


Illustrated Parts Manual for the EMT 10/12T embroidery peripheral



- A Complete Illustrated Parts Manual
- Twelve Melco Embroidery Heads
- 10 Needles with automatic color change
- Automatic Trimmers
- Caps, Tubular, Sash Frame
- 

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Introduction

Model and Serial Numbers

There is only one model version of the Melco EMT 10/12T Sewing Peripheral. This model is operated on 220 Volts only. The EMT 10/12T is identified as part number 011388-01.

Determine the model number of your machine before you use this manual to order parts. The machine MODEL number is located on the label that is placed on the front of the frame, under the table and to right side of the machine.

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 machine(s) described above.

The Serial Number for the EMT 10/12T Embroidery machine is located at the rear of the unit, behind the User Station area. It is easily visible when you stand behind the #1 Sewing Head and look just under the Monitor Shelf at the large vertical beam supporting the Logic Control Box.

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.

Special Parts Handling

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

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.

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

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

General Considerations

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

Printed Circuit Boards

Printed circuit boards are packaged and shipped in anti static bags. The components of the printed circuit boards are sensitive to static electrical discharges. The use of standard anti static precautions is recommended.

Special Packaging

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

Covers (Heads 1-4)

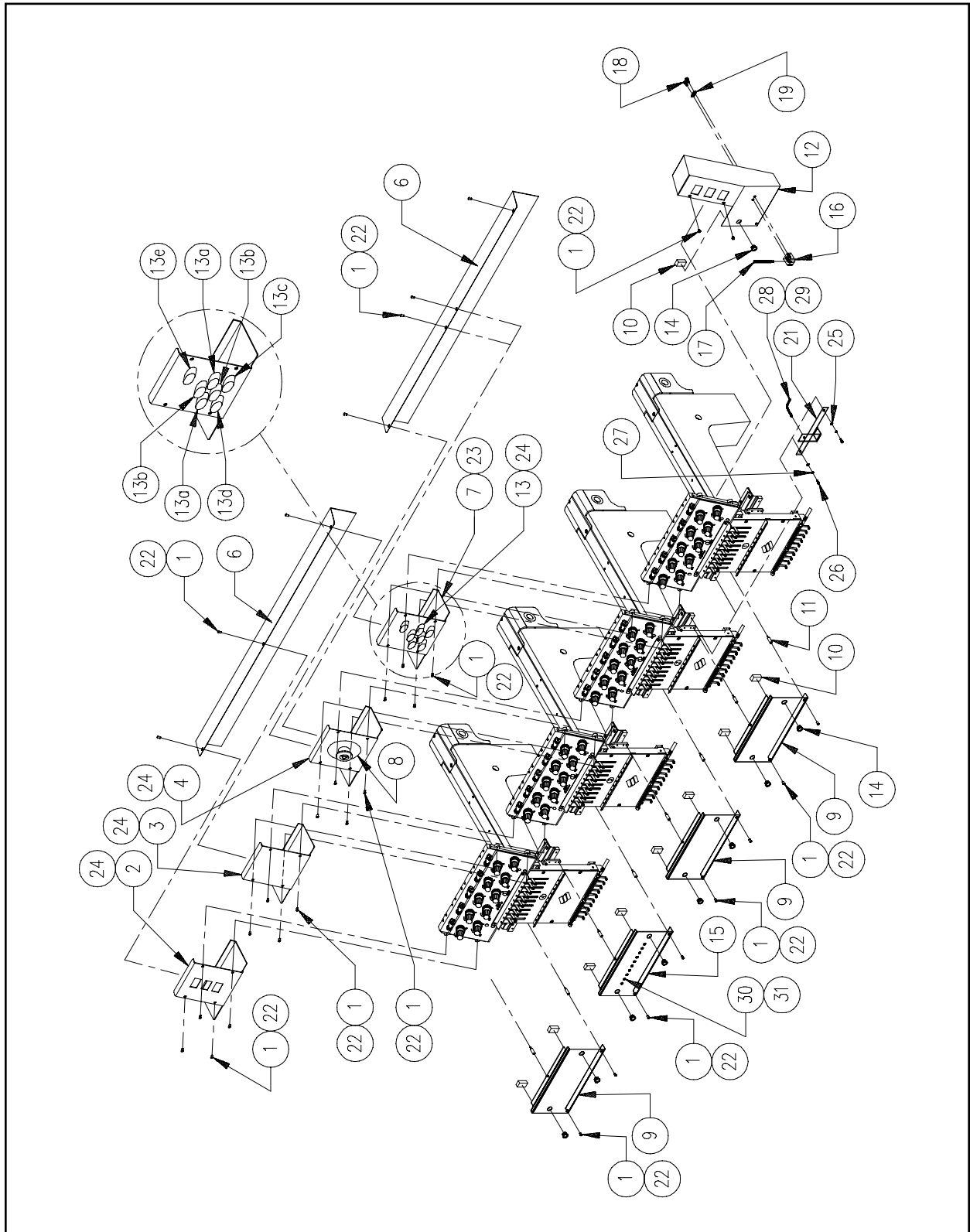


Figure 1

Covers (Heads 1-4)**Reference Figure 1**

Item No.	Part Number	Item Description
1	010171-08	Screw, Socket Head Cap, M4 x 0.7 x 8mm, Zinc Plate
2	009076-01	Cover, Spacer, Tensioner Bracket, Start/Stop - (See p/n 12032)
3	009438-01	Cover, Spacer, Tensioner Bracket
4	009439-01	Cover, Spacer, Tensioner Bracket, E-Stop
6	009444-03	Cover, Rear, Tensioner Bracket, EMI
7	009086-01	Cover, Spacer, Keypad
8a	010159-01	Switch, Contact BLK, N/C
8b	009143-01	Plate, Emergency Stop
8c	009145-01	Block, Contact, Emergency Stop
8d	009144-01	Push Button, Emergency Stop
9	008125-01	Cover, Spacer, Lower
10	006802-01	Damper, Spacer Cover
11	008129-16	Standoff, Hex, M/F, M4 x 0.7 x 16mm
12	10103-02	Cover, Tensioner Bracket, Right - (See page 10-1 for switches)
13	011131-01	PCB, Remote Keypad, Assembly
13a	009017-01	Keycap, Horizontal Arrow
13b	009017-02	Keycap, Vertical Arrow
13c	009017-05	Keycap, Jog
13d	009017-06	Keycap, Color Change
13e	009017-07	Keycap, Fast/Slow
14	008495-01	Miniature Insulating Bushing
15	10106	Cover, Spacer, Lower, LED
16	10109	Block, Bobbin
17	10110	Pin, Bobbin
18	010172-12	Screw, Socket Head Cap, M5 x 0.8 x 12mm, Zinc Plate
19	690427-05	Washer, Lock, Split M5
21	12170	Mount, Bracket, LED
22	690364-38	Washer, Flat, Nylon, #8
23	009862-08	Screw, PNH Phillips, w/Star M3 x 8mm
24	343109-01	Grommet, Rubber
25	690439-03	Washer Flat, M3
26	010170-08	Screw, Socket Head Cap, M3 x 0.5 x 8mm, Zinc Plate
27	690427-03	Washer, Lock, Split M3
28	12273	Socket, LED
29	10288	LED, Ultra Bright
30	12260	Lens, Low Profile, Green
31	12270	Ring, Retaining, Lens

Covers (Heads 5-8)

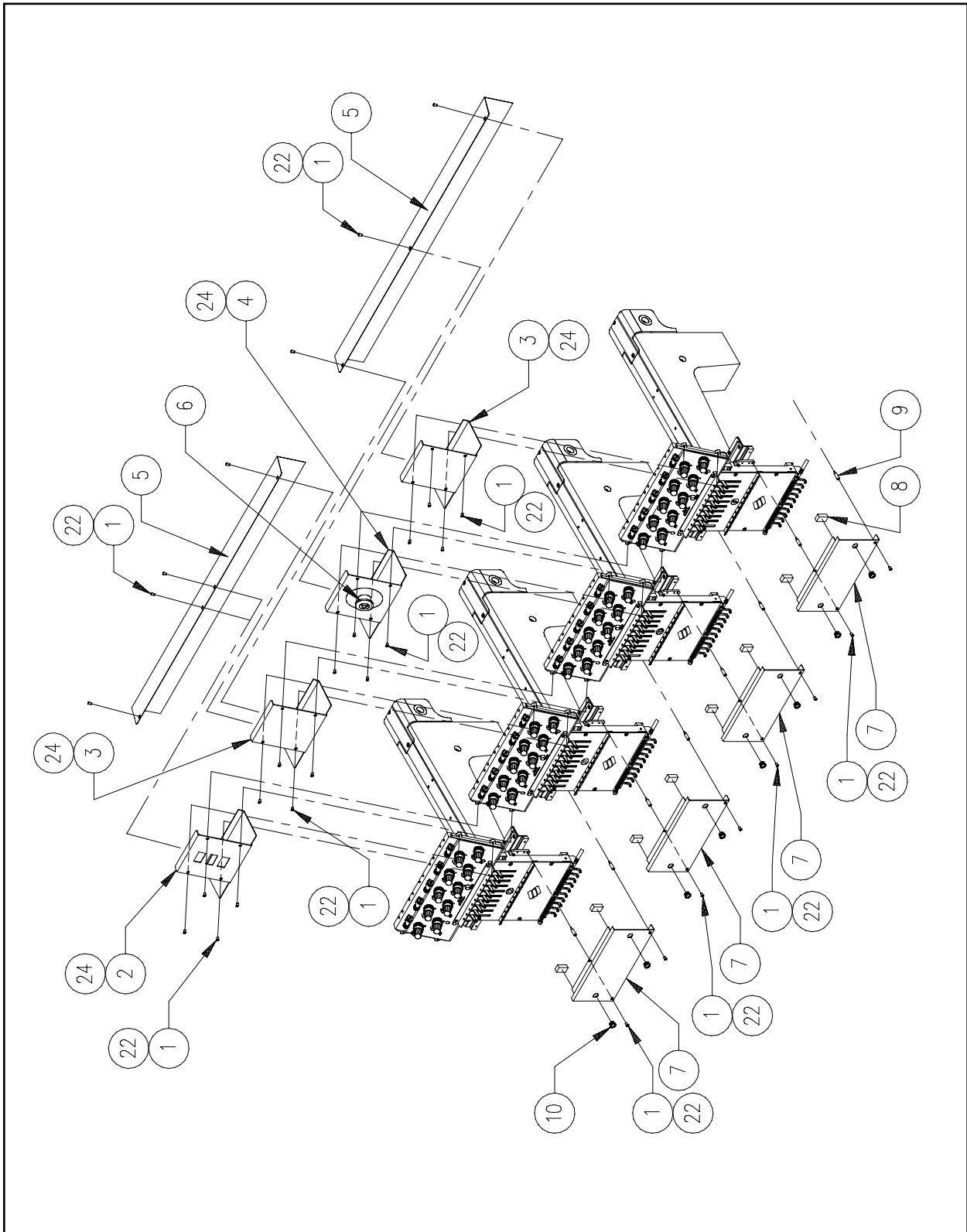


Figure 2

Covers (Heads 5-8)**Reference Figure 2**

Item No.	Part Number	Item Description
1	010171-08	Screw, Socket Head Cap, M4 x 0.7 x 8mm, Zinc Plate
2	009076-01	Cover, Spacer, Tensioner Bracket, Start/Stop - (See p/n 12032)
3	009438-01	Cover, Spacer, Tensioner Bracket
4	009439-01	Cover, Spacer, Tensioner Bracket, E-Stop
5	009444-03	Cover, Rear, Tensioner Bracket, EMI
6a	010159-01	Switch, Contact BLK, N/C
6b	009143-01	Plate, Emergency Stop
6c	009145-01	Block, Contact, Emergency Stop
6d	009144-01	Push Button, Emergency Stop
7	008125-01	Cover, Spacer, Lower
8	006802-01	Damper, Spacer Cover
9	008129-16	Standoff, Hex, M/F, M4 x 0.7 x 16mm
10	008495-01	Miniature Insulating Bushing
22	690364-38	Washer, Flat, Nylon, #8
24	343109-01	Grommet, Rubber

Covers (Heads 9-12)

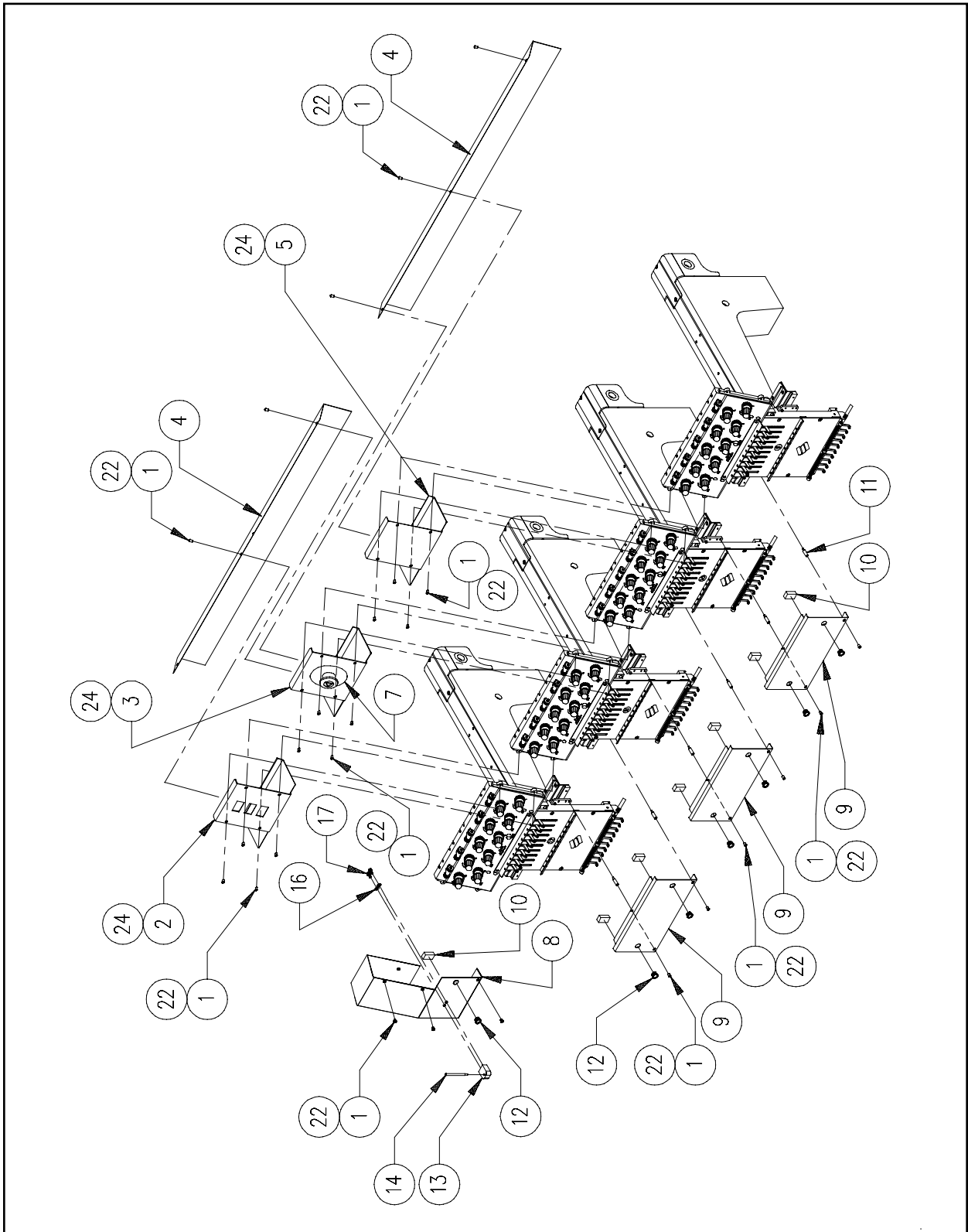


Figure 3

Covers (Heads 9-12)**Reference Figure 3**

Item No.	Part Number	Item Description
1	010171-08	Screw, Socket Head Cap, M4 x 0.7 x 8mm, Zinc Plate
2	009076-01	Cover, Spacer, Tensioner Bracket, Start/Stop - (See p/n 12032)
3	009439-01	Cover, Spacer, Tensioner Bracket, E-Stop
4	009444-03	Cover, Rear, Tensioner Bracket
5	009438-01	Cover, Spacer, Tensioner Bracket
7a	010159-01	Switch, Contact BLK, N/C
7b	009143-01	Plate, Emergency Stop
7c	009145-01	Block, Contact, Emergency Stop
7d	009144-01	Push Button, Emergency Stop
8	10104-02	Cover, Tensioner Bracket, Left
9	008125-01	Cover, Spacer, Lower
10	006802-01	Damper, Spacer Cover
11	008129-16	Standoff, Hex, M/F, M4 x 0.7 x 16mm
12	008495-01	Miniature Insulating Bushing
13	10109	Block, Bobbin
14	10110	Pin, Bobbin
16	690427-05	Washer, Lock, Split, M5
17	010172-12	Screw, Socket Head Cap, M5 x 0.8 x 12mm, Zinc Plate
22	690364-38	Washer, Flat, Nylon, #8
24	343109-01	Grommet, Rubber

Covers (Frame) (1 of 2)

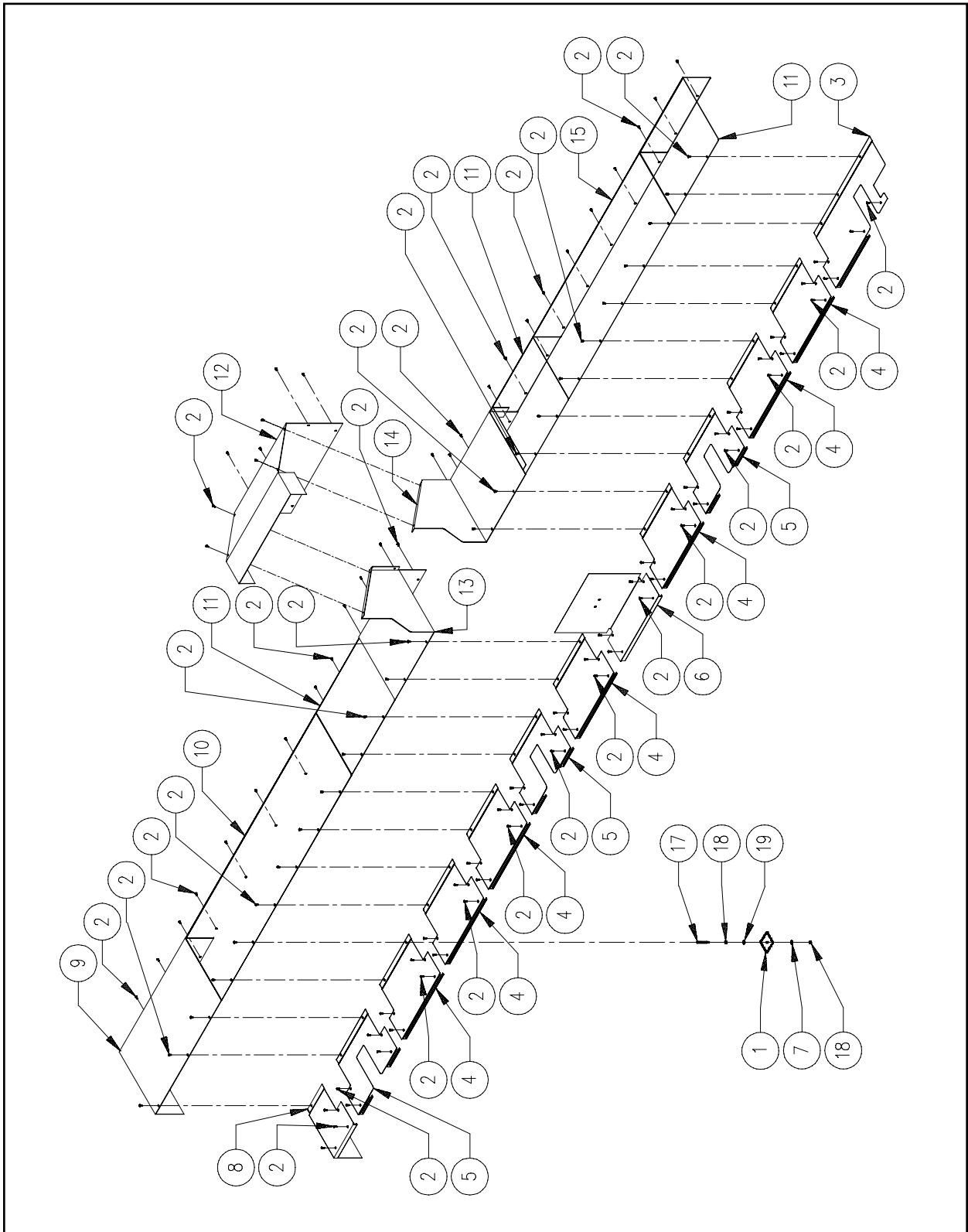


Figure 4

Covers (Frame) (1 of 2)**Reference Figure 4**

Item No.	Part Number	Item Description
1	011237-02	Frame, Main (reference only)
2	010170-08	Screw, Button Head Cap, M4 x 0.7 x 8mm
3	011245-01	Cover, Front, Head 1, Right Hand
4	011244-01	Cover, Front, Heads 2, 3, 5, 7, 9, 10, 11, Right Hand
5	011243-01	Cover, Front, Heads 4, 8, 12, Right Hand
6	011255-01	Cover, Front, Head 6, Right Hand
7	690439-06	Washer, Flat, M6 (x54)
8	011246-01	Cover, Front, Head 12, Left Hand
9	011247-01	Cover, Rear, Heads 11 & 12
10	011249-01	Cover, Rear, Heads 8, 9, 10
11	011248-01	Cover, Rear, Heads 3 & 7, Head 1 Right Hand
12	011253-02	Cover, Top, Z-Drive
13	011252-02	Cover, Rear, Z-Drive, Left Hand
14	011251-02	Cover, Rear, Z-Drive, Right Hand
15	011250-01	Cover, Rear, Heads 1 & 2
16	690364-38	Washer, Nylon, #8 (x60)
17	011260-01	Pillar, Support (x27)
18	680430-06	Nut, Hex, M6 (x54)

Covers (Frame) (2 of 2)

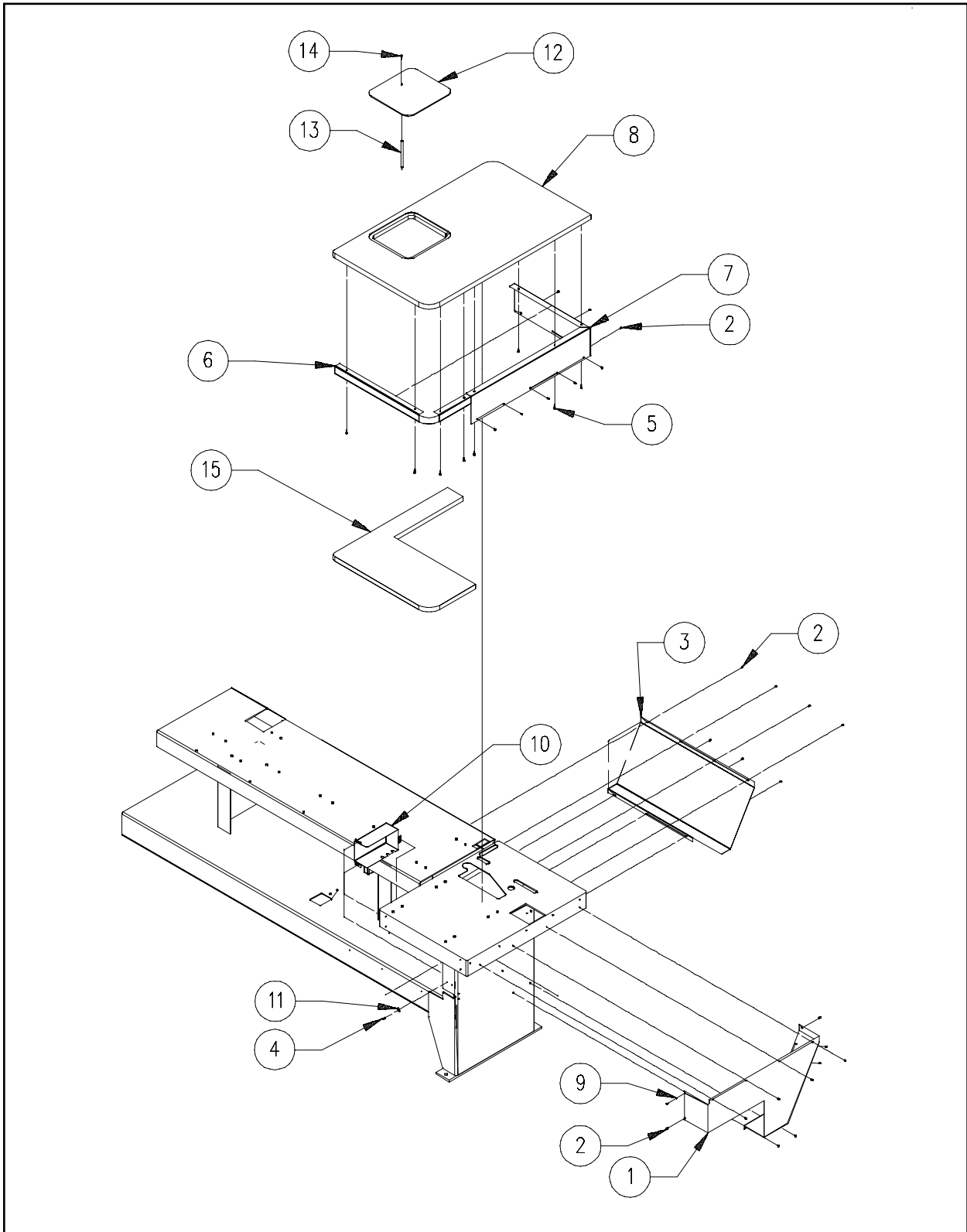


Figure 5

Covers (Frame) (2 of 2)**Reference Figure 5**

Item No.	Part Number	Item Description
A	-----	Keyboard Drawer
1	011239-01	Cover, End, X-Axis
2	010170-08	Screw, Button Head Cap, M4 x 0.7 x 8mm
3	011238-01	Cover, Rear, Y-Axis
4	010171-16	Screw, Socket Head Cap, M4 x 0.7 x 10mm, Zinc Plate
5	671910-12	Screw, Pan Head Phillips, Self-Tapping, #10 x 3/4"
6	011263-01	Cover, X-Drive, Front
7	011262-01	Cover, X-Drive, Rear
8	011264-02	Table Top, X-Drive
9	690364-38	Washer, Nylon, #8 (x30)
10	10341	Cover, Station, Power On
11	690439-06	Washer, Flat, M6
12	011236-01	Panel, Clear, Hoop, Center
13	10242	Pointer, Embroidery Stitch
14	011196-12	Screw, Flat Head Socket, M3 x 0.5 x 12mm
15	011254-01	Table, X Drive

Covers (Z-Drive)

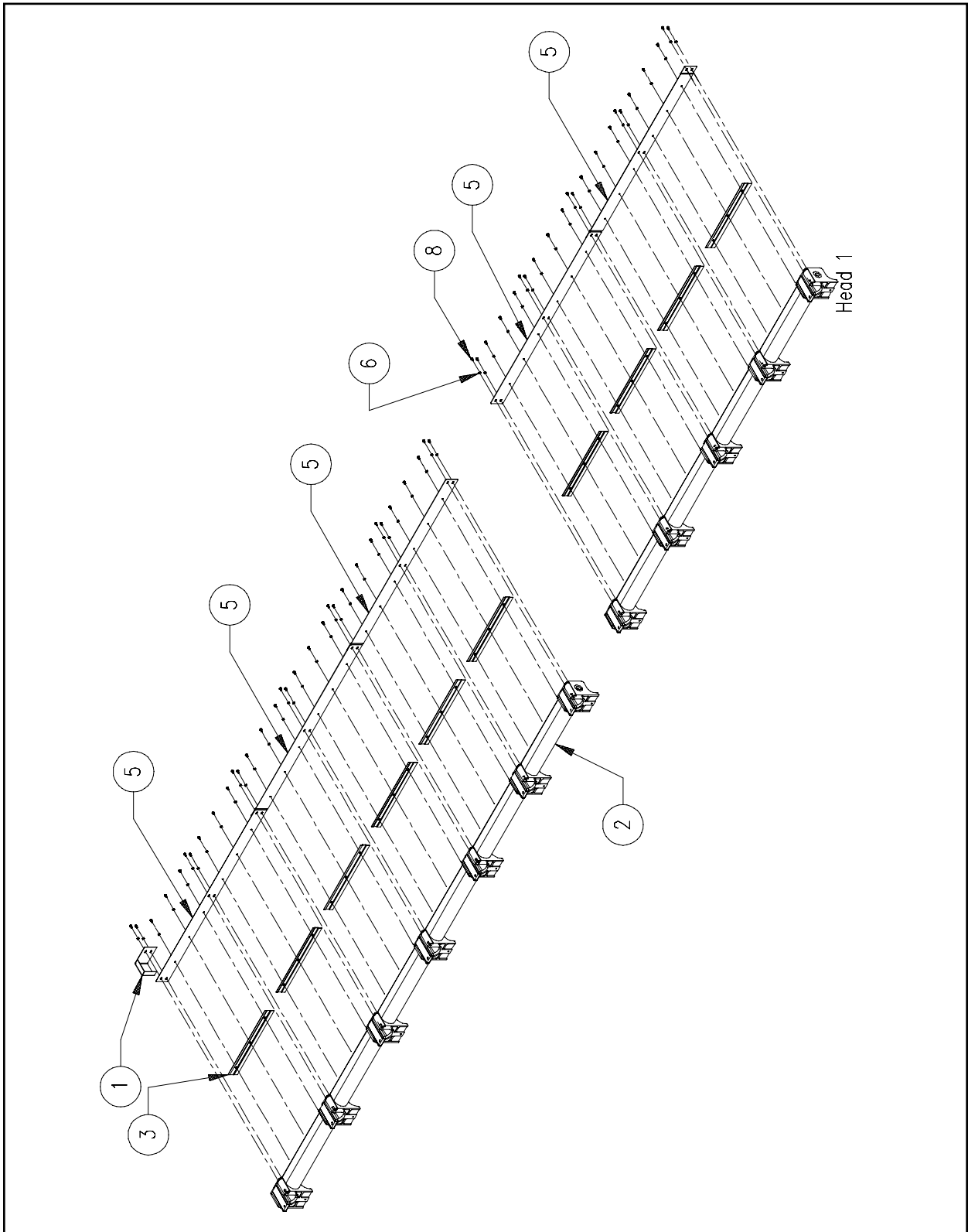


Figure 6

Covers (Z-Drive)**Reference Figure 6**

Item No.	Part Number	Item Description
1	10744	Cover, End, Z-Shaft
2	006676-02	Cover, Z-Shaft
3	007702-01	Plate, Clamp, Z-Cover
5	007699-01	Plate, Back, Z-Cover, Heads 6-10
6	690439-04	Washer, Flat, M4
8	010171-08	Screw, Socket Head Cap, M4 x 0.7 x 8mm, Zinc Plate

Table Tops

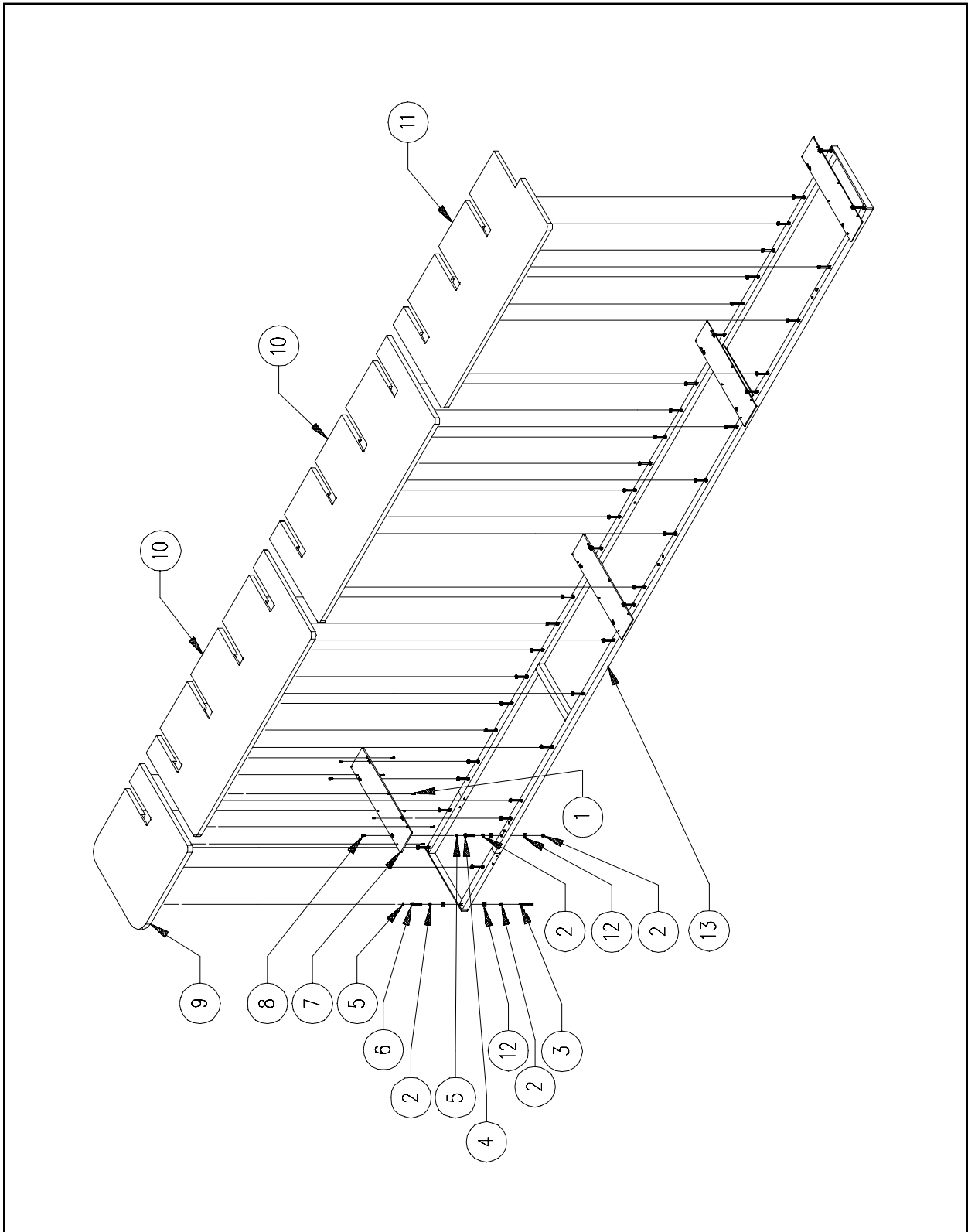


Figure 7

Table Tops**Reference Figure 7**

Item No.	Part Number	Item Description
1	671910-12	Screw, Pan Head Phillips, Self-Tapping, #10 x 3/4"
2	680430-12	Nut, Hex, M12
3	12299	Screw, Hex Head, 1/4-20 x 3.5"
4	10166	Pillar, Extension Support
5	011289-01	Washer, Rubber
6	011288-01	Pillar, Table Support
7	011285-01	Plate, Ext. Support
8	011163-10	Screw, Button Head Socket, M5 x 0.8 x 10mm
9	011282-01	Table Top, #10
10	011283-01	Table Top, #11 & #12
11	011284-01	Table Top, #13
12	690439-12	Washer, Flat, M12
13	011275-01	Frame

Drop Table (1 of 2)

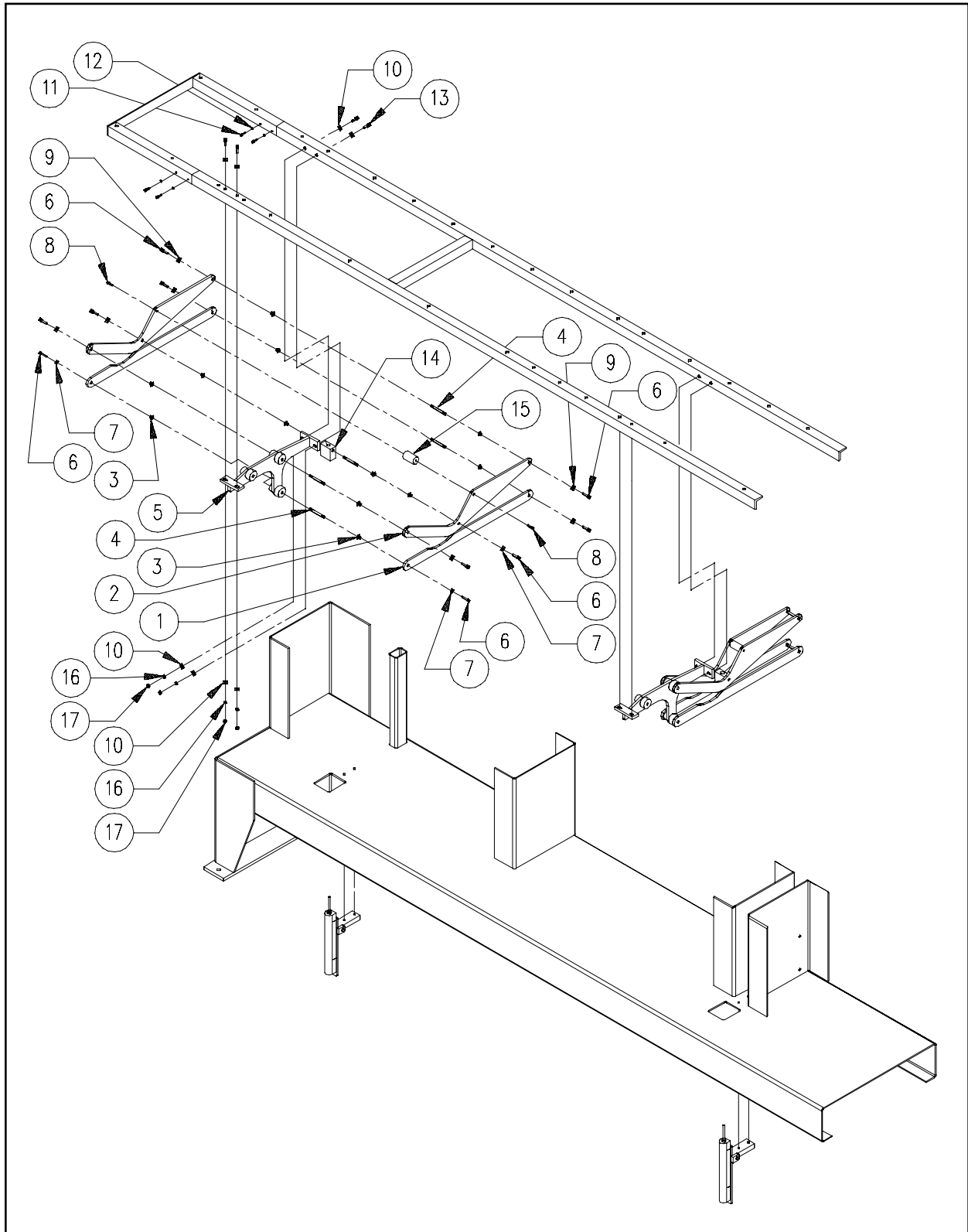


Figure 8

Drop Table (1 of 2)**Reference Figure 8**

Item No.	Part Number	Item Description
1*	011277-01	Link, Bottom, Drop Table
2*	011278-01	Link, Top, Drop Table
3*	11314-10	Bushing, Link, Drop Table
4*	011291-01	Shaft, Drop Table
5*	011276-01	Weldment Bracket, Drop Table
6	010173-12	Screw, Socket Head Cap, M6 x 1.0 x 12mm, Zinc Plate
7	690439-06	Washer, Flat, M6
8	010172-12	Screw, Socket Head Cap, M5 x 0.8 x 12mm, Zinc Plate
9	10435-07	Washer, Fender, M6
10	690439-08	Washer, Flat, M8
11	010173-16	Screw, Socket Head Cap, M6 x 1.0 x 16mm, Zinc Plate
12	690427-06	Washer, Lock, Split, M6
13	010174-20	Screw, Socket Head Cap, M8 x 1.25 x 20mm, Zinc Plate
14*	011280-01	Rod End, Cylinder, Drop Table
15*	011287-01	Spacer, Link, Top
16	690427-08	Washer, Lock, Split, M8
17	680430-08	Nut, Hex, M8

Note: The parts marked with '' may be replaced together as the following assembly:
 *11982 Drop Table Assembly

Drop Table (2 of 2)

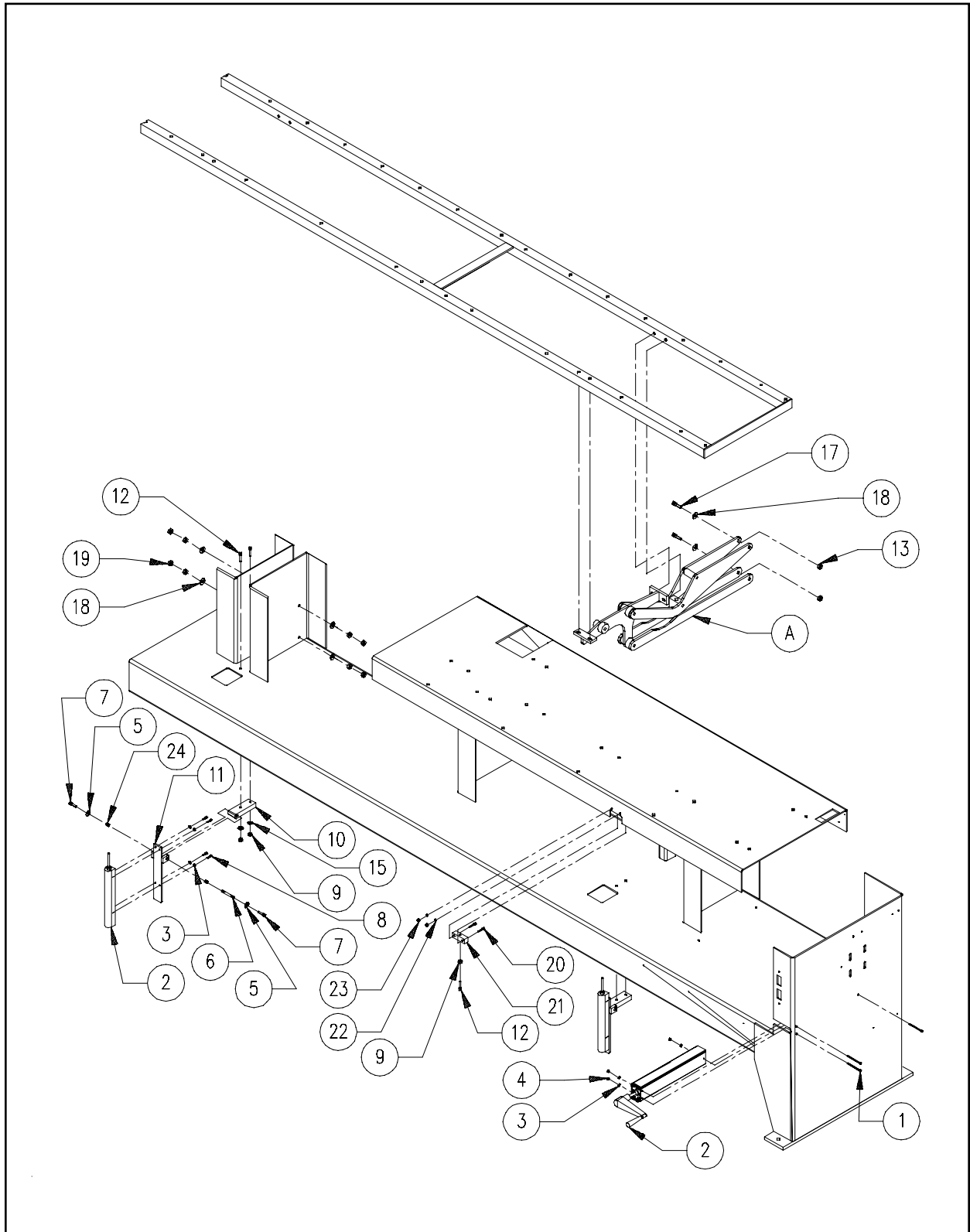


Figure 9

Drop Table (2 of 2)**Reference Figure 9**

Item No.	Part Number	Item Description
A	11982-01	Support Arm, Drop Table Assembly (see page 8-1)
1	010172-65	Screw, Socket Head Cap, M5 x 0.8 x 65mm, Zinc Plate
2	011281-01	Movotec Lift System
3	690439-05	Washer, Flat, M5
4	680430-05	Nut Hex, M5
5	10435-07	Washer, Fender, M6
6	011292-01	Shaft, Drop Table
7	010173-12	Screw, Socket Head Cap, M6 x 1.0 x 12mm, Zinc Plate
8	010172-16	Screw, Socket Head Cap, M5 x 0.8 x 16mm, Zinc Plate
9	680430-08	Nut, Hex, M8
10	011274-01	Bracket, Cylinder, Chassis
11	011273-01	Bracket, Cylinder, Drop Table
12	010174-30	Screw, Socket Head Cap, M8 x 1.25 x 30mm, Zinc Plate
13	680430-10	Nut, Hex, M10
15	690439-08	Washer, Flat, M8
17	010175-40	Screw, Socket Head Cap, M10 x 1.5 x 40mm, Zinc Plate
18	690439-10	Washer, Flat, M10
19	680430-10	Nut, Hex, M10
20	010173-25	Screw, Socket Head Cap, M6 x 1.0 x 25mm
21	10100	Block, Tensioner
22	690427-06	Washer, Lock, Split, M6
23	680430-06	Nut, Hex, M6
24	011286-01	Bushing, Plain

Start/Stop Cover

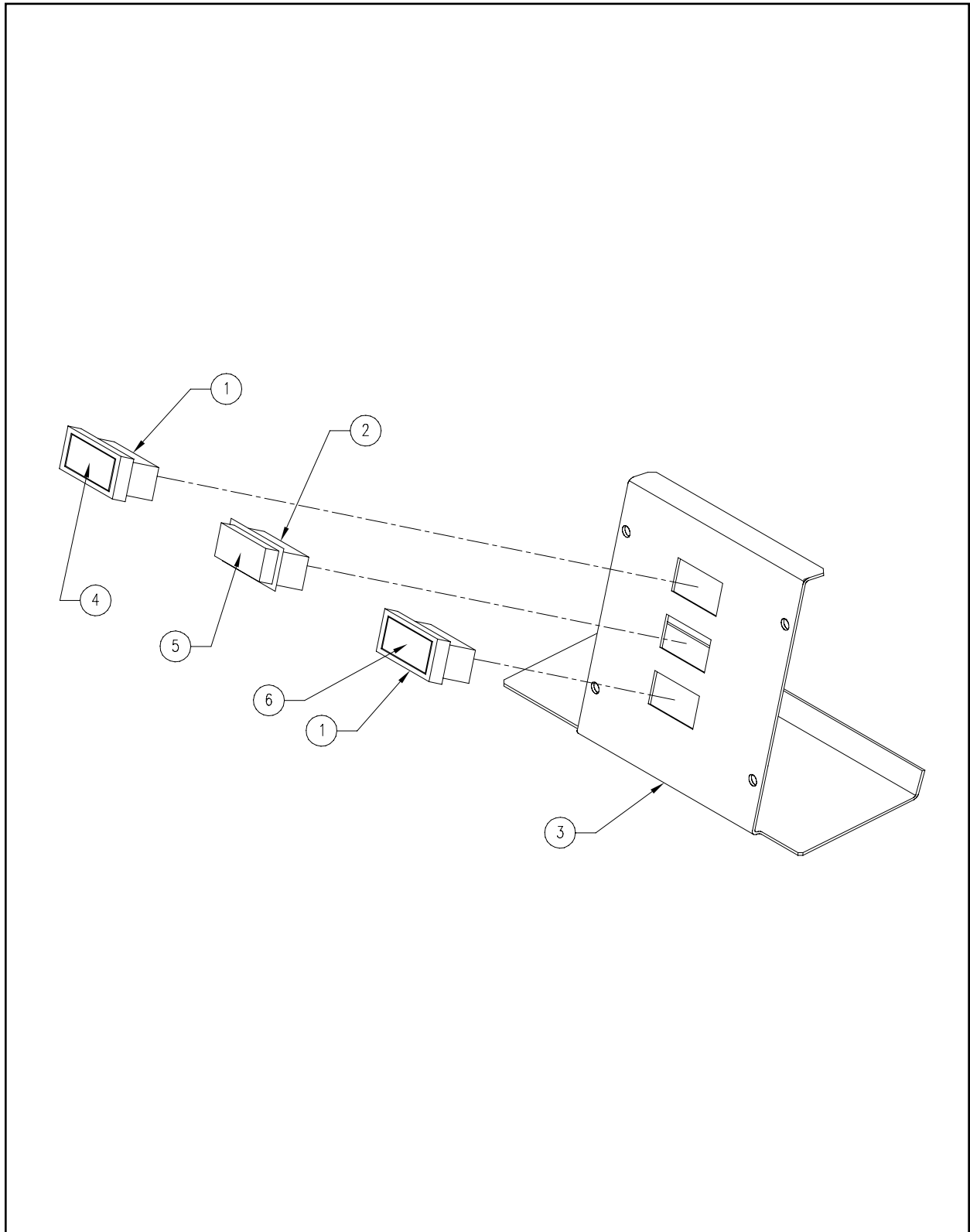


Figure 10

Start/Stop Cover**Reference Figure 10**

Item No.	Part Number	Item Description
1	009080-01	Switch, Momentary, w/Full Guard
2	009079-01	Switch, Push Button, Momentary
3	009076-01	Cover, Spacer, Tensioner Bracket, Start/Stop
4	009081-01	Lens, Push Button, White, Start
5	009081-02	Lens, Push Button, Black, Stop
6	009081-03	Lens, Push Button, Gray, Frame

Keyboard Drawer

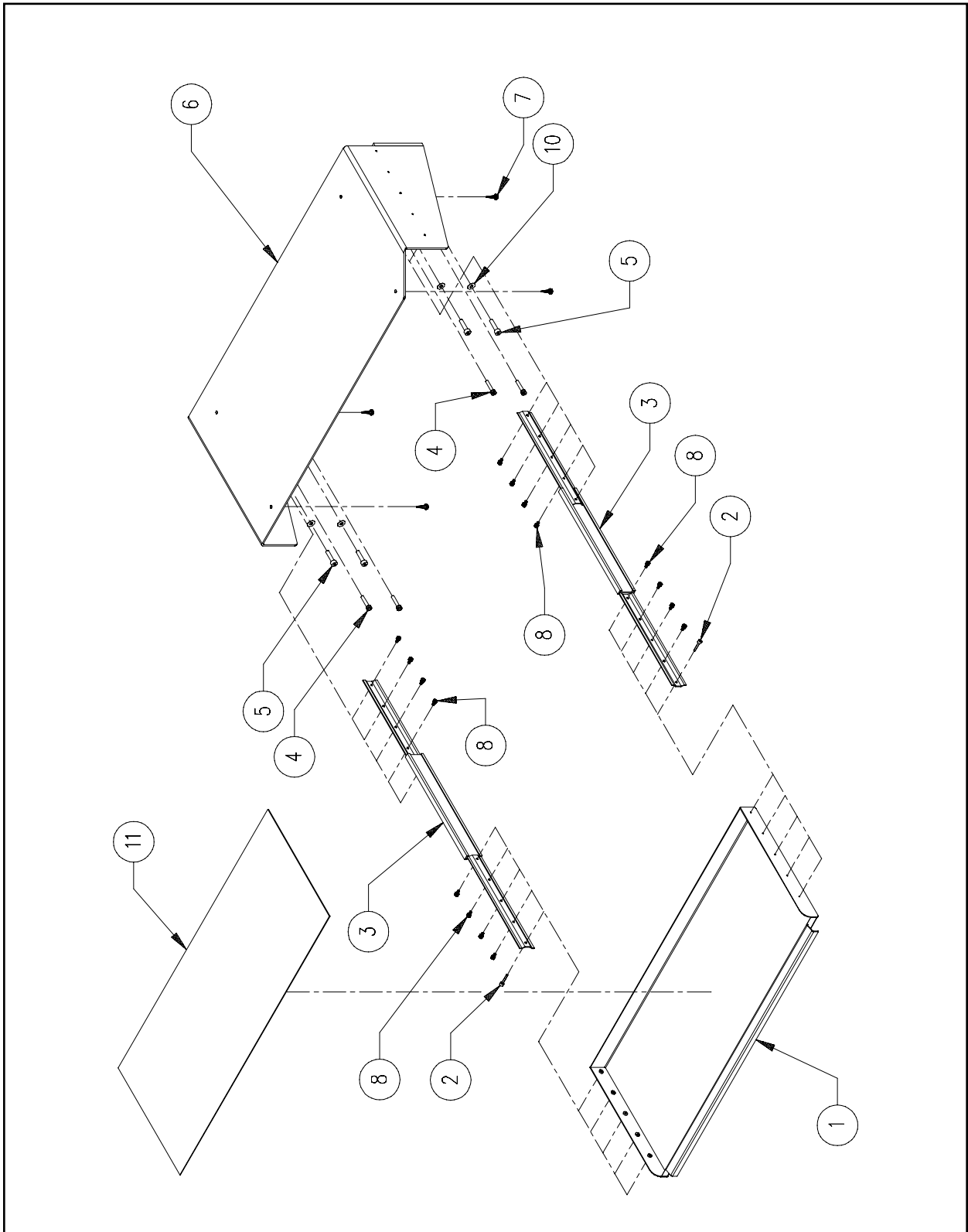


Figure 11

Keyboard Drawer**Reference Figure 11**

Item No.	Part Number	Item Description
1	011261-01	Drawer, Keyboard
2	010171-08	Screw, Socket Head Cap, M4 x 0.7 x 20mm, Zinc Plate (x2)
3	011258-01	Slide, Drawer
4	010172-25	Screw, Socket Head Cap, M5 x 0.8 x 25mm, Zinc Plate
5	010173-35	Screw, Socket Head Cap, M6 x 1.0 x 35mm, Zinc Plate
6	011257-02	Bracket, Table Support
7	671910-12	Screw, Pan Head Phillips, Self-Tapping, #10 x 3/4"
8	011197-08	Screw, Flat Head Socket, M4 x 0.7 x 8mm, Zinc Plate
9	690427-06	Washer, Lock, Split, M6 (x16)
10	10435-07	Washer, Fender, M6 x 18
11	10938	Pad, Keyboard, Rubber

Frame

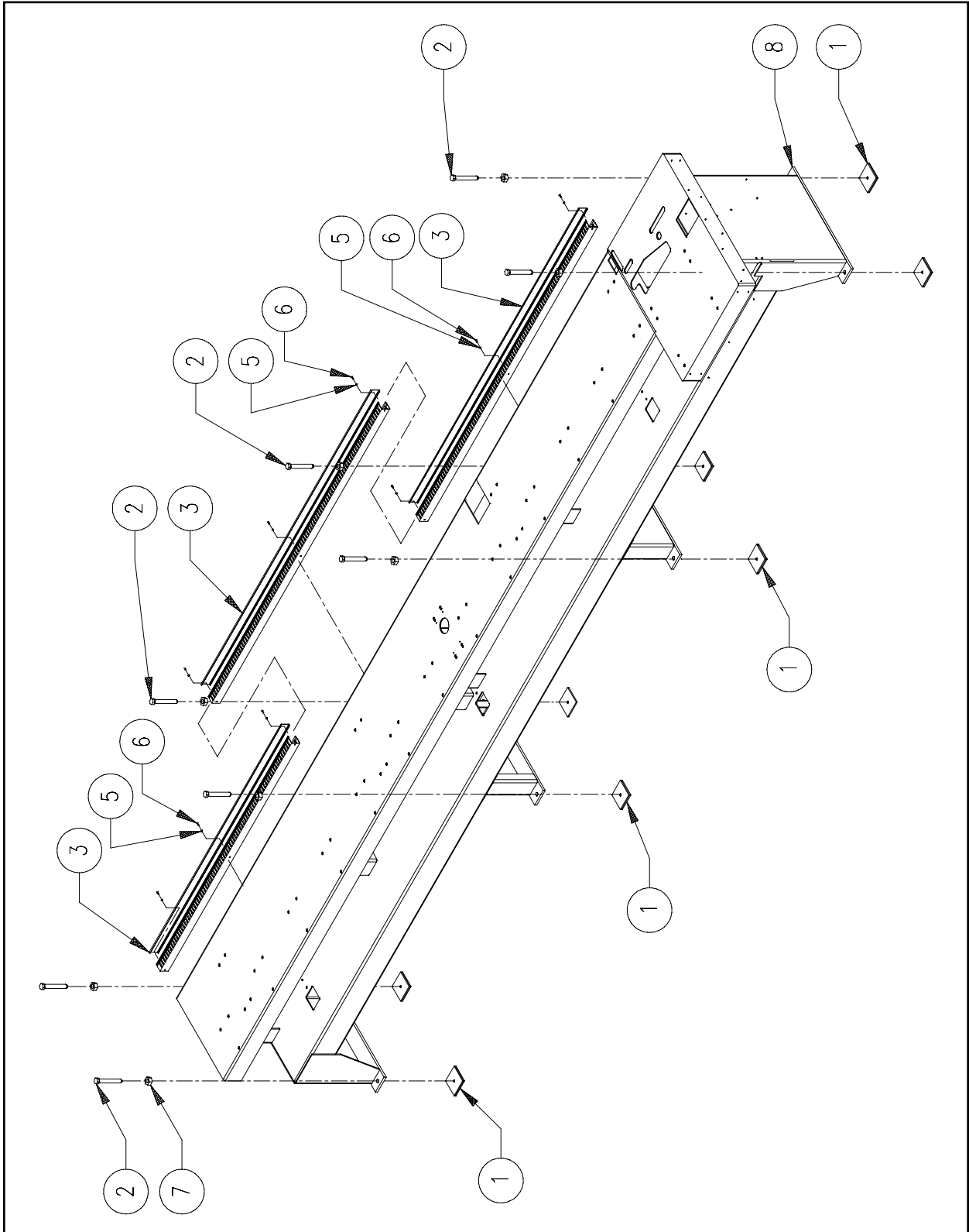


Figure 12

Frame**Reference Figure 12**

Item No.	Part Number	Item Description
1	008162-01	Pads, Jack Screw
2	011241-01	Screw, Jack
3	008163-02	Way, Cable
5	10435-05	Washer, Fender
6	010171-12	Screw, Socket Head Cap, M4 x 0.7 x 12mm
7	001963-20	Nut, Hex, M20
8	011237-03	Frame, Main

Sewing Head

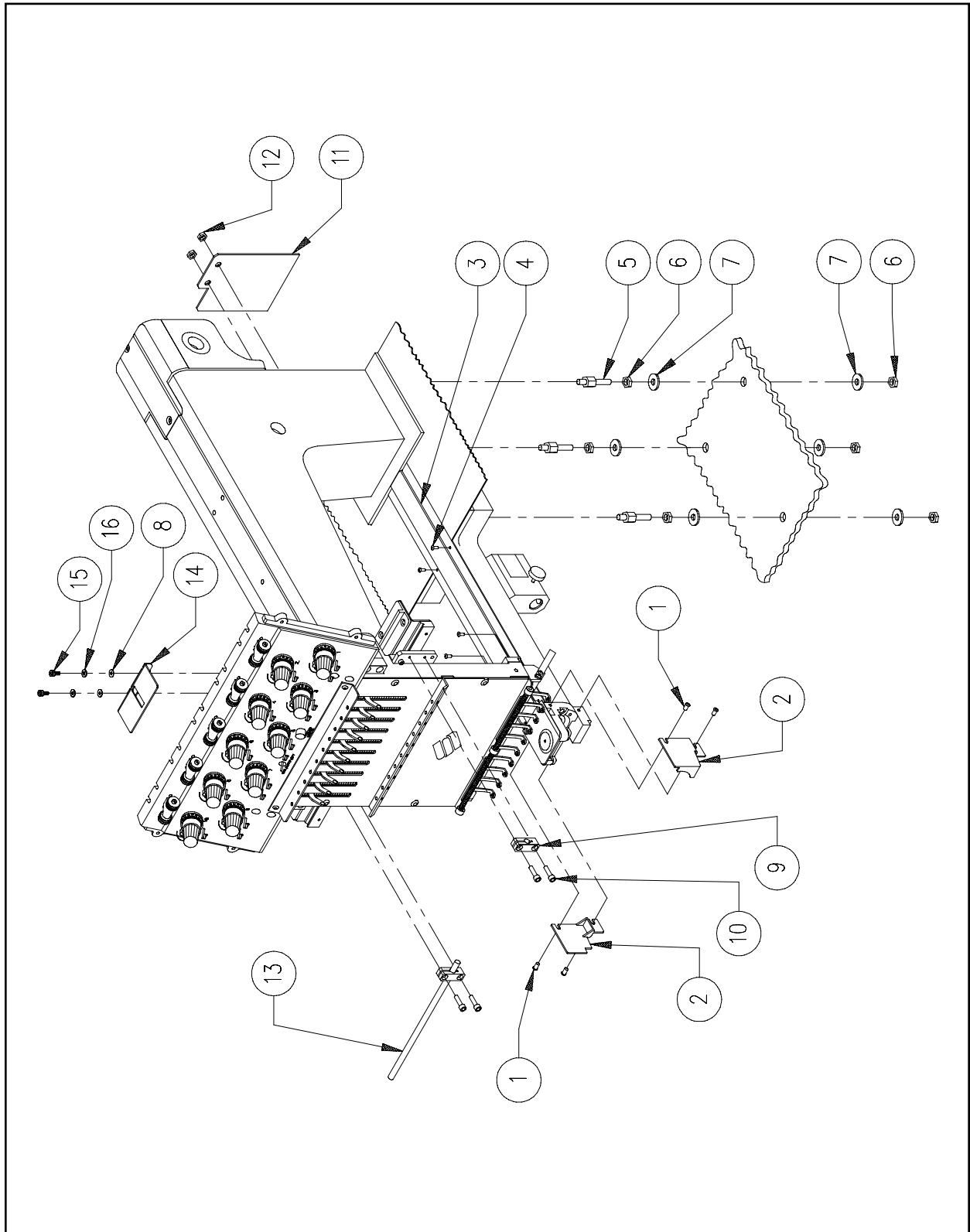


Figure 13

Sewing Head**Reference Figure 13**

Item No.	Part Number	Item Description
1	003136-06	Screw, Button Head Socket, M3 x 0.5 x 6mm
2	006529-01	Set, Cover, Rotary Hook
3	10805	Cover, Bed, Front
4	003509-08	Screw, Button Head Socket, M4 x 0.7 x 8mm
5	008241-01	Pillar, Head Support
6	680430-08	Nut, Hex, M8
7	10435-09	Washer, Fender, M8
8	690439-04	Washer, Flat, M4
9	008054-01	Clamp, Color Change Linkage
10	010170-10	Screw, Socket Head Cap, M3 x 0.5 x 10mm, Zinc Plate
11	008126-01	Cover, Head, Rear
12	005284-01	Nut, Lock, M6
13	008055-01	Shaft, Color Change Link
14	10329	Cover, Take-up Lever Drive
15	010171-08	Screw, Socket Head Cap, M4 x 0.7 x 8mm, Zinc Plate
16	690427-08	Washer, Lock, Split, M4

Color Change/Grabber

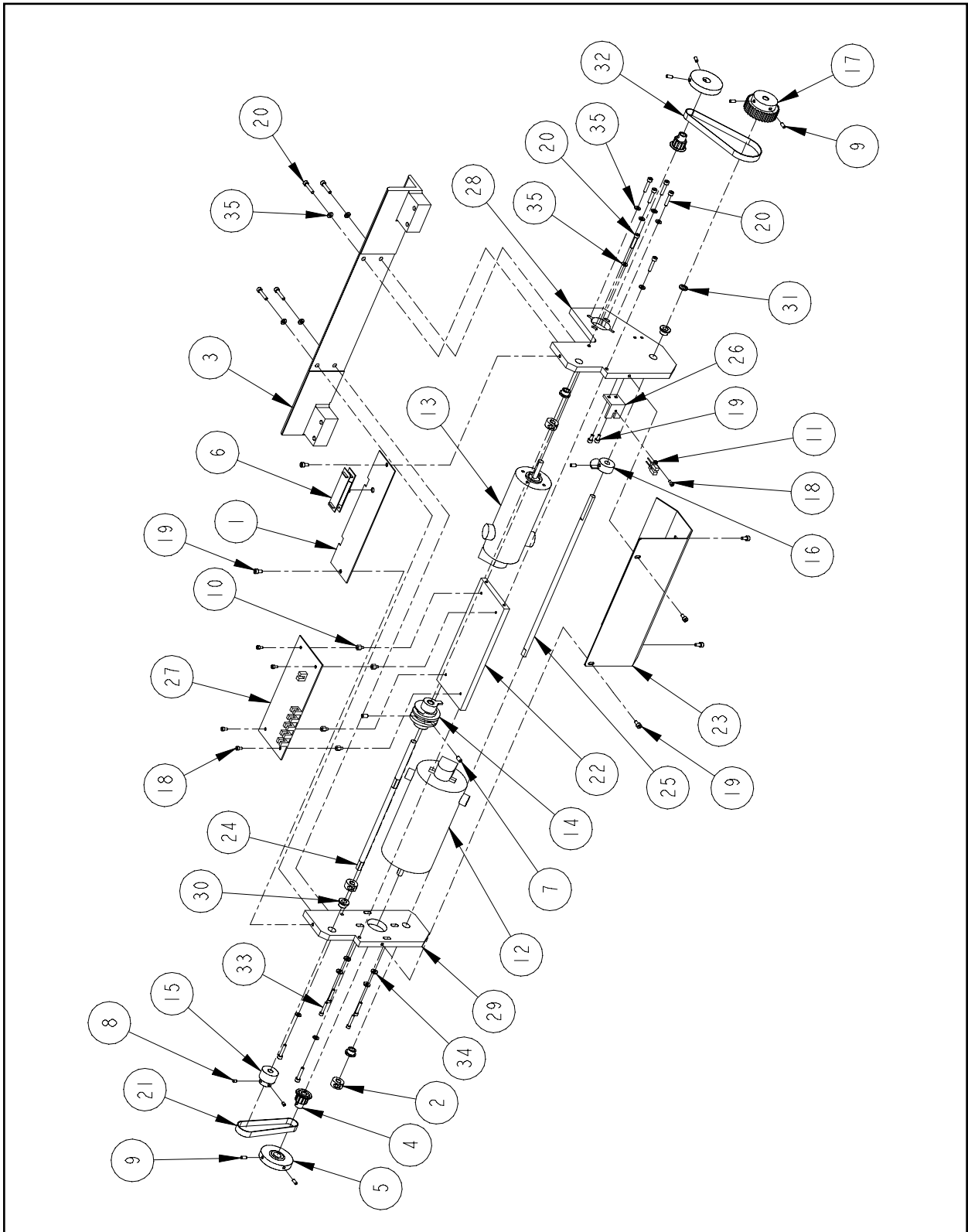


Figure 14

Color Change/Grabber**Reference Figure 14**

Item No.	Part Number	Item Description
1	10330	Cover, Color Change, top
2	10392	Collar, Clamp, 8mm ID
3	11386	Plate, Color Change, Rear
4	12080	Pulley, Timing, 5.08mmP, 12 Groove
5	12089	Disk, Pulley
6	12102	Clip, Ribbon Cable
7	001927-10	Screw, Set, Skt, Flt Pt, M5 x .8 x 10mm
8	001960-06	Screw, Set, Flat Point, M4 x 0.7 x 6mm
9	001960-10	Screw, Set, Flat Point, M4 x 0.7 x 10mm
10	005715-01	Standoff, M/F, M3
11	005850-01	Switch, Optical, Assembly
12	007544-01	Motor, Grabber
13	007698-01	Motor, Color Change
14	008056-01	Cam, Color Change
15	008060-01	Pulley, 1/5P, 16 Groove, Modified
16	008078-01	Disk, Home
17	008079-01	Pulley, 1/5P, 32 Groove
18	010170-06	Screw, M3 x 0.5 X 6mm Socket Head Cap, Zinc Plate
19	010171-08	Screw, M4 x 0.7 X 8mm Socket Head Cap, Zinc Plate
20	010171-20	Screw, M4 x 0.7 X 20mm Socket Head Cap, Zinc Plate
21	011333-01	Belt, Timing, 50T, 1/5P
22	011336-02	Plate, Support, PCB
23	011338-02	Cover, Color Change, Bottom
24	011339-02	Shaft, Color Change
25	011340-03	Shaft, Grabber, Drive
26	011341-01	Bracket, Sensor, Grabber
27	011342-01	PCB, Color Change
28	011344-04	Plate, Color Change, Right
29	011345-04	Plate, Color Change, Left
30	12055-01	Bearing, Flanged, Self-Lubricated, 10mm ID, 16mm Long
31	12072-12	Washer, D-Shape, .5 OD x .37 ID x .025 Thick
32	341657-01	Belt, Timing, 1/5P, 60T
33	670068-12	Screw, Socket Head Cap, 6-32UNC x 3/4 LG
34	690034-36	Washer, Flat, #6 NOM
35	690439-04	Washer, Flat, M4

Thread Tree

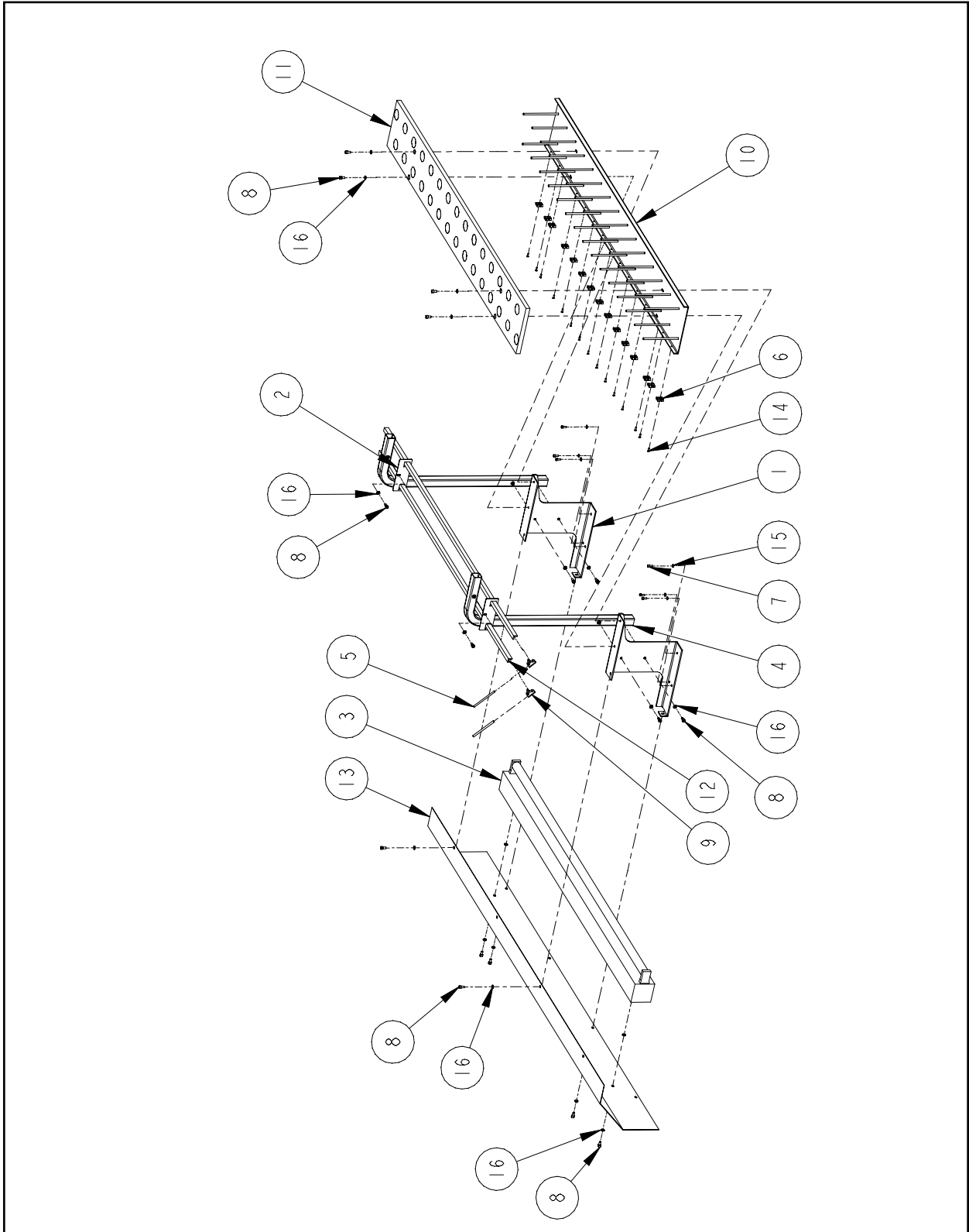


Figure 15

Thread Tree**Reference Figure 15**

Item No.	Part Number	Item Description
1	11392	Bracket, Thread Tree
2	11620	Clamp, Thread Guide Rails, Thread Tree
3	11622	Light, Strip, Fluorescent, 48 in
4	11893	Stand, Left Thread Tree
5*	005704-01	Tubing, .125 ID x .187 OD (Unit: feet)
6	005707-01	Clip, Tubing
7	010171-10	Screw, M4 x 0.7 X 10mm Socket Head Cap, Zinc Plate
8	010172-10	Screw, M5 x 0.8 X 10mm Socket Head Cap, Zinc Plate
9*	010632-01	Clip, Thread Tree
10	011227-02	Plate, Thread Tree
11	011228-02	Pad, Thread Tree
12	011229-03	Angle, Thread Tree
13	10776-01	Shield, Fluorescent
14	11650-10	Screw, Thread Forming, M3 x 0.5 x 10mm
15	690439-04	Washer, Flat, M4
16	690439-05	Washer, Flat, M5

Note: The parts marked with '' may be replaced together as the following assembly:
 *12644 Tubing w/clip (for one position)

Needle Case (1 of 2)

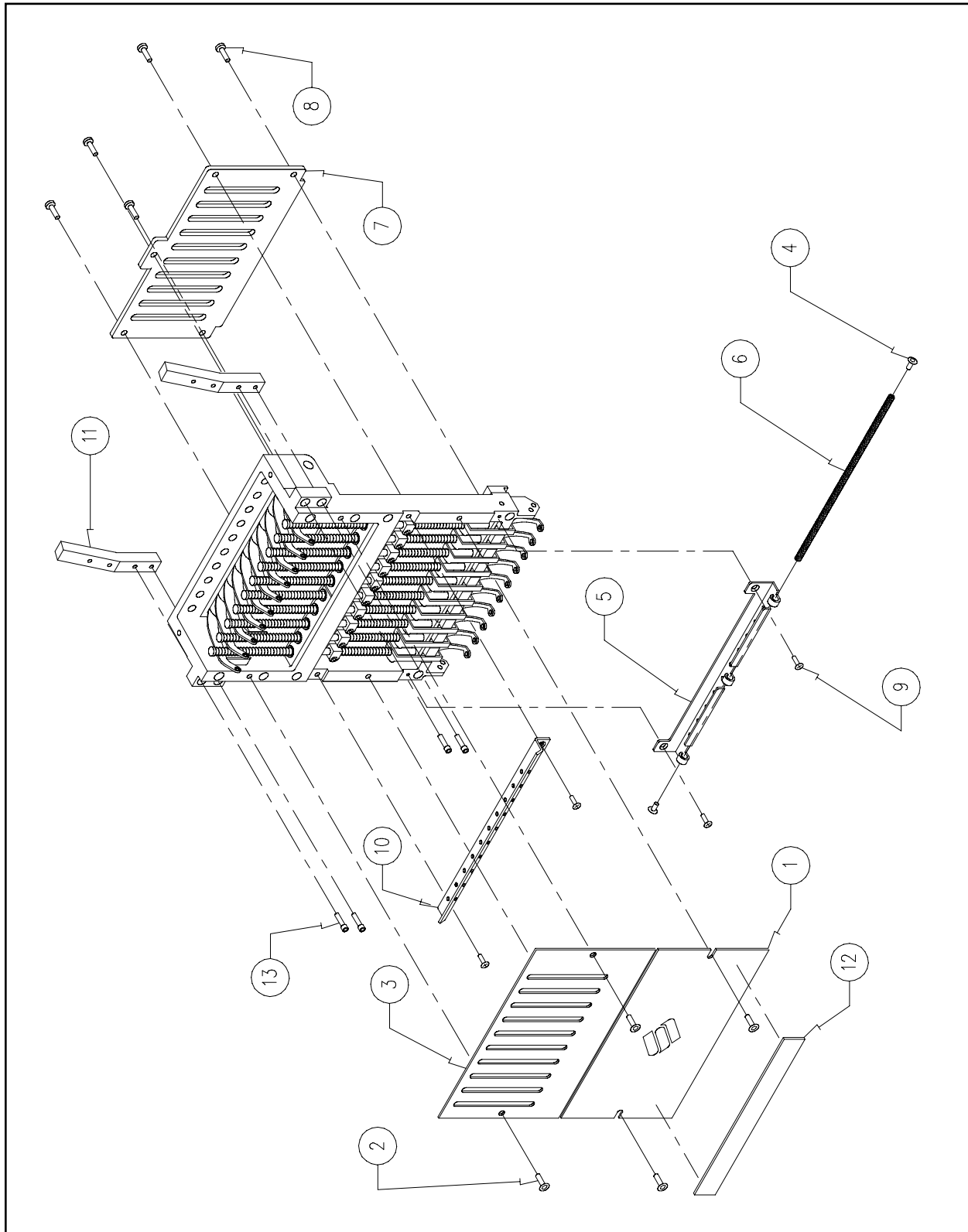


Figure 16

Needle Case (1 of 2)**Reference Figure 16**

Item No.	Part Number	Item Description
1	007511-01	Cover, Needle Case, Lower
2	003509-06	Screw, Button Head Cap, M4 x 0.7 x 6mm
3	007510-01	Cover, Needle Case, Upper
4	003509-10	Screw, Button Head Cap, M4 x 0.7 x 10mm
5	008483-01	Guide, Thread, Lower, Assembly
6	007519-01	Spring, Lower Thread Guide
7	007503-01	Plate, Guide, Needle Bar
8	001924-06	Screw, Slotted Cheese Head, 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, Assembly
11	007528-01	Support, Tensioner Bracket
12	007527-01	Magnet, Thread Retaining
13	672018-16	Screw, Socket Head Cap, M4 x 0.7 x 16mm

Needle Case (2 of 2)

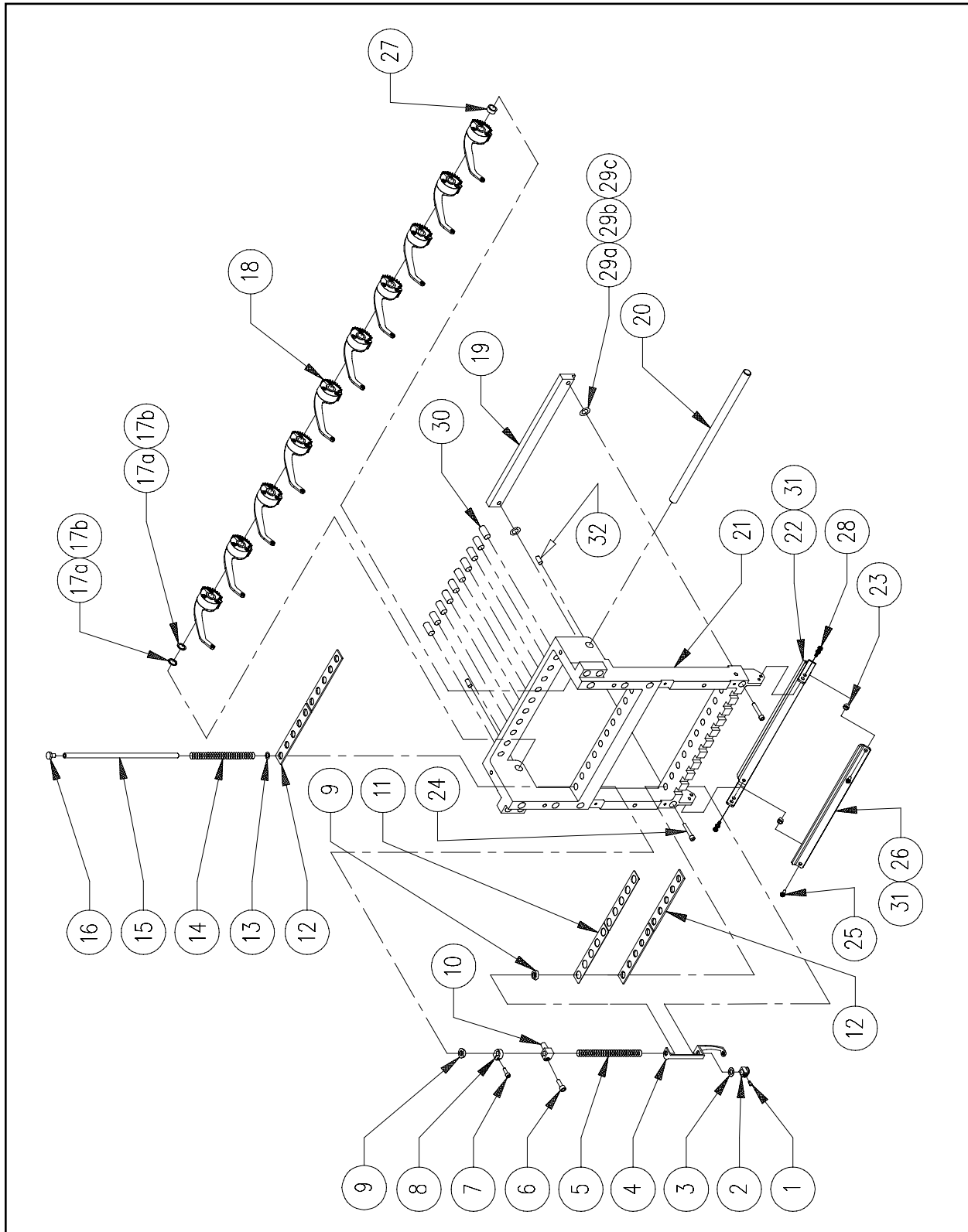


Figure 17

Needle Case (2 of 2)

Reference Figure 17

Item No.	Part Number	Item Description
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
23	002884-01	Spacer, Support, Velcro
24	672018-20	Screw, Socket Head Cap, M4 x 0.7 x 20mm
25	671855-08	Screw, Pan Head Slotted, M3 x 0.5 x 8mm
26*	008472-01	Bar, Grabber, Flared
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
32	001960-06	Screw, Set, Flat Point, M4 x 0.7 x 6mm

Note: The parts marked with '' may be replaced together as the following assembly:
 *008470-01 Grabber Bar, Upper, Flared, Assembly

*Note: The parts marked with '•' may be replaced together as the following assembly:
 •008473-01 Grabber Bracket, Lower, Flared, Assembly

Thread Tensioner

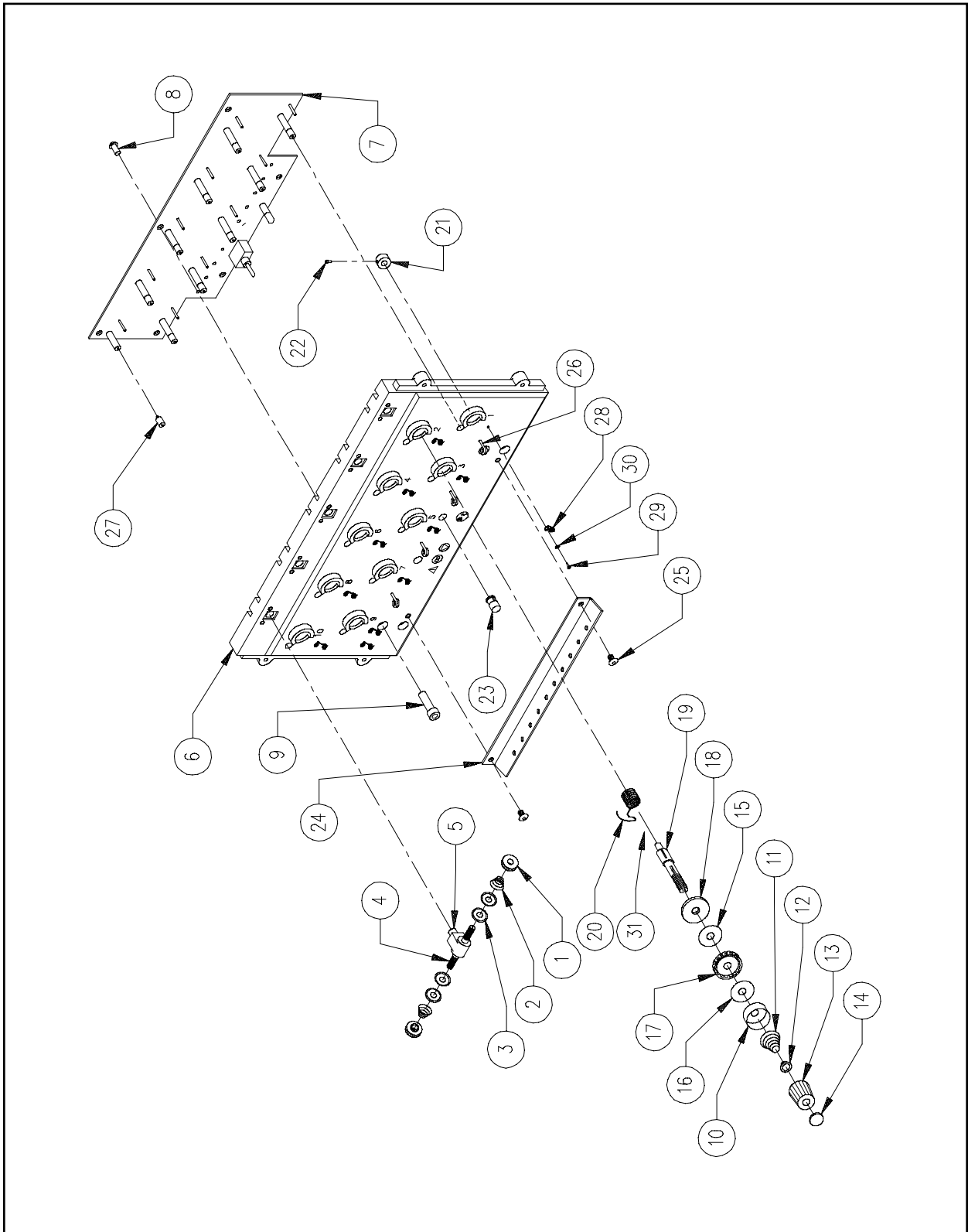


Figure 18

Thread Tensioner

Reference Figure 18

Item No.	Part Number	Item Description
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#	007743-01	PCB, Thread Break, Assembly
8#	001924-06	Screw, Cheese Head, Slotted, M4 x 0.7 x 6mm
9#	672018-16	Screw, Socket Head Cap, M4 x 0.7 x 16mm
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
23#	007548-01	Cover, LED
24#	008481-01	Guide, Thread, Upper, Assembly
25#	003509-06	Screw, Button Head Cap, M4 x 0.7 x 6mm
26#	002897-01	Post, Guide
27#	007659-02	Standoff, M-F, 3/16" Round
28#	008468-01	Pigtail
29#	672386-03	Screw, Pan Head Phillips, 2-56 x 3/16"
30#	690034-32	Washer, Flat #2
31#	011351-01	Bushing, Tensioner

Note: The parts marked with '' may be replaced together as the following assembly:
 *007547-01 Tensioner, Thread, Main, Black, Assembly

•Note: The parts marked with '•' may be replaced together as the following assembly:
 •007530-01 Pretensioner, Assembly

#Note: The parts marked with '#' may be replaced together as the following assembly:
 #10285 Tensioner Base Assembly (includes 007547-01 and 007530-01)

Arm and Bed

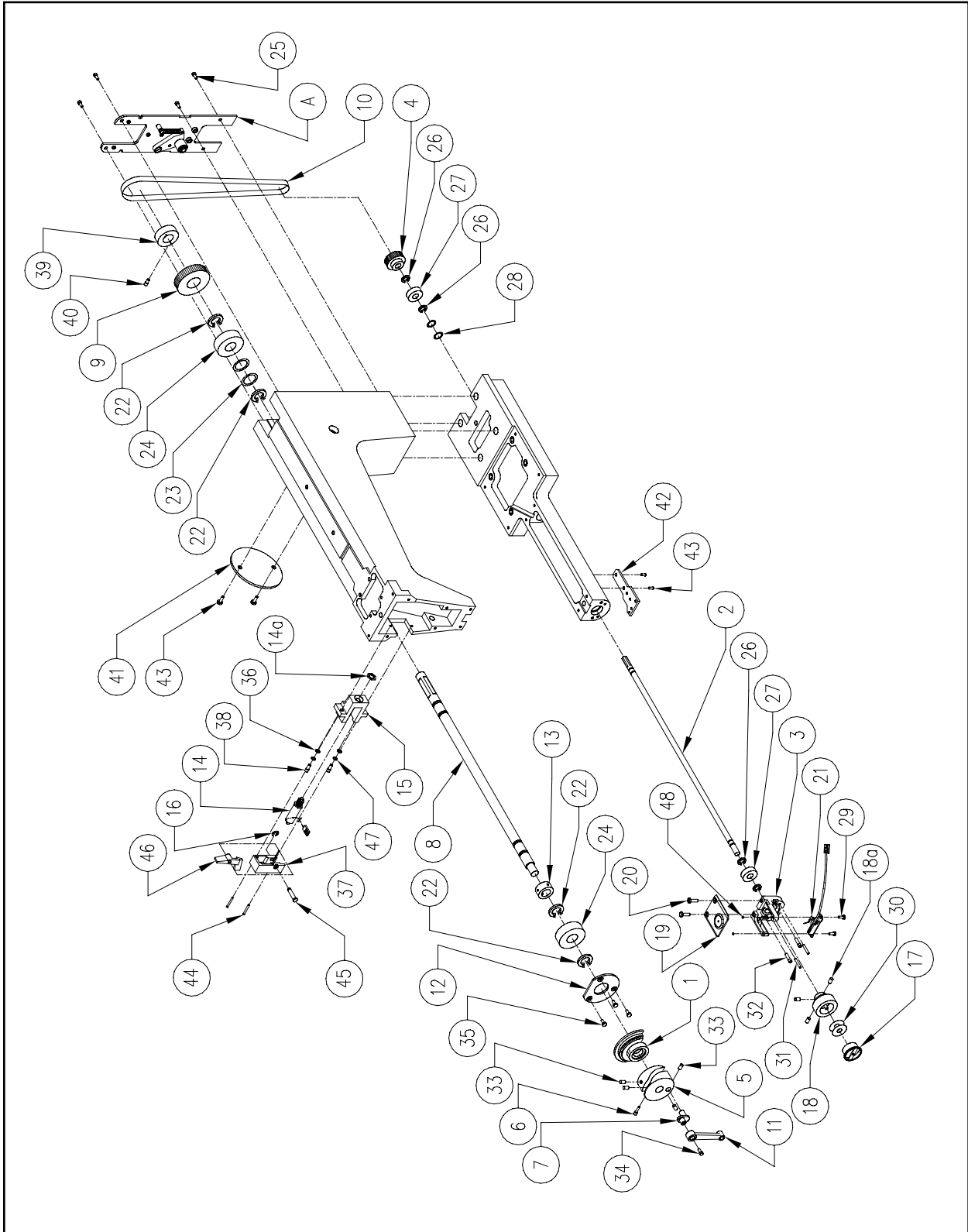


Figure 19

Arm and Bed**Reference Figure 19**

Item No.	Part Number	Item Description	
A	11395	Bobbin Idler	See Page 23-1
1	003539-01	Counterweight, Phase II	
2	003535-01	Shaft, Bobbin, Phase II	
3	005601-01	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	001523-01	Pulley, Drive, Bobbin, 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	008490-01	Case, Bobbin, Small, w/Spring	
18	009000-01	Hook, Rotary, Small Bobbin	
18a	-----	Screw, Rotary Hook	Included in Item #18
19	10246	Plate, Needle, Pocketed, Assembly	
19a	006579-01	Plate, Needle, Raised	
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	008499-01	Spool, Bobbin, Aluminum	
31	002610-14	Pin, Spring, 3mm OD x 14mm	
32	672018-16	Screw, Socket Head Cap, M4 x 0.7 x 12mm	
33	001971-06	Screw, Set, Flat Point, M6 x 1.0 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	

Arm and Bed**Reference Figure 19**

Item No.	Part Number	Item Description
38	672018-12	Screw, Socket Head Cap, M4 x 0.7 x 12mm
39	002668-01	Collar, Support, Gear
40	670038-10	Screw, Socket Head Cap, 10-32 x 5/8"
41	003622-21	Cover, Solenoid
42	006526-01	Bracket, Picker
43	003509-08	Screw, Button Head Socket, M4 x 0.7 x 8mm
44	001922-20	Screw, Socket Head Cap, M3 x 0.5 x 20mm
45*	006559-01	Pin, Latch
46*	002876-21	Latch, Jump Stitch
47	690427-04	Washer, Lock, Split, M4
48	006549-03	O-Ring, .187" ID x .06" Thick

*Note: The parts marked with '**' may be replaced together as the following assembly:
 *007340-01 Bracket, Latch, Jump Stitch, Assembly

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Reciprocator

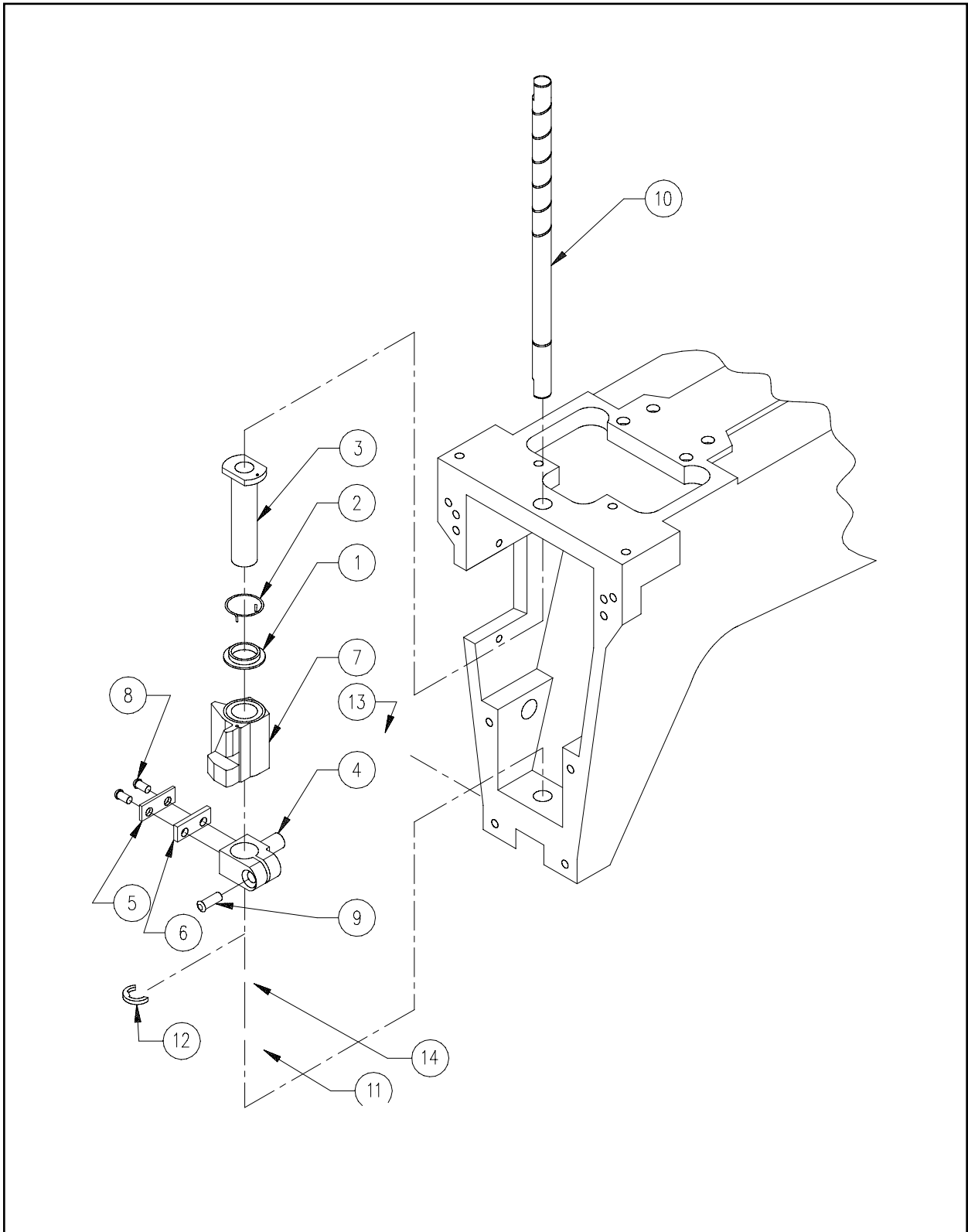


Figure 20

Reciprocator**Reference Figure 20**

Item No.	Part Number	Item Description
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
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 parts marked with '' may be replaced together as the following assembly:
 *001990-01S Assembly, Reciprocator

Needle Case Linear Drive

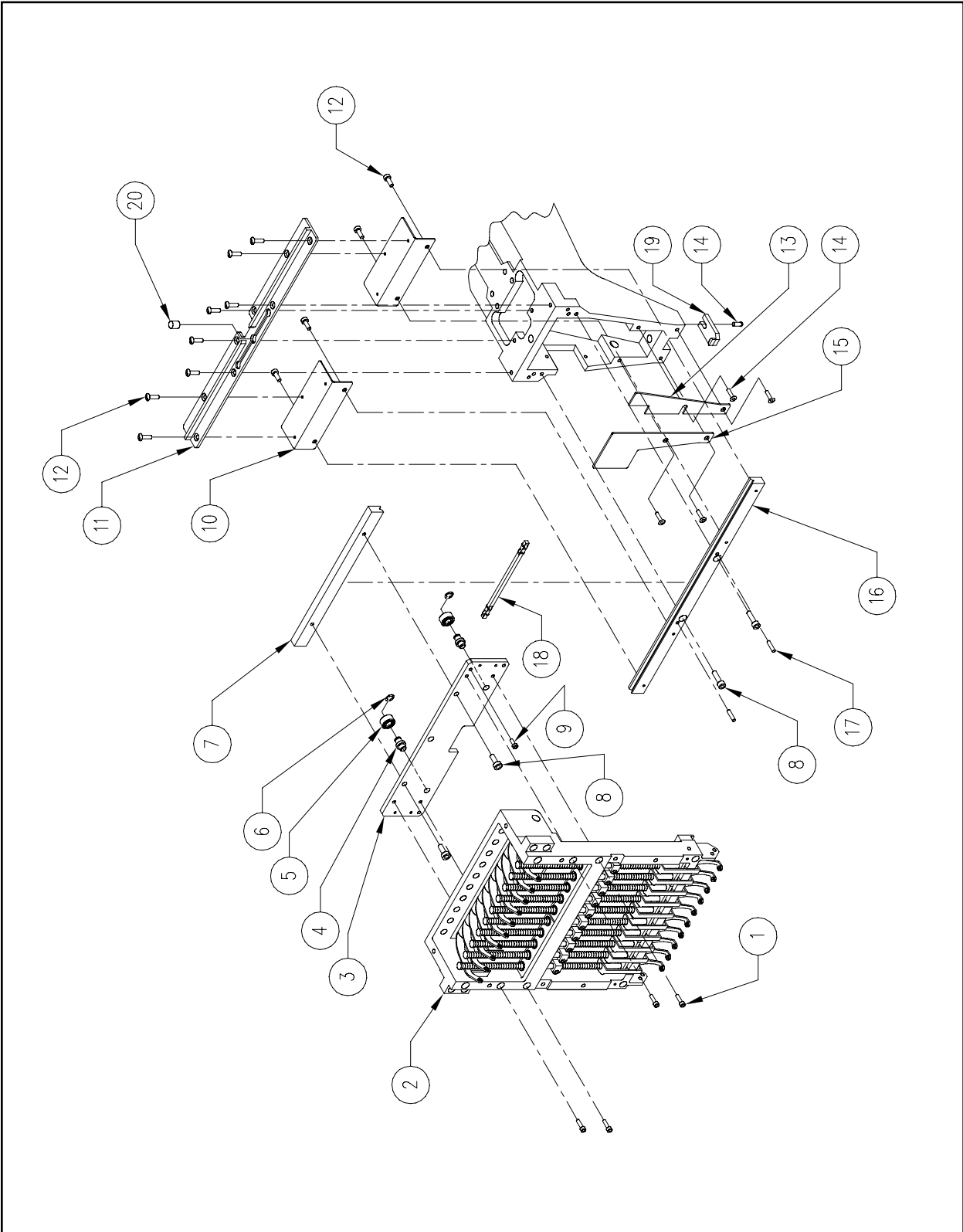


Figure 21

Needle Case Linear Drive**Reference Figure 21**

Item No.	Part Number	Item Description
1	672018-16	Screw, Socket Head Cap, M4 x 0.7 x 16mm
2	-----	Needle Case See Pages 17-1 & 18-1
3*	007515-01	Plate, Bearing, Retainer
4*	007516-01	Stud, Bearing, Retainer
5	007517-01	Bearing, Radial, 6mm ID x 13mm OD
6	007562-06	Ring, Retaining
7	007520-01	V-Rail, Needle Case
8	672018-12	Screw, Socket Head Cap, M4 x 0.7 x 12mm
9	672018-06	Screw, Socket Head Cap, M4 x 0.7 x 6mm
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

Bobbin Idler

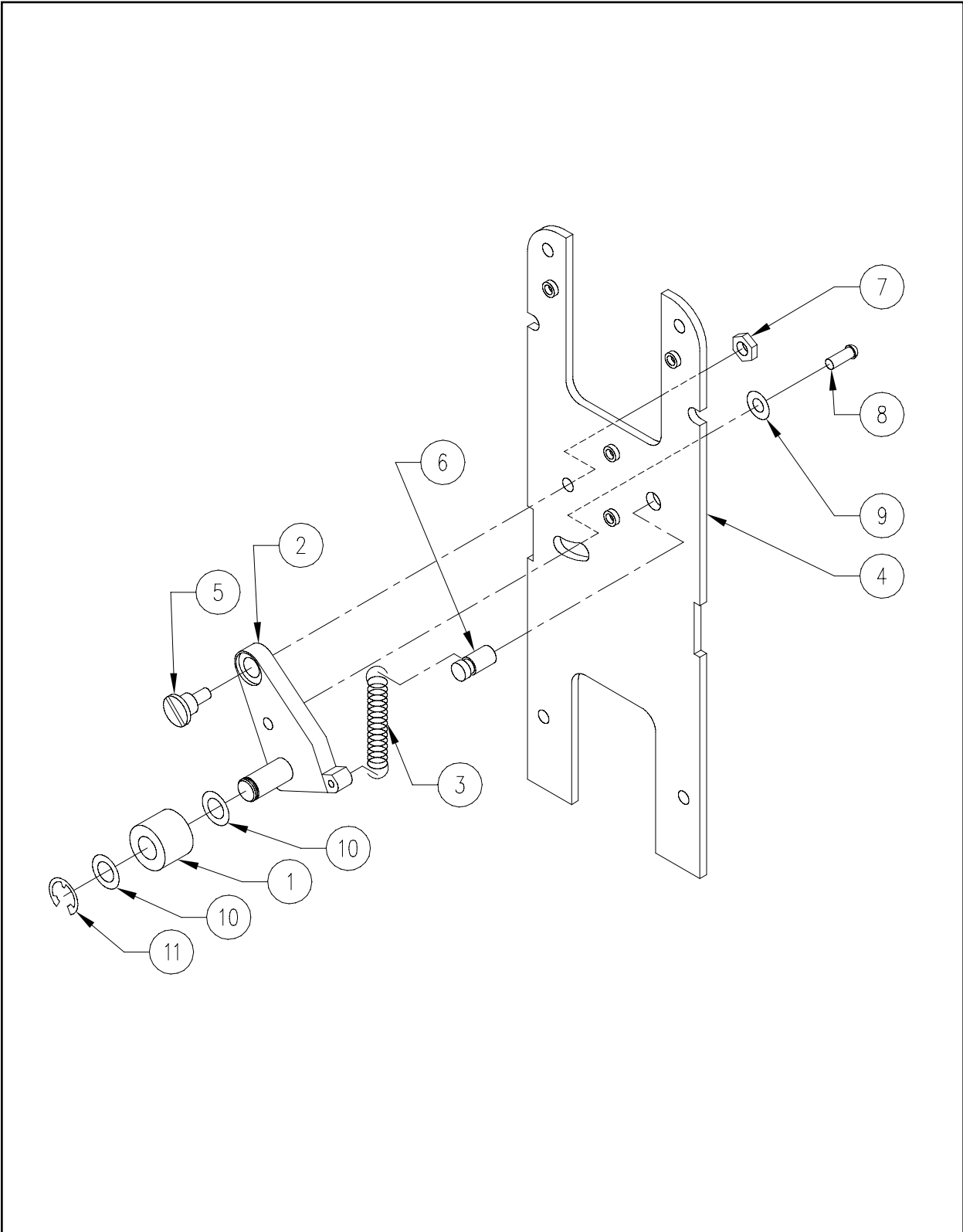


Figure 22

Bobbin Idler**Reference Figure 22**

Item No.	Part Number	Item Description
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	690439-05	Washer, Flat, M5
10	702876-08	Spacer, Shaft, 5/16" ID x .016" Thick
11	001955-18	Ring, Retainer, External, 5/16" ID

Take-Up Drive Lever

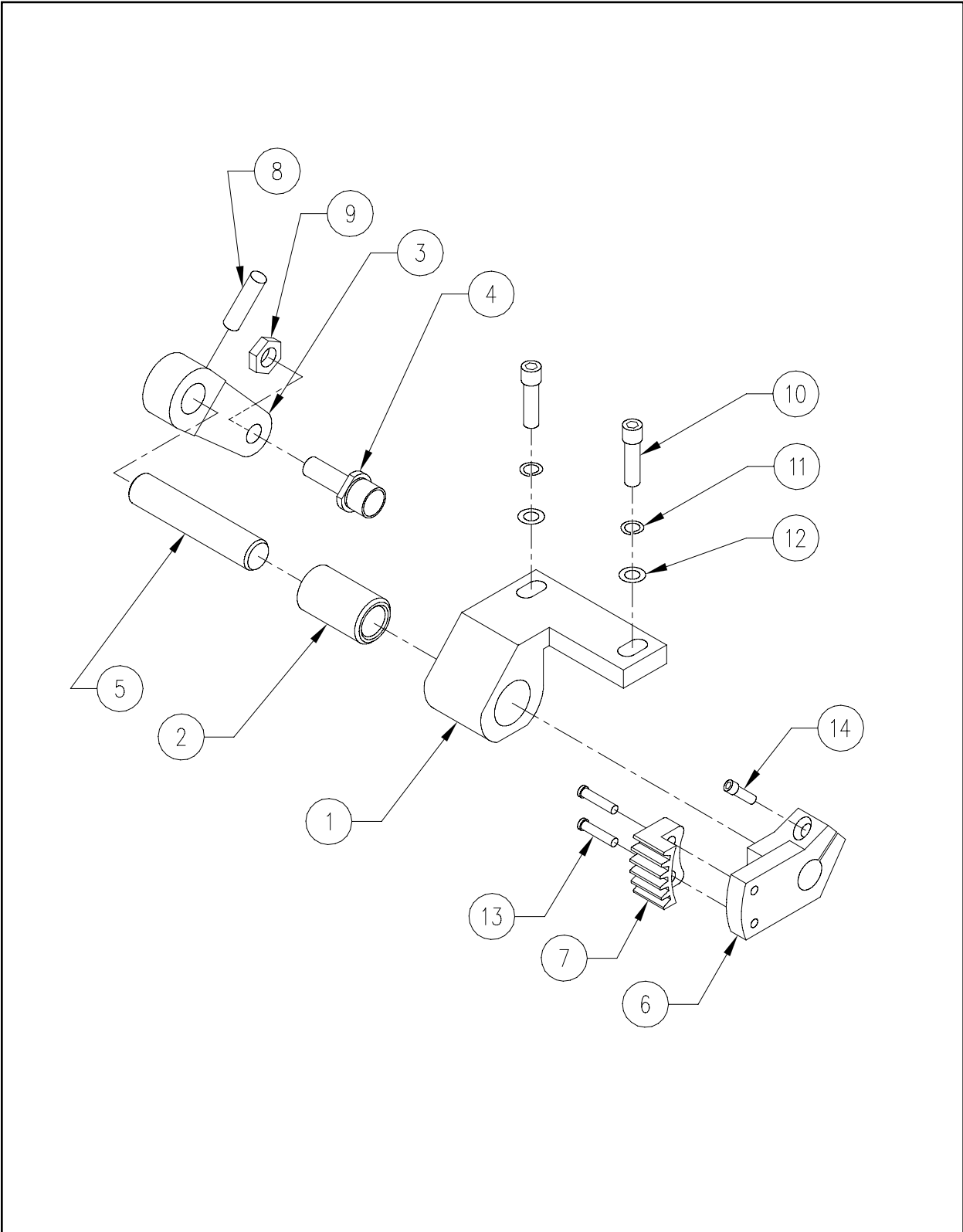


Figure 23

Take-Up Drive Lever**Reference Figure 23**

Item No.	Part Number	Item Description
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	672018-16	Screw, Socket Head Cap, M4 x 0.7 x 16mm
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	672018-10	Screw, Socket Head Cap, M4 x 0.7 x 10mm

Note: The parts marked with '' may be replaced together as the following assembly:
 *005362-01 Assembly, Bushing, Take-Up Lever

•Note: The parts marked with '•' may be replaced together as the following assembly:
 •004768-01 Lever, Drive, Lever, Take-up, Assembly

X-Drive (1 of 2)

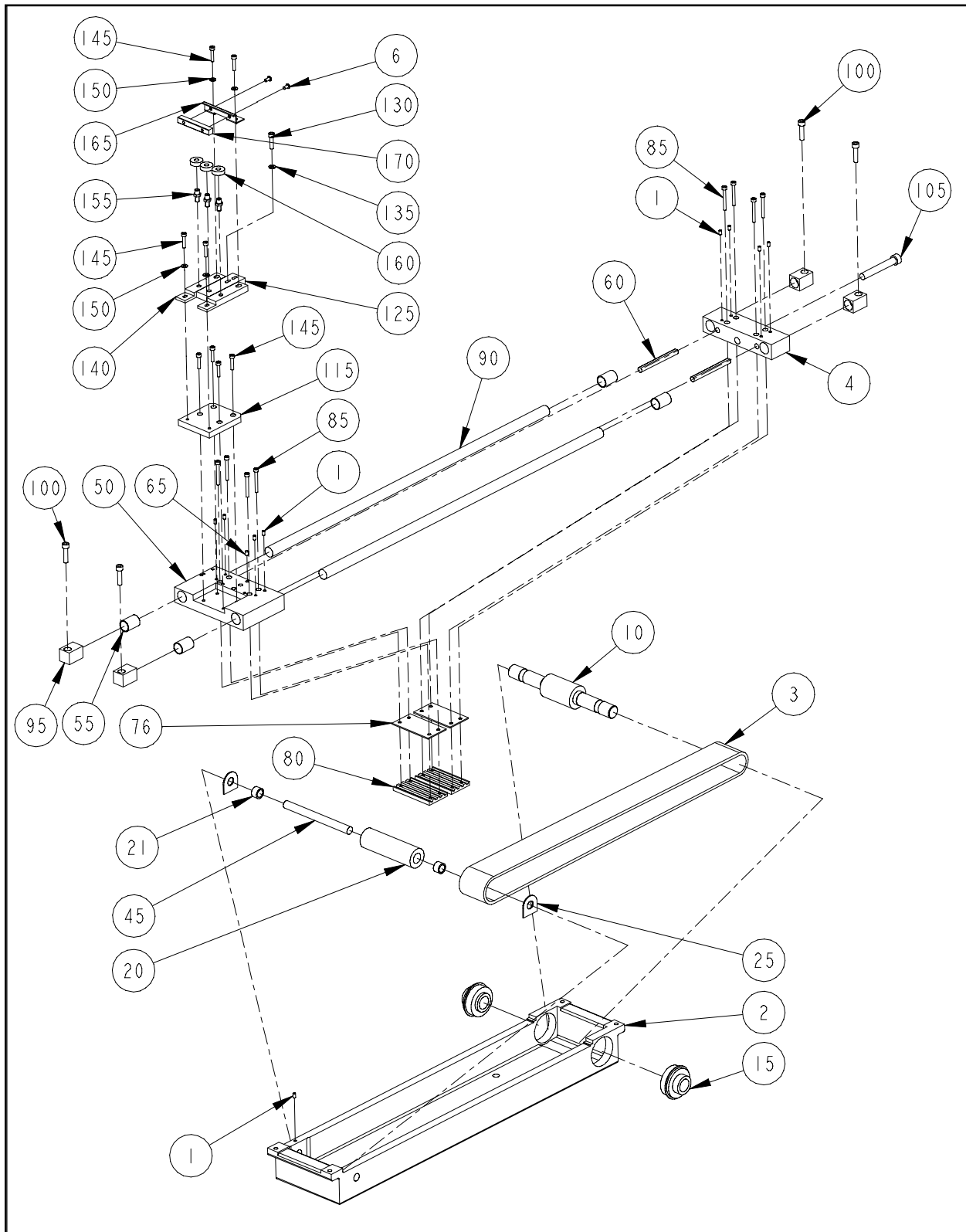


Figure 24

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

Item No.	Part Number	Item Description
1	001960-08	Screw, Set, Flat Point, M4 x 0.7 x 8mm
2	008183-02	Channel, X-Drive
3	008189-01	Belt, Poly, Timing
4	008191-02	Trolley, Rear X/Y-Drive
6	011162-08	Screw, M4 x .7 x 8mm, Button Head Cap, Zinc Plate
10	008185-02	Drive, Pulley, X-Channel, Left (L = 8.1" [200mm])
	008184-02	Drive, Pulley, X-Channel, Right (L = 13.7" [348mm])
15	008230-01	Bearing, Ball
20	008182-02	Roller, Idler
21	008187-01	Bearing, Needle, 12mm
25	12007-01	Washer, Thrust, D-Shape, 1/2 in
45	008195-01	Shaft, Idler, X-Channel
50	008190-02	Trolley, Front
55	008192-01	Bushing
60	008196-01	Dowel, Trolley
65	12087-01	Screw, Set, Nylon Tip, M5 x 0.8 x 7mm
76	12057	Spacer, Belt, X-Drive
80	008181-01	Plate, Clamp
85	010171-35	Screw, M4 x 0.7 X 35mm Socket Head Cap, Zinc Plate
90	008193-01	Rail, Guide, X-Channel
95	008229-01	Block, Support, Rail
100	010173-25	Screw, M6 x 25mm, Socket Head Cap, Zinc Plate
105	010175-70	Screw, M8 x 70mm, Socket Head Cap, Zinc Plate
115	008194-01	Plate, Drv, X-Channel
125	008210-02	Plate, Bearing
130	010172-20	Screw, M5 x 0.8 X 20mm Socket Head Cap, Zinc Plate
135	690439-05	Washer, Flat, M5
140	008209-02	Plate, Bearing
145	010171-20	Screw, M4 x 0.7 X 20mm Socket Head Cap, Zinc Plate
150	690439-04	Washer, Flat, M4
155*	008215-01	Bearing, Spigot
160*	008231-01	Bearing, Ball
165	008324-01	Bracket, Bearing, Rear
170	008323-01	Bearing, Block

*Note: *Exchange these parts ONLY together!

X-Drive (2 of 2)

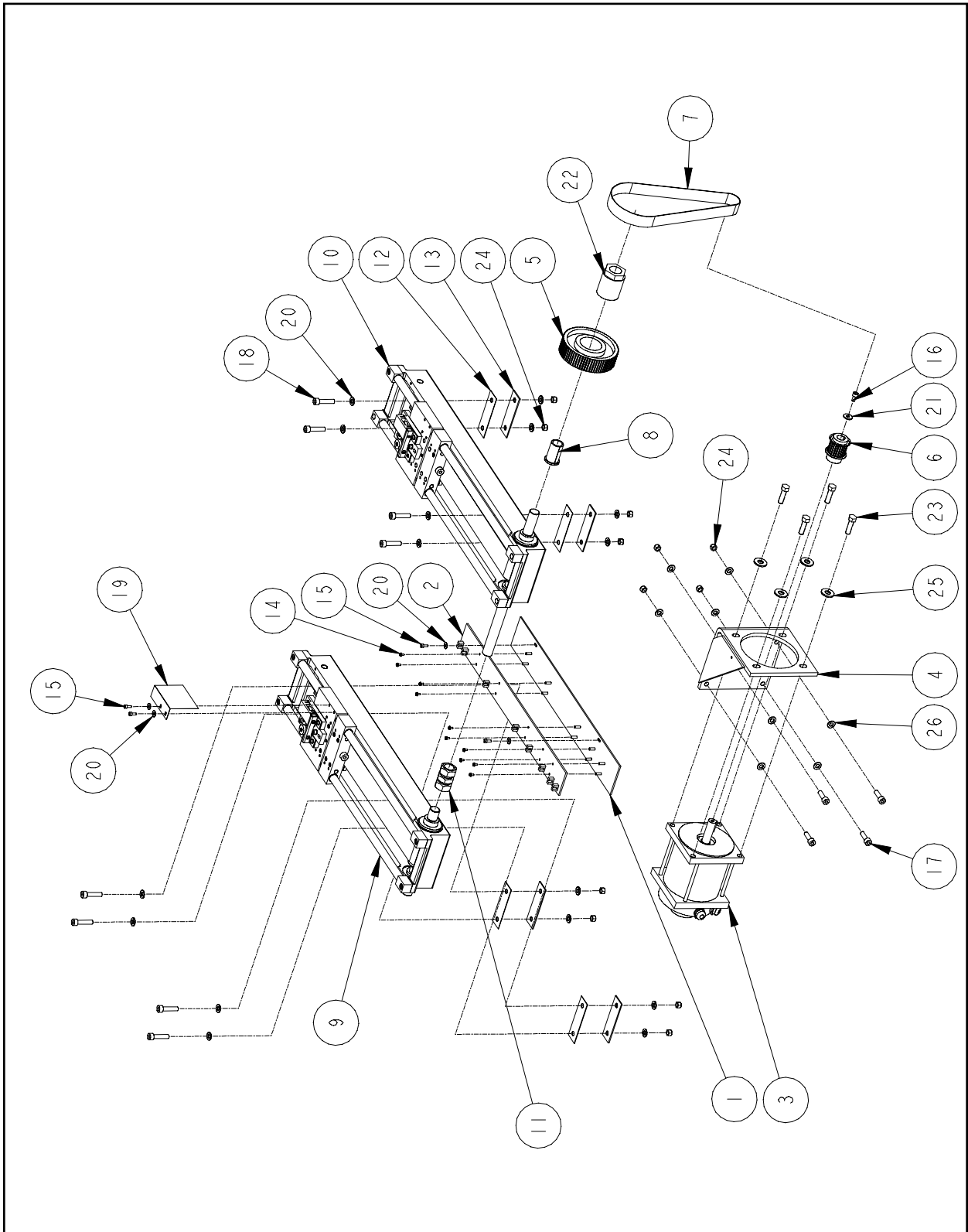


Figure 25

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

Item No.	Part Number	Item Description
1	10342	Plate, Mounting, X-Home
2	10348	PCB, X-Home Limit, Assembly
3	11203	Motor, Brushless DC, 1500 RPM, 4.378 Nm
4	11274	Bracket, X-Motor
5	11325	Pulley, 72 Tooth, AT5, Y-Drive
6	11328	Pulley, 24 Tooth, AT5, Flanged, Y-Drive
7	11333	Belt, Continuous, 25mm Wide, AT5, 132 Tooth
8	11446	Sleeve, X-Drive
9	11951	Channel, X-Drive, Left, Assembly
10	12011	Channel, X-Drive, Right, Assembly
11	008205-02	Coupling, Conntg, 20mm
12	008453-01	Shim, X and Y Axis
13	008453-03	Shim, X and Y Axis
14	009862-06	Screw, Pnh Phillips, W/Star, M3x6mm L
15	010171-10	Screw, M4 x 0.7 X 10mm Socket Head Cap, Zinc Plate
16	010173-12	Screw, M6 x 12mm, Socket Head Cap, Zinc Plate
17	010174-25	Screw, M8 x 25mm, Socket Head Cap, Zinc Plate
18	010174-35	Screw, M8 x 35mm, Socket Head Cap, Zinc Plate
19	10344-02	Flag, X/Y Home, Sensor
20	10435-05	Washer, Fender, 4.3 x 12 x 1mm
21	10435-07	Washer, Fender, 6.4 x 18 x 1.6mm
22	11055-25	Hub, Adjustable, 25mm ID
23	672038-20	Screw, Hex Hd Cap, 3/8-16 UNC x 1 1/4 Lg
24	680430-08	Nut, Hex, Metric, M8
25	690034-06	Washer, Flat, 3/8 NOM
26	690439-08	Washer, Flat, M8

Y-Drive (1 of 2)

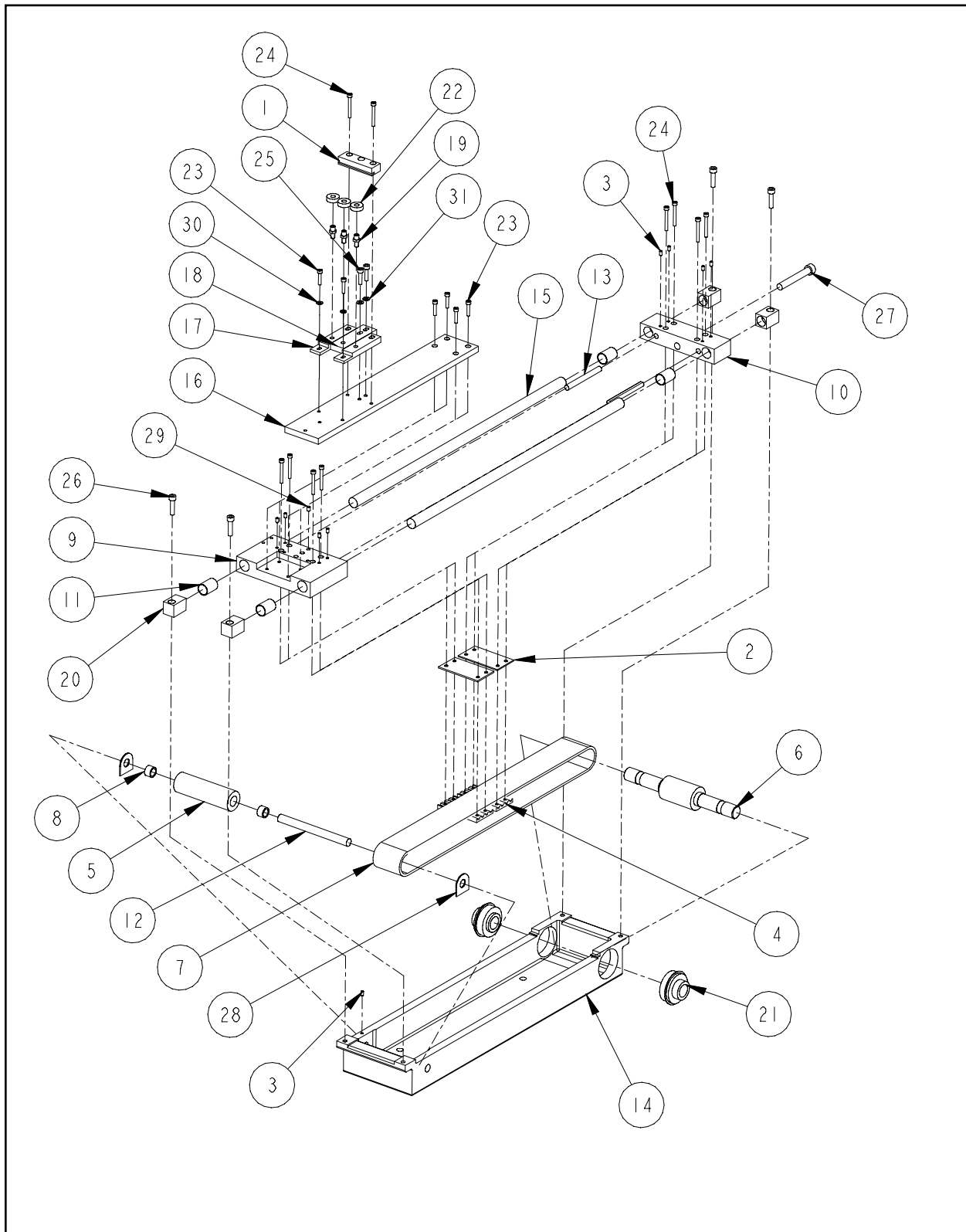


Figure 26

Y-Drive (1 of 2)**Reference Figure 26**

Item No.	Part Number	Item Description
1	10241	Block, Rear
2	12057	Spacer, Belt, X-Drive
3	001960-08	Screw, Set, Flat Point, M4 x 0.7 x 8mm
4	008181-01	Plate, Clamp
5	008182-02	Roller, Idler
6	008185-02	Drive, Pulley, X-Channel
7	008186-01	Belt, Poly, Timing, 50mm
8	008187-01	Bearing, Needle, 12mm
9	008190-02	Trolley, Front
10	008191-02	Trolley, Rear XY-Drive
11	008192-01	Bushing
12	008195-01	Shaft, Idler, X-Channel
13	008196-01	Dowell, Trolley
14	008197-02	Channel, Y-Drive
15	008198-01	Rail, Guide, X-Channel
16	008201-02	Arm, Drive, Y-Axis
17	008209-01	Plate, Bearing
18	008210-02	Plate, Bearing
19	008215-01	Bearing, Spigot
20	008229-01	Block, Support, Rail
21	008230-01	Bearing, Ball
22	008231-01	Bearing, Ball
23	010171-20	Screw, M4 x 0.7 X 20mm Socket Head Cap, Zinc Plate
24	010171-35	Screw, M4 x 0.7 X 35mm Socket Head Cap, Zinc Plate
25	010172-20	Screw, M5 x 0.8 X 20mm Socket Head Cap, Zinc Plate
26	010173-25	Screw, M6 x 25mm, Socket Head Cap, Zinc Plate
27	010175-70	Screw, M8 x 70mm, Socket Head Cap, Zinc Plate
28	12007-01	Washer, Thrust, D-Shape, 1/2 in
29	12087-01	Screw, Set, Nylon Tip, M5 x 0.8 x 7mm
30	690439-04	Washer, Flat, M4
31	690439-05	Washer, Flat, M5

Y-Drive (2 of 2)

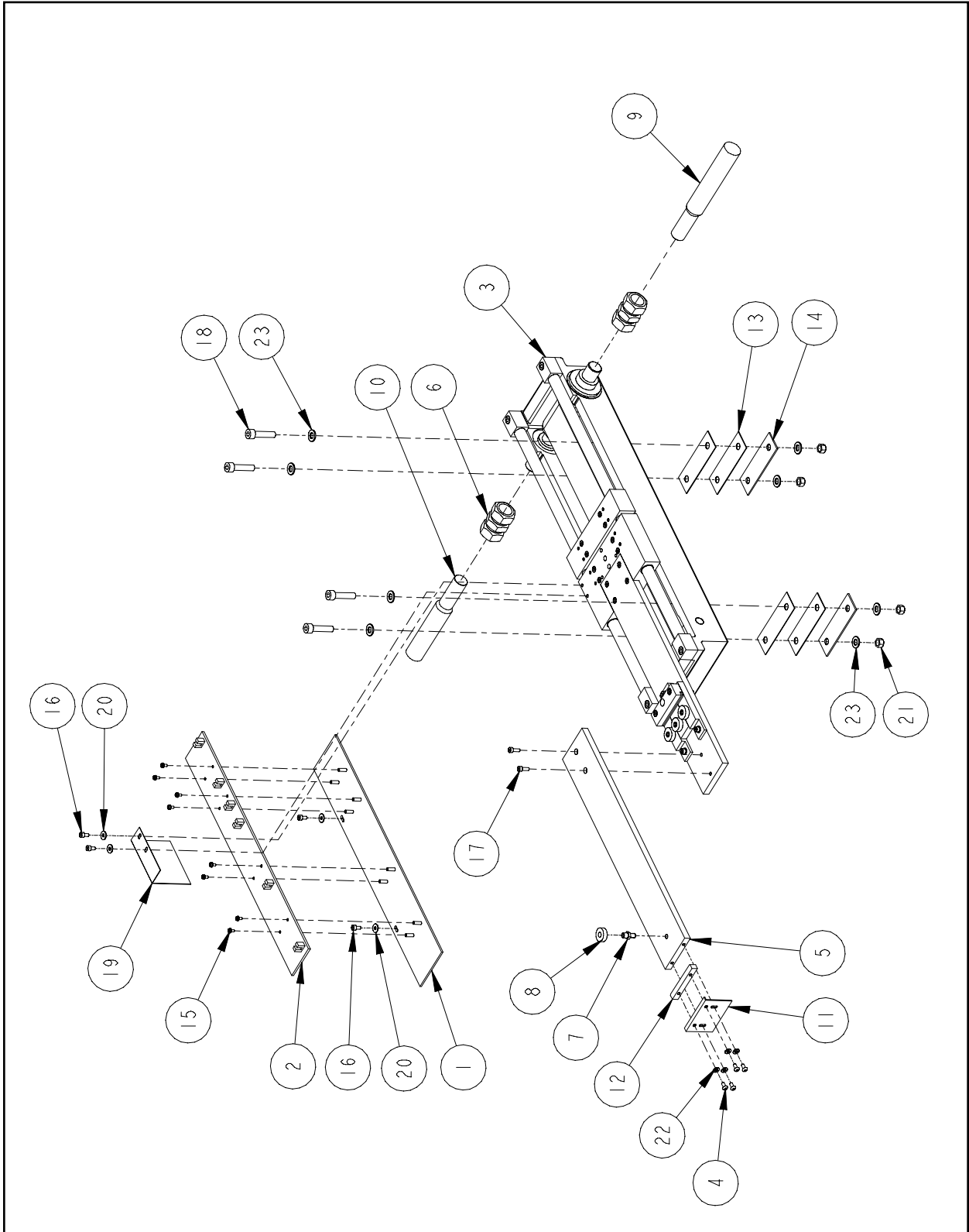


Figure 27

Y-Drive (2 of 2)**Reference Figure 27**

Item No.	Part Number	Item Description
1	10343	Plate, Mounting, X-Home
2	10352	PCB, X-Home Limit, Assembly
3	12013	Channel, Y-Drive, Assembly, EMT 10/12T
4	003509-08	Screw, Button Head Socket, M4 x 0.7 x 8mm
5	008202-02	Extension, Driver, Y-Axis
6	008205-02	Coupling, Conntg, 20mm
7	008215-01	Bearing, Spigot
8	008231-01	Bearing, Ball
9	008234-02_1	Shaft, #1, Y-Drive
10	008236-02_1	Shaft, #3, Y-Drive
11	008303-01	Plate, Bearing, Y-Drive
12	008323-01	Bearing, Block
13	008453-01	Shim, X-Y Axis, 1mm
14	008453-03	Shim, X-Y Axis, 2mm
15	009862-06	Screw, Pnh Phillips, W/Star, M3x6mm L
16	010171-08	Screw, M4 x 0.7 X 8mm Socket Head Cap, Zinc Plate
17	010171-12	Screw, M4 x 0.7 X 12mm Socket Head Cap, Zinc Plate
18	010174-35	Screw, M8 x 35mm, Socket Head Cap, Zinc Plate
19	10344-02	Flag, X/Y Home, Sensor
20	10435-05	Washer, Fender, 4.3 x 12 x 1mm
21	680430-08	Nut, Hex, Metric, M8
22	690439-04	Washer, Flat, M4
23	690439-08	Washer, Flat, M8

Y-Z Motor/Trimmer Drive (1 of 2)

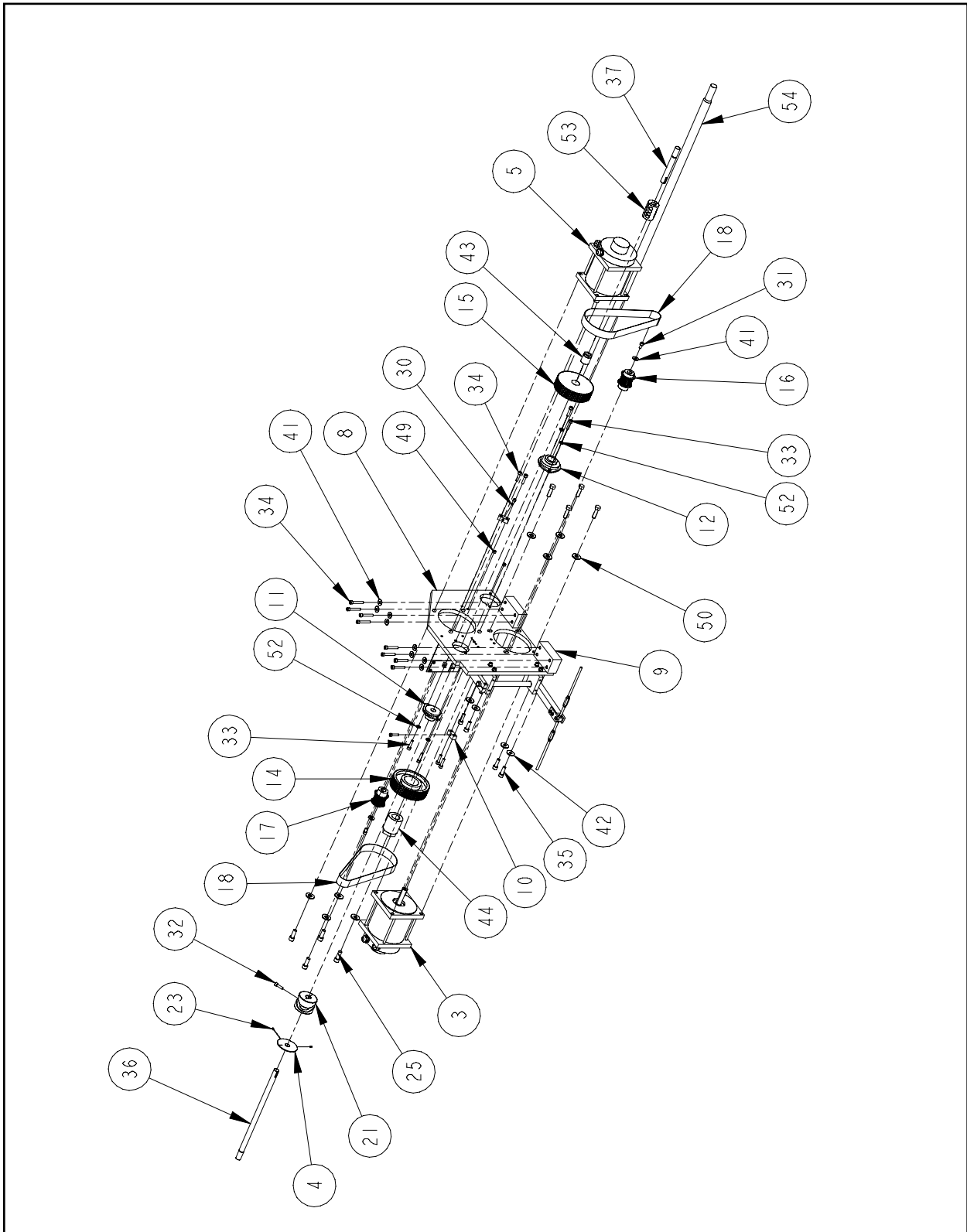


Figure 28-1

Y-Z Motor/Trimmer Drive (2 of 2)

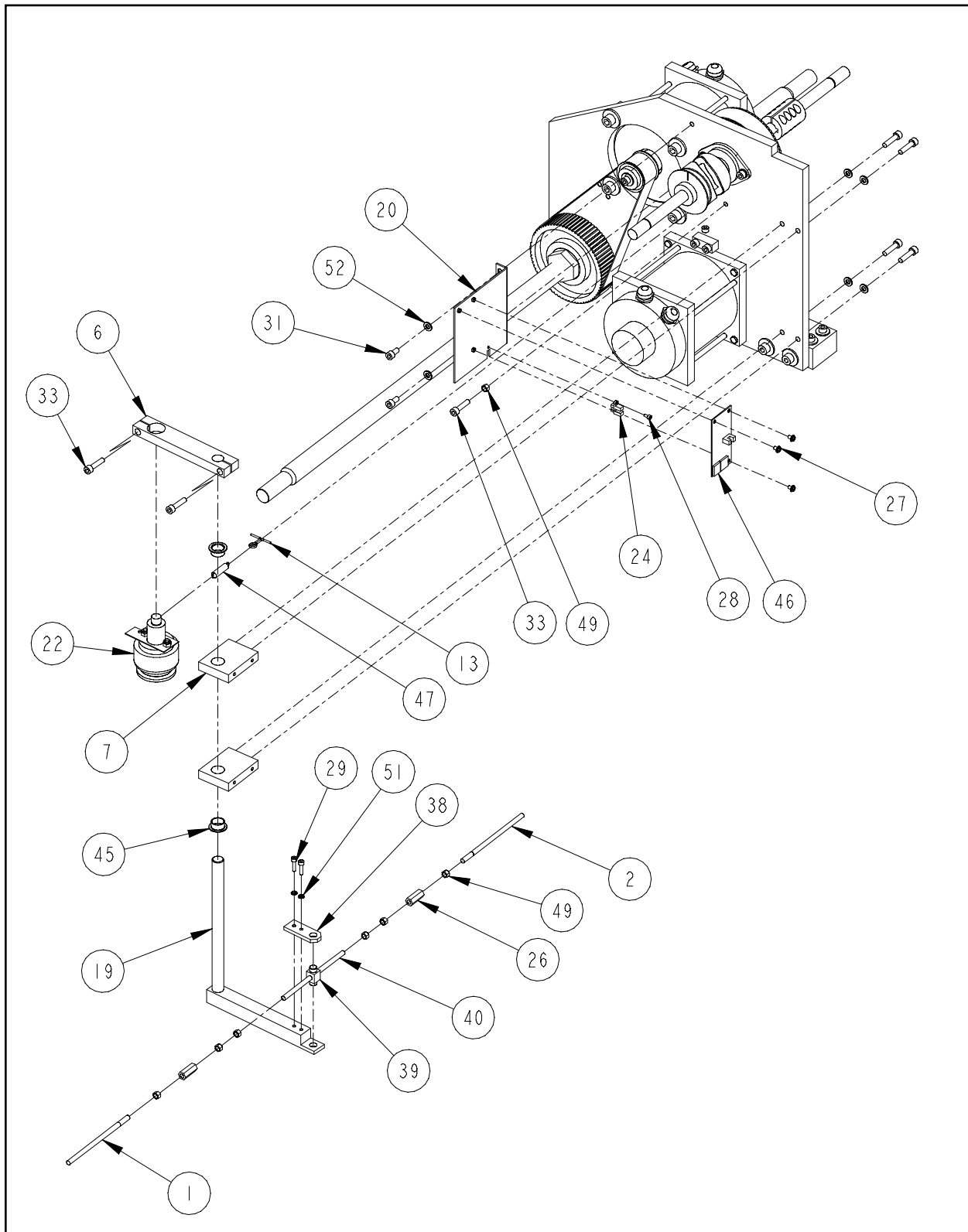


Figure 28-2

Y-Z Motor/Trimmer Drive

Reference Figures 28-1 & 28-2

Item No.	Part Number	Item Description
1	10114	Rod, Trimmer Drive, Left
2	10115	Rod, Trimmer Drive, Right
3	10118	Motor, Brushless DC, 4000 RPM, 38 lb/in
4	10933	Disk, Z-Index
5	11203	Motor, Brushless DC, 1500 RPM, 4.378 Nm
6	11279	Lever, Top, Trimmer Drive
7	11281	Block, Trimmer Drive
8	11282	Plate, Mount, Motors, Y & Z
9	11283	Block, Mounting, Plate
10	11291	Block, Tensioner, Motor
11	11315	Bearing, Flanged Cartridge, 15mm ID
12	11316	Bearing, Flanged Cartridge, 25mm ID
13	11317	Pin, Cotter, 4mm Dia. x 32mm Long
14	11325	Pulley, 72 Tooth, AT5, Y-Drive
15	11326	Pulley, 72 Tooth, AT5, Z-Drive
16	11327	Pulley, 24 Tooth, AT5, Flanged, Z-Drive
17	11328	Pulley, 24 Tooth, AT5, Flanged, Y-Drive
18	11333	Belt, Continuous, 25mm Wide, AT5, 132 Tooth
19	11342	Lever, Bottom, Trimmer Drive, Assembly
20	11435	Bracket, Z-Home
21	11916	Cam, Trimmer, Bridge
22	11967	Solenoid, Trimmer drive, Assembly
23	001960-06	Screw, Set, Flat Point, M4 x 0.7 x 6mm
24	005850-01	Switch, Optical, Assembly
25	007722-16	Screw, Socket Head Cap, 3/8-16 x 1.00"
26	008260-01	Coupling, Rod, 6mm
27	009863-06	Screw, Pan Head Phillips w/STAR, M4 x 6mm LG
28	010170-06	Screw, M3 x 0.5 X 6mm Socket Head Cap, Zinc Plate
29	010171-16	Screw, M4 x 0.7 X 16mm Socket Head Cap, Zinc Plate
30	010172-25	Screw, M5 x 0.8 X 25mm Socket Head Cap, Zinc Plate
31	010173-12	Screw, M6 x 12mm, Socket Head Cap, Zinc Plate
32	010173-20	Screw, M6 x 20mm, Socket Head Cap, Zinc Plate
33	010173-25	Screw, M6 x 25mm, Socket Head Cap, Zinc Plate
34	010173-40	Screw, M6 x 40mm, Socket Head Cap, Zinc Plate
35	010174-25	Screw, M8 x 25mm, Socket Head Cap, Zinc Plate
36	011312-01	Shaft, Z-Drive, #2
37	011313-01	Shaft, Z-Drive, #1
38	011319-01	Plate, Trimmer, Bar
39	011321-01	Pivot, Trimmer, Drive
40	011327-01	Rod, Threaded, M6
41	10435-07	Washer, Fender, 6.4 x 18 x 1.6mm

Y-Z Motor/Trimmer Drive (cont)**Reference Figures 28-1 & 28-2**

Item No.	Part Number	Item Description
42	10435-09	Washer, Fender, 8.4 x 24 x 2mm
43	11055-15	Hub, Adjustable, 15mm ID
44	11055-25	Hub, Adjustable, 25mm ID
45	11314-15	Bushing, Flanged, 15mm
46	11641-02	PCB, Z-Index, Assembly
47	11980-01	Spring, Return, Trimmer Drive
48	672038-20	Screw, Hex Hd Cap, 3/8-16 UNC x 1 1/4 Lg
49	680430-06	Nut, Hex, Metric, M6
50	690034-06	Washer, Flat, 3/8 NOM
51	690427-04	Washer, Lock, Split, M4
52	690439-06	Washer, Flat, M6
53	11335	Coupling, Clamshell
54	008234-02	Shaft, Y-Drive, #1

Z-Drive (Heads)

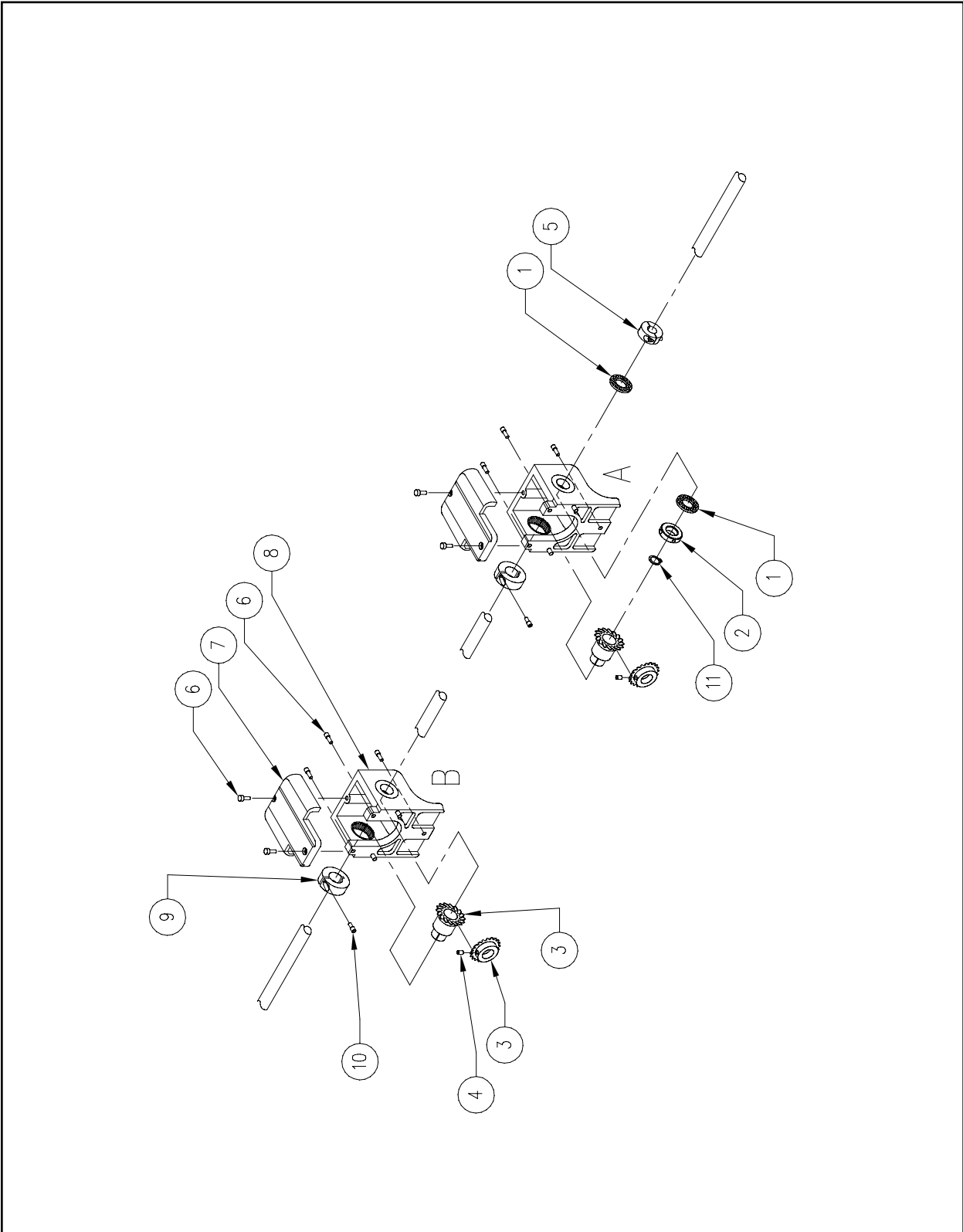


Figure 29

Z-Drive (Heads)**Reference Figure 29**

Item No.	Part Number	Item Description
1	008292-01	Bearing, Thrust, Set, Z-Shaft
2	008293-01	Collar, 15mm ID, Gearbox
3	003195-01S	Gears, Bevel, Assembly
4	001971-06	Screw, Set, Flat Point, M6 x 1.00 x 6mm
5	11250-15	Collar, Pulley, 2-piece
6	670018-16	Screw, Socket Head Cap, M4 x 0.7 x 16mm
7	004263-21	Cover, Gearbox
8	006043-21	Gear, Case, Assembly, Grey
9	002668-01	Collar, Support, Gear
10	670038-10	Screw, Socket Head Cap, 10-32 x 5/8"
11	10454-13	Ring, Retaining, 15mm ID

*Note: "A" represents heads 5 and 6
"B" represents all other heads

Logic Control Box**Reference Figure 30**

Item No.	Part Number	Item Description
1	009907-01	Harness, DC Power Control
2	009713-01	PCB Assembly, Connector I/F
3	12425-01	PCB Assembly, Low Voltage Driver
4	009862-06	Screw, Pan Head Phillips W/Star, M3 x 6mm
5	011331-01	Lid, Logic Control
6	10311	PCB Assembly, Control I/F
7	011330-02	Box, Logic Control
8	680430-04	Nut, Hex, M4
9	690427-03	Washer, Lock, Split, M3
10	690439-03	Washer, Flat, M3
11	004262-25	Screw, PHD, Phillips, M4 x 0.7 x 25mm, Zinc Plate
12	010167-08	Washer, Lock, Ext, M8
14	12312	Assembly, Buzzer
15	12252-03	PCB Assembly, Differential-Bus
16	000609-02	Screwlock, 4-40 Fem, 4-40 Male, .250 L
17	690033-34	Washer, Lock
18	12684	Bumper, Rubber, 0.50 x 0.23, Adhesive Mount
19	670131-05	Screw, PHD, Phillips, 4-40 x 5/16 in, Zinc Plate
20	710420-10	Standoff, Female, 4-40 x 5/8 in
21	680032-34	Nut, Hex, 4-40, UNC, Zinc Plate
22	690033-34	Washer, Lock, Split, #4 NOM, Zinc Plate

Power Distribution Box (1 of 2)

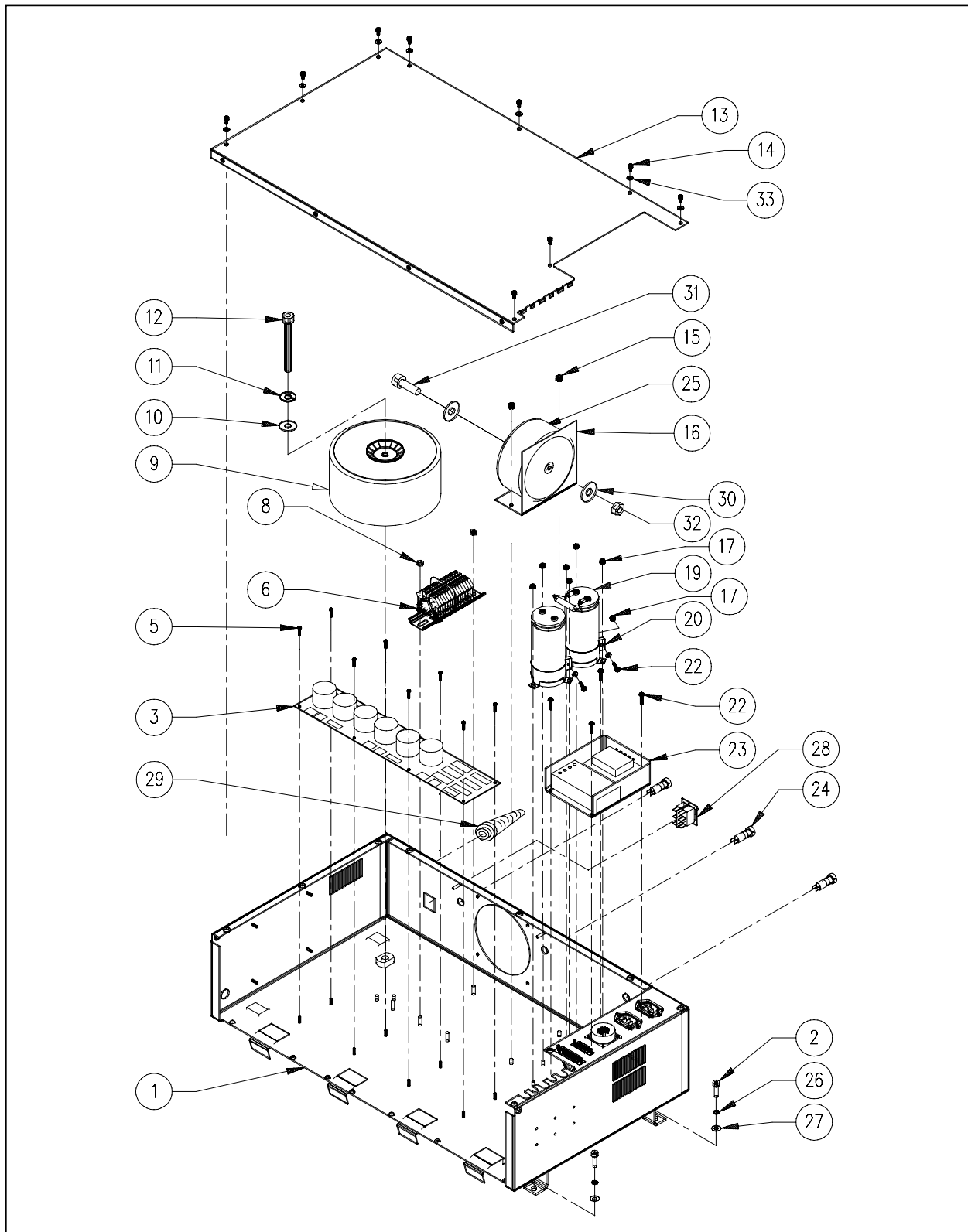


Figure 31

Power Distribution Box (1 of 2)**Reference Figure 31**

Item No.	Part Number	Item Description
1	009716-02	Base, Power Distribution Box
2	010173-16	Screw, Socket Head Cap, M6 x 1.0 x 20mm
3	007754-02	PCB, Motor Drive, Assembly
5	006558-12	Screw, Pan Head Phillips, M3 x 0.5 x 12mm
6	12608-01	Terminal Block, Assembly
8	009561-05	Nut, KEP, M5
9	12577-01	Transformer Assembly, 208/230V
10	690439-10	Washer, Flat, M10
11	690427-10	Washer, Lock, Split, M10
12	010175-90	Screw, Socket Head Cap, M10 x 1.5 x 90mm
13	009717-01	Cover, Power Distribution Box
14	010171-10	Screw, Socket Head Cap, M4 x 10mm
15	009561-05	Nut, Kep, M5
16	009755-01	Bracket, Right Angle, 300VA Transformer
17	009561-04	Nut, Kep, M4
19	007833-01	Capacitor, Electrolytic, 20,000mf, 50V
20	007688-01	Mount, Capacitor, 2"
22	009863-08	Screw, Pan Head Phillips w/star, M4 x 8mm
23	12569-01	Power Supply Interface Assembly
24	010340-01	Holder, Fuse
25	12578-01	Transformer Assembly, 120/240 VAC
26	690427-06	Washer, Lock, Split, M6
27	690439-06	Washer, Flat, M6
28	10760	Switch, 208/230 VAC
29	12068	Strain Relief
30	690439-08	Washer, Flat, M8
31	010174-60	Screw, Socket Head Cap, M8 x 60mm
32	680430-08	Nut, Hex, M8
33	690427-04	Washer, Lock, Split, 4mm

Power Distribution Box (2 of 2)

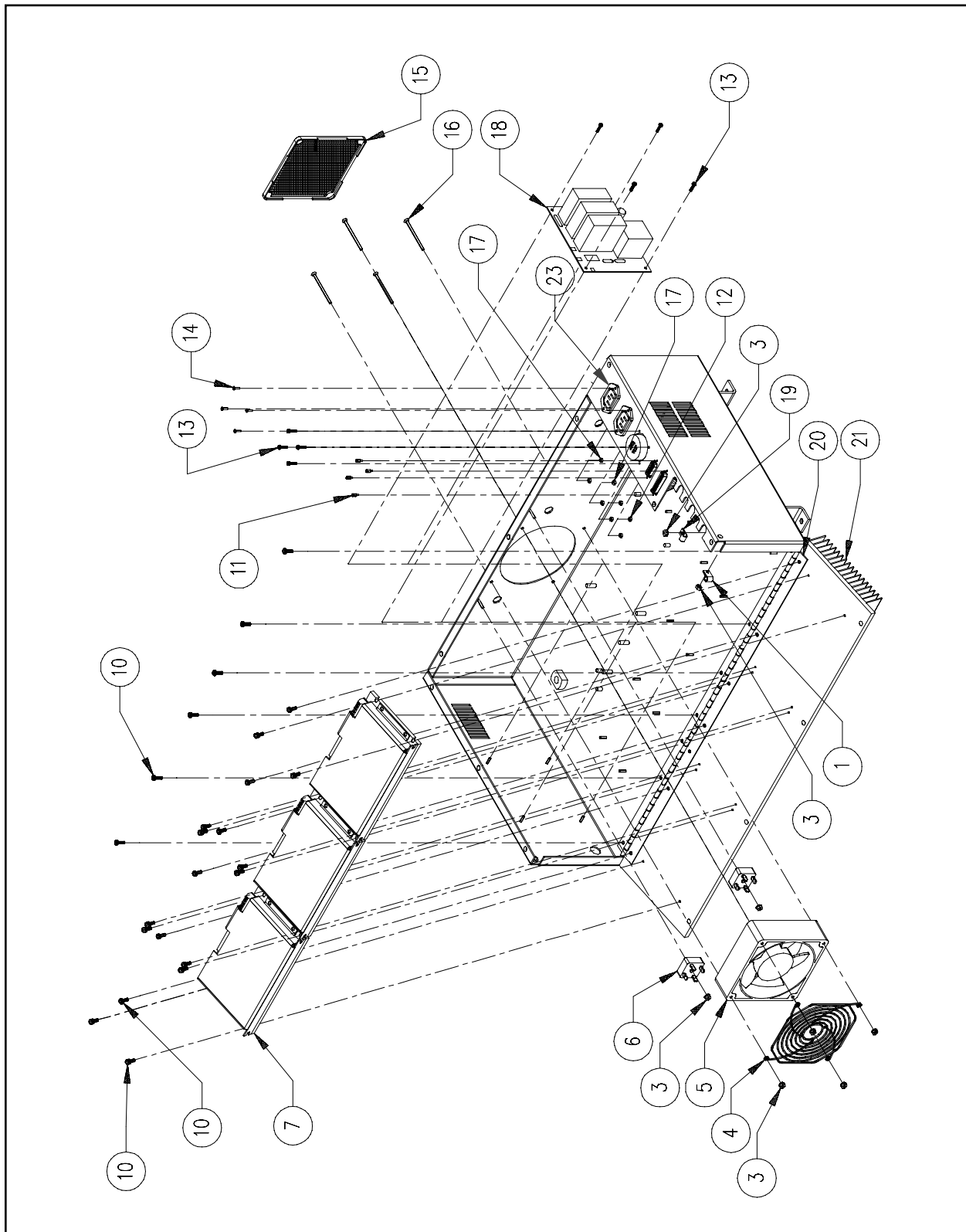


Figure 32

Power Distribution Box (2 of 2)**Reference Figure 32**

Item No.	Part Number	Item Description
1	340743-03 and 340743-04	Clamp, Cable, Nylon, 1/4 in ID Clamp, Cable, Nylon, 5/16 in ID
3	009561-04	Nut, Kep, M4
4	009739-01	Guard, 4-1/2" Fan
5	009736-01	Fan, 230VAC
6	009738-01	Diode, Bridge, 35A, 400V
7	010424-01	Amplifier, Servo
10	009863-12	Screw, Pan Head Phillips w/star, M4 x 12mm
11	000609-01	Screwlock, 3/16"
12	680032-34	Nut, Hex, 4-40 UNC
13	006558-12	Screw, Pan Head Phillips, M3 x 0.5 x 12mm
14	005934-10	Screw, Flat Head Phillips, M3 x 0.5 x 10mm
15	342763-01	Filter, Fan
16	004262-60	Screw, Pan Head Phillips, M4 x 0.7 x 60mm
17	009561-03	Nut, KEP, M3
18	007750-01	PCB, E-Stop, Assembly
19	010028-02	Clamp, Cable, Steel, .25" ID
20	009731-01	Hinge, Power Distribution
21	009730-01	Heatsink, Servo Amplifier
23	009737-01	Connector, Power Outlet

Cutter/Picker

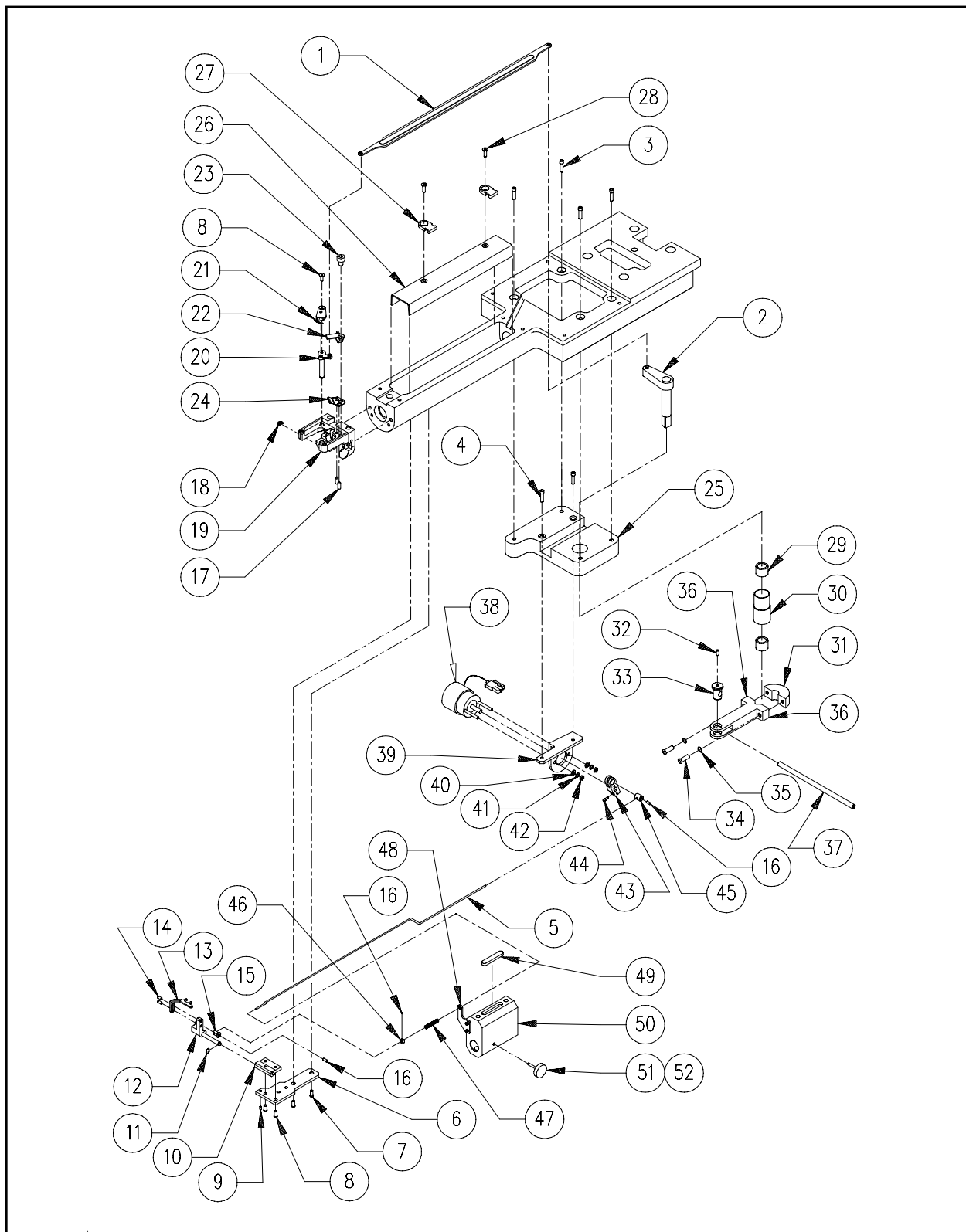


Figure 33

Cutter/Picker**Reference Figure 33**

Item No.	Part Number	Item Description
1	008258-01	Link, Connecting, Trimmer
2	008109-01	Drive, Arm Short, Trimmer, Assembly
3	671852-16	Screw, Socket Head Cap, M5 x 0.8 x 16mm
4	672018-20	Screw, Socket Head Cap, M4 x 0.7 x 20mm
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	001962-06	Screw, Set, Flat Point, M3 x 0.5 x 6mm
10	003511-01	Mount, Picker
11	001955-08	Ring, Retainer, External, .125"
12	003141-01	Base, Picker
13	005615-01	Picker
14	003136-06	Screw, Button Head Socket, M3 x 0.5 x 6mm
15	003131-01	Pin, Swivel, Front
16	003123-03	Screw, Set, Cup Point, M3 x 0.5 x 3mm
17	10188-01	Screw, Set, Cone Point, M3 x 0.5 x 6mm
18	001955-15	Clip, Retaining, External, .145" ID
19	10181	Bracket, Needle Plate
20	10185	Arm, Drive, Movable Knife
21	10186	Knife, Movable
22	10187	Knife, Spring, Fixed
23	001922-08	Screw, Socket Head Cap, M3 x 0.5 x 8mm
24	10184	Presser, Thread, Under
25	008075-01	Base, Arm
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	008040-01	Bushing, Trimmer Pivot
30	008076-01	Spacer, Pivot, Trimmer
31	008041-01	Plate, Nut, Long Arm
32	005034-01	Screw, Set, Cup Point, M4 x 0.7 x 6mm
33	008039-01	Pivot, Trimmer Drive
34	672018-12	Screw, Socket Head Cap, M4 x 0.7 x 12mm
35	690427-04	Washer, Lock, Split, M4
36	008038-01	Arm, Linkage, Long
37	008259-01	Rod, Trimmer, Drive, 6mm
38	003452-01	Solenoid, Picker, Assembly
39	003126-01	Bracket, Solenoid
40	690439-03	Washer, Flat, M3
41	004642-01	Washer, Lock, Split, 5-40

Cutter/Picker**Reference Figure 33**

Item No.	Part Number	Item Description
42	680430-03	Nut, Hex, M3
43	003130-01	Arm, Solenoid
44	672018-08	Screw, Socket Head Cap, M4 x 0.7 x 8mm
45	003155-01	Swivel, Wire
46	008467-01	Collar
47	008466-01	Spring
48	008465-01	Spring Mount Bracket
49	006525-01	Key, Shaft, 6mm x 6mm x 32mm
50	12091	Bracket, Cap Frame
51	671852-08	Screw, Socket Head Cap, M5 x 0.8 x 8mm
52	006538-01	Knob, Knurled, M5, Black

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Grabber Blade

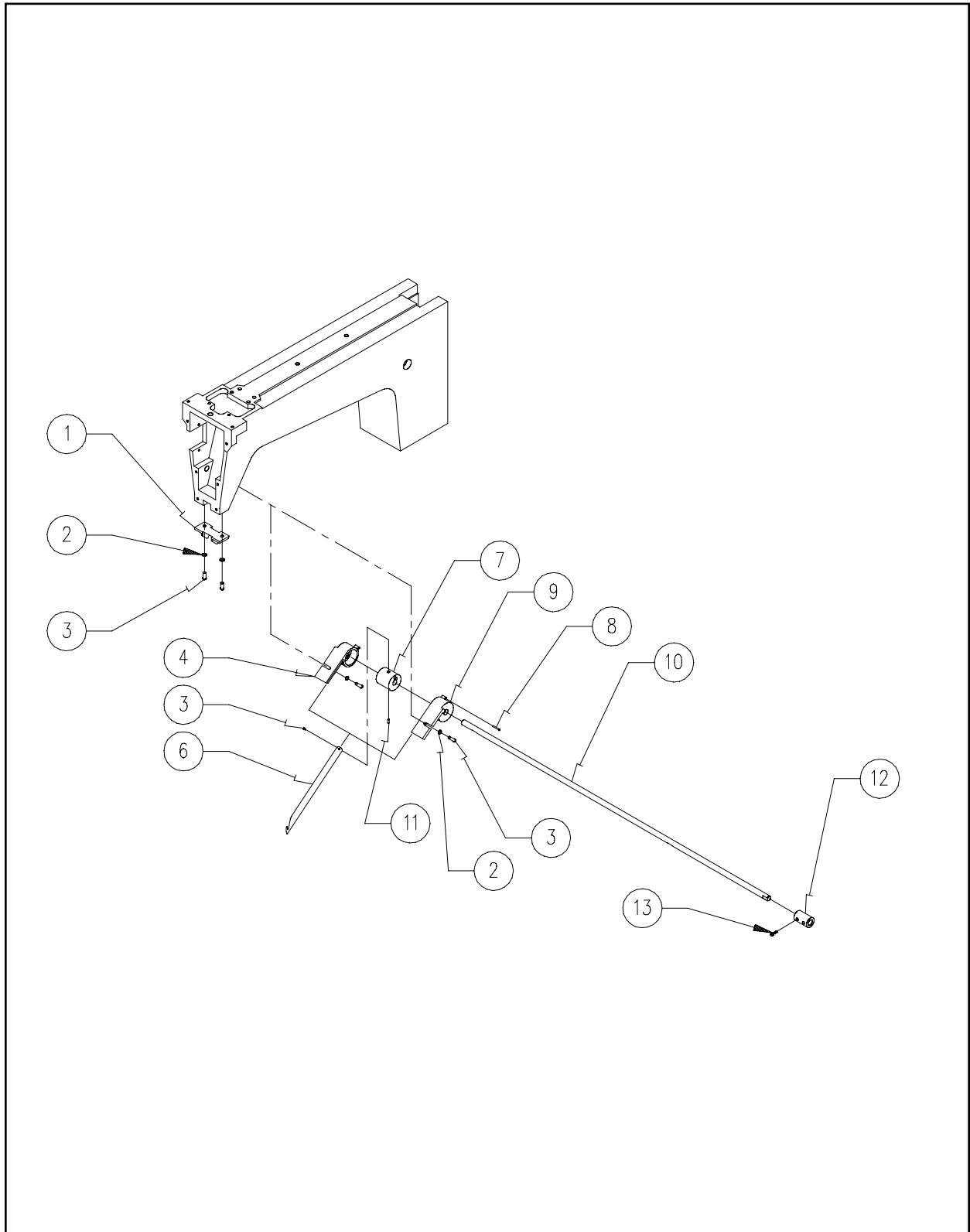


Figure 34

Grabber Blade**Reference Figure 34**

Item No.	Part Number	Item Description
1	10156	Guide, Grabber
2	10435-05	Washer, Fender
3	011162-08	Screw, Button Head Socket, M4 x 0.7 x 8mm
4	008066-01	Housing, Drive, Grabber, Left
5	003136-06	Screw, Button Head Socket, M3 x 0.5 x 6mm
6	008043-01	Blade, Grabber
7	007590-01	Sprocket, Drive, Grabber
8	008496-08	Screw, Self-Tapping, #4 x .50"
9	008127-01	Housing, Drive, Grabber, Right
10	12028	Shaft, End, Grabber, Drive
11	005034-01	Screw, Set, Cup Point, M4 x 0.7 x 6mm
12	007549-01	Coupler, Shaft, Grabber
13	010172-06	Screw, SKT Head M4 x 6mm

User Station

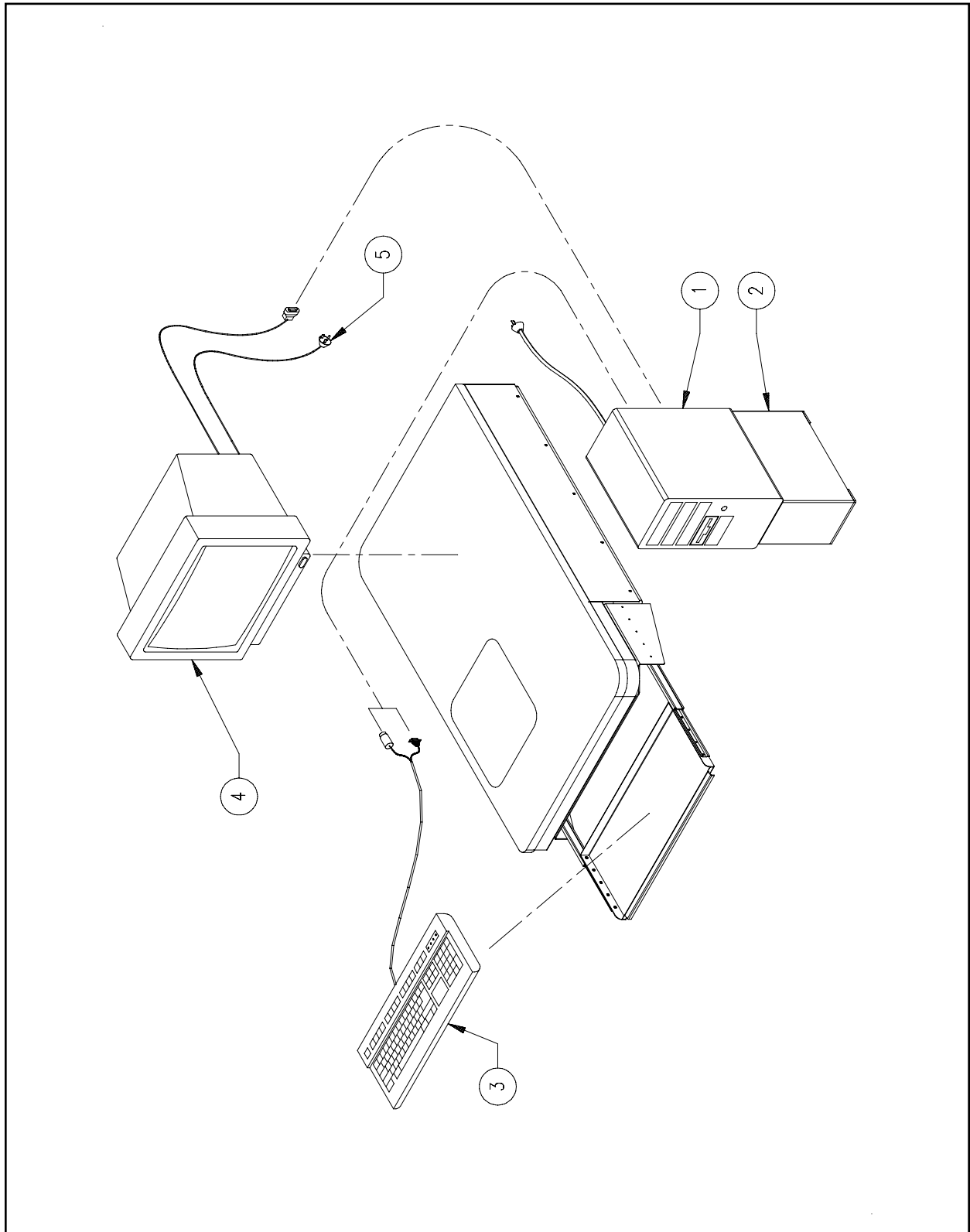


Figure 35

User Station**Reference Figure 35**

Item No.	Part Number	Item Description
1	10545	Stand Alone Computer
2	10102	Stand, PC
3	10543	Keyboard, w/Built-in Touch Pad
4	10544	Monitor, 14" , VGA, Color
5	009798-01	Cord, IEC 320 Plug, 2 meter

Harnesses (General) *Left Half*

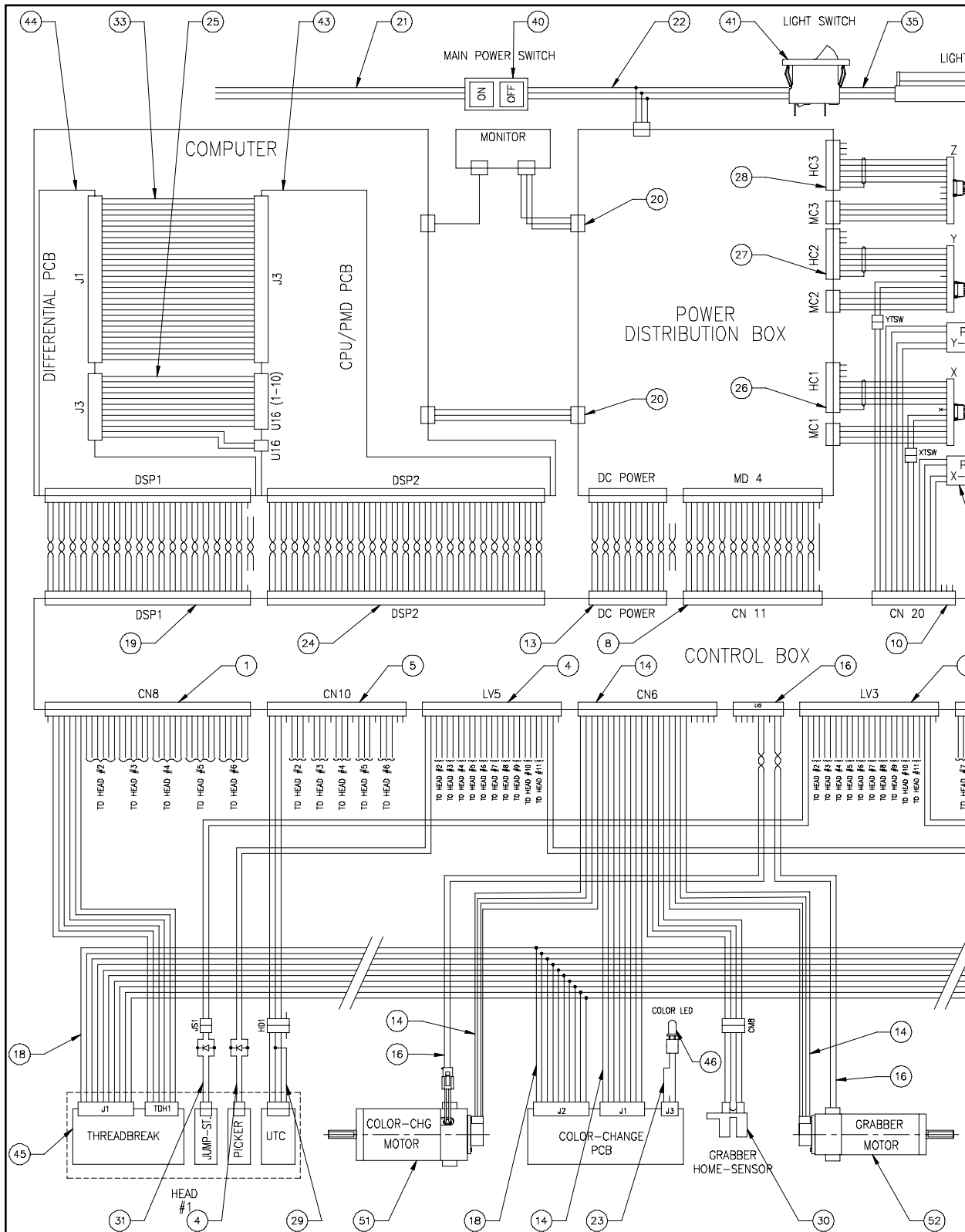


Figure 36 (Left Half)

Harnesses (General) *Right Half*

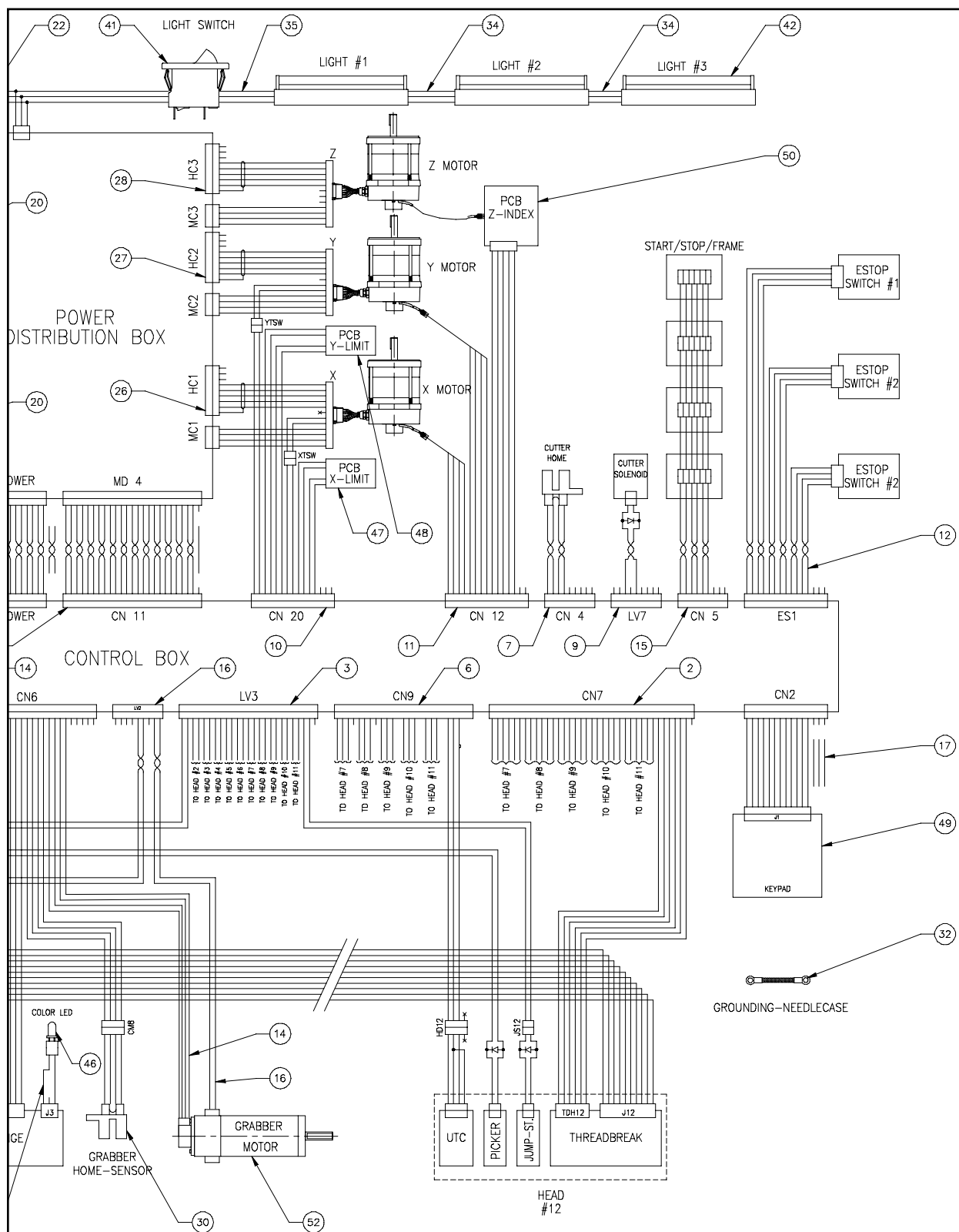


Figure 36 (Right Half)

Reference Figure 36

Item No.	Part Number	Item Description
1	011233-01	Harness, Thread Break/Mode 1-6
2	011234-01	Harness, Thread Break/Mode 7-12
3	011235-01	Harness, Jumpstitch
4	011265-01	Harness, Picker
5	011266-01	Harness, UTC, 1-6
6	011267-01	Harness, UTC, 7-12
7	011268-02	Harness, Cutter Home
8	011269-01	Harness, XYZ Motor Commands
9	011270-01	Harness, Solenoid, Cutter
10	011271-03	Harness, X-Y Home
11	011272-02	Harness, XYZ Encoder
12	011302-01	Harness, E-Stop
13	011303-01	Harness, DC Power Input
14	011305-02	Harness, Color Change
15	011308-01	Harness, Stop/Start/Frame
16	011347-03	Harness, Grabber/Color Motors
17	011348-01	Harness, Remote Keypad
18	10091	Harness, Link, Threadbreak
19	10092-01	Harness, Link, Computer/Control Box
20	009798-01	Cord, IEC 320 Plug, 2 Meter
21	12310	Harness, AC In
22	12311	Harness, AC Power Distribution
23	12313	Harness, CC/Needle LED
24	12316-01	Harness, Computer/Control Diff. Bus
25	12317	Harness, Computer Diff. Bus to CPU
26	12318-01	Harness, X Motor
27	12319	Harness, Y Motor
28	12320-01	Harness, Z Motor
29	12630-01	Harness, UTC Extension
30	005850-01	Switch Assembly, Optical, Thread Holder
31	009781-01	Cable, Diode, Jumpstitch
32	009317-01	Cable, GND, Pan, 4.75"
33	12649-01	Harness, CPU Link
34	12718-01	Harness, Light
35	12719-01	Harness, Switch/Light
40	009879-08	Breaker, ON/OFF, 8A
41	009880-01	Breaker, CRKT, Rocker, 1.2A
42	11622-01	Light-Strip, Fluorescent, 1,2 Meter
43	011069-01	PCB Assembly, CPU/PMD
44	12248-03	PCB Assembly, Diff. MBus, CPU Side
45	007743-01	PCB Assembly, Threadbreak, EMT 10/12

Reference Figure 36

Item No.	Part Number	Item Description
46a	12273	Mounting, Clip w/Ring, LED, 5mm
46b	10288	LED, Ultra Bright
47	10348-01	PCB Assembly, X-Home Limit
48	10352-01	PCB Assembly, Y-Home Limit
49a	12030	Panel Assembly, Keypad, Remote
49b	011131-01	PCB Assembly, Remote Keypad, CE
50	12462-01	PCB Assembly, Z Index
51	007698-01	Motor, Drive, Color Change
52	007544-01	Motor, Drive, Grabber

Harnesses (Logic Control Box)

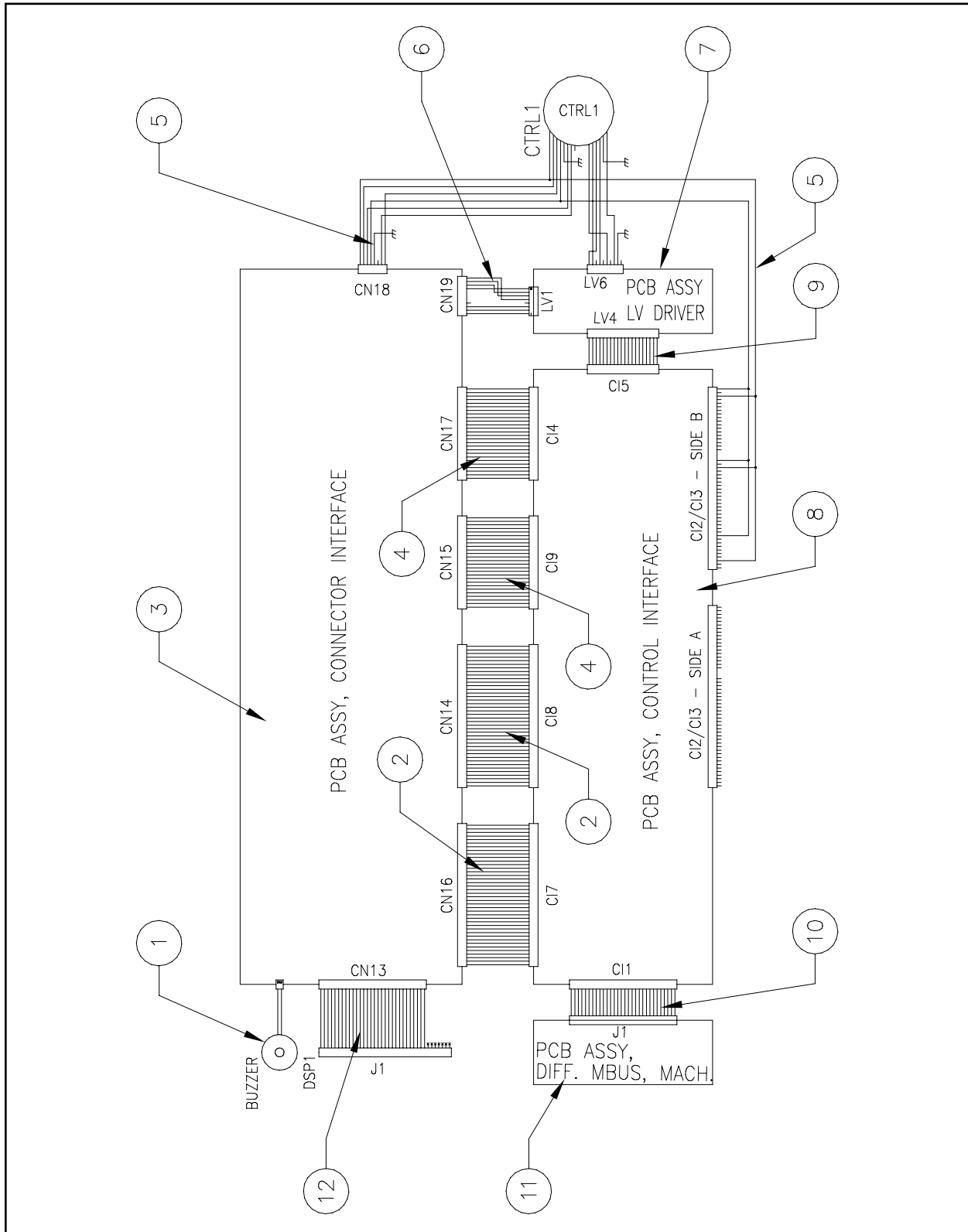


Figure 37

Harnesses (Logic Control Box)**Reference Figure 37**

Item No.	Part Number	Item Description
1	12312	Buzzer Assembly
2	10096-01	Harness, Connector, Interface, 40 pin (2x)
3	009713-01	PCB Assembly, Connector Interface, LV
4	10097-01	Harness, Connector, Interface, 26 pin (2x)
5	10099	Harness, Control DC Power Distribution
6	010781-01	Harness, Low Voltage, I/F
7	12425-01	PCB Assembly, Low Voltage Driver
8	10311-01	PCB Assembly, Control Interface
9	10098-01	Harness, Connector, Interface, 20 pin
10	12315-01	Harness, Control Differential Bus Output
11	12252-03	PCB Assembly, Control Differential Melcobus
12	10093-01	Harness, Link

Harnesses (Power Distribution Box)

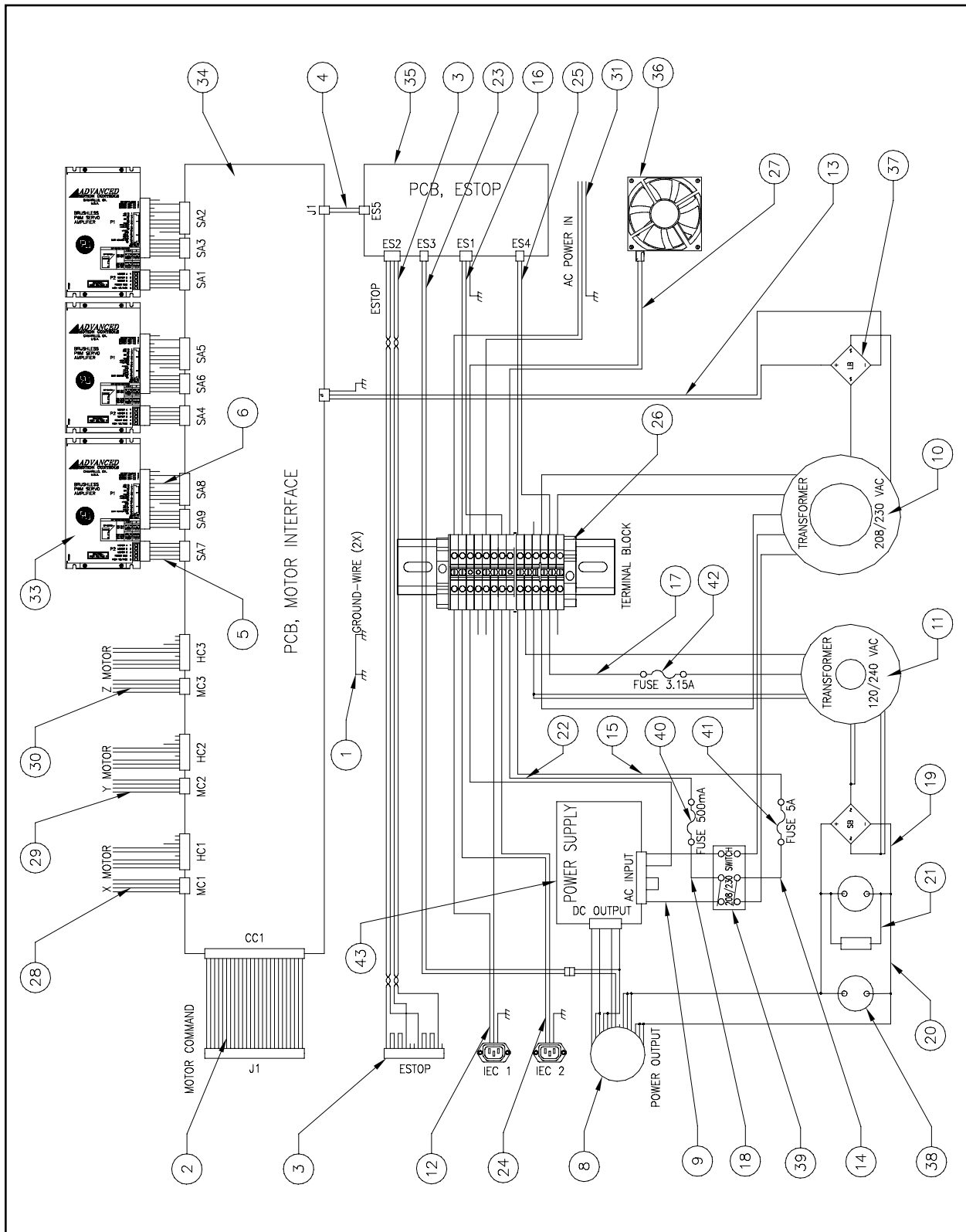


Figure 38

Harnesses (Power Distribution Box)**Reference Figure 38**

Item No.	Part Number	Item Description
1	009317-01	Cable, Ground, Pan, 4.75" (2x)
2	009773-02	Harness, Motor Command
3	009774-02	Harness, EStop Switch Signal
4	009775-02	Harness, Motor Brake
5	12567-01	Harness, Amplifier Power (3x)
6	12568-01	Harness, Amplifier Command (3x)
8	12575-01	Harness, 30/5 Volt Power Output
9	12576-01	Harness, 30/5 Volt Power Input
10	12577-01	Transformer Assembly 208/230
11	12578-02	Transformer Assembly 120/240VAC
12	12579-01	Harness, Terminal Block/IEC 1
13	12580-01	Harness, Motor Interface/Rectifier
14	12581-01	Harness, Main Switch/Large Fuse
15	12582-01	Harness, Terminal Block/Medium Fuse
16	12583-01	Harness, AC In/ESTop
17	12584-01	Harness, Terminal Block/Medium Fuse
18	12585-01	Harness, Switch/Small Fuse
19	12586-01	Harness, Bridge/Capacitor
20	12587-01	Harness, Capacitor/Capacitor
21	12588-02	Harness, Capacitor/Load Resistor
22	12589-01	Harness, Small Fuse/Terminal Block
23	12603-01	Harness, EStop Monitor
24	12606-01	Harness, Terminal Block/IEC 2
25	12607-01	Harness, AC Out/ESTop
26	12608-01	Terminal Block 28 Position
27	12609-01	Harness, Fan Input
28	12318-01	Harness, X Motor
29	12319	Harness, Y Motor
30	12320-01	Harness, Z Motor
31	12311	Harness, AC Power Distribution
33	010424-01	Amplifier Assembly, Servo
34	007754-02	PCB Assembly, Motor Interface
35	007750-02	PCB Assembly, EStop
36	009736-01	Fan, 230 Volt, 100 CFM, 4.7"
37	009738-01	Diode, Bridge, 35A, 400V
38	007833-01	Capacitor, Electrolytic, 20,000mf, 50V
39	10760	Switch, 208/230 VAC, DPDT
40	010340-01	Holder, Fuse, Panel Mount, 5 x 20,
	010162-50	Fuse, 5 x 20, 1/2 Amp, TD, High Int
41	010340-01	Holder, Fuse, Panel Mount, 5 x 20
	010162-05	Fuse, 5 x 20, 5 Amp, TD, High Int
42	010340-01	Holder, Fuse, Panel Mount, 5 x 20
	010162-31	Fuse, 5 x 20, 3,15 Amp, TD, High Int
43	12569-01	Power Supply Interface Assembly

Harnesses (Heads 1-12)

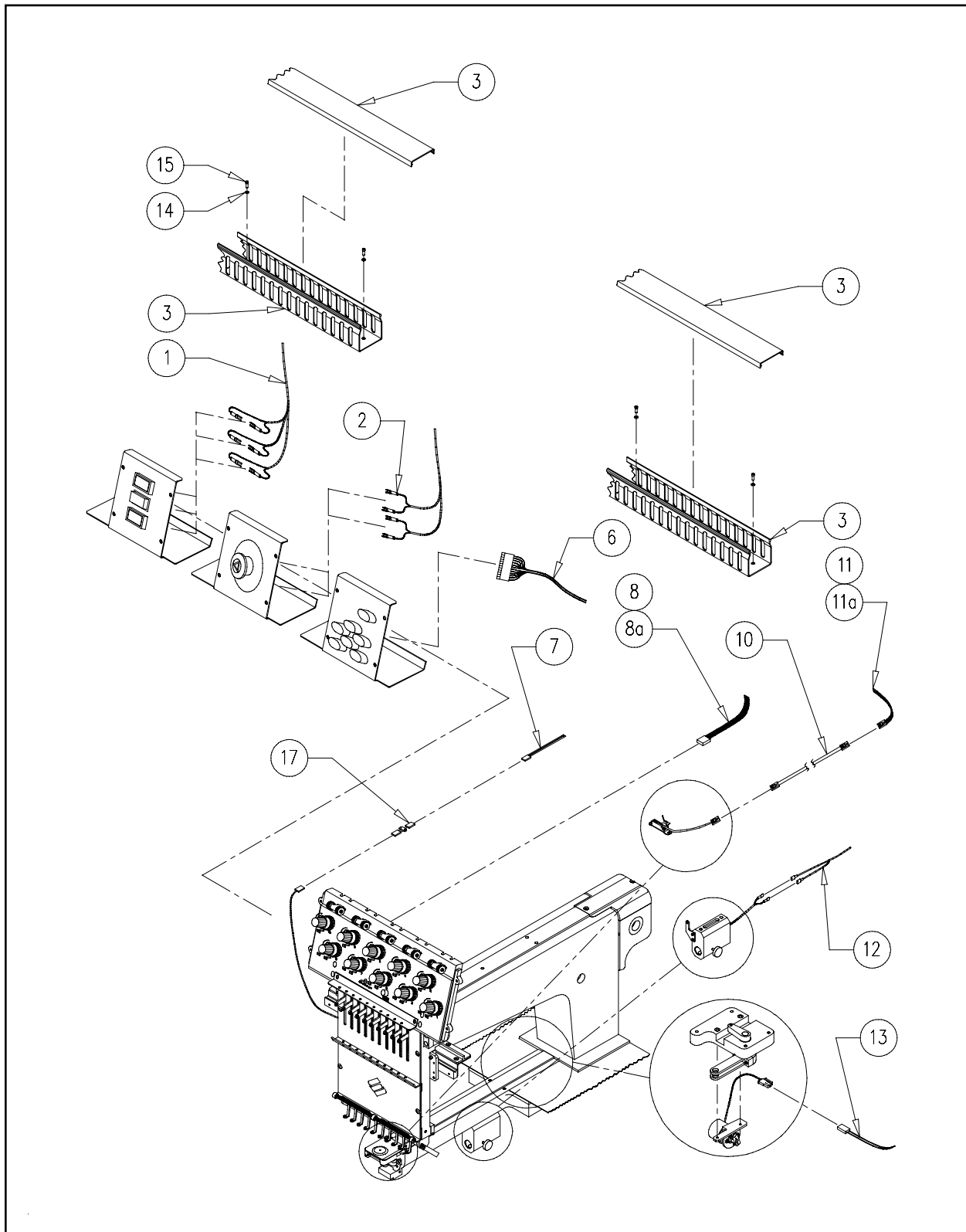


Figure 39

Harnesses (Heads 1-12)**Reference Figure 39**

Item No.	Part Number	Item Description
1	011308-01	Harness, Stop/Start/Frame
2	011302-01	Harness, E-Stop
3	008163-04	Way, Cable, 54.96"
6	011348-01	Harness, Remote Keypad
7	011235-01	Harness, Jump Stitch
8	011233-01	Harness, Thread Break/Mode, Heads 1-6
8a	011234-01	Harness, Thread Break/Mode, Heads 7-12
10	12630-01	Harness, Arm, Under Thread Control
11	011266-01	Harness, Under Thread Control, Heads 1-6
11a	011267-01	Harness, Under Thread Control, Heads 7-12
12	011268-02	Harness, Cutter Home
13	011265-01	Harness, Picker
14	10435-05	Washer, Fender, M4
15	010171-12	Screw, Socket Head Cap, M4 x 0.7 x 10mm
17	009781-01	Diode, Jump Stitch Snubber, Assembly

Harnesses (Motor Power)

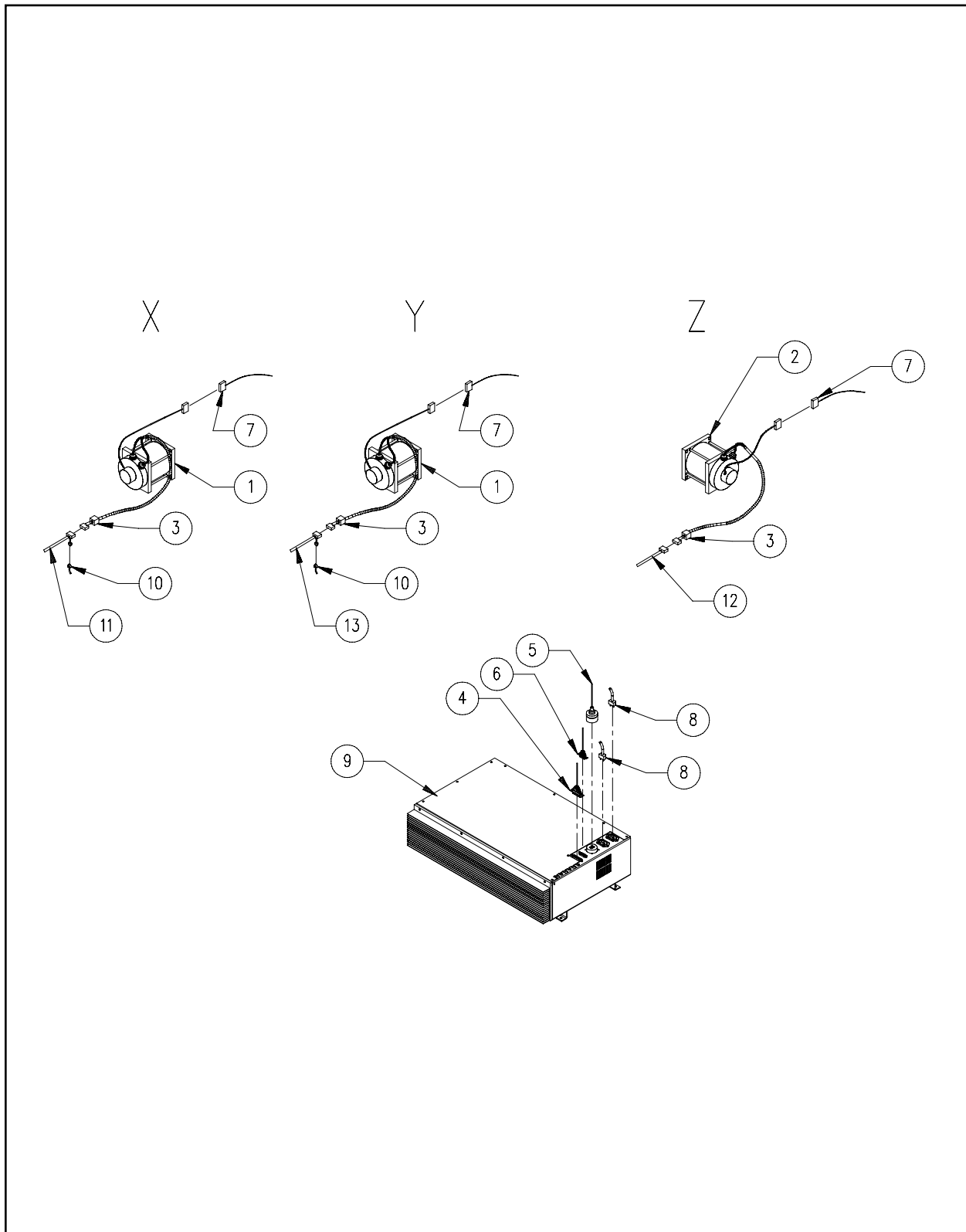


Figure 40

Harnesses (Motor Power)**Reference Figure 40**

Item No.	Part Number	Item Description
1	11203	Assembly, Motor, X/Y-Drives
2	10118	Assembly, Motor, Z-Drive
3	009311-01	Ferrite, Split, Large
4	011269-01	Harness, X/Y/Z Control
5	011303-01	Cable, DC Power
6	011302-01	Harness, E-Stop
7	011272-02	Harness, X/Y/Z Encoder
8	009798-01	Monitor Power Cable, 120VAC
9	009758-03	Box, Power Distribution, Assembly
10	011271-03	Harness, X-Y Home
11	12318-01	Harness, X Motor
12	12319	Harness, Y Motor
13	12320-01	Harness, Z Motor

Sash Hoops (1 of 2)

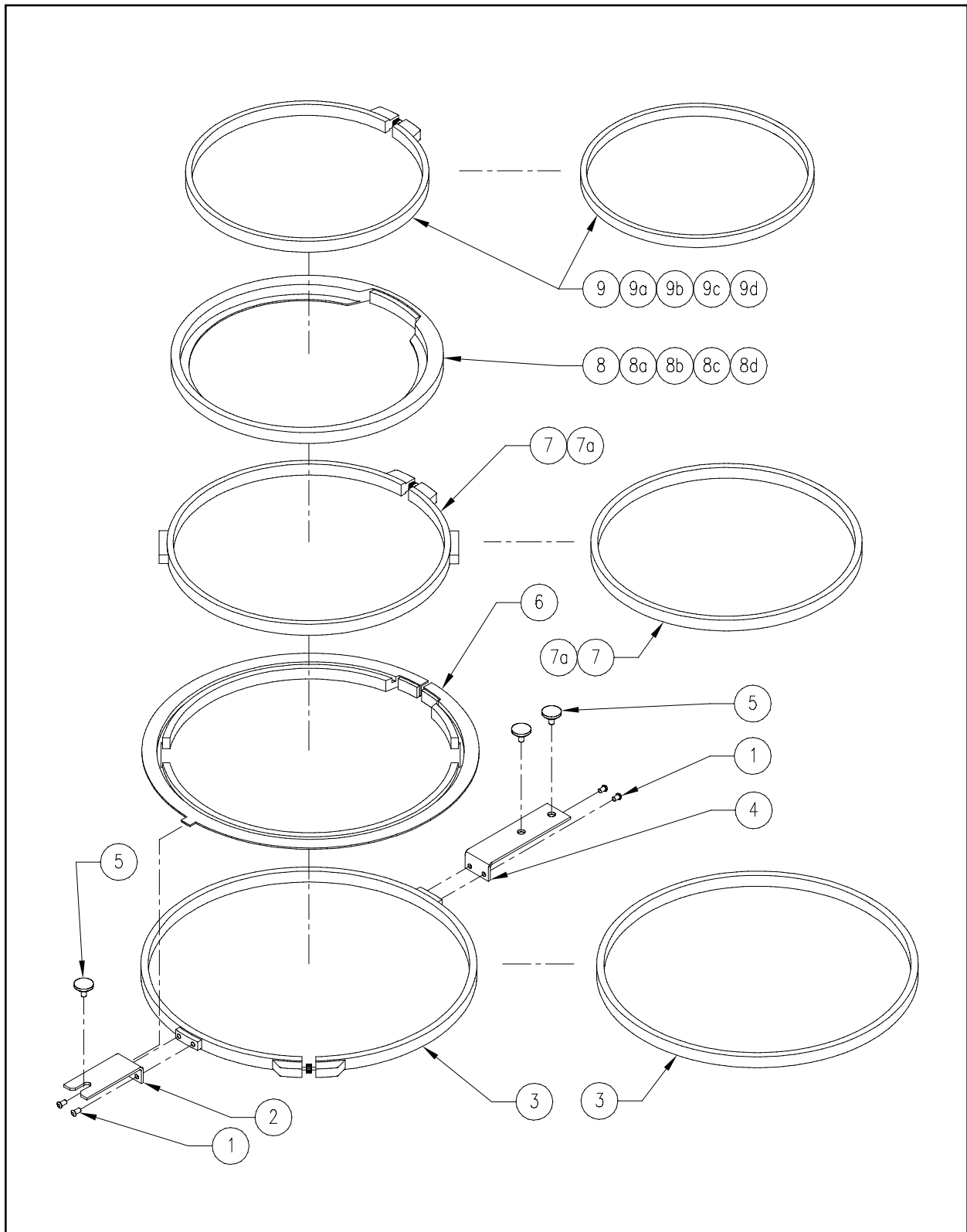


Figure 41

Sash Hoops (1 of 2)**Reference Figure 41**

Item No.	Part Number	Item Description
1	003509-04	Screw, Button Head Socket, M4 x 0.5 x 4mm
2*	007595-01	I/F Bracket, 25cm, Slotted
3*	007592-01	Hoop, 25cm, w/Arms
4*	007594-01	I/F Bracket, 25cm, 2-Hole
5	008334-01	Screw, Thumb, M4 x 0.7 x 10mm
6	006793-01	Hoop, Spider, 21cm
7	005404-01	Hoop Set, 21cm Round, w/Arms
7a	007535-01	Hoop Set, 21cm Round, wo/Arms
8	005413-01	Frame, Spider Net, Hoop, 18cm
8a	005407-01	Frame, Spider Net, Hoop, 15cm
8b	005414-01	Frame, Spider Net, Hoop, 12cm
8c	005415-01	Frame, Spider Net, Hoop, 9cm
8d	005416-01	Frame, Spider Net, Hoop, 7cm
9	005408-01	Hoop, Round, 18cm
9a	005409-01	Hoop, Round, 15cm
9b	005410-01	Hoop, Round, 12cm
9c	005411-01	Hoop, Round, 9cm
9d	005412-01	Hoop, Round, 7cm

Note: The parts marked with '' may be replaced together as the following assembly:

*008429-01 Assembly, Hoop, Sash, Round, 25cm

Sash Hoops (2 of 2)

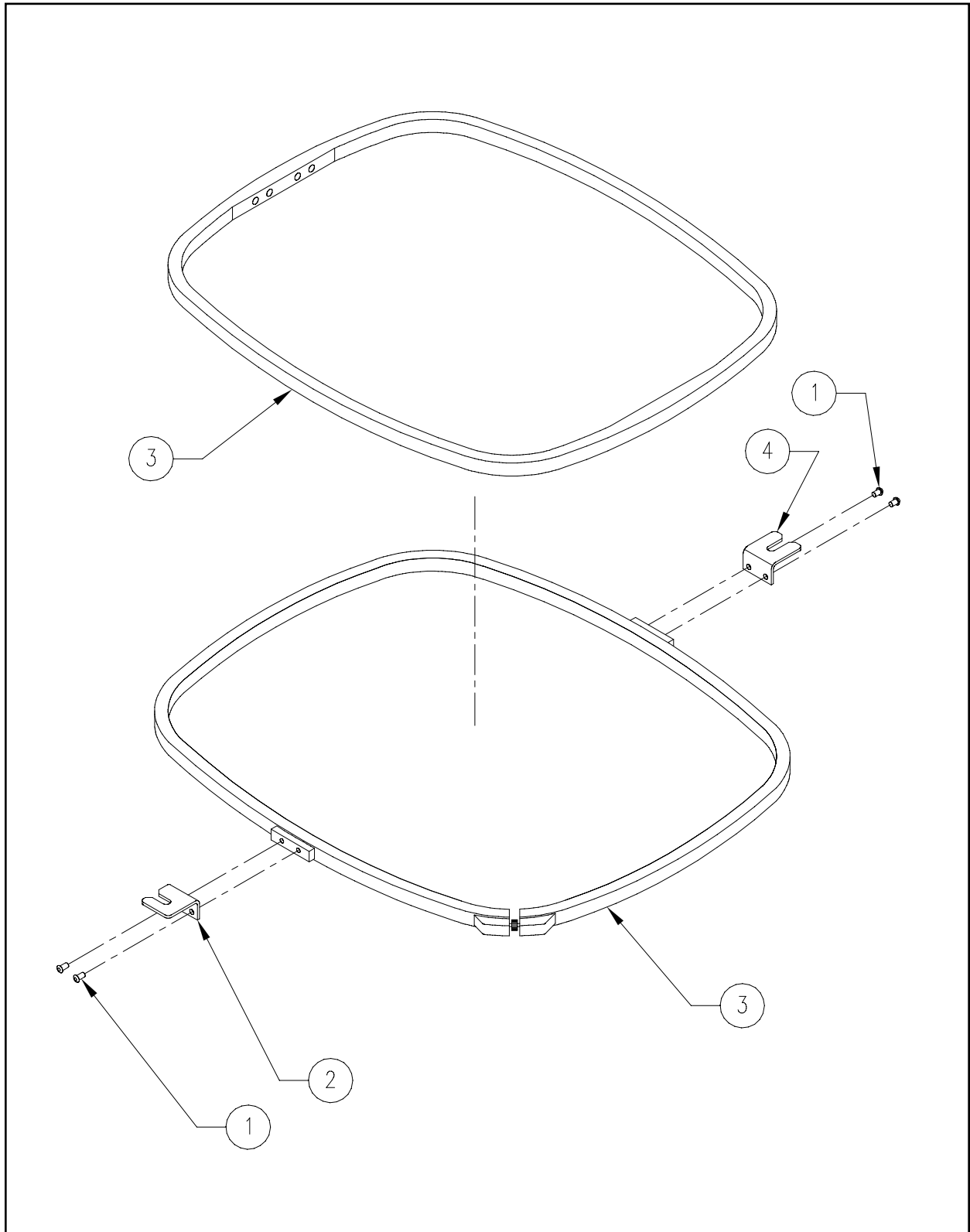


Figure 42

Sash Hoops (2 of 2)**Reference Figure 42**

Item No.	Part Number	Item Description
1*	003136-06	Screw, Button Head Socket, M3 x 0.5 x 6mm
2*	007595-01	Bracket, Hoop, I/F, 36 x 30, Front
3*	006454-01	Hoop, 36cm x 30cm, w/Insert
4*	007594-01	Bracket, Hoop, I/F, 36 x 30, Rear

Note: The parts marked with '' may be replaced together as the following assembly:
*008297-01 Assembly, Hoop, Sash, 36cm x 30cm

Sash Frame

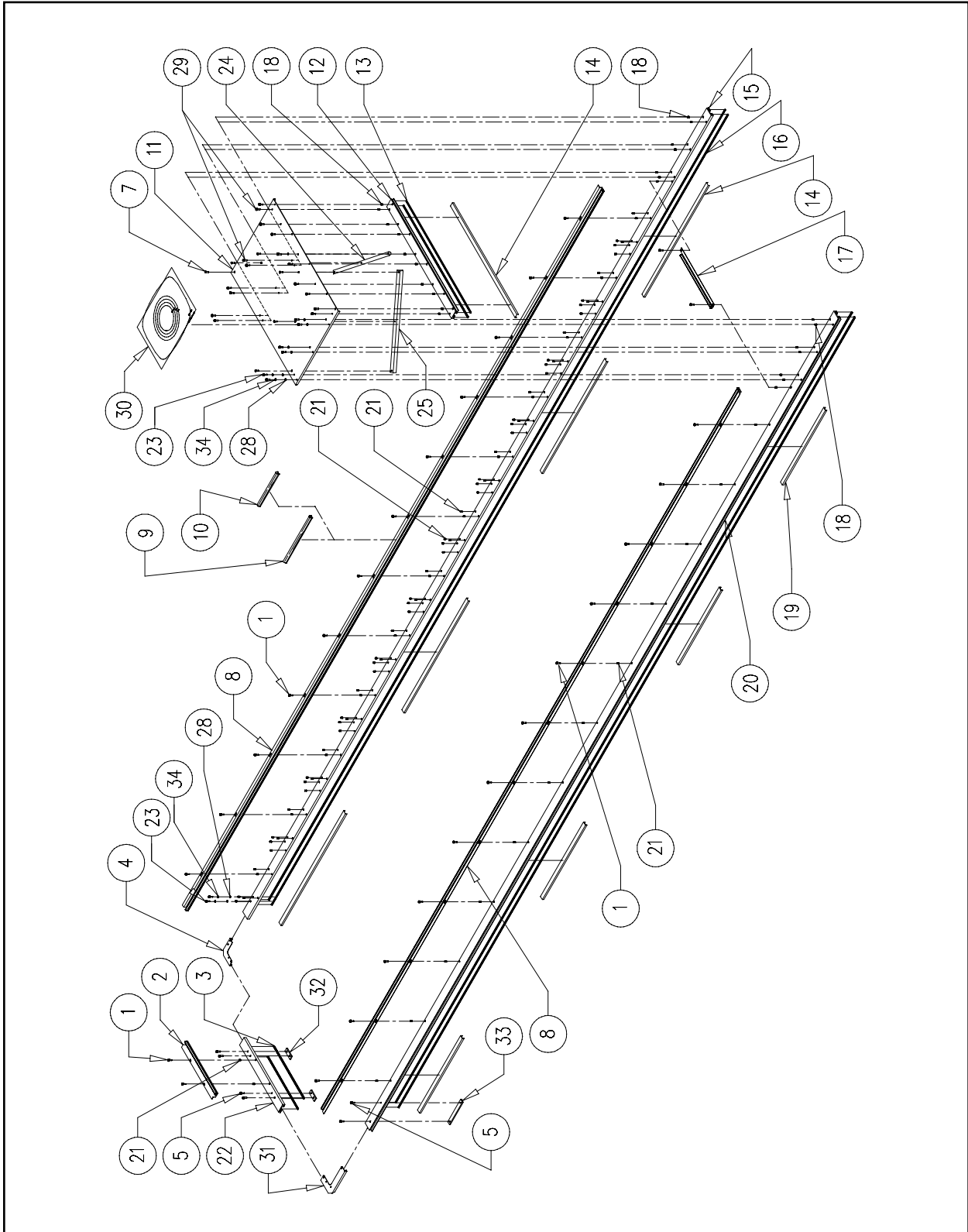


Figure 43

Sash Frame**Reference Figure 43**

Item No.	Part Number	Item Description
1*	008334-01	Screw, Thumb, M4 x 10mm
2*	011298-01	Frame, Border LH
3*	008178-03	Support, Sash, Delrin, .35M
4*	011300-01	Sash Frame, Joint
5*	010172-12	Screw, Socket Head Cap, M5 x 0.8 x 12mm
7*	011197-08	Screw, Flat Head, M4 x 0.7 x 8mm
8*	011297-01	Frame, Border, Front & Rear
9	008177-01	Clip, Border Frame, 300mm
10	007598-01	Clip, Border Frame, 220mm
11*	008173-01	Plate, Sash Frame
12*	008172-01	Frame, Sash, Right
13*	008178-02	Support, Sash, Delrin, .75M
14*	008326-01	Running Strip, Rear Sash
15*	011294-01	Sash Frame, Rear
16*	008178-01	Support, Sash, Delrin, 5.3M
17*	011299-01	Frame, Border, RH
18*	008242-01	Insert, Threaded
19*	008327-01	Running Strip, Front Sash
20*	011295-01	Sash Frame, Front
21*	008322-01	Insert, Threaded
22*	011296-01	Sash Frame, Left
23*	010171-12	Screw, Socket Head Cap, M4 x 0.7 x 12mm
24*	008333-02	Sash Frame, Plate, Runner, Rear
25*	008333-01	Sash Frame, Plate, Runner, Front
28*	690439-04	Washer, Flat, M4
29*	011162-08	Screw, Button Head Socket, M4 x 0.7 x 8mm
30*	008363-01	Screen Print
31*	011301-01	Sash Frame, Joint
32*	011231-01	Sash Clamp, Plate
33*	011232-01	Sash Clamp, Plate
34*	690427-04	Washer, Lock, M4

Note: The parts marked with '' may be replaced together as the following assembly:
 *12014 Frame, Sash, Assembly

Cap Frame Mounts

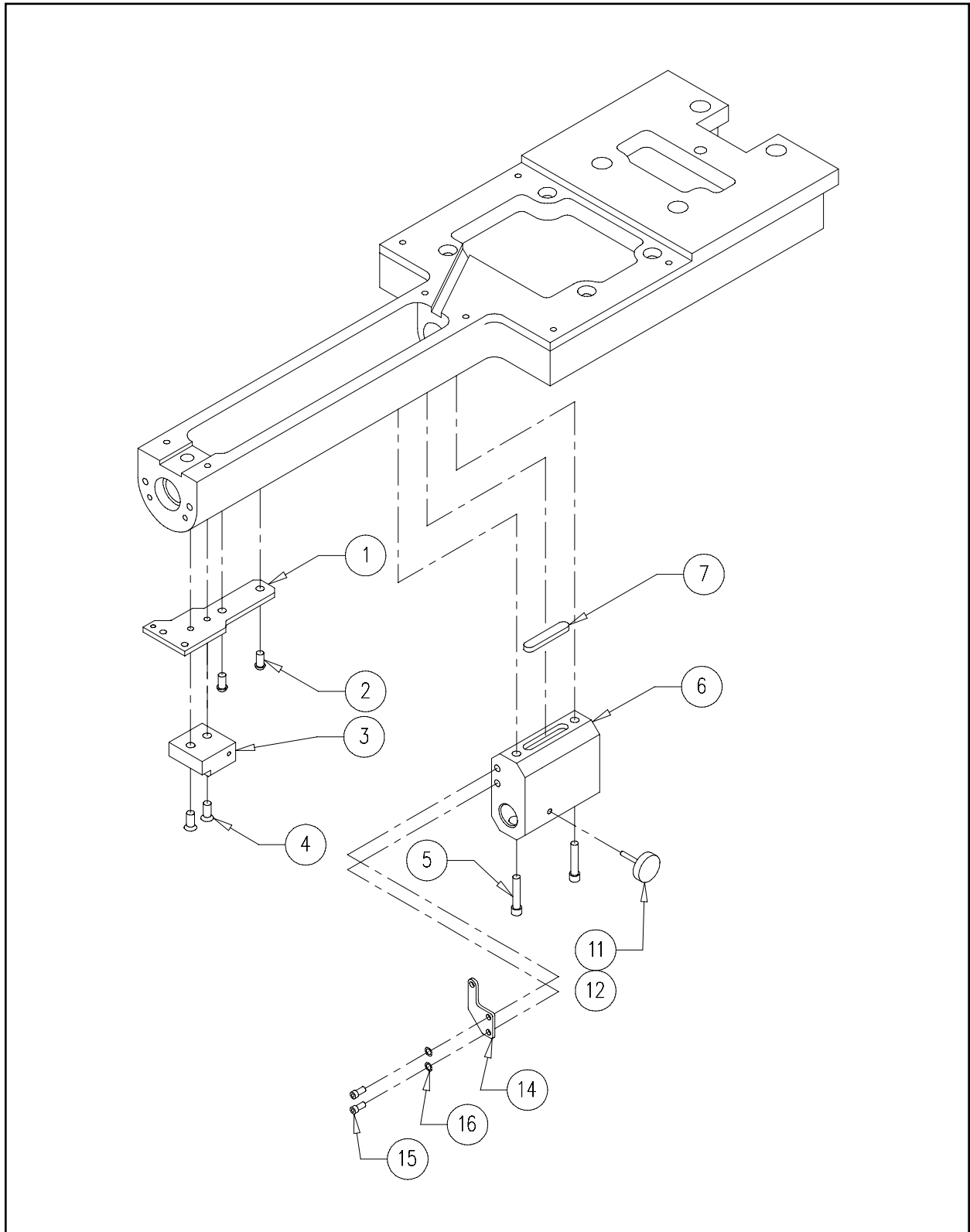


Figure 44

Cap Frame Mounts**Reference Figure 44**

Item No.	Part Number	Item Description
1	006526-01	Bracket, Picker
2	003509-08	Screw, Button Head Socket, M4 x 0.7 x 8mm
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
6	12091	Bracket, Cap Frame
7	006525-01	Key, Shaft, 6mm x 6mm x 32mm
11	010172-10	Screw, Socket Head Cap, M5 x 0.8 x 10mm
12	006538-01	Knob, Knurled, M5, Black
14	008465-01	Spring Mount Bracket
15	010170-06	Screw, Socket Head Cap, M3 x 0.5 x 6mm
16	690427-03	Washer, Lock, Split, M3

Wide-Angle Cap Frame (1 of 6)

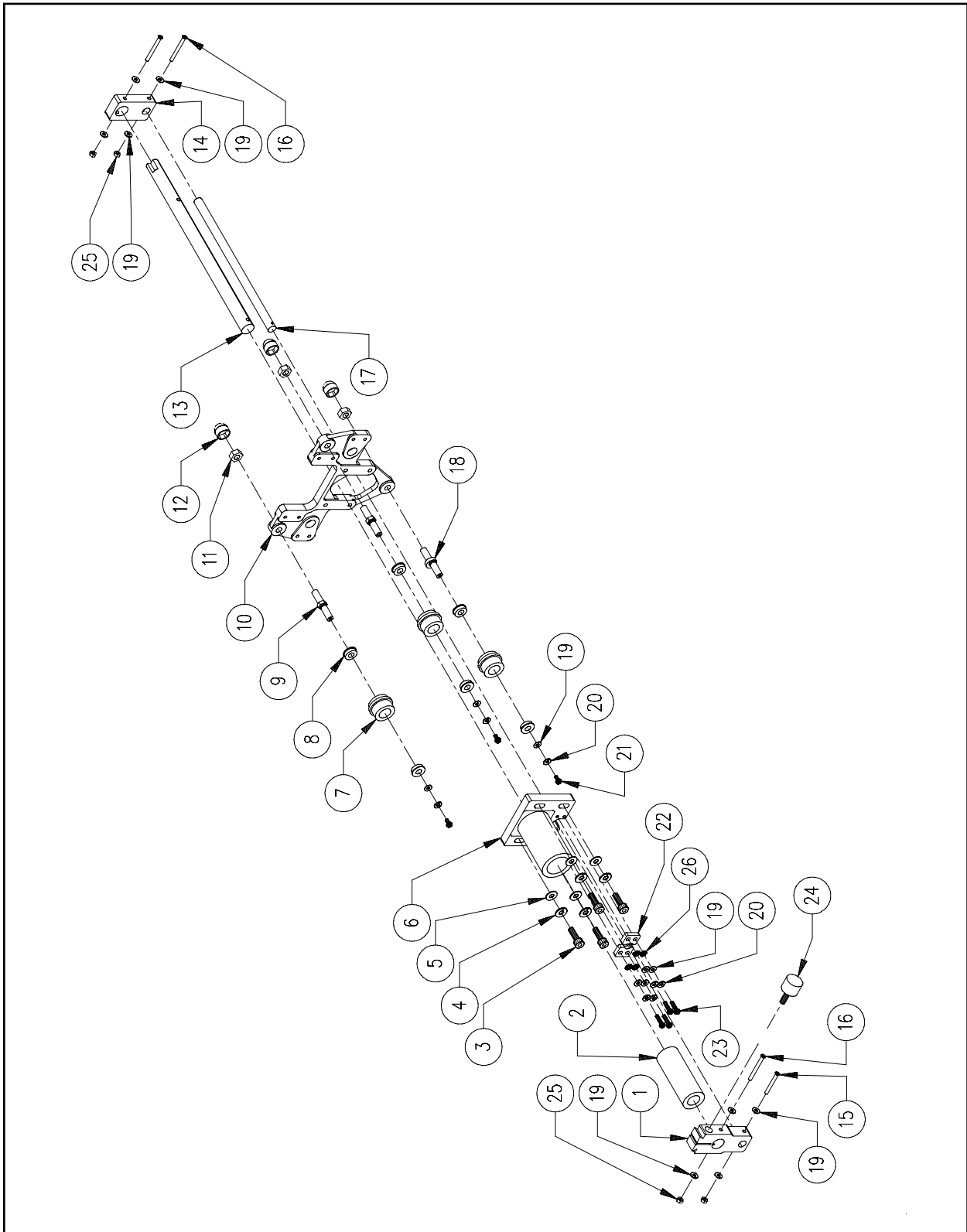


Figure 45

Wide-Angle Cap Frame (1 of 6)**Reference Figure 45**

Item No.	Part Number	Item Description
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	009601-02	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	010170-25	Screw, Socket Head Cap, M3 x 0.5 x 25mm
16	010170-30	Screw, Socket Head Cap, 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	010170-06	Screw, Socket Head Cap, 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, Zinc Plate
24	11698-05	Screw, Thumb, M5 x 16mm
25	003573-03	Nut, M3, Locking
26	010167-03	Washer, External Star, M3

Note: *Used with Item 3 and supplied with the embroidery machine

Wide-Angle Cap Frame (2 of 6)

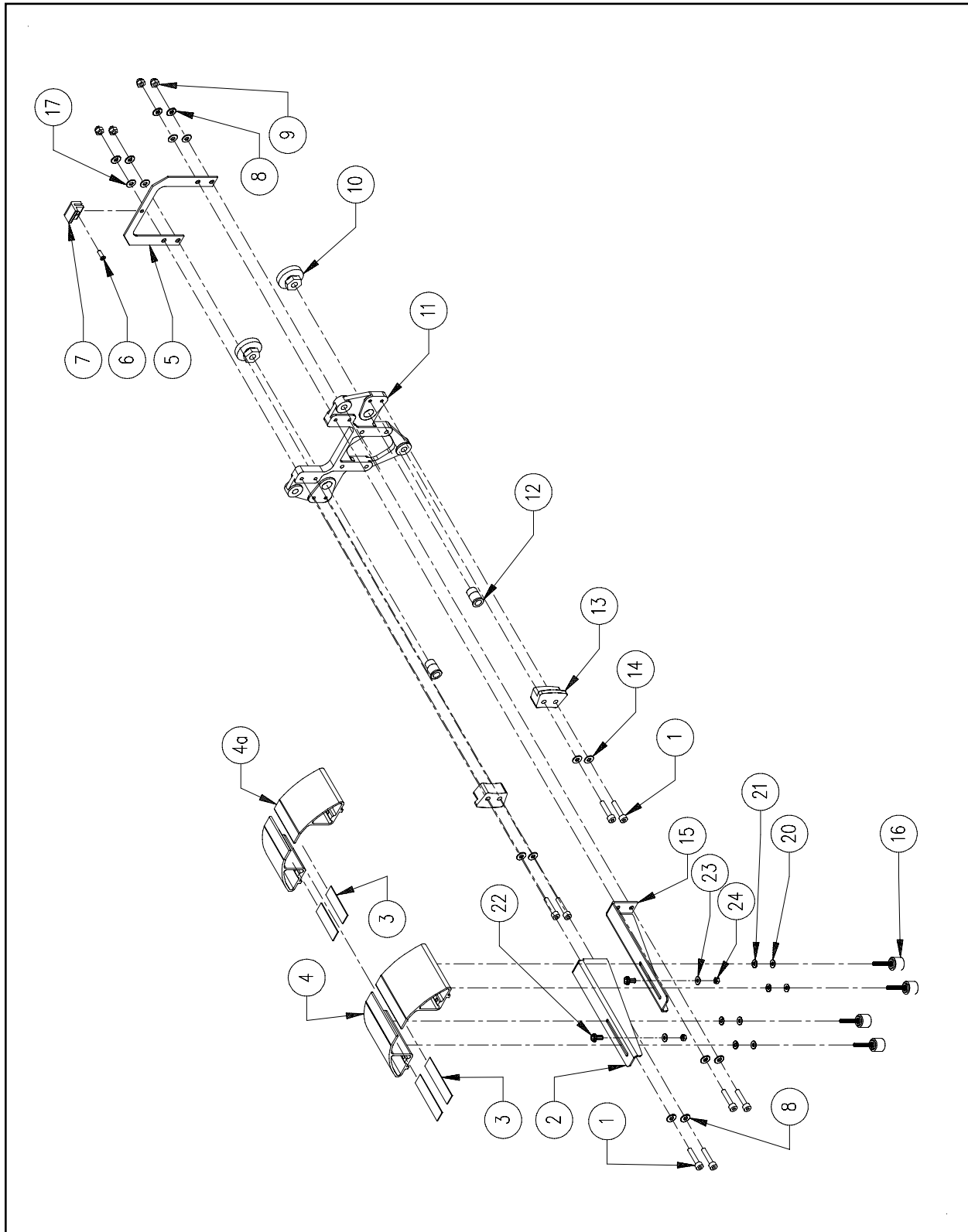


Figure 46

Wide-Angle Cap Frame (2 of 6)**Reference Figure 46**

Item No.	Part Number	Item Description
1	010171-20	Screw, Socket Head Cap, M4 x 0.7 x 20mm, Zinc Plate
2	011057-02	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	009601-02	Base, Drive Ring
12	009616-02	Nipple, Support, Tensioner Disk
13	009600-02	Pad, Support, Cylinder
14	010668-01	Washer, Flat, Fender, M4
15	011056-02	Bracket, Support, Right Hand
16	11647	Screw, Thumb, M3
17	690439-04	Washer, Flat, M4
20	006303-04	Washer, Plain, Type 3
21	690427-03	Washer, Lock, Split, M3
22	010170-06	Screw, Socket Head Cap, M3 x 6mm
23	690439-03	Washer, Flat, M3
24	003573-03	Nut, Lock, M3

Note:

* Item 10 is supplied with the Disk Tensioner Option Kit,
Part number 11699

Wide-Angle Cap Frame (3 of 6)

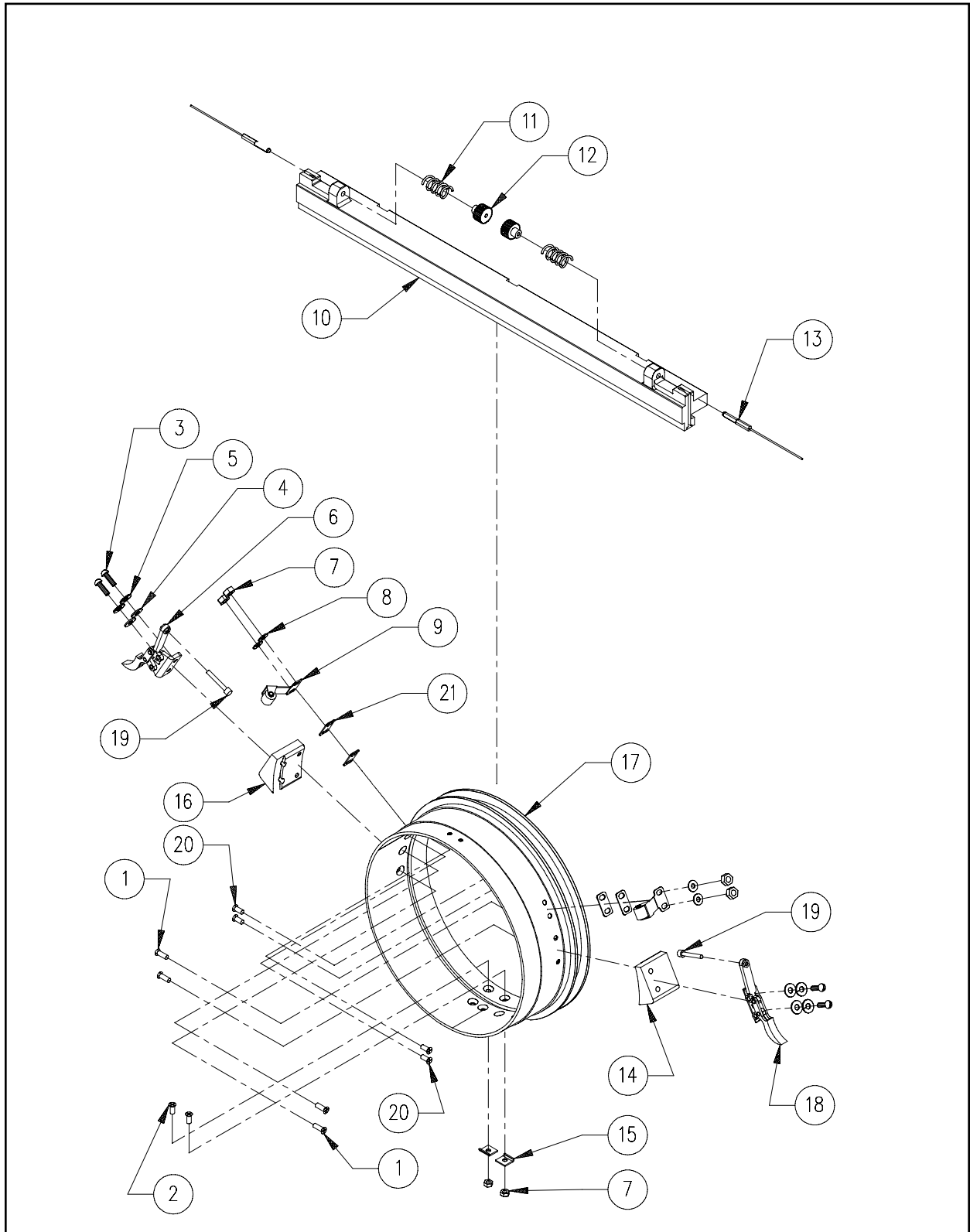


Figure 47

Wide-Angle Cap Frame (3 of 6)**Reference Figure 47**

Item No.	Part Number	Item Description
1	011196-08	Screw, Flat Head, Socket, M3 x 0.5 x 8mm
2	011196-06	Screw, Flat Head, Socket, M3 x 0.5 x 6mm
3	010171-10	Screw, Socket Head, Cap, M4 x 0.7 x 10mm
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	Bar, Drive Ring
11	009625-01	Spring, Compression
12	009610-01	Nut, Tensioner, Drive Ring
13	009626-01	Cable, Drive Ring, Assembly
14	011058-03	Bracket, Clamp, Right Hand
15	009811-01	Washer, Holder, Cable
16	011059-03	Bracket, Clamp, Left Hand
17	009619-03	Cylinder, Drive Ring
18	009624-01	Clamp, Hold Down, Right Hand
19	674900-10	Screw, Hex Head, 8-32 x 5/8"
20	011196-10	Screw, Flat Head, Socket, M3 x 10
21	11652-01	Spacer, Roller Clip

Wide-Angle Cap Frame (4 of 6)

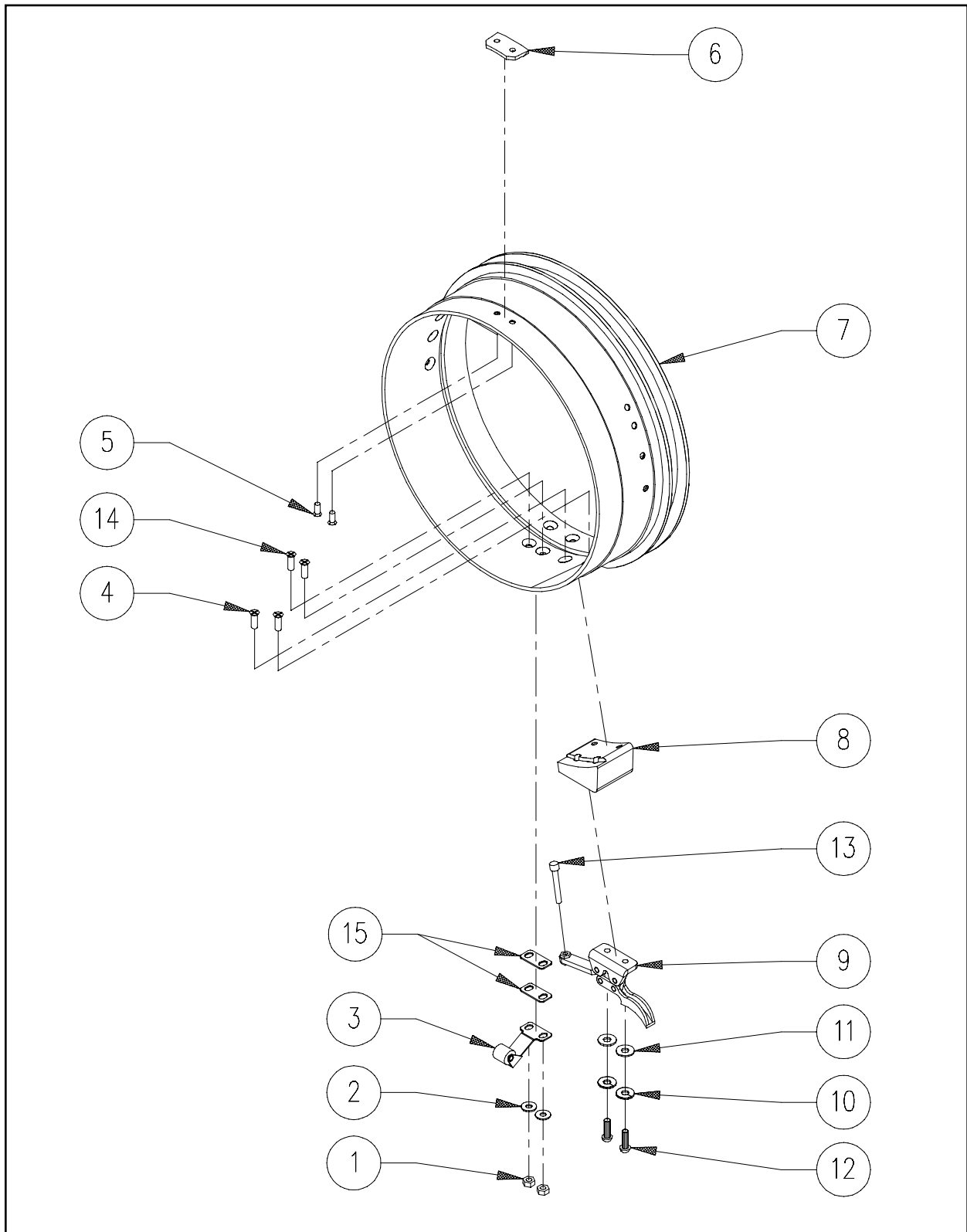


Figure 48

Wide-Angle Cap Frame (4 of 6)**Reference Figure 48**

Item No.	Part Number	Item Description
1	680430-03	Nut, Hex, M3
2	690439-03	Washer, Flat, M3
3	004229-01	Clip, Roller, Assembly
4	011196-08	Screw, Flat Head Socket, M3 x 0.5 x 8mm
5	011196-04	Screw, Flat Head Socket, M3 x 0.5 x 4mm
6	009620-02	Locator, Drive Ring
7	009619-03	Cylinder, Drive Ring
8	011059-03	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	010171-10	Screw, Socket Head, Cap, M4 x 0.7 x 10mm
13	674900-10	Screw, Hex Head, 8-32 x 5/8"
14	011196-10	Screw, Flat Head, Socket, M3 x 10
15	11652-01	Spacer, Roller Clip

Wide-Angle Cap Frame (5 of 6)

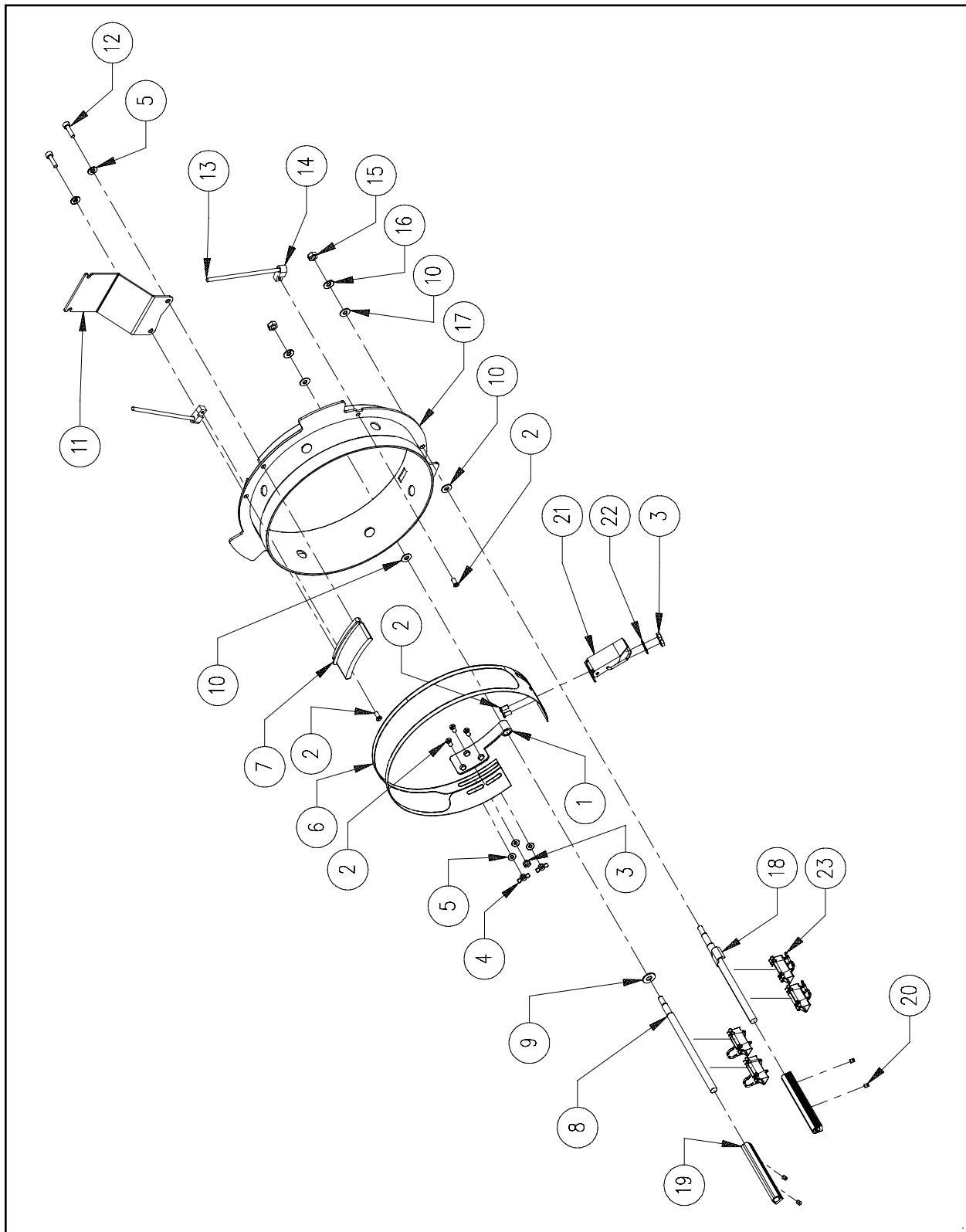


Figure 49

Wide-Angle Cap Frame (5 of 6)**Reference Figure 49**

Item No.	Part Number	Item Description
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, Toggle
22	690427-03	Washer, Lock, Split, M3
23	009682-02	Clip, Cap Frame

Wide-Angle Cap Frame (6 of 6)

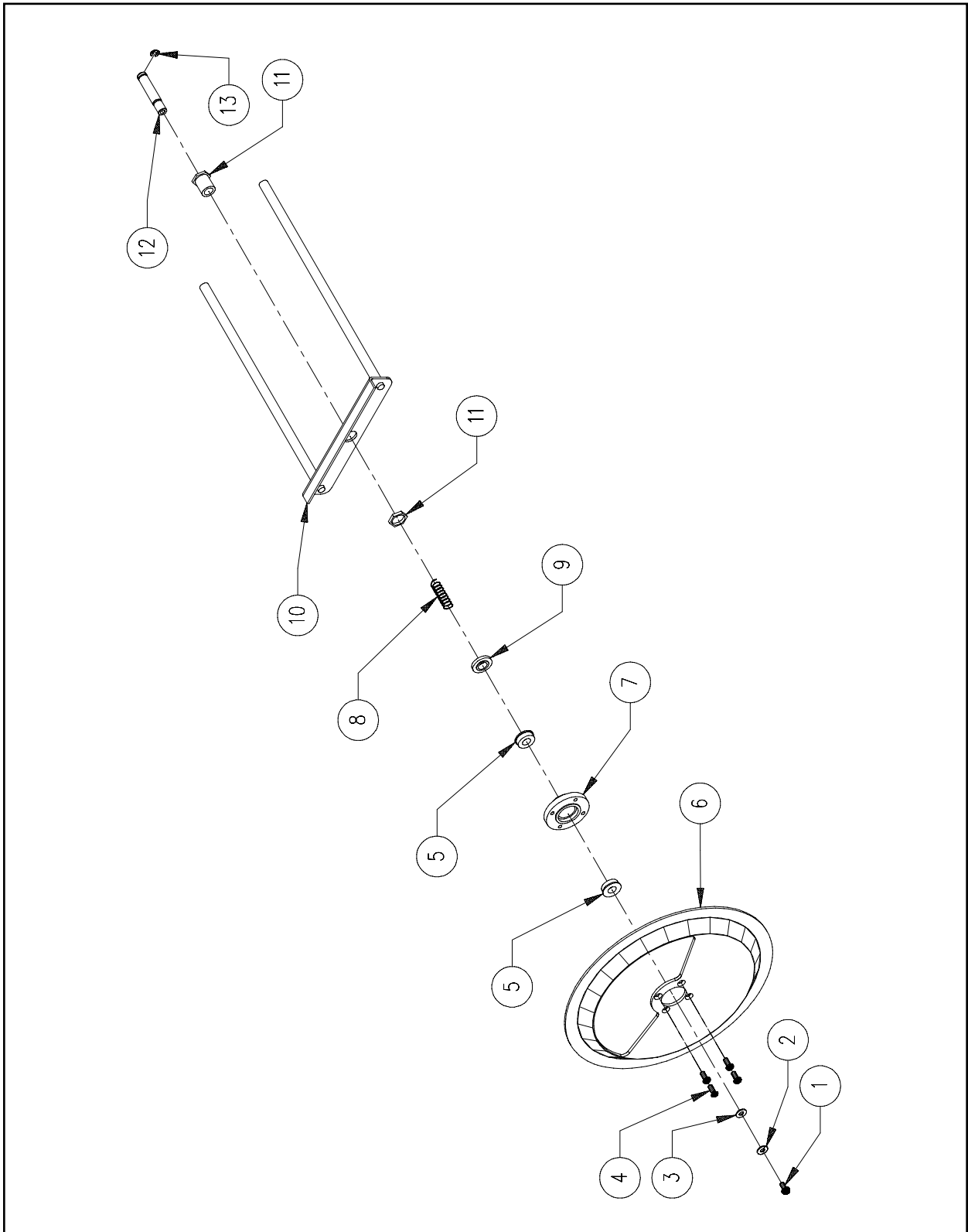


Figure 50

Wide-Angle Cap Frame (6 of 6)**Reference Figure 50**

Item No.	Part Number	Item Description
1	010170-06	Screw, Socket Head Cap, M3 x 0.5 x 6mm
2	690427-03	Washer, Lock, Split M3
3	690439-03	Washer, Flat, M3
4	011196-06	Screw, Flat Head, Socket, 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: All items above may be replaced with the Tensioner Disk Assembly, Part Number 010094-02

Wide Angle Cap Frame Interface

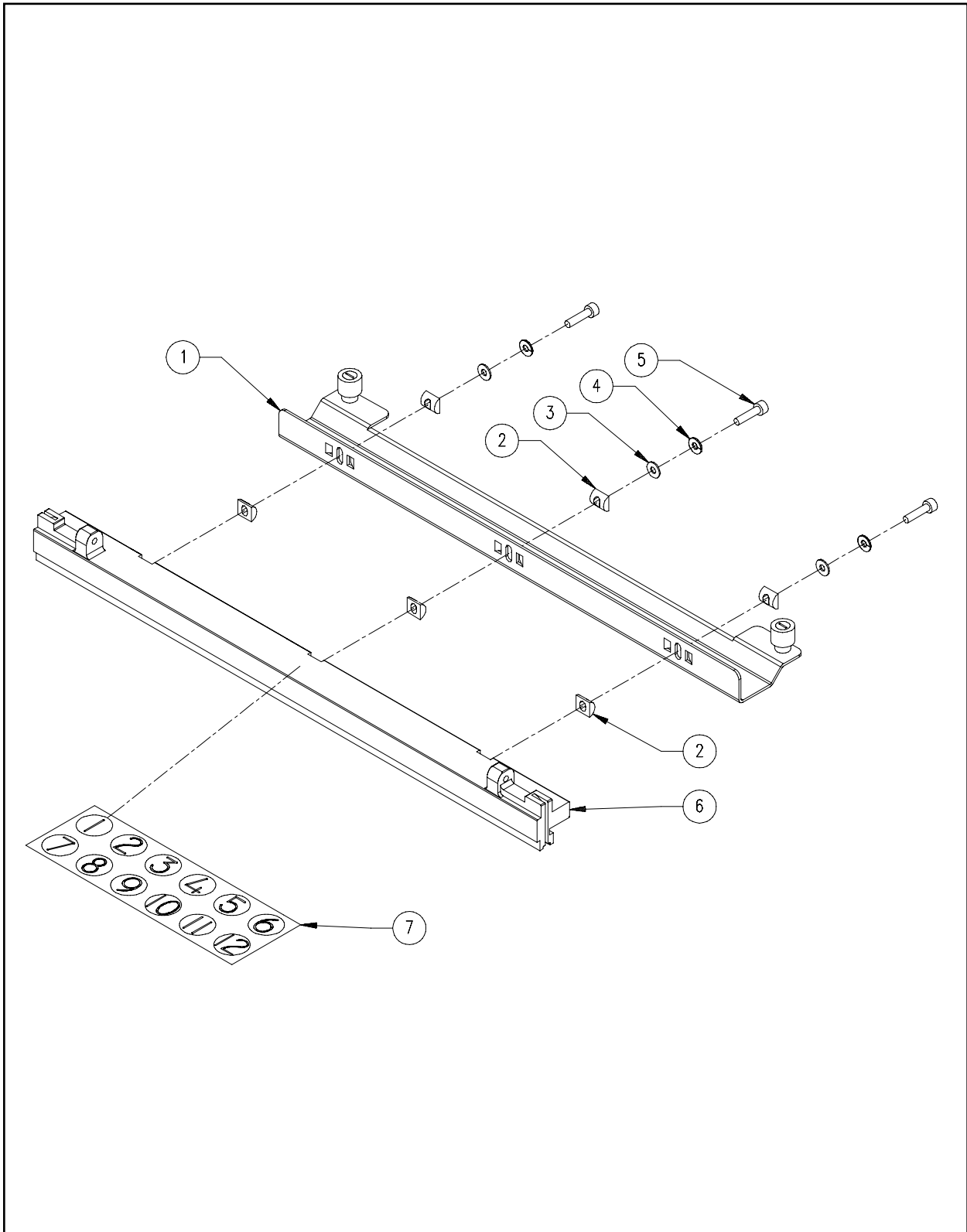


Figure 51

Wide Angle Cap Frame Interface**Reference Figure 51**

Item No.	Part Number	Item Description
1	010059-03	Bracket, Interface
2	010064-01	Spacer, Bracket, Interface
3	690439-04	Washer, Flat, M4
4	690427-04	Washer, Lock, Split, M4
5	010171-16	Screw, Socket Head Cap, M4 x 0.7 x 16mm, Zinc Plate
6	009608-02	Bar, Drive Ring
7	007564-01	Set, Number, Head ID

Wide Angle Cap Frame Gauge

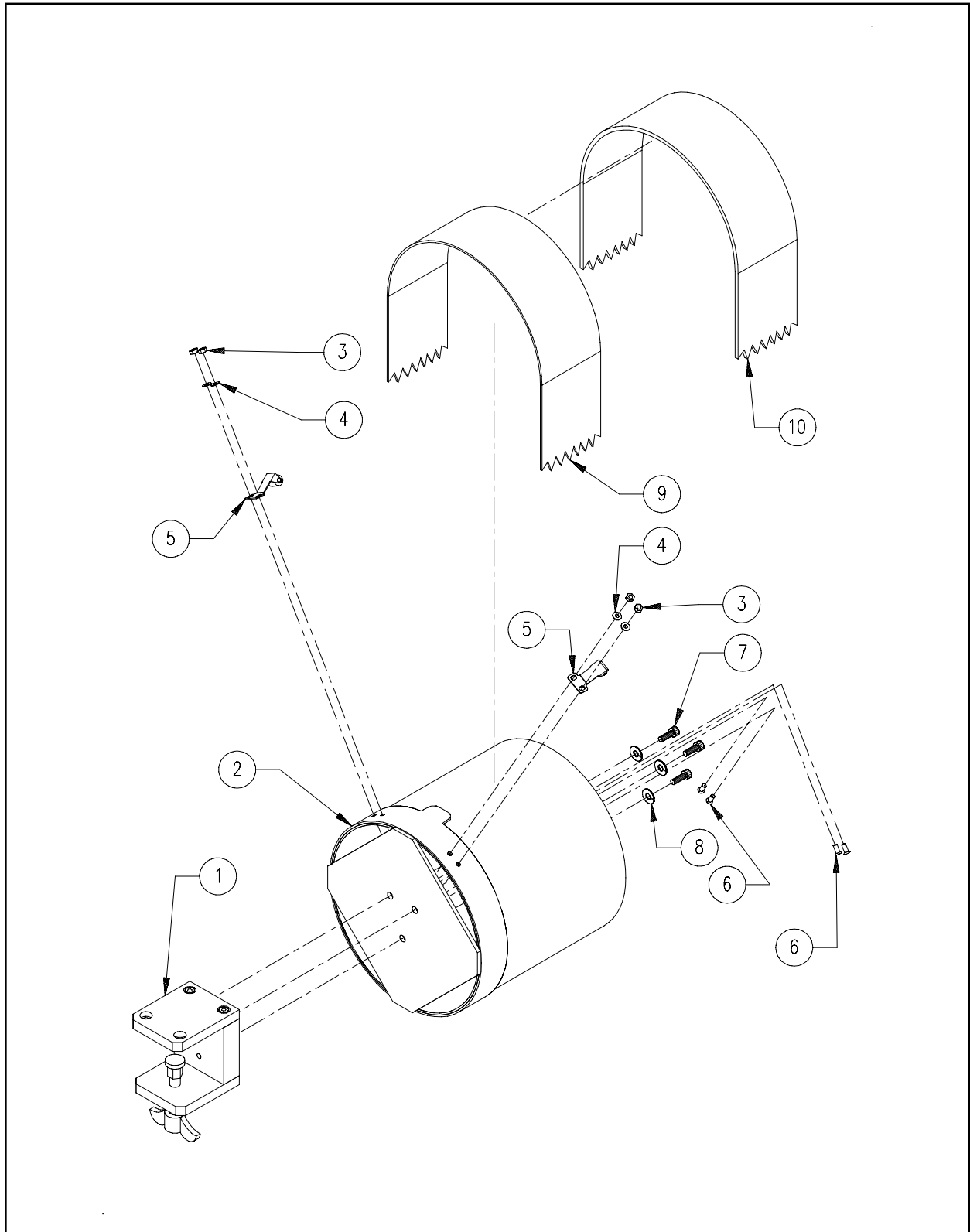


Figure 52

Wide Angle Cap Frame Gauge**Reference Figure 52**

Item No.	Part Number	Item Description
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	010170-08	Screw, Socket Head Cap, M3 x 0.5 x 8mm
7	670038-08	Screw, Socket Head Cap, 10-32 x 1/2"
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

WACC (Conventional Cap Frame for Wide Angle Driver)

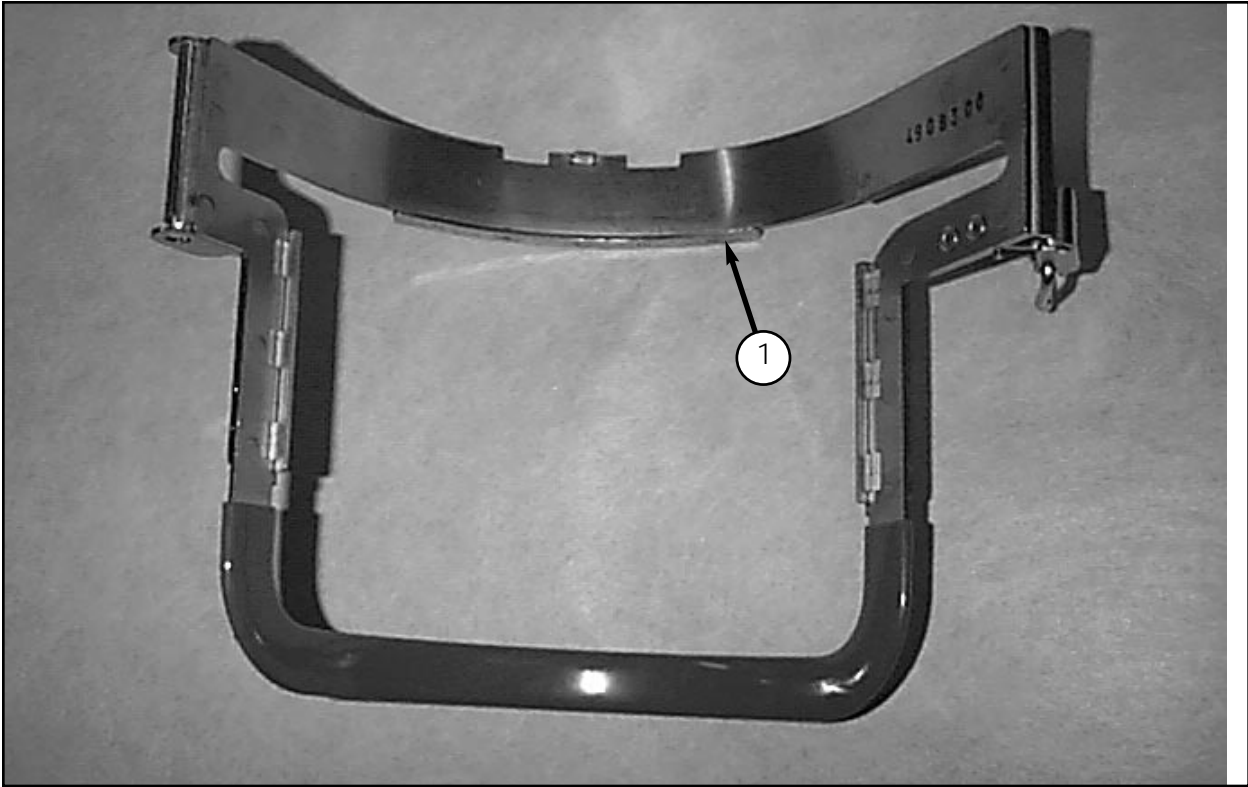


Figure 53a

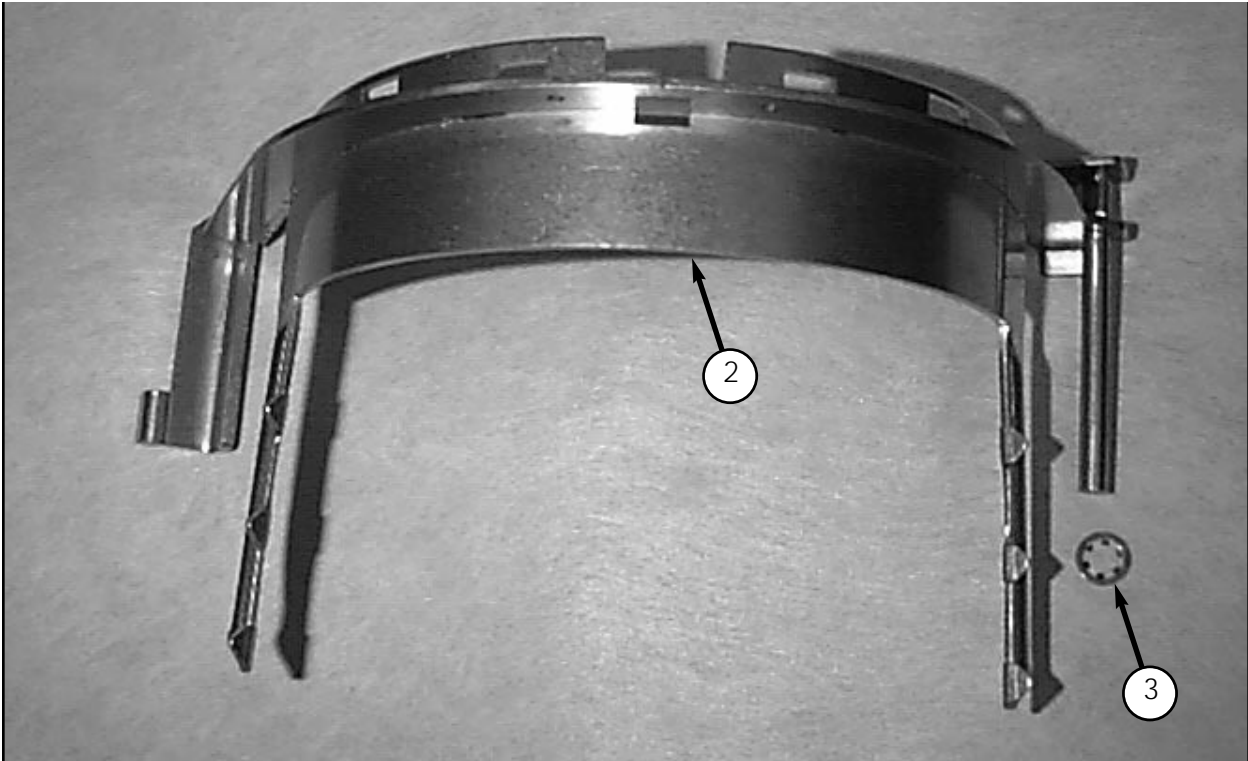


Figure 53b

WACC (Conventional Cap Frame for Wide Angle Driver)**Reference Figure 53**

Item No.	Part Number	Item Description
1	12208	Frame Assembly, Upper
2	12206	Frame Assembly, Lower
3	12235-07	Retaining Ring
	Note:	All items above may be replaced with the WACC Assembly, Part Number 12155

Tubular Hoops

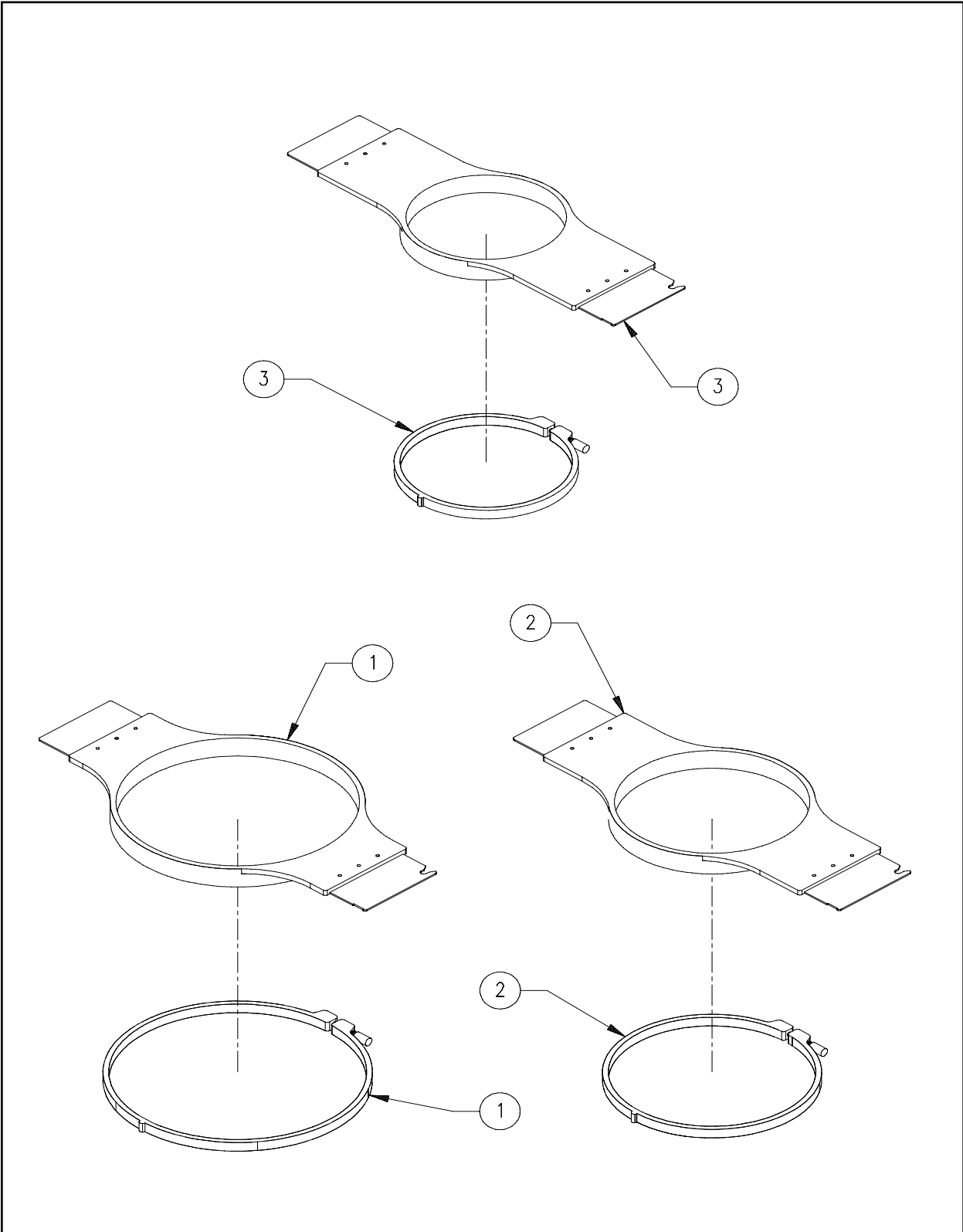


Figure 54

Tubular Hoops**Reference Figure 54**

Item No.	Part Number	Item Description
1	10214	Hoop, Tubular, 22cm, w/Interface Brackets
2	10215	Hoop, Tubular, 18cm, w/Interface Brackets
3	10216	Hoop, Tubular, 15cm, w/Interface Brackets

Tube Frame

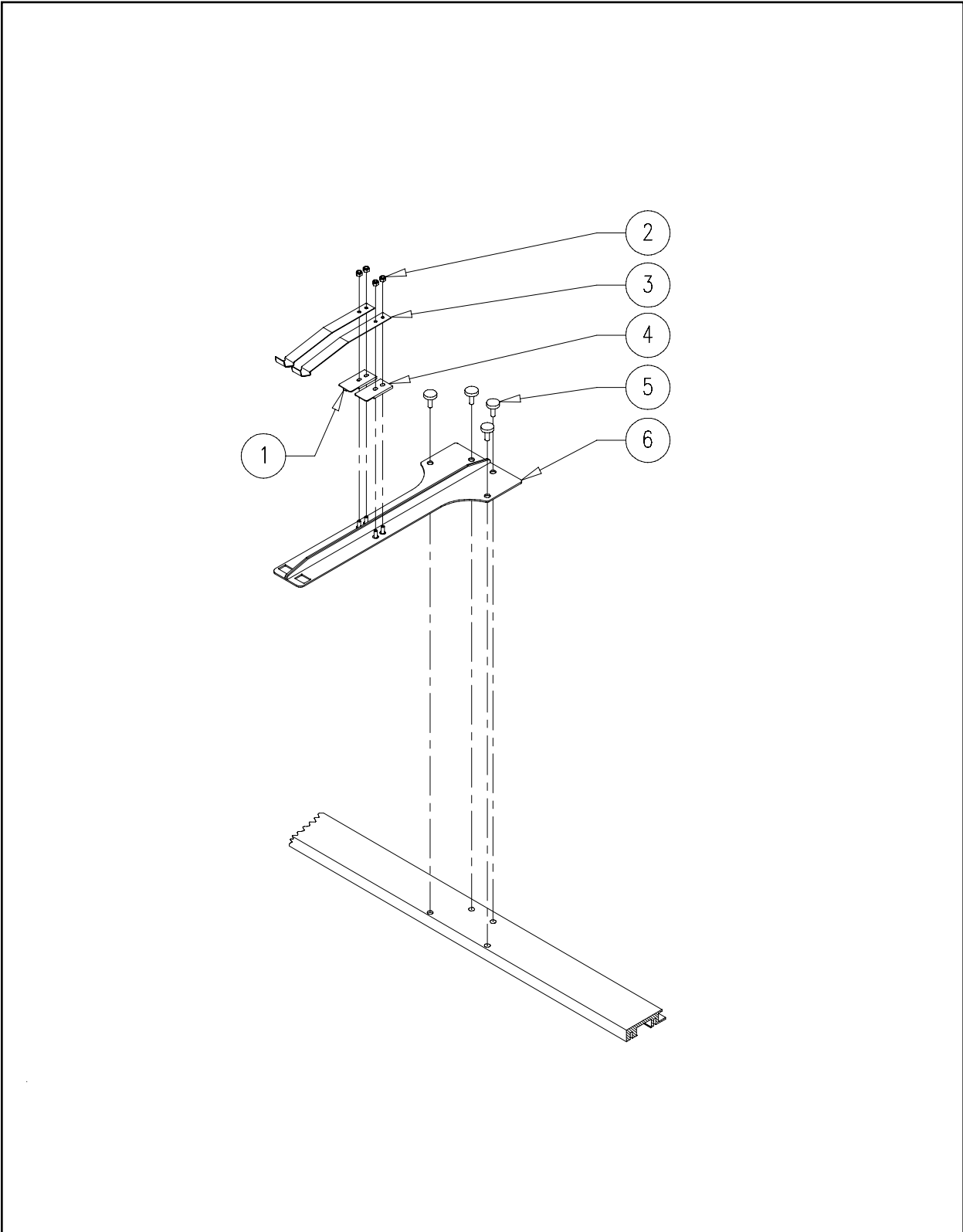


Figure 55

Tube Frame**Reference Figure 55**

Item No.	Part Number	Item Description
1*	008213-01	Locator, Tubular Sash, Right Hand
2*	003573-03	Nut, Nylock, M3
3*	008208-01	Spring, Tubular Sash
4*	008214-01	Locator, Tubular Sash, Left Hand
5	008334-01	Screw, Thumb, M4 x 0.7 x 10mm
6*	008212-01	Sash, Tubular Arm

Note: The parts marked with '' may be replaced together as the following assembly:
*009585-01 Arm, Tubular, Assembly

A

Amplifier, Servo32-2
 Arm, Tubular, Assembly55-2
 Assembly, Motor, X/Y-Drives40-2
 Assembly, Motor, Z-Drive40-2

B

Bar, Drive Ring47-2, 51-2
 Bar, Idler, Assembly22-2
 Bar, Needle17-2
 Base, Drive Ring45-2
 Base, Drive, Lever, Take-Up, PHS II23-2
 Base, Power Distribution Box31-2
 Base, Tensioner18-2
 Bearing, Ball24-2, 27-2
 Bearing, Flanged45-2
 Bearing, Flanged, 6mm ID x 12mm OD ...50-2
 Bearing, Linear45-2
 Bearing, Needle, 12mm24-2, 26-2
 Bearing, Radial, 6mm ID x 13mm OD21-2
 Bearing, Spigot27-2
 Bearing, Thrust, Set, Z-Shaft29-2
 Belt, Continuous, 25mm Wide, AT5,
 132 Tooth25-2
 Belt, Poly, Timing24-2
 Belt, Poly, Timing, 50mm26-2
 Belt, Timing, 1/5P,
 104 Groove, 3/8" Wide19-2
 Blade, Grabber34-2
 Block, Contact,
 Emergency Stop1-2, 2-2, 3-2

Block, Mount, Cap Gauge52-2
 Block, Mounting, Plate28-3
 Block, Rear26-2
 Block, Support, Rail24-2
 Block, Tensioner, Motor28-3
 Block, Trimmer Drive28-3
 Bobbin Idler19-2, 23-1
 Box, Logic Control30-2
 Box, Power Distribution, Assembly40-2
 Bracket, Cap Frame44-2
 Bracket, Clamp, Left Hand48-2
 Bracket, Cylinder, Chassis9-2
 Bracket, Holder, Bar46-2
 Bracket, Hoop, I/F, 36 x 30, Front42-2
 Bracket, Hoop, I/F, 36 x 30, Rear42-2
 Bracket, Interface51-2
 Bracket, Needle Plate19-2
 Bracket, Picker33-2, 44-2
 Bracket, Pretensioner18-2
 Bracket, Stopper, Delrin20-2
 Bracket, Stopper, Steel20-2
 Bracket, Support, Left Hand46-2
 Bracket, Support, Take-Up Lever Guide21-2
 Bracket, Table Support11-2
 Bracket, Tensioner18-2
 Bracket, Thread Tree15-2
 Bracket, X-Motor25-2
 Bushing24-2

Bushing, Base, Drive, Lever, Take-Up	23-2	Collar, Pulley, 2-piece	29-2
Bushing, Cradle, Spring	20-2	Collar, Support, Gear	29-2
Bushing, Link, Drop Table	8-2	Cord, IEC 320 Plug, 2 meter	35-2
Bushing, Shaft, Needle Bar	20-2	Counterweight, Phase II	19-2
Buzzer Assembly	37-2	Coupling, Conntg, 20mm	27-2
C		Cover, Bed, Front	13-2
Cable, DC Power	40-2	Cover, Color Change, top	14-2
Cable, Ground, Pan, 4.75" (2x)	38-2	Cover, End, X-Axis	5-2
Cam, Drive, Take-Up Lever	19-2	Cover, End, Z-Shaft	6-2
Case, Gear, Drive, Lever, Take-Up	23-2	Cover, Front, Head 1, Right Hand	4-2
Channel, X-Drive	24-2	Cover, Front, Head 12, Left Hand	4-2
Channel, X-Drive, Left, Assembly	25-2	Cover, Front, Head 6, Right Hand	4-2
Channel, X-Drive, Right, Assembly	25-2	Cover, Front, Heads 2, 3, 5, 7, 9, 10, 11, Right Hand	4-2
Channel, Y-Drive, Assembly, EMT 10/12T	27-2	Cover, Front, Heads 4, 8, 12, Right Hand	4-2
Clamp, Cable, Nylon, 1/4 in ID	32-2	Cover, Gearbox	29-2
Clamp, Cable, Nylon, 5/16 in ID	32-2	Cover, Needle Case, Lower	16-2
Clamp, Color Change Linkage	13-2	Cover, Needle Case, Upper	16-2
Clamp, Hold Down, Left Hand	47-2, 48-2	Cover, Rear	22-2
Clamp, Needle	17-2	Cover, Rear, Heads 11 & 12	4-2
Clamp, Stop, Needle Bar	17-2	Cover, Rear, Heads 8, 9, 10	4-2
Clamp, Thread Guide Rails, Thread Tree ...	15-2	Cover, Rear, Tensioner Bracket	3-2
Clip, Border Frame, 220mm	43-2	Cover, Rear, Tensioner Bracket, EMI	1-2, 2-2
Clip, Border Frame, 300mm	43-2	Cover, Rear, Y-Axis	5-2
Clip, Ribbon Cable	14-2	Cover, Spacer, Keypad	1-2
Clip, Roller, Assembly	47-2, 48-2, 52-2	Cover, Spacer, Lower	1-2, 2-2, 3-2
Clip, Thread Tree	15-2	Cover, Spacer, Tensioner Bracket	1-2, 2-2, 3-2
Clip, Tubing	15-2	Cover, Spacer, Tensioner Bracket, E-Stop	1-2, 2-2, 3-2
Collar, 15mm ID, Gearbox	29-2		
Collar, Clamp, 8mm ID	14-2		

Cover, Spacer, Tensioner Bracket, Start/Stop	1-2, 2-2, 3-2, 10-2
Cover, Station, Power On	5-2
Cover, Tensioner Bracket, Left	3-2
Cover, X-Drive, Front	5-2
Cover, X-Drive, Rear	5-2
Cover, Z-Shaft	6-2
Cylinder, Drive Ring	48-2
Cylinder, Gauge	52-2

D

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