldment                           |                 |
| 19•             | 010081-02          | Holder, Clip  |                 |
| 20•             | 001960-03          | Screw, Set, Flat Point, M4 x 0.7 x 3mm              |                 |
| 21*             | 005487-01          | Latch, Takigen                                      |                 |
| 22*             | 690427-03          | Washer, Lock, Split, M3                             |                 |
| 23•             | 009682-02          | Clip, Cap Frame                                     |                 |

Note:

The following can be replaced as a factory built assembly:

- \*010093-01 Cap Frame, Wide-Angle, Melco, Assembly
- 010540-02 Cap Frame, Wide-Angle, Sub-Assembly

# Wide Angle Cap Frame (6 of 7)

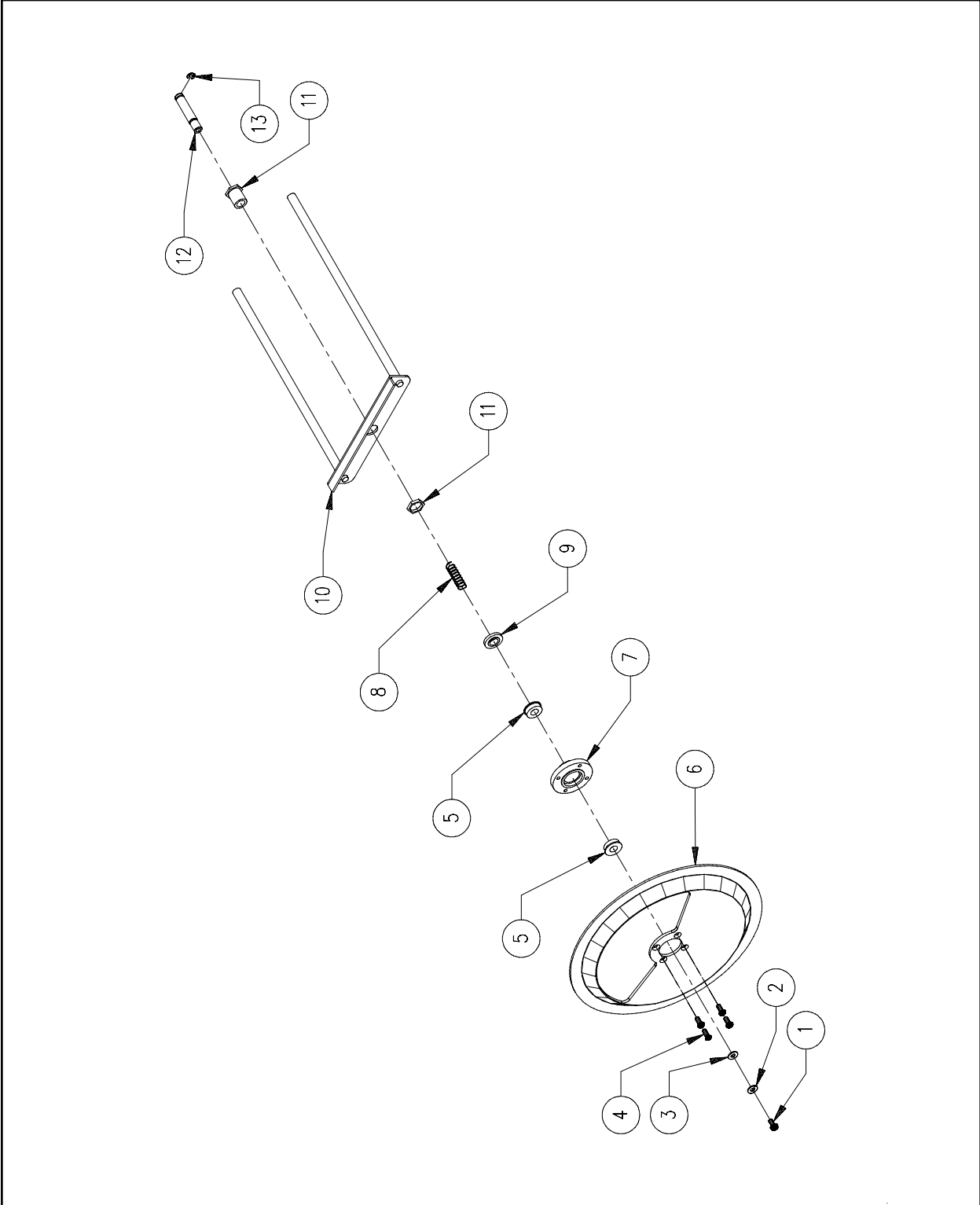


Figure 42

**Wide Angle Cap Frame (6 of 7)****Reference Figure 42**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                   | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1*              | 675310-01          | Screw, Pan Head Phillips, M3 x 0.5 x 6mm  |                 |
| 2*              | 690427-03          | Washer, Lock, Split M3                    |                 |
| 3*              | 690439-03          | Washer, Flat, M3                          |                 |
| 4*              | 010133-06          | Screw, Flat Head Phillips, M3 x 0.5 x 6mm |                 |
| 5*              | 009623-01          | Bearing, Flanged, 6mm ID x 12mm OD        |                 |
| 6*              | 009613-01          | Tensioner Disk                            |                 |
| 7*              | 010096-02          | Tensioner Disk Hub                        |                 |
| 8*              | 009622-01          | Spring, Compression                       |                 |
| 9*              | 009812-02          | Washer, Support, Spring                   |                 |
| 10*             | 009606-01          | Tensioner Disk Support                    |                 |
| 11              | 009658-01          | Bearing, Panel, 1/4" ID                   |                 |
| 12*             | 009614-01          | Tensioner Disk Shaft                      |                 |
| 13*             | 001955-17          | Retainer Ring                             |                 |

Note: The following can be replaced as a factory built assembly:

\*010094-01 Tensioner, Disk, Assembly

# Wide Angle Cap Frame (7 of 7)

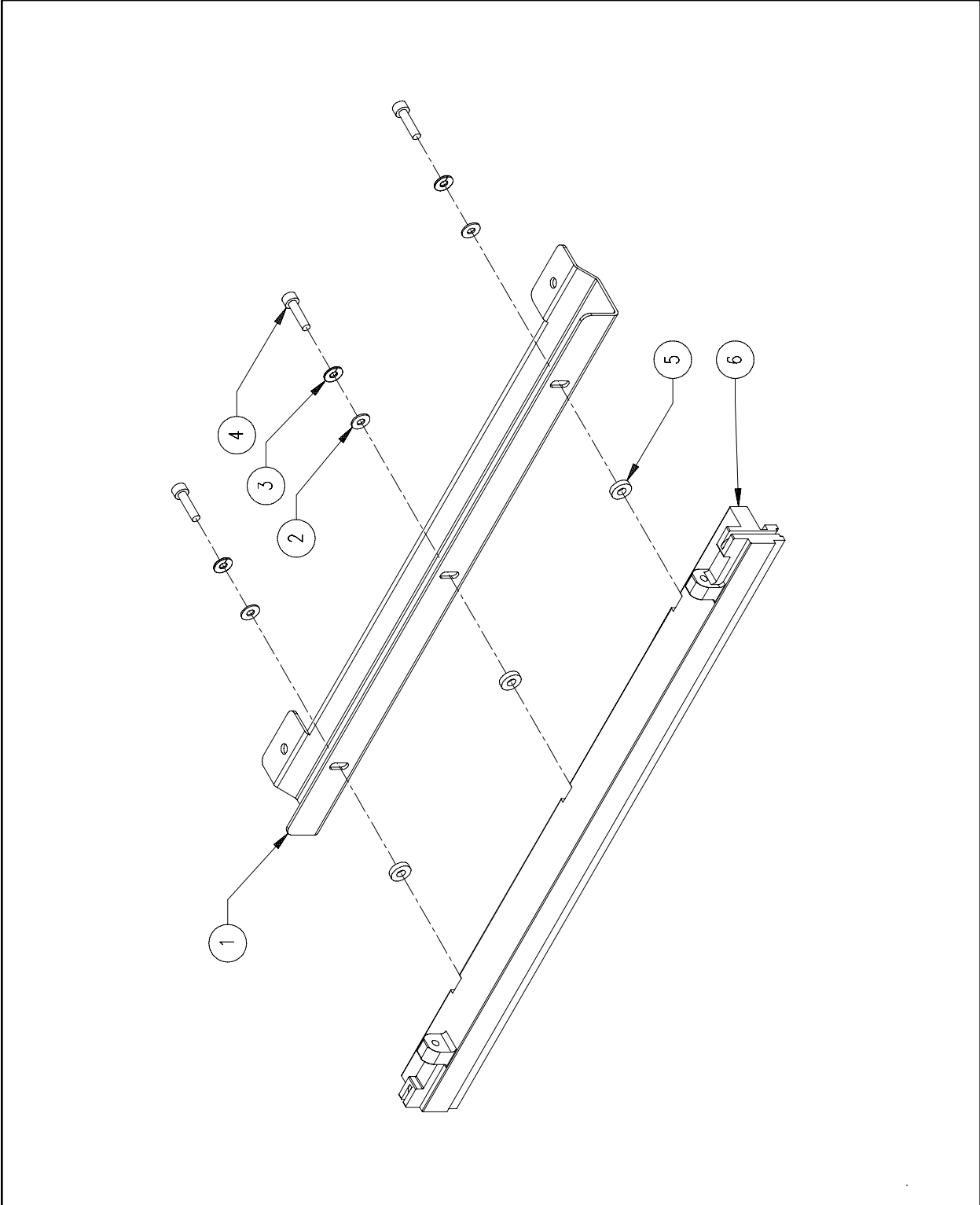


Figure 43

**Wide Angle Cap Frame (7 of 7)****Reference Figure 43**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b>        |
|-----------------|--------------------|---|------------------------|
| 1               | 010097-02          | Bracket, Interface, Cap Frame                       |                        |
| 2               | 690439-04          | Washer, Flat, M4                                    |                        |
| 3               | 690427-04          | Washer, Lock, Split, M4                             |                        |
| 4               | 010171-12          | Screw, Socket Head Cap, M4 x 0.7 x 12mm, Zinc Plate |                        |
| 4a*             | 010701-02          | Wrench, L-Hex, 3mm, Short Arm                       | (see Note) (not shown) |
| 5               | 010658-01          | Spacer, Interface, Wide Angle Cap Frame             |                        |
| 6               | 009608-02          | Bar, Drive Ring                                     |                        |

Note: \*Used with Item 4 and supplied with the Wide-Angle Cap Frame Option

# Wide Angle Cap Frame Gauge

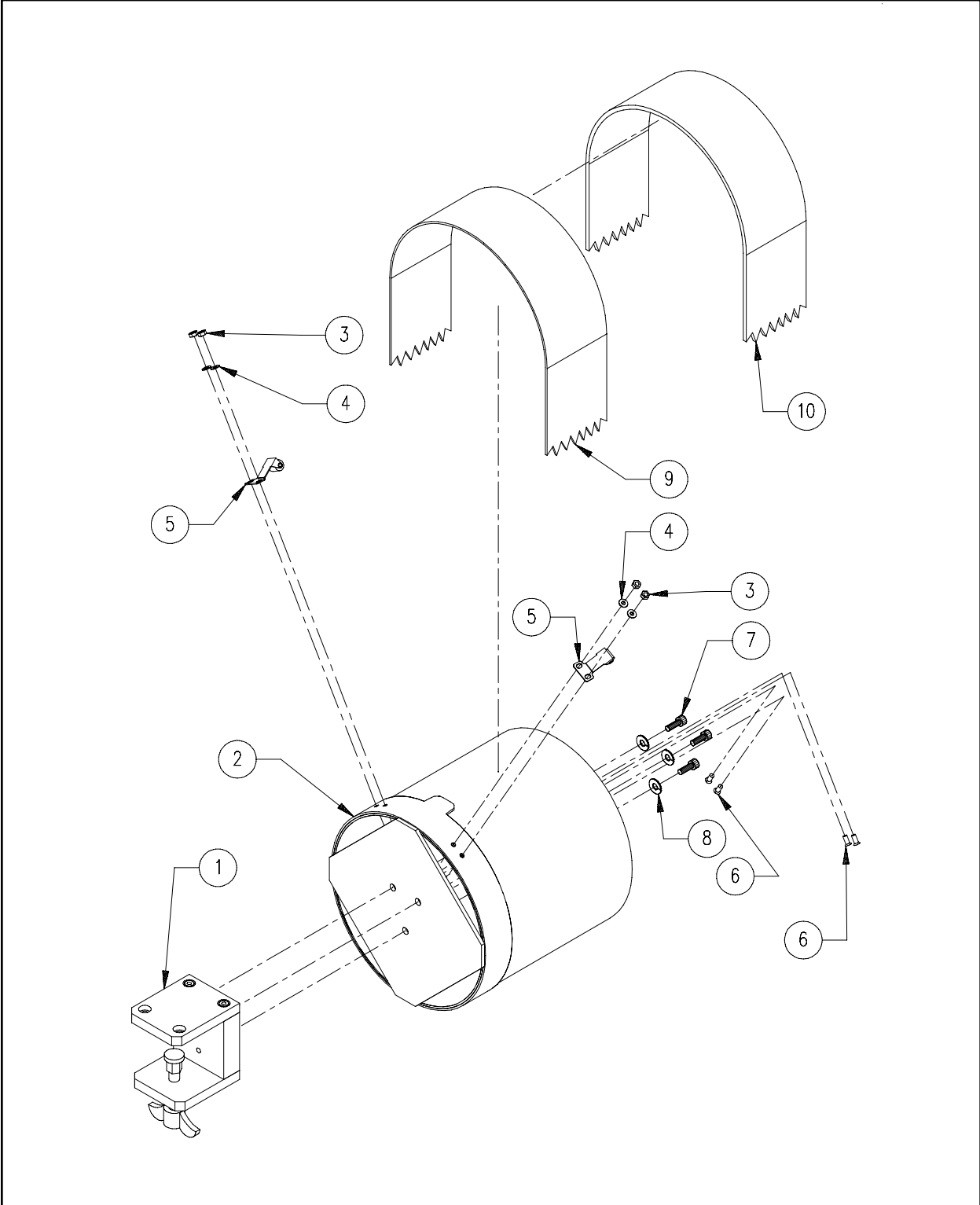


Figure 44



**Wide Angle Cap Frame Gauge****Reference Figure 44**

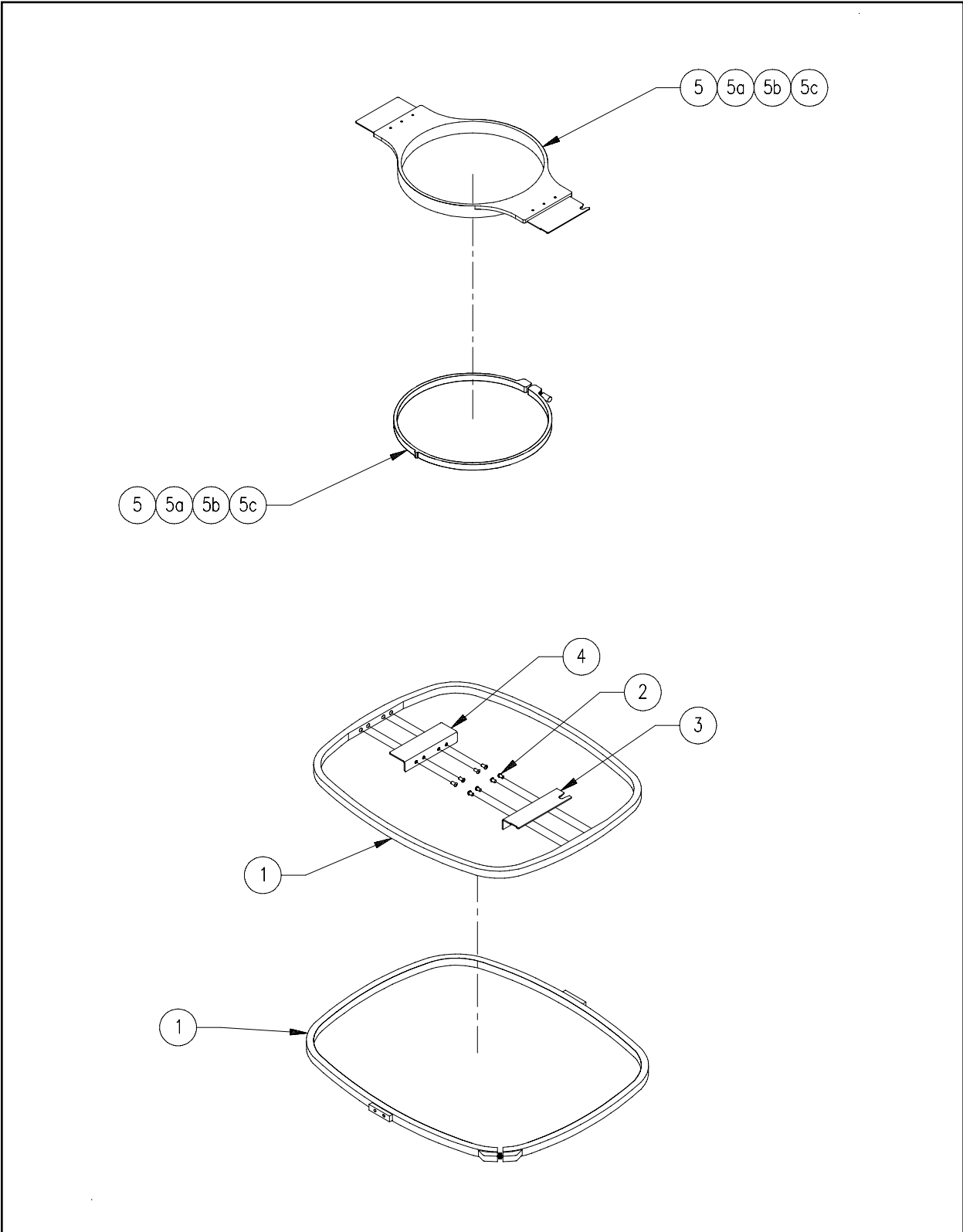
| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                             | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1*              | 004949-01          | Block, Mount, Cap Gauge                             |                 |
| 2*              | 010196-01          | Cylinder, Gauge                                     |                 |
| 3*              | 680430-03          | Nut, Hex, M3  |                 |
| 4*              | 690439-03          | Washer, Flat, M3                                    |                 |
| 5*              | 004229-01          | Clip, Roller, Assembly                              |                 |
| 6*              | 006558-08          | Screw, Pan Head, Slotted, M3 x 0.5 x 8mm            |                 |
| 7*              | 670038-06          | Screw, Socket Head Cap, 10-32 x 3/8"                |                 |
| 8*              | 690033-03          | Washer, Lock, Split, #10                            |                 |
| 9               | 010467-01          | Strap, Rubber, Gauge, 2.38" x 18.00" x .0625" Thick |                 |
| 10              | 010973-01          | Strap, Rubber, Gauge, 2.38" x 18.00" x .125" Thick  |                 |

Note:

The following can be replaced as a factory built assembly:

\*010195-01 Gauge, Cap Frame, Wide-Angle

# Tubular Hoops (1 of 2)



**Figure 45**

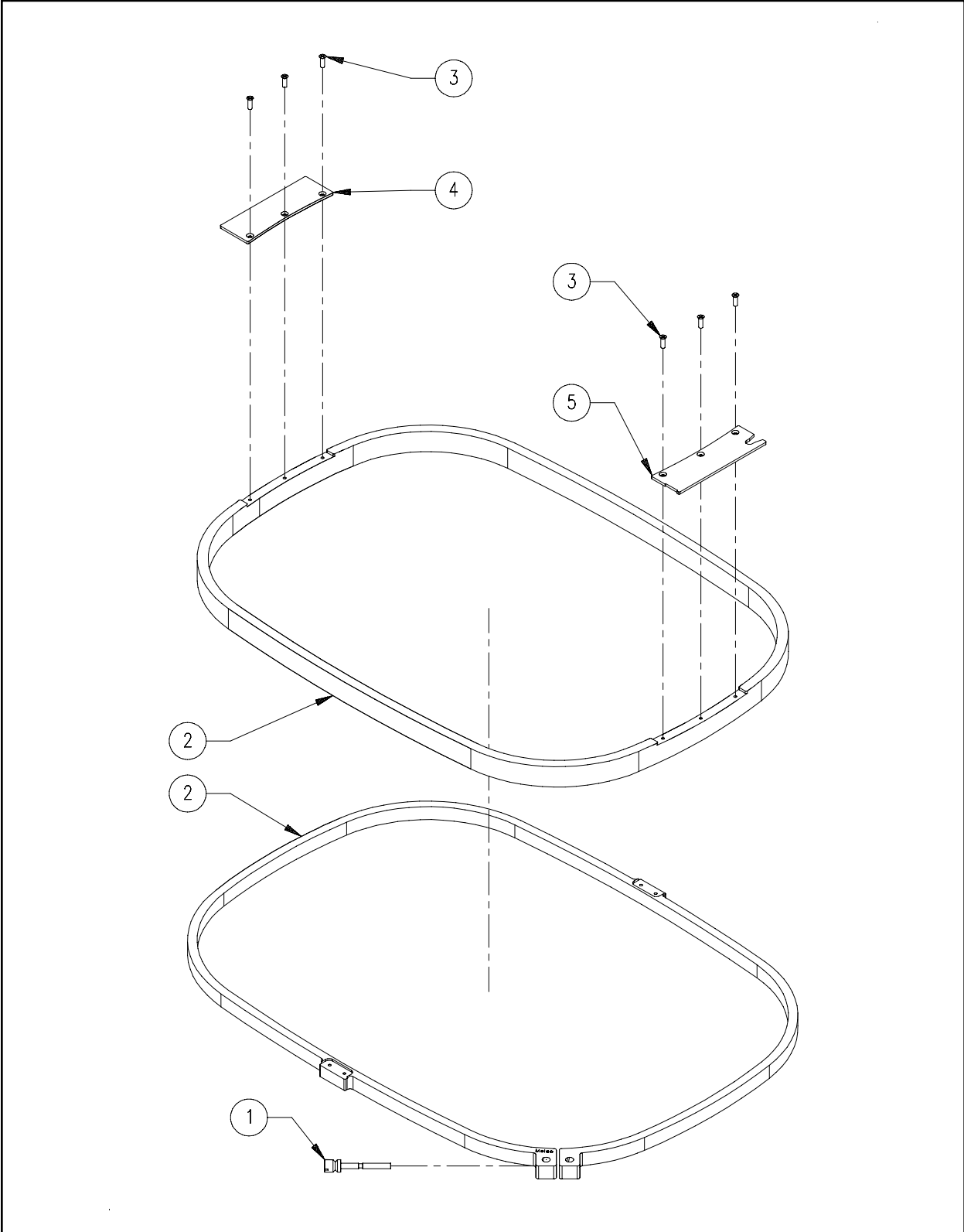
**Tubular Hoops (1 of 2)****Reference Figure 45**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                   | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1*              | 006454-01          | Hoop, 36cm x 30cm, w/Insert               |                 |
| 2*              | 003136-06          | Screw, Button Head Socket, M3 x 0.5 x 6mm |                 |
| 3*              | 008253-01          | Bracket, Tubular, I/F, Right              |                 |
| 4*              | 008254-01          | Bracket, Tubular, I/F, Left               |                 |
| 5               | 10214              | Hoop, Tubular, 22cm, w/Interface Brackets |                 |
| 5a              | 10215              | Hoop, Tubular, 18cm, w/Interface Brackets |                 |
| 5b              | 10216              | Hoop, Tubular, 15cm, w/Interface Brackets |                 |
| 5c              | 10217              | Hoop, Tubular, 12cm, w/Interface Brackets |                 |

Note: The following can be replaced as a factory built assembly:

\*010942-01 Hoop, Tubular, 36cm x 30cm, Assembly

# Tubular Hoops (2 of 2)



**Figure 46**

**Tubular Hoops (2 of 2)****Reference Figure 46**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                   | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1*              | 005576-01          | Screw/Barrel Nut, Hoop, Assembly          |                 |
| 2*              | 010194-03          | Hoop, Oval, 44cm x 30cm                   |                 |
| 3*              | 001935-08          | Screw, Flat Head Phillips, M3 x 0.5 x 8mm |                 |
| 4*              | 010447-02          | Bracket, Tubular Hoop, Left               |                 |
| 5*              | 010446-02          | Bracket, Tubular Hoop, Right              |                 |

Note:

The following can be replaced as a factory built assembly:

\*010204-01 Hoop, Tubular, Oval, 44cm x 30cm, Assembly

# Mobile Cart

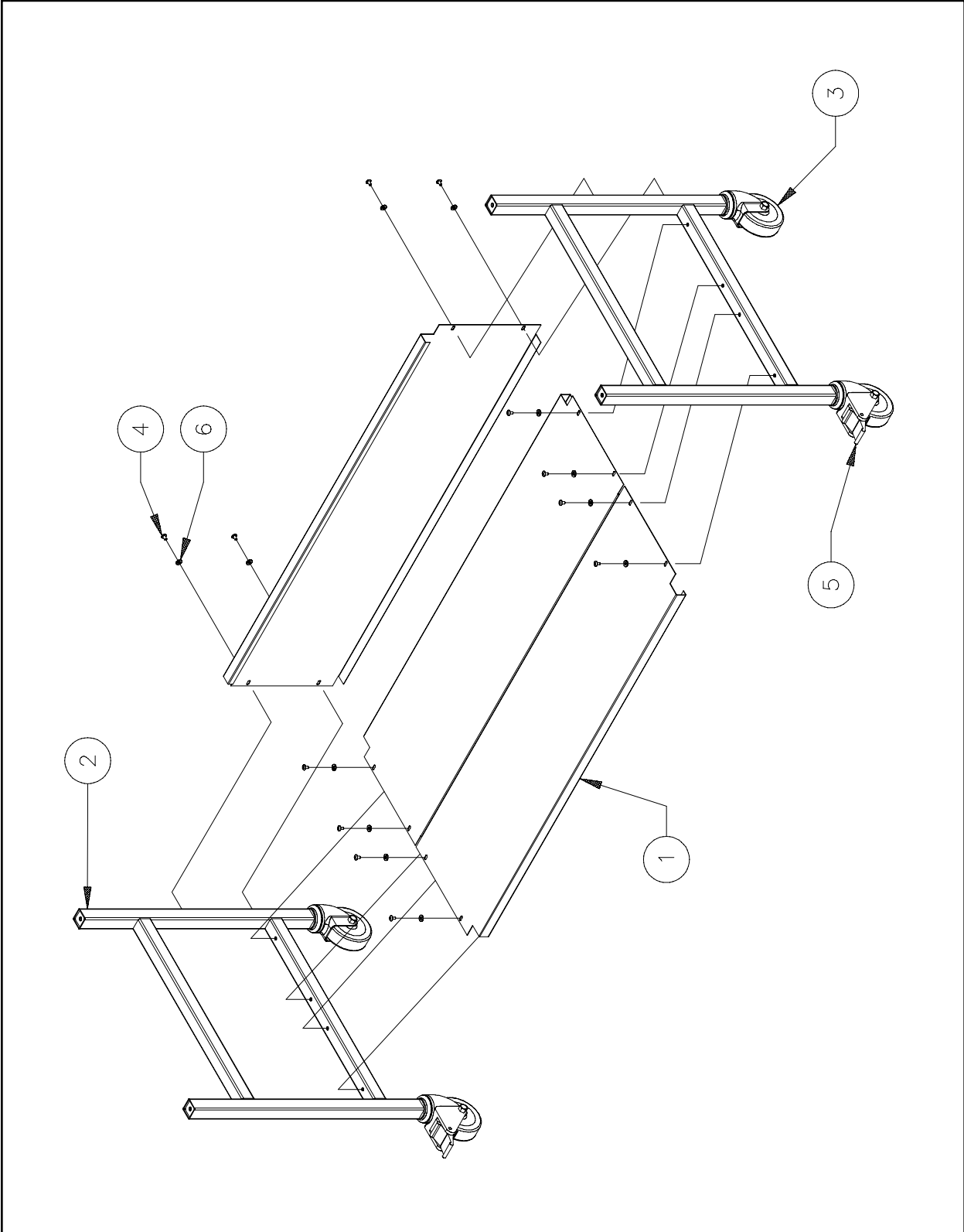


Figure 47

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**Mobile Cart** **Reference Figure 47**

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| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                     | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1               | 11701              | Shelf                                       |                 |
| 2               | 11702              | Side  |                 |
| 3               | 009989-01          | Castor, 4", w/Brake                         |                 |
| 4               | 010309-10          | Screw, Truss Head Phillips, M5 x 0.8 x 10mm |                 |
| 5               | 010469-01          | Castor, 4", w/Brake                         |                 |
| 6               | 690034-03          | Washer, Flat, #10                           |                 |

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# Hoop Interface

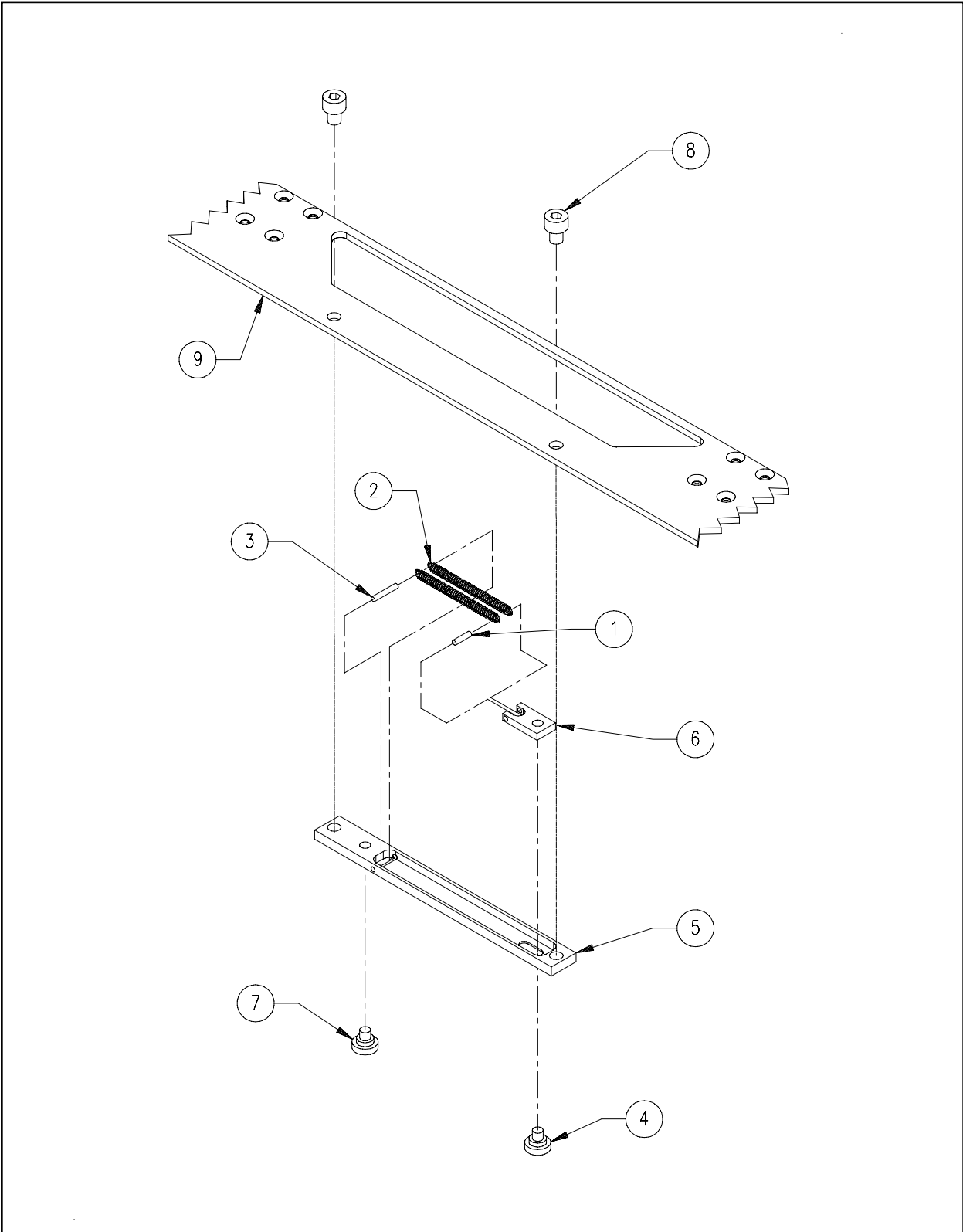


Figure 48



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**Hoop Interface** **Reference Figure 48**


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| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                            | <b>Comments</b> |
|-----------------|--------------------|--|-----------------|
| 1*              | 010378-08          | Pin, Roll, 2mm x .315"                             |                 |
| 2*              | 010379-01          | Spring, Extension, .125" OD x 1.75"                |                 |
| 3*              | 010378-12          | Pin, Roll, 2mm x .472"                             |                 |
| 4*              | 010376-01          | Locator, Movable Interface, Pin Type               |                 |
| 5*              | 010374-01          | Block Interface, Pin Type                          |                 |
| 6*              | 010375-01          | Slide Interface, Pin Type                          |                 |
| 7*              | 010377-01          | Locator, Fixed Interface, Pin Type                 |                 |
| 8*              | 010172-08          | Screw, Socket Head Cap, M5 x 0.8 x 8mm, Zinc Plate |                 |
| 9               | 009478-02          | Carriage, X-Axis Rack                              |                 |

Note: The following can be replaced as a factory built assembly:

\*010395-01 Interface, Hoop, Pin Type, Assembly

# Sash Frame

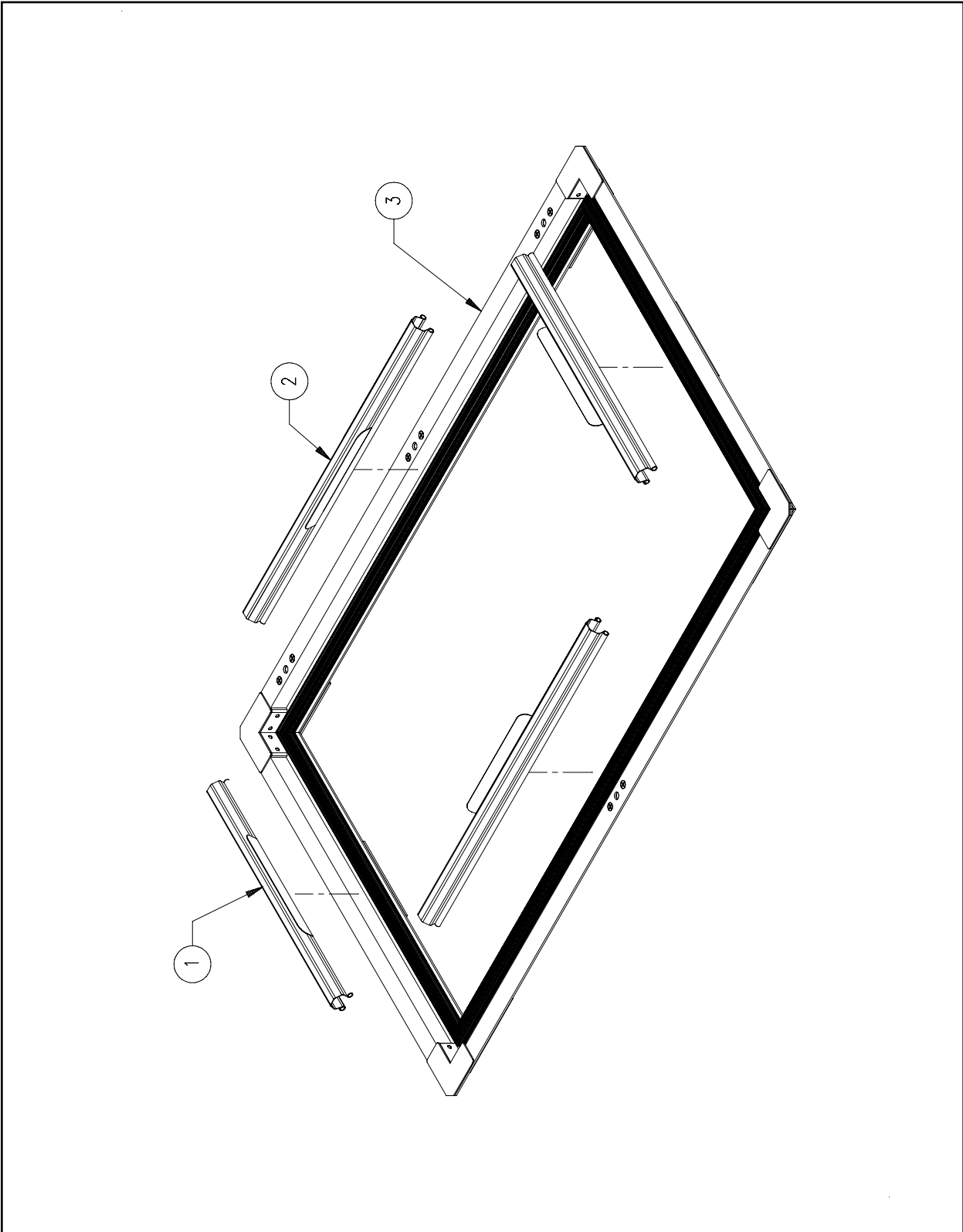


Figure 49

**Sash Frame****Reference Figure 49**

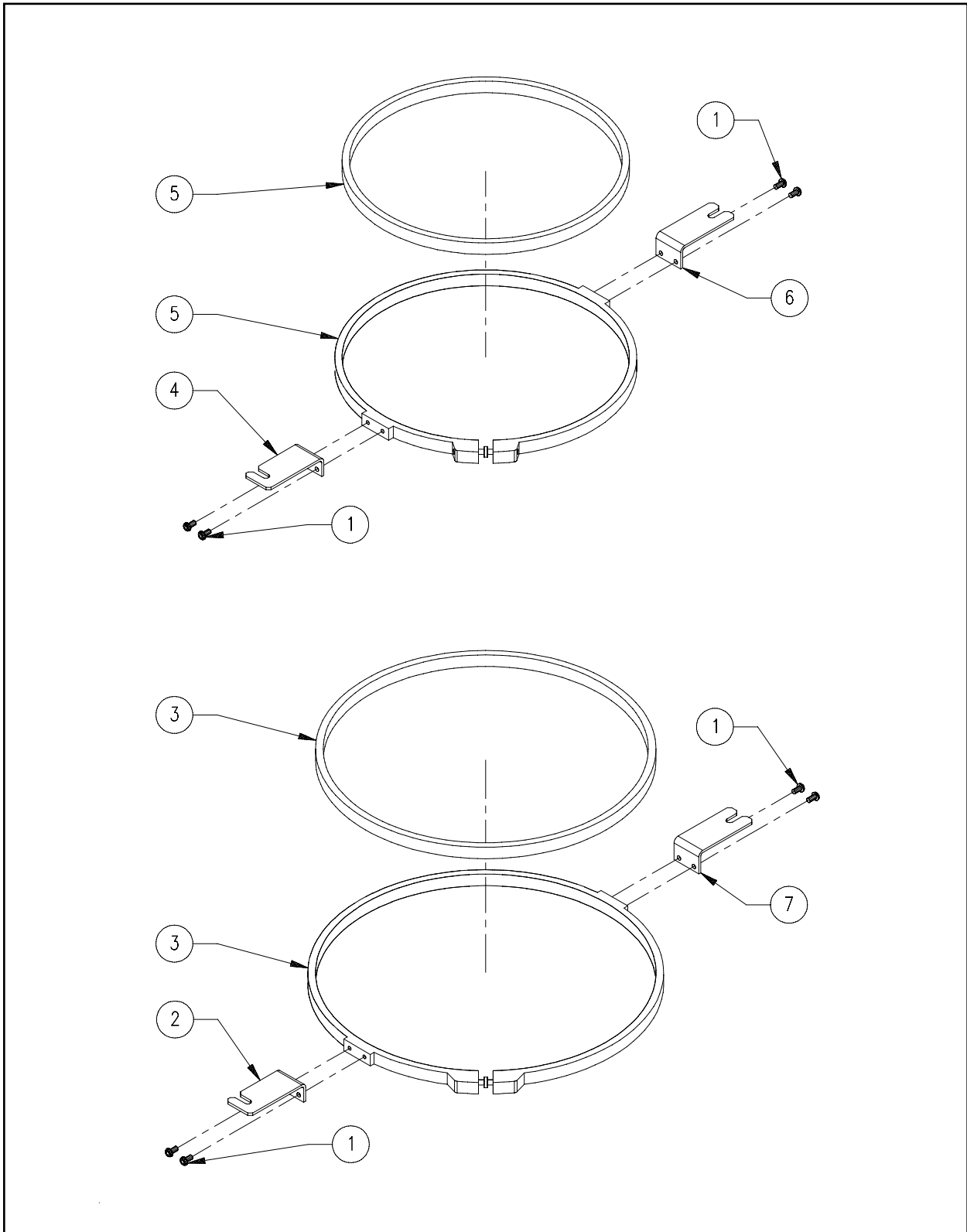
| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>       | <b>Comments</b> |
|-----------------|--------------------|-------------------------------|-----------------|
| 1*              | 007598-01          | Clip, Border Frame, 220mm     |                 |
| 2*              | 008177-01          | Clip, Border Frame, 300mm     |                 |
| 3*              | 010764-02          | Sash Frame, EMT 10T, Assembly |                 |

Note:

The following can be replaced as a factory built assembly:

\*010452-01 Option, Sash Frame, EMT 10T, Assembly

## Sash Hoops (21cm, 25cm)



**Figure 50**

**Sash Hoops (21cm, 25cm)****Reference Figure 50**

| <b>Item No.</b> | <b>Part Number</b> | <b>Item Description</b>                   | <b>Comments</b> |
|-----------------|--------------------|---|-----------------|
| 1*•             | 003136-06          | Screw, Button Head Socket, M3 x 0.5 x 6mm |                 |
| 2*              | 010756-02          | Bracket, Front, 25cm Hoop                 |                 |
| 3*              | 007592-01          | Hoop, 25cm, w/Arms                        |                 |
| 4•              | 010759-02          | Bracket, Front, 21cm Hoop                 |                 |
| 5•              | 005404-01          | Hoop, 21cm, w/Arms                        |                 |
| 6•              | 010758-02          | Bracket, Rear, 21cm Hoop                  |                 |
| 7*              | 010755-02          | Bracket, Rear, 25cm Hoop                  |                 |

Note: The following can be replaced as a factory built assembly:

- \*010757-01 Hoop, Sash, Round, 25cm
- 010760-01 Hoop, Sash, Round, 21cm

**A**

Arm, Drive, Grabber .....18-2  
 Arm, Drive, Movable Knife ..... 19-2

**B**

Bar, Drive Ring .....43-2  
 Bar, Grabber .....11-2  
 Bar, Guide .....34-2  
 Bar, Idler, Assembly .....16-2  
 Bar, Needle .....11-2  
 Base, Cap Frame, Assembly .....35-2  
 Base, Drive Ring .....37-2,38-2  
 Base, Drive, Lever, Take-Up, PHS II ..... 17-2  
 Base, Picker ..... 19-2  
 Base, Power Supply .....23-2  
 Base, Strain Relief, Operator I/F .....4-2  
 Base, Tensioner ..... 13-2  
 Bearing, Ball, Radial, 15mm ID..... 14-2  
 Bearing, Ball, Radial, 8mm ID .....14-2  
 Bearing, Ball, Radial, Flanged, 3/16" ID ... 24-2  
 Bearing, Cross-Roller .....12-2  
 Bearing, Flange Cartridge, 2-Hole..... 27-2  
 Bearing, Flanged .....37-2  
 Bearing, Flanged, 6mm ID x 12mm OD ...42-2  
 Bearing, Linear .....37-2  
 Bearing, Panel, 1/4" ID .....42-2  
 Bearing, Radial, 4mm ID x 9mm OD .....12-2  
 Bearing, Roller, 1/2" ID x 1/2" ..... 28-2,29-2  
 Bearing, Shaft, Guide ..... 15-2

Bearing, Sleeve, Frelon .....34-2  
 Bearing, Thrust, 8mm ..... 8-2  
 Belt, 80T, 1/5P .....27-2  
 Belt, Timing, 1/5P, 104 Groove,  
 3/8" Wide .....14-2  
 Belt, Timing, 39T, 1/5P .....8-2  
 Belt, Timing, 80 Groove, 1/5P,  
 3/8" Wide ..... 26-2  
 Belt, X-Axis .....24-2  
 Belt, Y-Axis ..... 28-2,29-2  
 Blade, Grabber .....18-2  
 Blade, Sensor, Interruptor .....10-2  
 Block Interface, Pin Type .....48-2  
 Block, Carriage, Y-Axis .....28-2,29-2  
 Block, Drive .....28-2,29-2  
 Block, Locator, Brim .....35-2  
 Block, Mount, Cap Gauge ..... 44-2  
 Block, Mounting, Cap Gauge,  
 Assembly .....36-2  
 Block, Mounting, Switch..... 5-2  
 Block, Return .....24-2  
 Block, Return, Y-Rack ..... 28-2,29-2  
 Bobbin, Aluminum ..... 5-2  
 Bolt, Adjuster, Trimmer .....20-2  
 Bracket, Angle, Table Top, Long..... 1-2  
 Bracket, Angle, Table Top, Short ..... 1-2  
 Bracket, Base, Winder ..... 5-2  
 Bracket, Bed, Cable .....19-2  
 Bracket, Blank, PC .....21-2

|  |                |  |         |
|--|----------------|--|---------|
| Bracket, Cable .....                   | 34-2           | Bracket, Pretensioner .....                | 13-2    |
| Bracket, Clamp, Left Hand .....        | 39-2,40-2      | Bracket, Rear, 21cm Hoop .....             | 50-2    |
| Bracket, Clamp, Right Hand .....       | 39-2           | Bracket, Rear, 25cm Hoop .....             | 50-2    |
| Bracket, Drive .....                   | 34-2           | Bracket, Right .....                       | 24-2    |
| Bracket, Drive Ring .....              | 39-2           | Bracket, Solenoid, Mounting .....          | 20-2    |
| Bracket, Enclosure, Disk Drive .....   | 3-2            | Bracket, Spring, Mount.....                | 19-2    |
| Bracket, Ethernet Card Connector ..... | 22-2           | Bracket, Stopper, Delrin .....             | 15-2    |
| Bracket, Frame Holder, Gauge Set ..... | 36-2           | Bracket, Stopper, Steel .....              | 15-2    |
| Bracket, Front, 21cm Hoop.....         | 50-2           | Bracket, Strap, Rubber .....               | 41-2    |
| Bracket, Front, 25cm Hoop .....        | 50-2           | Bracket, Support, Left Hand .....          | 38-2    |
| Bracket, Grabber, Lower, Flared .....  | 11-2           | Bracket, Support, Right Hand .....         | 38-2    |
| Bracket, Hinge .....                   | 35-2           | Bracket, Support, Take-Up Lever Guide .... | 12-2    |
| Bracket, Holder, Bar .....             | 38-2           | Bracket, Support, Thread Tree .....        | 9-2     |
| Bracket, Interface, Cap Frame.....     | 43-2           | Bracket, Switch, Adjusting .....           | 20-2    |
| Bracket, Jump Stitch Solenoid .....    | 14-2           | Bracket, Tensioner .....                   | 13-2    |
| Bracket, Latch .....                   | 14-2,35-2      | Bracket, Transition .....                  | 18-2    |
| Bracket, Left .....                    | 24-2           | Bracket, Tube, Thread .....                | 2-2,7-2 |
| Bracket, Motor Board Connector .....   | 22-2           | Bracket, Tubular Frame, Left .....         | 25-2    |
| Bracket, Mount Rack .....              | 28-2           | Bracket, Tubular Frame, Right .....        | 25-2    |
| Bracket, Mount, D-Sub .....            | 33-2           | Bracket, Tubular Hoop, Left .....          | 46-2    |
| Bracket, Mount, Right Rack .....       | 29-2           | Bracket, Tubular Hoop, Right.....          | 46-2    |
| Bracket, Mounting, Disk Drive .....    | 3-2            | Bracket, Tubular, I/F, Left .....          | 45-2    |
| Bracket, Mounting, Display.....        | 4-2            | Bracket, Tubular, I/F, Right.....          | 45-2    |
| Bracket, Mounting, Grabber Drive ..... | 18-2           | Bracket, Wire Guard .....                  | 8-2     |
| Bracket, Mounting, Z-Cover .....       | 1-2,2-2        | Breaker, On/Off, 4A .....                  | 33-2    |
| Bracket, Needle Plate.....             | 14-2,19-2      | Bulb, 12V/12W .....                        | 6-2     |
| Bracket, Picker.....                   | 14-3,19-2,30-2 | Bumper, Motor Stop.....                    | 18-2    |
| Bracket, Pivot, Display .....          | 4-2            | Bushing, Base, Drive, Lever, Take-Up.....  | 17-2    |

|  |               |   |                |
|--|---------------|---|----------------|
| Bushing, Bearing, Lower Guide .....          | 15-2          | Card Cage, Top Cover .....                        | 22-2           |
| Bushing, Cradle, Spring .....                | 15-2          | Carriage, X-Axis Rack .....                       | 25-2,48-2      |
| Bushing, Shaft, Bobbin Winder .....          | 5-2           | Case, 10 Needle .....                             | 11-2           |
| Bushing, Shaft, Needle Bar .....             | 15-2          | Case, Bobbin, <sup>wo</sup> /Spring .....         | 14-2           |
| Bushing, Strain Relief .....                 | 2-2           | Case, Gear, Drive, Lever, Take-Up .....           | 17-2           |
| Bushing, Tensioner .....                     | 13-2          | Castor, 4", <sup>w</sup> /Brake .....             | 47-2           |
| <b>C</b>                                     |               | Castor, 4", <sup>wo</sup> /Brake .....            | 47-2           |
| Cable, Drive Ring .....                      | 34-2          | Catch, Pull .....                                 | 35-2           |
| Cable, Drive Ring, Assembly .....            | 39-2          | Clamp, Belt .....                                 | 24-2           |
| Cable, E-Stop .....                          | 33-2          | Clamp, Hold Down, Left Hand .....                 | 39-2,40-2      |
| Cable, Ethernet, Network,<br>Interface ..... | 32-2,33-2     | Clamp, Hold Down, Right Hand .....                | 39-2           |
| Cable, Floppy Drive .....                    | 32-2,33-2     | Clamp, Needle .....                               | 11-2           |
| Cable, Ground, Braid, 6.5" .....             | 4-2,33-2      | Clamp, Ribbon Cable, 3.31" .....                  | 13-2           |
| Cable, Ground, Pan, 4.75" .....              | 2-2,10-2,13-2 | Clamp, Split-Hub, 8mm ID.....                     | 8-2            |
| Cable, Jump Stitch .....                     | 32-2,33-2     | Clamp, Stop, Needle Bar .....                     | 11-2           |
| Cable, Jumper, Thread Break .....            | 33-2          | Clamp, Swivel, Picker.....                        | 20-2           |
| Cable, Low Voltage Power .....               | 31-2,32-2     | Clamp, Y-Belt .....                               | 28-2,29-2      |
| Cable, Power, Backplane .....                | 32-2          | Clip, Border Frame, 220mm.....                    | 49-2           |
| Cable, Thread/Color Change .....             | 32-2,33-2     | Clip, Border Frame, 300mm .....                   | 49-2           |
| Cable, X-Axis Flex .....                     | 33-2          | Clip, Cap Frame.....                              | 41-2           |
| Cable. Power, Backplane .....                | 31-2          | Clip, Fixing, Drive Arm .....                     | 19-2           |
| Cam, Color Change.....                       | 8-2           | Clip, Roller, Assembly .....                      | 39-2,40-2,44-2 |
| Cam, Drive, Take-Up Lever .....              | 14-2          | Clip, Roller, Cap Frame Driver,<br>Assembly ..... | 34-2,36-2      |
| Cam, Trimmer .....                           | 14-3          | Clip, Spring, Tubular .....                       | 25-2           |
| Cap, Spring .....                            | 13-2          | Clip, Tubing .....                                | 7-2            |
| Card Cage, Bottom Cover .....                | 22-2          | Collar, Picker .....                              | 19-2           |
| Card Cage, Front Cover, Single Head .....    | 22-2          | Collar, Shaft, 1/2" ID .....                      | 34-2           |



|  |           |  |           |
|--|-----------|--|-----------|
| Collar, Shaft, Headup .....                | 14-2      | Cover, Rear, Tensioner, Bracket, Left .....  | 2-2       |
| Collar, Support, Gear .....                | 14-2      | Cover, Rear, Tensioner, Bracket, Right ..... | 2-2       |
| Collar, Tensioner, Assembly .....          | 13-2      | Cover, Side .....                            | 1-2       |
| Connector, Dual Cap Frame .....            | 30-2      | Cover, X-Beam, PCB .....                     | 24-2      |
| Cord, Shock, Cap Frame .....               | 35-2,41-2 | Cover, Z-Motor .....                         | 2-2       |
| Counterweight, Phase II.....               | 14-2      | Cylinder, Drive Ring .....                   | 39-2,40-2 |
| Coupler, In-Line, 6 Position .....         | 33-2      | Cylinder, Gauge .....                        | 44-2      |
| Coupler, Shaft, Helical, 1/4" x 1/4" ..... | 26-2      | <b>D</b>                                     |           |
| Cover, Bed, Front .....                    | 7-2       | Damper, Needle Case .....                    | 11-2      |
| Cover, Bed, Rear .....                     | 7-2       | Damper, Needle Clamp .....                   | 11-2      |
| Cover, Blade, Front .....                  | 18-2      | Disc, Tensioner .....                        | 5-2       |
| Cover, Blade, Rear .....                   | 18-2      | Disk, Plastic.....                           | 13-2      |
| Cover, Blade, Top .....                    | 18-2      | Disk, Pretensioner .....                     | 13-2      |
| Cover, Cable, Operator I/F .....           | 4-2       | Disk, Tensioner, Thread, Assembly .....      | 13-2      |
| Cover, Cap Frame Bracket .....             | 30-2      | Door, Disk Drive .....                       | 3-2       |
| Cover, Cap, Hex, M6 .....                  | 37-2      | Drive, Disk, 3-1/2" .....                    | 3-2       |
| Cover, Drive, Color Change, Left .....     | 7-2       | <b>E</b>                                     |           |
| Cover, Drive, Color Change, Right .....    | 7-2       | Encoder, Z-Axis .....                        | 26-2      |
| Cover, Drive, Grabber Motor .....          | 18-2      | Extrusion, Base .....                        | 24-2,25-2 |
| Cover, Front, Arm, Left .....              | 12-2      | Extrusion, Cover .....                       | 25-2      |
| Cover, Front, Arm, Right .....             | 12-2      | <b>F</b>                                     |           |
| Cover, LED, Yellow .....                   | 13-2      | Felt, Needle Case .....                      | 11-2      |
| Cover, LEDs .....                          | 1-2       | Ferrite, Split, Large .....                  | 33-2      |
| Cover, Needle Case, Lower .....            | 10-2      | Flag, Home, Grabber .....                    | 18-2      |
| Cover, Needle Case, Upper .....            | 10-2      | Flag, Y-Limit .....                          | 28-2      |
| Cover, Operator Interface .....            | 3-2       | Flange, Pulley, X-Axis Motor .....           | 24-2      |
| Cover, Power Supply .....                  | 23-2      | Follower, Assembly .....                     | 17-2      |
| Cover, Rear .....                          | 16-2      | Foot, Presser, Assembly .....                | 11-2      |

|  |           |  |           |
|--|-----------|--|-----------|
| Frame, Assembly .....                          | 1-2       | Harness, Y-Z Axis .....                            | 32-2,33-2 |
| Frame, Lower, w/Rubber, 6-Panel .....          | 35-2      | Hinge, Cap Frame .....                             | 41-2      |
| Frame, Movable, Machined .....                 | 20-2      | Holder, Cable Tie, .75" Square .....               | 5-2       |
| Fuse, 5A, TD .....                             | 23-2      | Holder, Clip .....                                 | 41-2      |
| <b>G</b>                                       |           |  |           |
| Gasket, Rack, X-Axis .....                     | 25-2      | Holder, Cord, Visor Clamp .....                    | 35-2      |
| Gauge, Cap Frame, Weldment .....               | 36-2      | Holder, Fuse.....                                  | 23-2      |
| Gear, Drive, Lever, Take-Up .....              | 17-2      | Holder, Visor.....                                 | 41-2      |
| Grommet, 3.3" .....                            | 3-2       | Hook, Rotary, Small Bobbin .....                   | 14-2      |
| Grommet, Actuator Lever .....                  | 5-2       | Hoop, 21cm, w/Arms .....                           | 50-2      |
| Guard, Switch .....                            | 33-2      | Hoop, 25cm, w/Arms .....                           | 50-2      |
| Guide, Grabber.....                            | 18-2      | Hoop, 36cm x 30cm, w/Insert .....                  | 45-2      |
| Guide, Take-Up Lever .....                     | 12-2      | Hoop, Oval, 44cm x 30cm .....                      | 46-2      |
| Guide, Thread, Lower, w/Eyelet .....           | 10-2      | Hoop, Tubular, 12cm, w/Interface<br>Brackets ..... | 45-2      |
| Guide, Thread, Middle, w/Eyelet .....          | 10-2      | Hoop, Tubular, 15cm, w/Interface<br>Brackets ..... | 45-2      |
| Guide, Thread, Upper, Assembly.....            | 13-2      | Hoop, Tubular, 18cm, w/Interface<br>Brackets ..... | 45-2      |
| Guide, Thread, Winder .....                    | 5-2       | Hoop, Tubular, 22cm, w/Interface<br>Brackets ..... | 45-2      |
| <b>H</b>                                       |           |  |           |
| Harness, Bed, Under Thread Control.....        | 33-2      | Housing, Bearing .....                             | 37-2      |
| Harness, Bobbin Winder .....                   | 31-2,33-2 | Housing, Drive, Color Change .....                 | 8-2       |
| Harness, Circuit Breaker .....                 | 31-2,33-2 | Hub, Cap Driver, Phase II .....                    | 34-2      |
| Harness, Color/Grabber-<br>Encoder/Motor ..... | 32-2,33-2 | Hub, Shaft, Arm, Winder.....                       | 5-2       |
| Harness, Head .....                            | 32-2,33-2 | <b>I</b>   |           |
| Harness, Keyboard/Display .....                | 32-2,33-2 | Insulator, Thread Break .....                      | 13-2      |
| Harness, Power Entry, PC.....                  | 23-2,33-2 | <b>K</b>   |           |
| Harness, Start/Stop/Frame .....                | 33-2      | Key, Color Change Mount .....                      | 7-2       |
| Harness, X-Axis Collector .....                | 32-2,33-2 | Key, Shaft, 6mm x 6mm x 32mm .....                 | 30-2      |
|  |           | Keycap, Alt .....                                  | 3-2       |

|   |           |  |      |
|---|-----------|--|------|
| Keycap, Color Change .....                | 3-2       | Link, Connecting .....                     | 19-2 |
| Keycap, Enter .....                       | 3-2       | Link, Connecting, Picker .....             | 19-2 |
| Keycap, Fast/Slow .....                   | 3-2       | Locator, Brim, Cap Frame .....             | 41-2 |
| Keycap, Horizontal Arrow, Left .....      | 3-2       | Locator, Cap Frame .....                   | 34-2 |
| Keycap, Horizontal Arrow, Right .....     | 3-2       | Locator, Drive Ring .....                  | 40-2 |
| Keycap, Jog .....                         | 3-2       | Locator, Fixed Interface, Pin Type .....   | 48-2 |
| Keycap, Menu .....                        | 3-2       | Locator, Left .....                        | 25-2 |
| Keycap, Vertical Arrow, Down .....        | 3-2       | Locator, Movable Interface, Pin Type ..... | 48-2 |
| Keycap, Vertical Arrow, Up .....          | 3-2       | Locator, Right .....                       | 25-2 |
| Knife, Adjustable .....                   | 19-2      | Lock, Shaft, .25" ID .....                 | 38-2 |
| Knife, Movable .....                      | 19-2      | <b>M</b>                                   |      |
| Knob, Adjust, Pretensioner, Plastic ..... | 5-2,13-2  | Magnet, Thread Retaining .....             | 10-2 |
| Knob, Extension, Pot .....                | 3-2       | Motor, Color Change .....                  | 8-2  |
| Knob, Knurled, Black, M3 .....            | 38-2      | Motor, Modified, Winder .....              | 5-2  |
| Knob, Knurled, Black, M5 .....            | 37-2      | Motor, X-Axis .....                        | 24-2 |
| Knob, Knurled, M5, Black .....            | 30-2,34-2 | Motor, Y-Axis .....                        | 27-2 |
| Knob, Tensioner, Black, Assembly .....    | 13-2      | Motor, Z-Drive .....                       | 26-2 |
| <b>L</b>                                  |           | Motor/Encoder, Assembly .....              | 18-2 |
| Lamp, Flexible, w/Switch, 12V/12W .....   | 6-2       | Mount, Cable Tie .....                     | 19-2 |
| Latch, Jump Stitch .....                  | 14-3      | Mount, Cable Tie, Nylon .....              | 24-2 |
| Latch, Takigen .....                      | 41-2      | Mount, Dove Tail, Cap Frame .....          | 30-2 |
| Latch, Touch .....                        | 3-2       | Mount, Drive Ring .....                    | 34-2 |
| Lens, Pushbutton, Black w/Legend .....    | 3-2       | Mount, Front, Drive Ring .....             | 37-2 |
| Lens, Pushbutton, Grey w/Legend .....     | 3-2       | Mount, Male, Cap Frame .....               | 34-2 |
| Lens, Pushbutton, White w/Legend .....    | 3-2       | Mount, Picker .....                        | 19-2 |
| Lever, Actuator, Bobbin Winder .....      | 5-2       | Mount, Solenoid, Trimmer .....             | 20-2 |
| Lever, Drive, Lever, Take-Up .....        | 17-2      |  |      |
| Lever, Take-Up, Assembly .....            | 11-2      | <b>N</b>                                   |      |

|  |           |                                       |           |
|--|-----------|---------------------------------------|-----------|
| Nipple, Support, Tensioner Disk .....              | 38-2      | PCB, Motor Driver, Assembly .....     | 21-2      |
| Nut, Swivel, 3/8-16 .....                          | 36-2      | PCB, Network, Intel, Pro 10 .....     | 21-2,32-2 |
| Nut, Tensioner, Drive Ring .....                   | 39-2      | PCB, Thread Break, Assembly .....     | 13-2      |
| Nut, Wing, M3 .....                                | 41-2      | PCB, X-Beam, X-Rack, Assembly .....   | 24-2      |
| <b>O</b>   |           | PCB, Y-Home, Assembly .....           | 28-2      |
| O-Ring, .187" ID x .06" Thick .....                | 14-3      | Pedestal, Control Interface .....     | 4-2       |
| O-Ring, 2-7/16" ID x 3/16" Dia. ....               | 5-2       | Picker .....                          | 19-2      |
| O-Ring, 3/16" ID x 5/16" OD<br>x 1/16" Thick ..... | 5-2       | Picker, Solenoid, Assembly .....      | 20-2      |
| <b>P</b>   |           | Pigtail .....                         | 13-2      |
| Pad, Cone, Thread .....                            | 5-2       | Pillar, Head, Support .....           | 7-2       |
| Pad, Cushion, Disk Drive .....                     | 3-2       | Pin, Dowel, .25" OD x .50" .....      | 11-2      |
| Pad, Felt, .065" Thick .....                       | 13-2      | Pin, Dowel, 1/4" OD x .750" .....     | 26-2      |
| Pad, Felt, .095" Thick .....                       | 13-2      | Pin, Dowel, 3mm OD x 12mm Long .....  | 14-2      |
| Pad, Guide, Shaft .....                            | 37-2      | Pin, Groove, 1/8" OD x 5/8" .....     | 17-2      |
| Pad, Holder, Bar .....                             | 38-2      | Pin, Groove, 1/8" OD x 7/8" .....     | 34-2      |
| Pad, Leveling .....                                | 1-2       | Pin, Latch .....                      | 14-3      |
| Pad, Reservoir, Felt .....                         | 12-2      | Pin, Pivot, Door .....                | 3-2       |
| Pad, Support, Cylinder .....                       | 38-2      | Pin, Roll, 2mm x .315" .....          | 48-2      |
| Pad, Thread Tree .....                             | 9-2       | Pin, Roll, 2mm x .472" .....          | 48-2      |
| PCB, Backplane, Assembly .....                     | 21-2,32-2 | Pin, Spring, 3mm .....                | 12-2      |
| PCB, CPU, Assembly .....                           | 21-2      | Pin, Swivel, Front .....              | 19-2      |
| PCB, EMT Operator Interface, Assembly .....        | 3-2       | Plate Mounting, Z-Drive Motor .....   | 26-2      |
| PCB, EMT, Color Change, Assembly .....             | 8-2       | Plate, Base, Operator Interface ..... | 3-2       |
| PCB, E-Stop-Power Supply, Assembly .....           | 23-2      | Plate, Base, Winder .....             | 5-2       |
| PCB, Interface, Assembly .....                     | 21-2      | Plate, Bearing, Retainer .....        | 12-2      |
| PCB, LV Drivers, Assembly .....                    | 21-2      | Plate, Coupler .....                  | 1-2       |
| PCB, Motor Drive, Assembly .....                   | 32-2      | Plate, Encoder .....                  | 26-2      |
|  |           | Plate, E-Stop .....                   | 2-2       |

|   |           |  |           |
|---|-----------|--|-----------|
| Plate, Guide, Needle Bar .....                    | 10-2      | Pulley, Drive, Y-Rail .....              | 27-2      |
| Plate, Link Adjusting .....                       | 20-2      | Pulley, Hub, Adjustable .....            | 14-3      |
| Plate, Motor Mount #2 .....                       | 27-2      | Pulley, Idler, Return, Assembly .....    | 28-2,29-2 |
| Plate, Mounting, Grabber Home.....                | 18-2      | Pulley, Pinion, Y-Axis .....             | 27-2      |
| Plate, Needle, Pocketed .....                     | 14-2      | Pulley, Return .....                     | 24-2      |
| Plate, Position, Machined .....                   | 12-2      | Pulley, Timing, 1/5P, 12 Groove .....    | 8-2       |
| Plate, Retainer, Bearing, Arm Shaft .....         | 14-2      | Pulley, Timing, 5.08mmP, 16 Groove ..... | 8-2       |
| Plate, Strain Relief, Operator I/F .....          | 4-2       | <b>R</b>                                 |           |
| Plate, Table Top, Locator, Rear .....             | 1-2       | Rail, Guide, Lower .....                 | 11-2      |
| Plate, Table Top, Locator, Side .....             | 1-2       | Rail, X-Drive .....                      | 25-2      |
| Plate, Thread Tree .....                          | 9-2       | Rail, Y-Carriage .....                   | 28-2,29-2 |
| Plunger, Ball, 1/4-20, 7lbs. ....                 | 5-2       | Reciprocator .....                       | 15-2      |
| Post, Bobbin, Storage .....                       | 5-2       | Re-inforcement, Self-Adhesive .....      | 13-2      |
| Post, Cap Frame .....                             | 41-2      | Ring, Drive, Cap Frame .....             | 34-2      |
| Post, Cap Frame, Weldment .....                   | 41-2      | Ring, Retainer, E-Style .....            | 35-2      |
| Post, Guide .....                                 | 5-2,13-2  | Ring, Retainer, External, 5/16" ID ....  | 15-2,16-2 |
| Post, Pretensioner .....                          | 13-2      | Ring, Retaining, External, .188" .....   | 20-2      |
| Post, Tensioner .....                             | 13-2      | Rod, Connecting .....                    | 14-2      |
| Post, Tensioner, Winder .....                     | 5-2       | Rod, Crank, 90 Deg .....                 | 14-2      |
| Post, Thread, Winder .....                        | 5-2       | Rod, Guide .....                         | 18-2      |
| Power Entry Module, Filtered, 6A ....             | 23-2,33-2 | Roller, Drive Ring .....                 | 37-2      |
| Presser, Under Thread .....                       | 19-2      | Roller, Idler .....                      | 16-2      |
| Pulley, 16T, 3/8" ID, w/Hub .....                 | 26-2      | Roller, Movable, Frame .....             | 20-2      |
| Pulley, Adjustable, Top, 32T, 1/5P.....           | 14-2      | <b>S</b>                                 |           |
| Pulley, Drive .....                               | 27-2      | Sash Frame, EMT 10T, Assembly .....      | 49-2      |
| Pulley, Drive, Bobbin, Bottom,<br>16T, 1/5P ..... | 14-2      | Screw, Needle Plate .....                | 14-2      |
| Pulley, Drive, Bobbin, Top, 32T, 1/5P .....       | 26-2      | Screw, Rotary Hook .....                 | 14-2      |
|   |           | Screw, Set, Cam .....                    | 14-2      |

|   |           |   |      |
|---|-----------|---|------|
| Screw, Special, Cap Frame .....                 | 35-2      | Shaft, Roller, Eccentric .....                            | 37-2 |
| Screw, Thumb, Knurl, 8mm .....                  | 25-2      | Shaft, Roller, Movable Frame .....                        | 20-2 |
| Screw, Thumb, Wing-Head,<br>3/8-16 x 1.5" ..... | 36-2      | Shaft, Take-Up Lever .....                                | 11-2 |
| Screw/Barrel Nut, Hoop, Assembly .....          | 46-2      | Shelf .....   | 47-2 |
| Screwlock, 4-40 ID x 5/16" .....                | 22-2      | Shim, Needle Case .....                                   | 11-2 |
| Seal, Rubber, 3/8" x 1/2" .....                 | 22-2      | Side .....  | 47-2 |
| Seat, Cone, Thread.....                         | 5-2       | Slide Interface, Pin Type .....                           | 48-2 |
| Seat, Cone, Thread, Thread Tree .....           | 9-2       | Solenoid, Jump Stitch .....                               | 14-2 |
| Sensor, Optical Switch, Assembly .....          | 24-2      | Solenoid, Trimmer, Assembly .....                         | 20-2 |
| Sensor, Under Thread Control,<br>Assembly ..... | 14-2      | Spacer .....  | 35-2 |
| Set, Cover, Rotary Hook .....                   | 7-2       | Spacer, 3/16" ID x .25" OD<br>x .031" Thick .....         | 25-2 |
| Shaft Cover, Frame Holder .....                 | 36-2      | Spacer, Belt .....  | 24-2 |
| Shaft, Arm .....                                | 14-2      | Spacer, Interface, Wide Angle<br>Cap Frame .....          | 43-2 |
| Shaft, Arm, Winder .....                        | 5-2       | Spacer, Nylon, .14" ID x .25" OD<br>x .75" .....          | 38-2 |
| Shaft, Bobbin, Phase II.....                    | 14-2      | Spacer, Precision, .313" ID<br>x .010" Thick .....        | 11-2 |
| Shaft, Cam, Color Change .....                  | 8-2       | Spacer, Precision, .313" ID<br>x .016" Thick .....        | 11-2 |
| Shaft, Cap Frame .....                          | 34-2      | Spacer, Shaft, .128" ID x .317" OD<br>x .03" Thick .....  | 19-2 |
| Shaft, Drive .....                              | 27-2      | Spacer, Shaft, .375" ID x .562" OD<br>x .016" Thick ..... | 8-2  |
| Shaft, Drive Ring .....                         | 37-2      | Spacer, Shaft, 1/4" ID x .002" Thick .....                | 11-2 |
| Shaft, Drive, Lever, Take-Up .....              | 17-2      | Spacer, Shaft, 5/16" ID x .016" Thick .....               | 16-2 |
| Shaft, Frame Holder, Gauge Set .....            | 36-2      | Spacer, Shaft, Take-Up Lever .....                        | 11-2 |
| Shaft, Guide, Drive Ring .....                  | 37-2      | Spacer, Support, Velcro .....                             | 11-2 |
| Shaft, Guide, Needle Bar .....                  | 15-2      | Spring, Check, Tensioner, Thread .....                    | 13-2 |
| Shaft, Return .....                             | 28-2,29-2 |   |      |
| Shaft, Return, X-Axis .....                     | 24-2      |   |      |
| Shaft, Roller.....                              | 37-2      |   |      |

|   |           |  |           |
|---|-----------|--|-----------|
| Spring, Compression .....                         | 39-2,42-2 | Strap, Clamping, 82mm, 6-Panel .....                         | 35-2      |
| Spring, Extension, .125" OD x 1.75" .....         | 48-2      | Strap, Clamping, Cap Frame, w/Rubber ....                    | 41-2      |
| Spring, Holding, Needle Bar.....                  | 11-2      | Strap, Rubber, Gauge, 2.38"<br>x 18.00" x .0625" Thick ..... | 44-2      |
| Spring, Idler .....                               | 16-2      | Strap, Rubber, Gauge, 2.38"<br>x 18.00" x .125" Thick .....  | 44-2      |
| Spring, Jump, Reciprocator .....                  | 15-2      | Stud, Bearing, Retainer .....                                | 12-2      |
| Spring, Lower Thread Guide .....                  | 10-2      | Stud, Connecting, Needle Bar .....                           | 11-2      |
| Spring, Picker, Front .....                       | 19-2      | Stud, Connector, Reciprocator .....                          | 15-2      |
| Spring, Presser Foot .....                        | 11-2      | Stud, Press, 1/4" OD x 1/2" .....                            | 16-2      |
| Spring, Pretensioner .....                        | 13-2      | Support, Cap, Large, Machined .....                          | 38-2      |
| Spring, Return, Solenoid .....                    | 20-2      | Support, Cap, Small, Machined .....                          | 38-2      |
| Spring, Shaft, Arm, Winder .....                  | 5-2       | Support, Shaft, Rear .....                                   | 37-2      |
| Spring, Tensioner .....                           | 5-2       | Support, Tensioner Bracket .....                             | 10-2      |
| Spring, Tensioner, Thread .....                   | 13-2      | Switch, Cap Frame, Dual .....                                | 30-2      |
| Spring, Trimmer Home .....                        | 20-2      | Switch, E-Stop Block, 24mm .....                             | 2-2       |
| Standoff, 10mm Hex, M-F,<br>M5 x 0.8 x 16mm ..... | 20-2      | Switch, E-Stop, 24mm .....                                   | 2-2       |
| Standoff, Encoder, M-F,<br>M4 x 0.7 x 2.01" ..... | 26-2      | Switch, Full, Bobbin, Assembly .....                         | 5-2       |
| Standoff, F/F, 1/2" Hex, 1/4-20 x 1" .....        | 26-2      | Switch, Momentary, w/Full Guard .....                        | 3-2       |
| Standoff, F/F, Hex, M5 x 0.8 x 10mm .....         | 18-2      | Switch, Optical, Assembly .....                              | 18-2,20-2 |
| Standoff, Hex, M-F, M4 x 0.7 x 22mm.....          | 8-2       | Switch, Pushbutton, Momentary .....                          | 3-2       |
| Standoff, Hex, M-F, M4 x 0.7 x 35mm.....          | 8-2       | Switch, Winder, On/Off, Assembly .....                       | 5-2       |
| Standoff, M/F, Hex, M4 x 0.7 x 25mm.....          | 18-2      | Swivel, Wire .....   | 18-2      |
| Standoff, M/F, Hex, M4 x 0.7 x 48mm .....         | 18-2      | <b>T</b>   |           |
| Standoff, M/F, M4 x 0.7 x 31mm .....              | 3-2       | Tab, Tensioner .....   | 13-2      |
| Standoff, M-F, 3/16" Round .....                  | 13-2      | Table Top, Main .....  | 1-2       |
| Stiffener, Table Insert .....                     | 1-2       | Table Top, Rear, Left.....                                   | 1-2       |
| Strap, Clamping, 72mm, 6-Panel .....              | 35-2      | Table Top, Rear, Right .....                                 | 1-2       |
|   |           | Table Top, Side, Left .....                                  | 1-2       |

|  |                |   |      |
|--|----------------|---|------|
| Table Top, Side, Right .....                       | 1-2            | Washer, Flat,Fender, M4 .....                   | 38-2 |
| TableTop, Rear, Right .....                        | 6-2            | Washer, Head .....                              | 7-2  |
| Tape, Adhesive, 2.25" .....                        | 38-2           | Washer, Holder, Cable .....                     | 39-2 |
| Tape, Static, LCD .....                            | 3-2            | Washer, Neoprene .....                          | 5-2  |
| Template, Panel .....                              | 3-2            | Washer, Stainless Steel.....                    | 19-2 |
| Tensioner Disk .....                               | 42-2           | Washer, Support, Spring .....                   | 42-2 |
| Tensioner Disk Shaft .....                         | 42-2           | Washer, Thrust, 1.00mm Thick .....              | 8-2  |
| Tensioner Disk Support .....                       | 42-2           | Washer, Thrust, 2.75mm Thick .....              | 8-2  |
| Tensioner Disk Hub.....                            | 42-2           | Washer, Wave, 22mm OD .....                     | 14-2 |
| Terminal, Shock Cord .....                         | 35-2           | Washer, Wave, 35mm OD .....                     | 14-2 |
| Thread, Bobbin, White .....                        | 14-2           | Weldment, Cap Frame, <sup>w</sup> /Rubber ..... | 41-2 |
| Tie, Cable, 3.1" .....                             | 5-2,24-2       | Wrench, Hex, 4mm .....                          | 37-2 |
| Tray, Table .....                                  | 1-2            | Wrench, L-Hex, 3mm, Short Arm .....             | 43-2 |
| Trim, Hand Hold .....                              | 1-2            |   |      |
| Trimmer, Picker, Solenoid, Opto,<br>Assembly ..... | 33-2           |   |      |
| Tube, Guide, Thread, Thread<br>Tree, 9.7" .....    | 9-2            |   |      |
| Tubing, .125" ID x .187" OD.....                   | 7-2            |   |      |
| Tubing, Thread Tree, Assembly.....                 | 9-2            |   |      |
| <b>V</b>   |                |   |      |
| Velcro Pile, Dust Wiper .....                      | 24-2           |   |      |
| Velcro, Wiper, Pile, Flared.....                   | 11-2           |   |      |
| V-Rail, Arm .....                                  | 12-2           |   |      |
| V-Rail, Needle Case .....                          | 12-2           |   |      |
| <b>W</b>   |                |   |      |
| Washer, AIN .....                                  | 24-2,28-2,29-2 |   |      |
| Washer, Bellville, M6 .....                        | 4-2            |   |      |
| Washer, Flat, Rectangle .....                      | 34-2           |   |      |