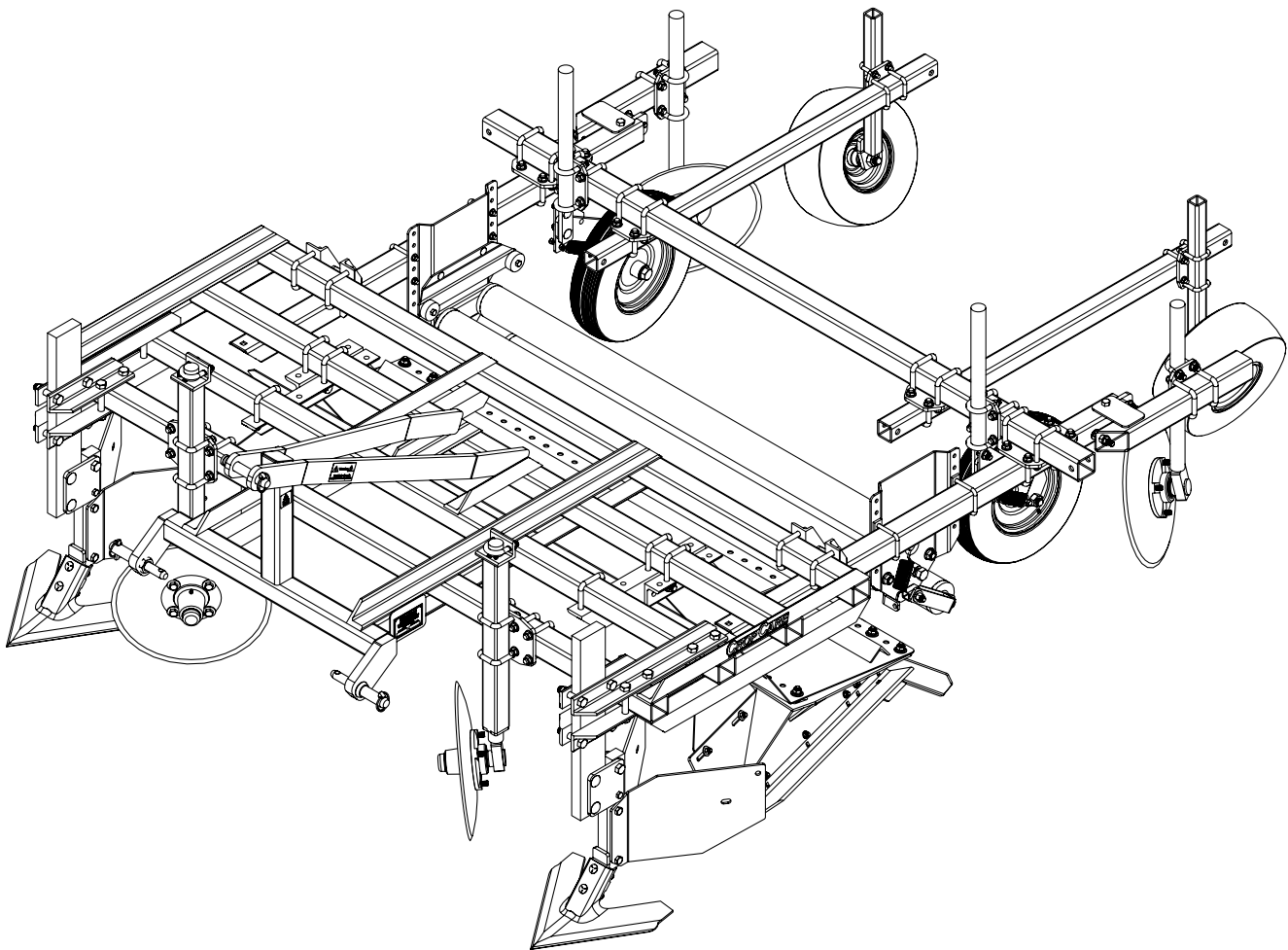


Assembly Manual

Model: ML4600AM
Bed Shaper / Plastic Layer



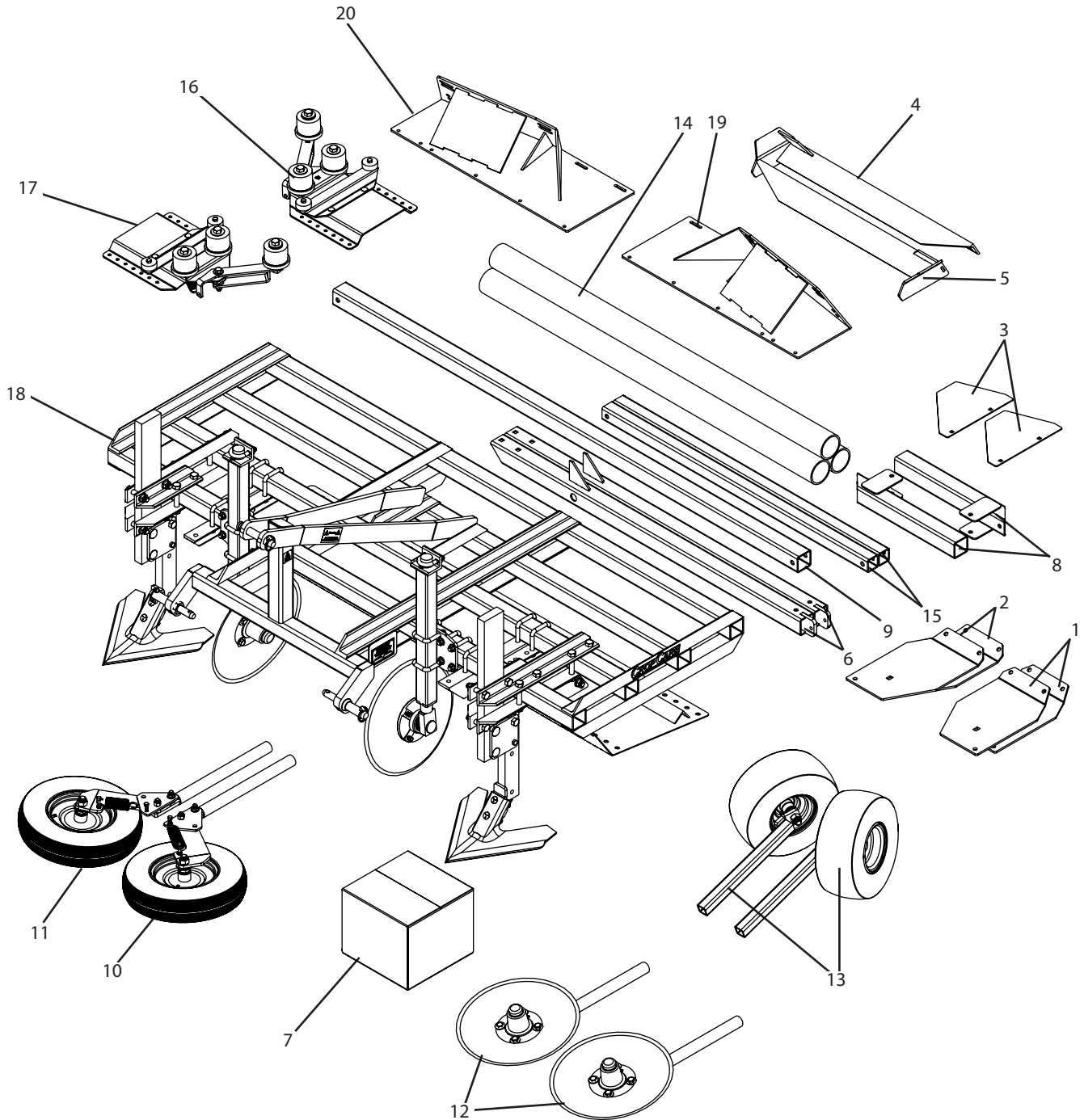
Manufactured by PBZ LLC
A Paul B Zimmerman Inc. Company
www.CropCareEquipment.com

Form ML4600AM
Rev. A Date: 5/21

ML4600 Assembly Instructions

Pallet Contents

The Bed Shaper /Plastic Layer comes partially assembled on a pallet and requires some assembly. Follow the step-by-step instructions to ensure proper assembly. Before assembling, ensure that the pallet contains all of the necessary components and parts.



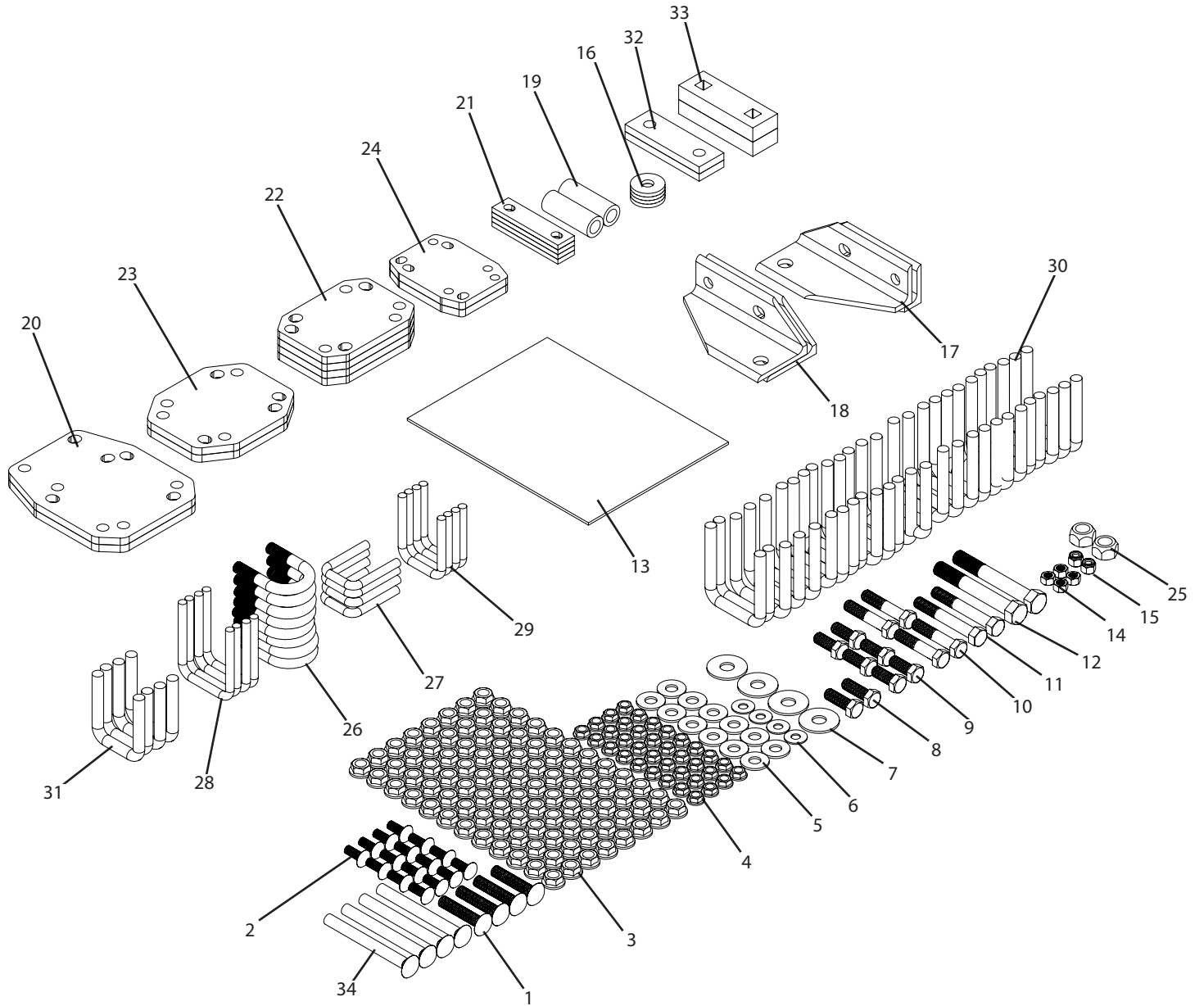
ML4600 Assembly Instructions

Pallet Contents

Ref#	Qty.	Part #	Description
1	2	RBL107A	Bed Shaper, Furrow Wing, Left
2	2	RBL107B	Bed Shaper, Furrow Wing, Right
3	2	RBL116	Bed Shaper, Adjustable Side Shield
4	1	RBL118A	Bed Shaper, Furrow Shoe, Side A
5	1	RBL118B	Bed Shaper, Furrow Shoe, Side B
6	2	RBL122	Plastic Layer, Side Tool Bar
7	1	RBL123	Bed Shaper/Plastic Layer, Hardware Box
8	2	RBL126	Plastic Layer, Rear Toolbar Extension
9	1	RBL128	Plastic Layer, Toolbar 84in
10	1	RBL129A	Plastic Layer, Press Wheel Assembly, Side A
11	1	RBL129B	Plastic Layer, Press Wheel Assembly, Side B
12	2	RBL130	Plastic Layer, Covering Disk Assembly
13	2	RBL131	Plastic Layer, Gauge Wheel Assembly
14	3	RBL141	Plastic Layer, Roller 60in
15	2	RBL151	Plastic Layer, Rear Gauge Wheel Toolbar
16	1	RBL160A	Plastic Layer, Roll Carriage, Side A
17	1	RBL160B	Plastic Layer, Roll Carriage, Side B
18	1	RBL161	Bed Shaper / Plastic Layer, Frame with Furrow Shanks and Shaping Disks
19	1	-----	Bed Height (Side A) Selected with Bed Shaper Height.
20	1	-----	Bed Height (Side B) Selected with Bed Shaper Height.

ML4600 Assembly Instructions

Hardware Kit Contents (Breakdown)



ML4600 Assembly Instructions

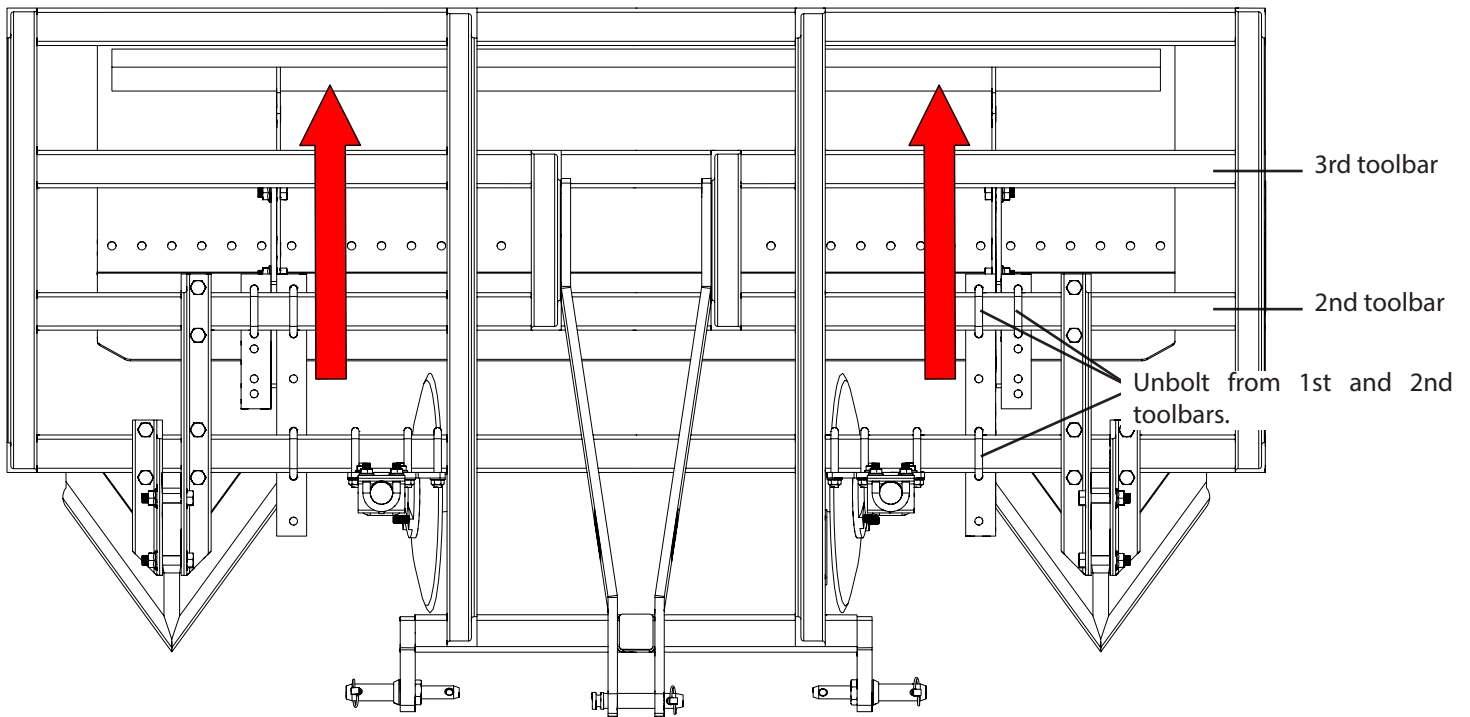
Hardware Kit Contents (Parts List)

Ref#	Qty.	Part #	Description
1	4	CB12*212G5	Bolt, Carriage 1/2-13 x 2-1/2" Gr 5
2	16	CB38*1G5	Bolt, Carriage 3/8-16 x 1" Gr 5
3	96	FN12	Nut, Flange 1/2-13
4	36	FN38	Nut, Flange 3/8-16
5	12	FW12	Washer, Flat 1/2" USS
6	4	FW38	Washer, Flat 3/8"
7	4	FW58	Washer, Flat 5/8"
8	2	H5C12*112	Bolt, Hex 1/2-13 x 1-1/2" Gr 5
9	6	H5C12*114	Bolt, Hex 1/2-13 x 1-1/4" Gr 5
10	4	H5C12*212	Bolt, Hex 1/2-13 x 2-1/2" Gr 5
11	2	H5C12*312	Bolt, Hex 1/2-13 x 3-1/2" Gr 5
12	2	H5C58*412	Bolt, Hex 5/8-11 x 4-1/2" Gr 5
13	1	ML4600OM	Manual, Owners, Bed Shaper / Plastic Mulch Layer
14	4	NC38	Nut, Hex 3/8-16
15	2	NNC12	Nut, Lock Nylon 1/2-13
16	4	RBL119	Bed Shaper, Washer
17	2	RBL120A	Plastic Layer, Hinge Bracket, Side A
18	2	RBL120B	Plastic Layer, Hinge Bracket, Side B
19	2	RBL121	Plastic Layer, Hinge Bushing
20	2	RBL127	Plastic Layer, Toolbar Clamp Plate
21	4	RBL132	Plastic Layer, Spacer
22	4	RBL143	Plastic Layer, Covering Disk and Press Wheel Shank Clamp
23	2	RBL150	Plastic Layer, Toolbar Clamp Plate
24	2	RBL152	Plastic Layer, Rear Gauge Wheel Clamp
25	2	SNC58	Nut, Lock Steel 5/8-11
26	8	UBR08X0108X0212	U-bolt, 1/2-13 x 1 1/2" ID width x 2 3/4" length, Zinc
27	4	UBSQ06X0108X0208	U-bolt, Square, 3/8-16 x 1 1/2" ID width x 2 1/2" ID length, zinc
28	4	UBSQ06X0208X0308	U-bolt, Square, 3/8-16 x 2 1/2" ID width x 3 1/2" ID length, Zinc
29	4	UBSQ06X02X03	U-bolt, Square, 3/8-16 x 2" ID width x 3" ID length, zinc
30	26	UBSQ08X0208X0308	U-bolt, Square, 1/2-13 x 2 1/2" ID width x 3 1/2" ID length, zinc
31	4	UBSQ08X02X03	U-bolt, Square, 1/2-13 x 2" ID width x 3" ID length, zinc
32	2	RBL124	Plastic Layer, Clamp Bar
33	2	RBL125	Plastic Layer, Spacer Bar
34	4	CB12*5G5	Bolt, Carriage 1/2-13 x 5" Gr 5

ML4600 Assembly Instructions

Assembly Step 1

- The shaper pan needs to be removed from the first and second toolbars, and moved back and reattached to the second and third toolbars.

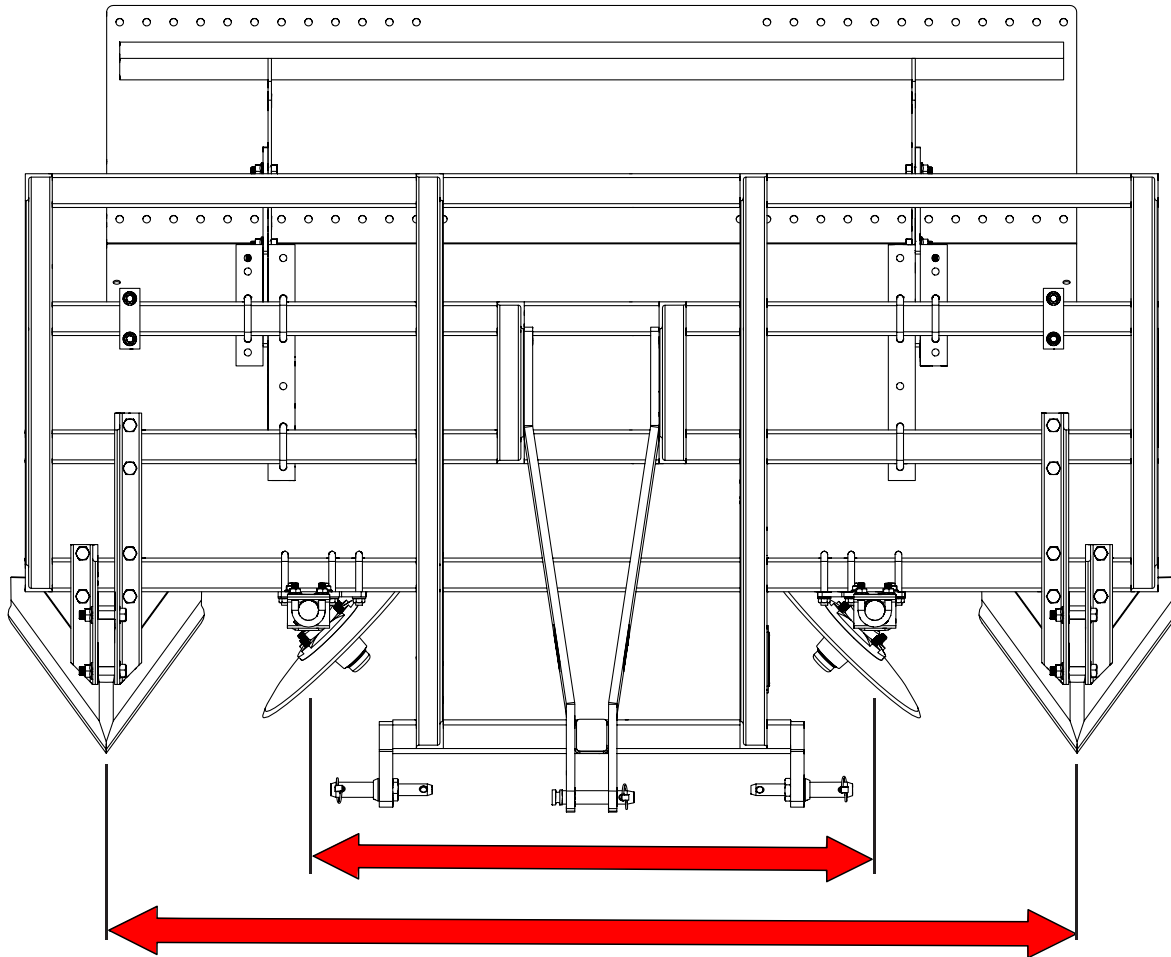


Ref#	Qty.	Part #	Description
1	1	RBL161	Bed Shaper / Plastic Layer, Frame with Furrow Shanks and Shaping Disks

ML4600 Assembly Instructions

Assembly Step 2

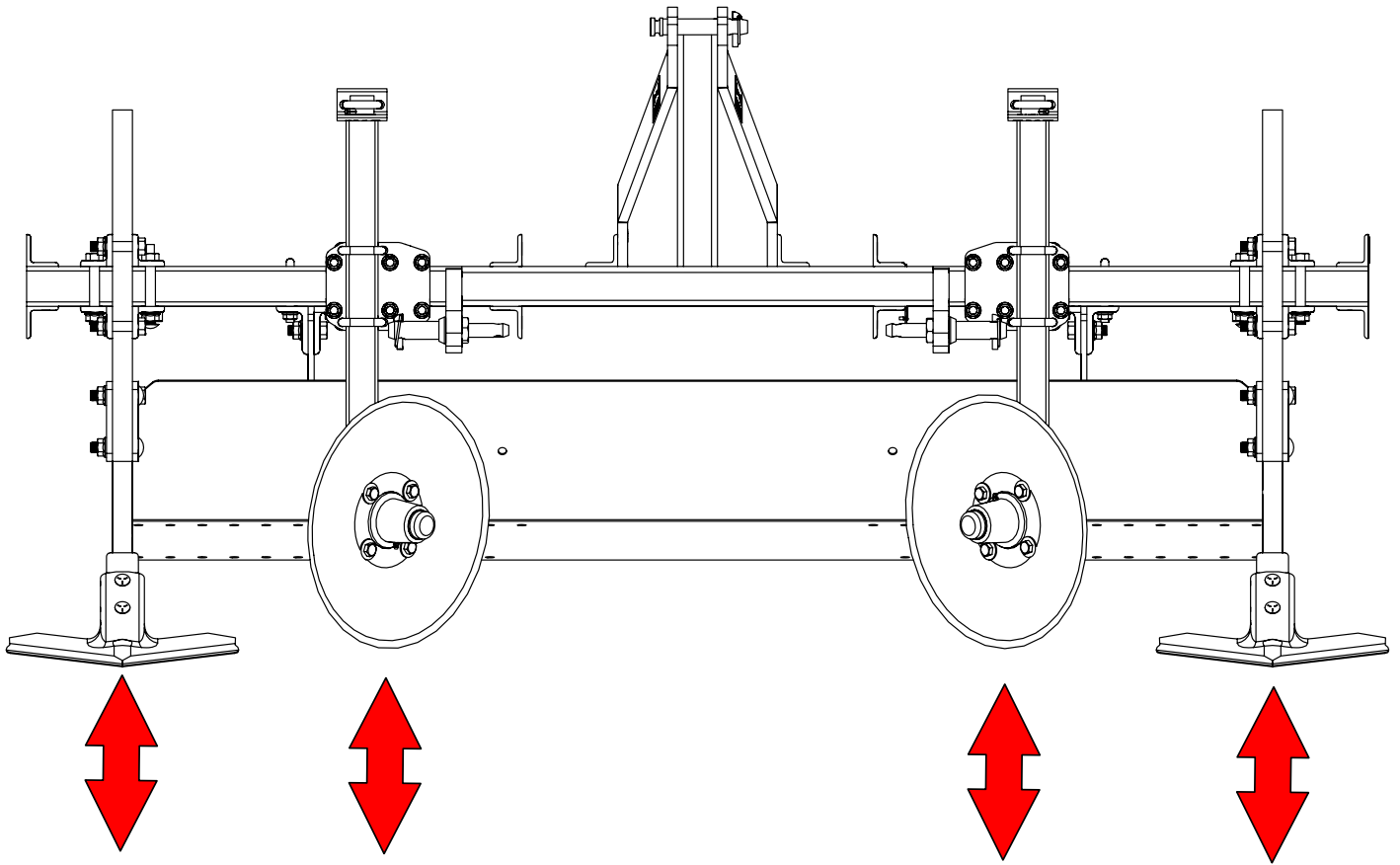
- Move the Furrow Shanks and Shaping Disks as required by row spacing and bed width. Refer to the owner's manual for details.



ML4600 Assembly Instructions

Assembly Step 3

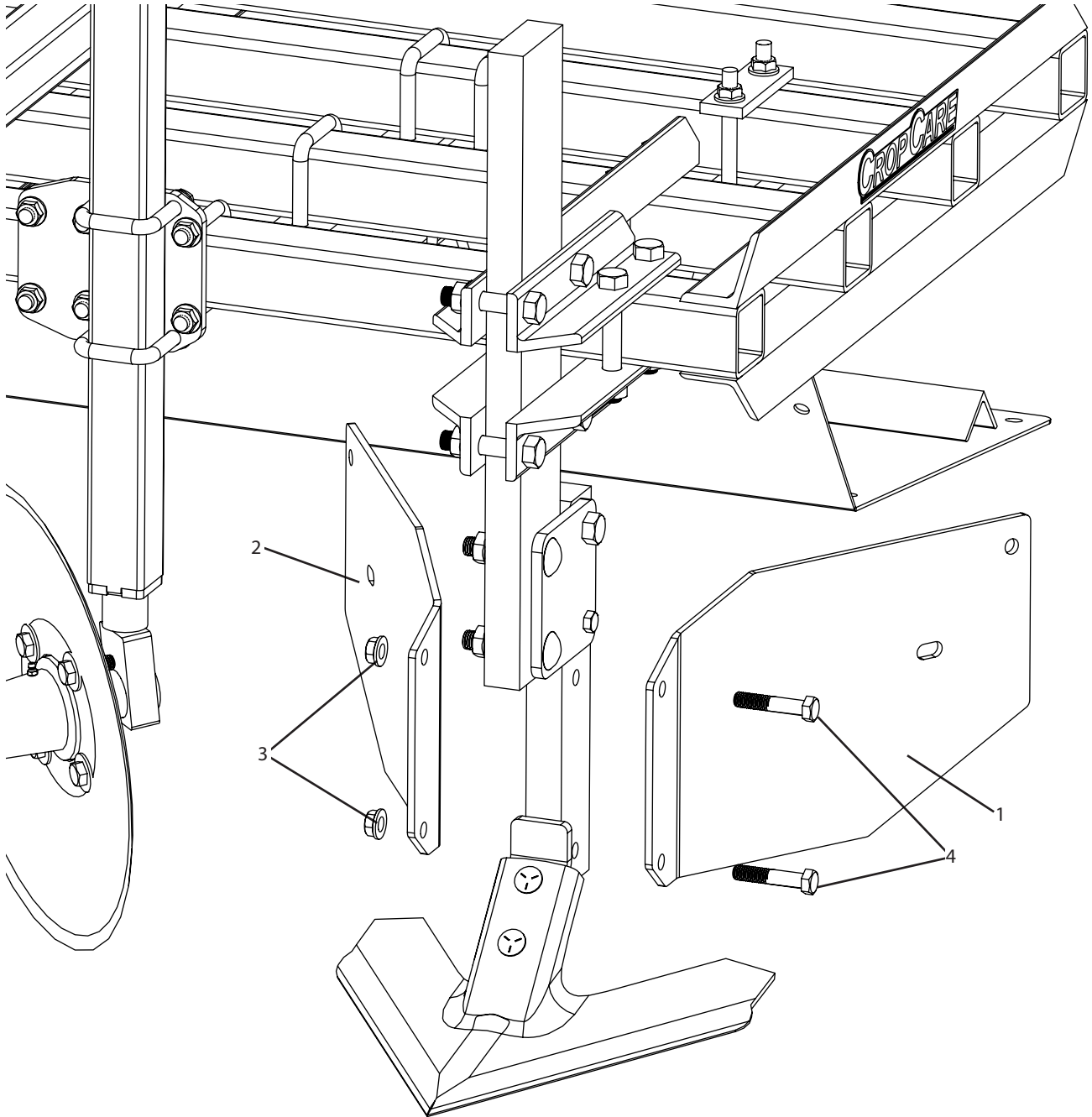
- Adjust Furrow Shank and Shaping Disk heights as required by bed height. Refer to owner's manual for details.



ML4600 Assembly Instructions

Assembly Step 4

- Install Furrow wings (Item 1 and 2) onto the Furrow Shanks.

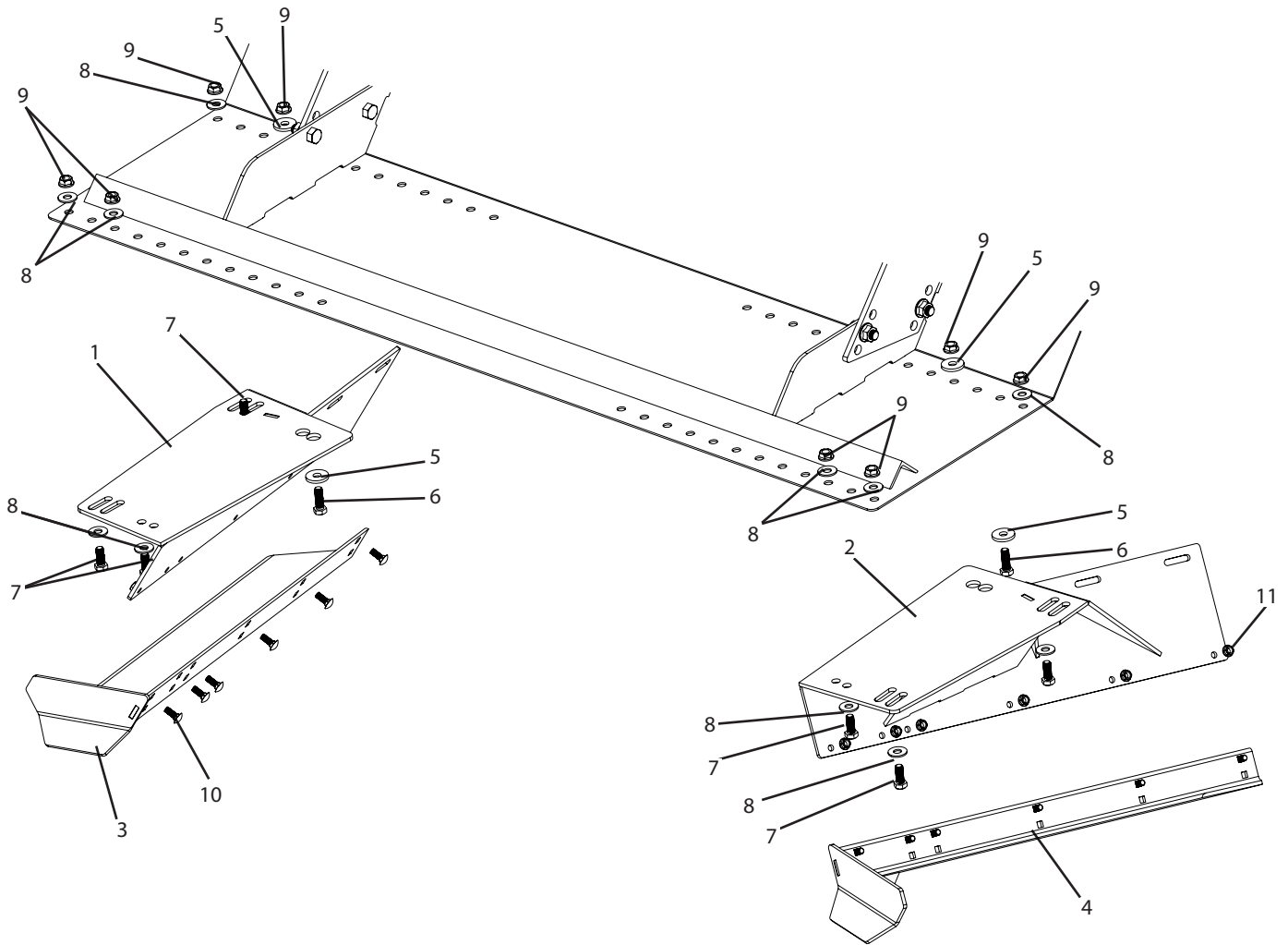


Ref#	Qty.	Part #	Description
1	2	RBL107A	Bed Shaper, Furrow Wing, Left
2	2	RBL107B	Bed Shaper, Furrow Wing, Right
3	4	FN12	Nut, Flange 1/2-13
4	4	H5C12*212	Bolt, Hex 1/2-13 x 2-1/2" Gr 5

ML4600 Assembly Instructions

Assembly Step 5

- Install bed height and furrow shoes onto the shaper pan. The bed height components can be adjusted as needed to fit the bed size needed. Refer to the owner's manual for details.

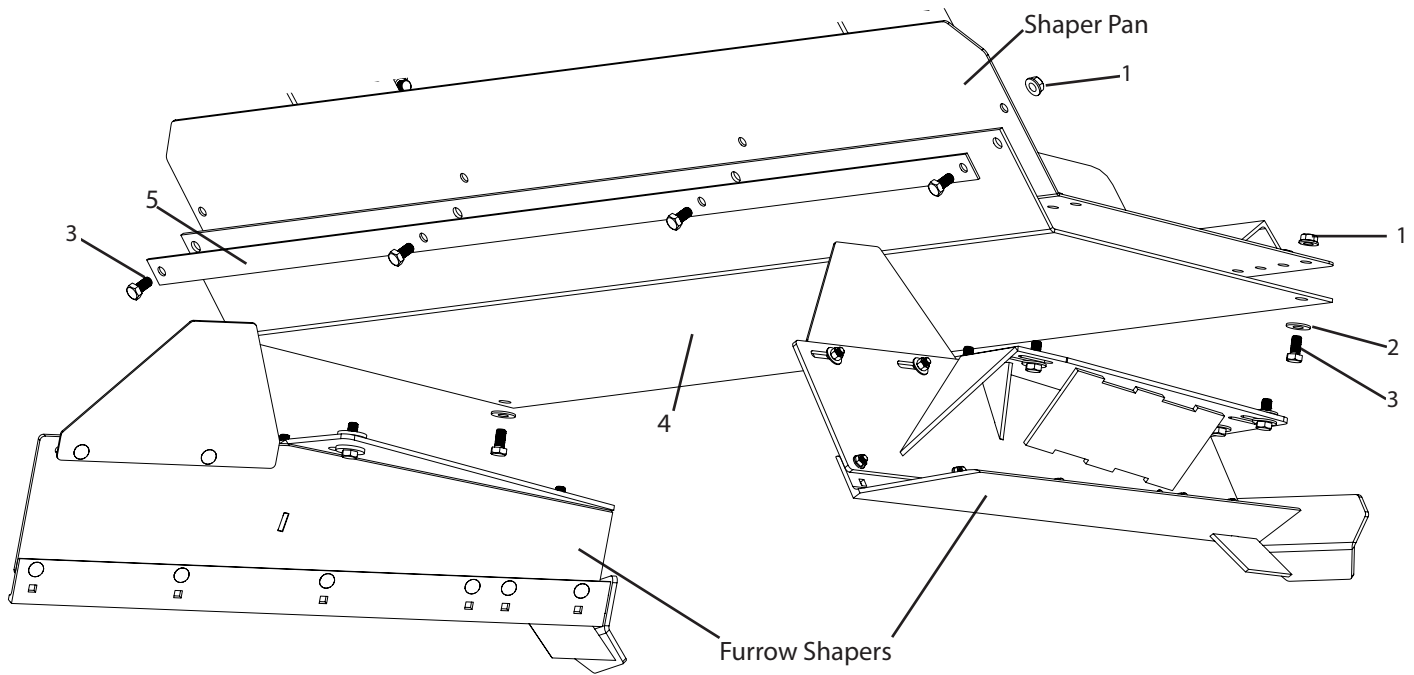


Ref#	Qty.	Part #	Description
1	1	-----	Bed Height (Side A) Selected with Bed Shaper Height.
2	1	-----	Bed Height (Side B) Selected with Bed Shaper Height.
3	1	RBL118A	Bed Shaper, Furrow Shoe, Side A
4	1	RBL118B	Bed Shaper, Furrow Shoe, Side B
5	4	RBL119	Bed Shaper, Washer
6	2	H5C12*112	Bolt, Hex 1/2-13 x 1-1/2" Gr 5
7	6	H5C12*114	Bolt, Hex 1/2-13 x 1-1/4" Gr 5
8	12	FW12	Washer, Flat 1/2" USS
9	16	FN12	Nut, Flange 1/2-13
10	12	CB38*1G5	Bolt, Carriage 3/8-16 x 1" Gr 5
11	13	FN38	Nut, Flange 3/8-16

ML4600 Assembly Instructions

Assembly Step 5 (Optional Poly Bed Liner)

- Installed poly liner between the Shaper Pan and the Furrow Shapers (see Figure below).
- Drill holes through the poly liner as needed to install Furrow Shapers.

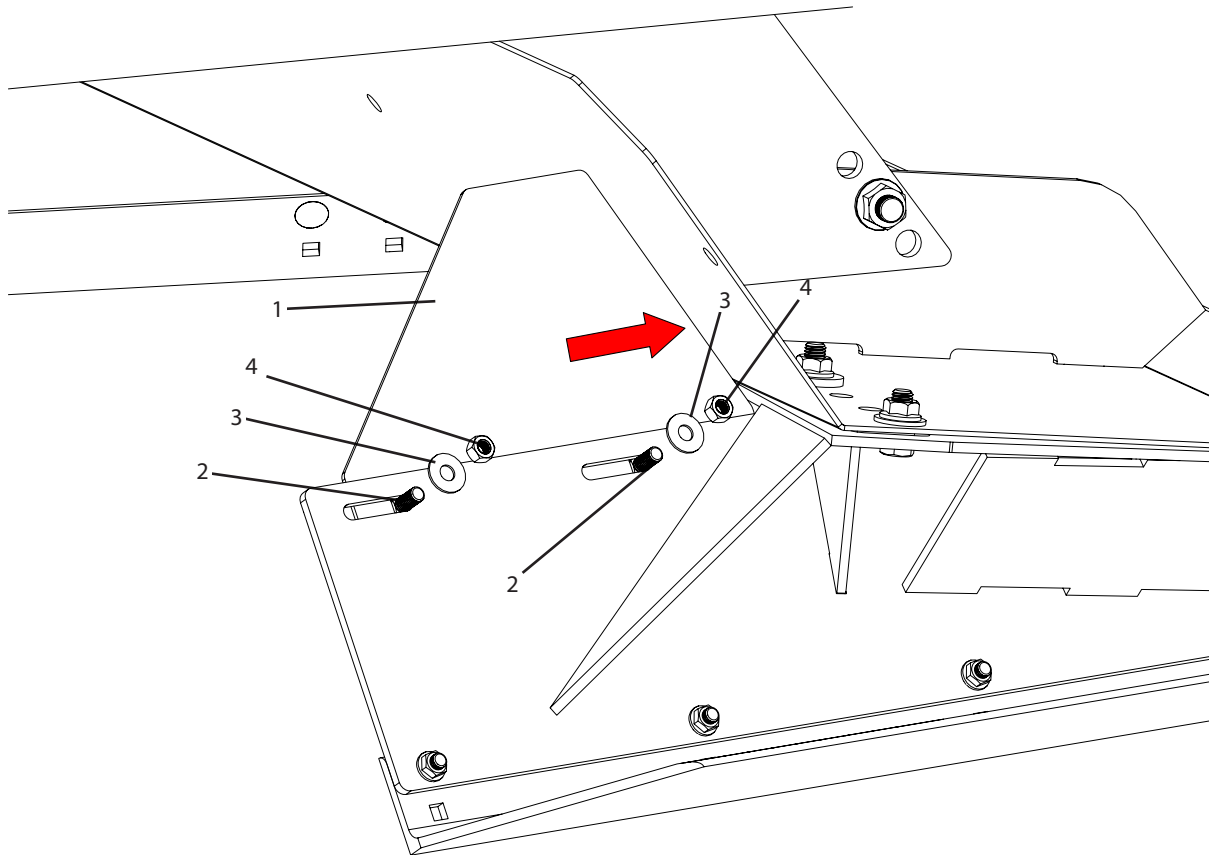


Ref#	Qty.	Part #	Description
1	6	FN12	Nut, Flange 1/2-13
2	2	FW12	Washer, Flat 1/2" USS
3	6	H5C12*1	Bolt, Hex 1/2-13 x 1" Gr 5
4	1	RBL156	Plastic Mulch Layer, Poly Lining
5	1	RBL157	Plastic Mulch Layer, Poly Lining Clamp

ML4600 Assembly Instructions

Assembly Step 6

- Install side shields onto the bed height components, slide the shields back until there is as small a gap as possible between the shield and the shaper pan.



Ref#	Qty.	Part #	Description
1	2	RBL116	Bed Shaper, Adjustable Side Shield
2	4	CB38*1G5	Bolt, Carriage 3/8-16 x 1" Gr 5
3	4	FW38	Washer, Flat 3/8"
4	4	NC38	Nut, Hex 3/8-16

ML4600 Assembly Instructions

Assembly Step 7

- Cut roller tubes to length to match nominal plastic mulch width. Refer to chart below for length of rollers based on mulch width.
- NOTE: The rollers come cut to 60". For longer lengths use 3" schedule 40 PVC pipe and cut to length.

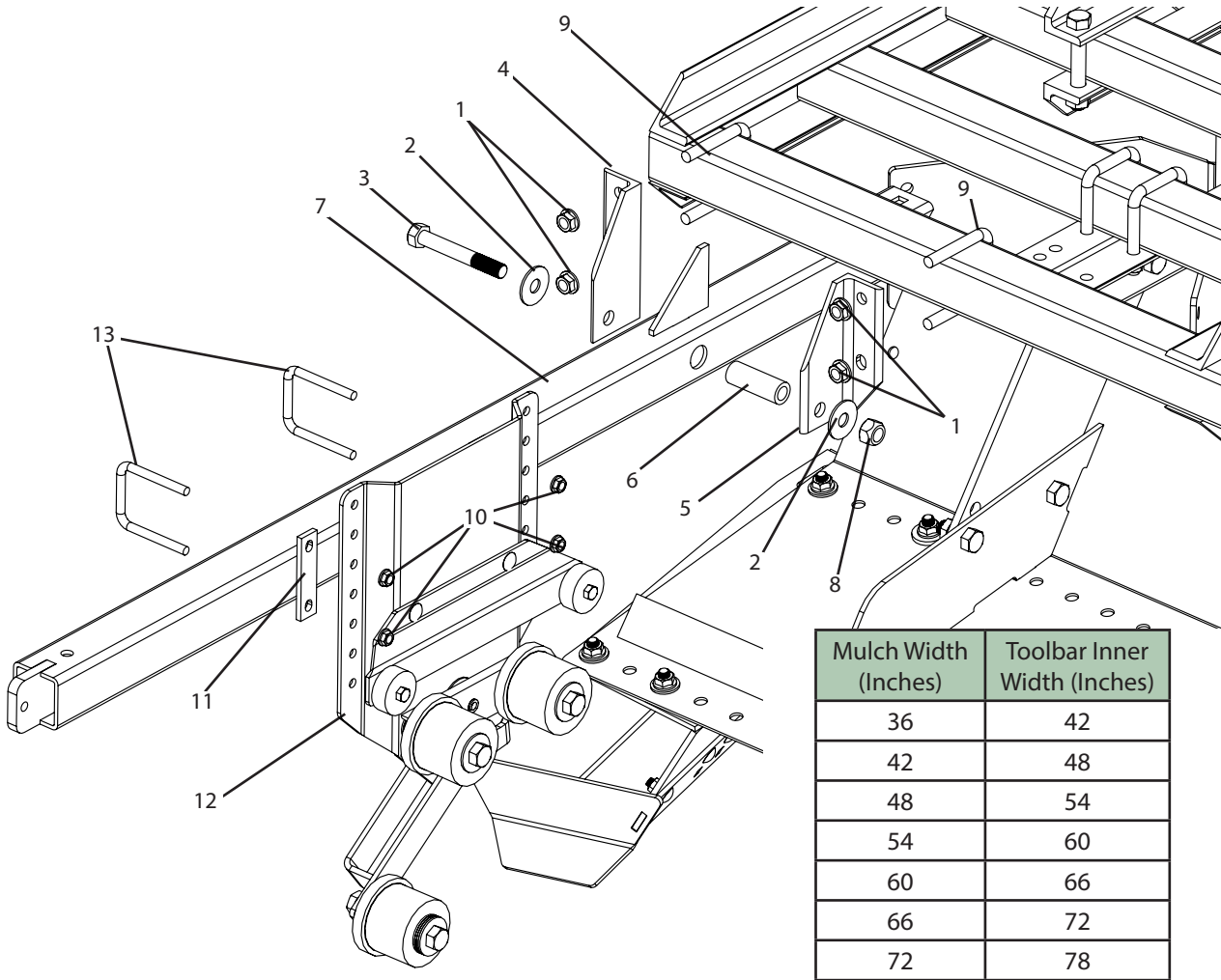
Mulch Width (Inches)	Roller Length (Inches)
36	36
42	42
48	48
54	54
60	60
66	66
72	72

Ref#	Qty.	Part #	Description
1	3	RBL141	Plastic Layer, Roller 60in

ML4600 Assembly Instructions

Assembly Step 8

- Install one side toolbar onto frame.
- NOTE: Space apart as needed for mulch width + 6 inches (refer to chart below). Set toolbar spacing to be centered with the bed shaper. Refer to owner's manual for more details on set up and adjustment.

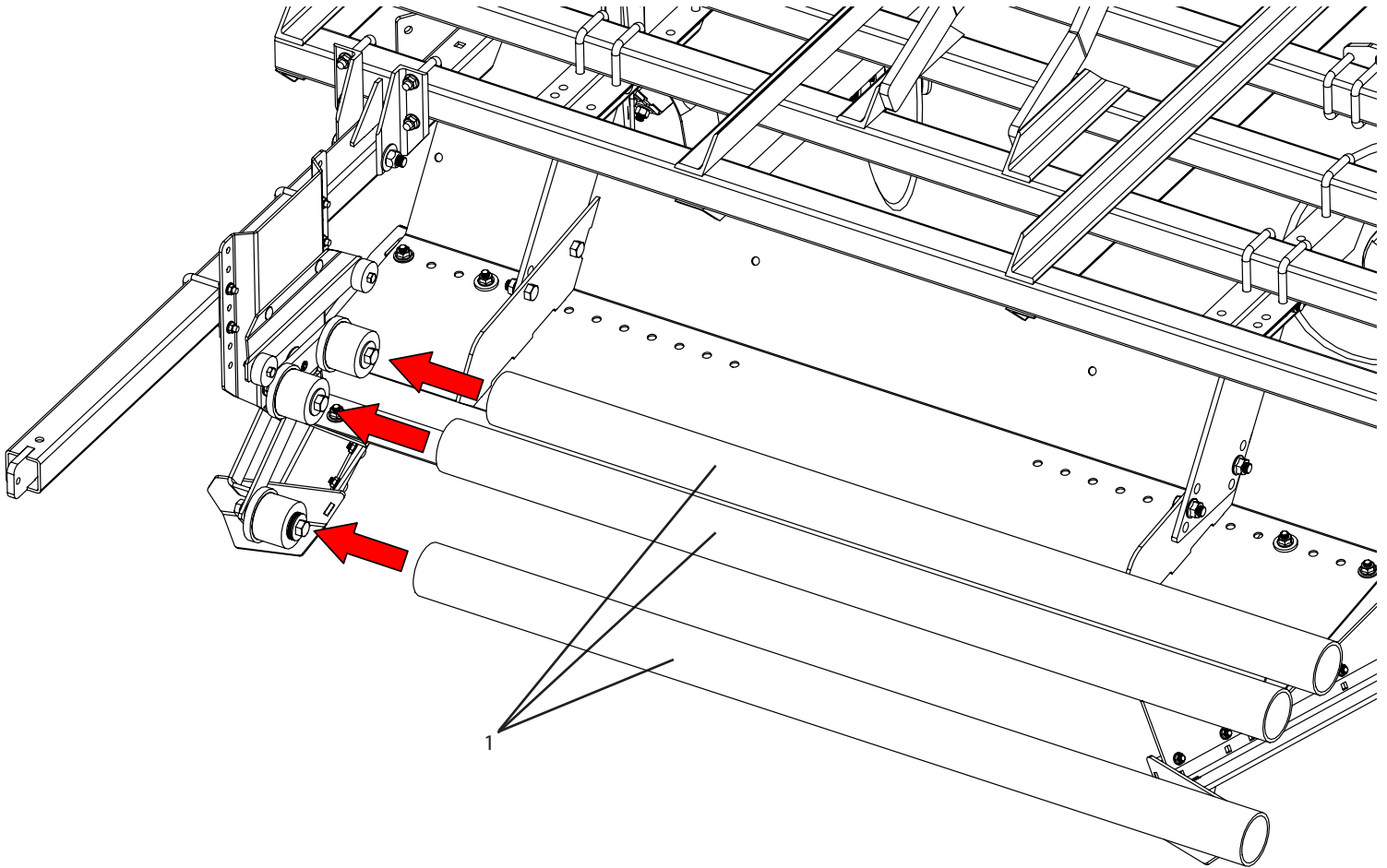


Ref#	Qty.	Part #	Description
1	4	FN12	Nut, Flange 1/2-13
2	2	FW58	Washer, Flat 5/8"
3	1	H5C58*412	Bolt, Hex 5/8-11 x 4-1/2" Gr 5
4	1	RBL120A	Plastic Layer, Hinge Bracket, Side A
5	1	RBL120B	Plastic Layer, Hinge Bracket, Side B
6	1	RBL121	Plastic Layer, Hinge Bushing
7	1	RBL122	Plastic Layer, Side Tool Bar
8	1	SNC58	Nut, Lock Steel 5/8-11
9	2	UBSQ08X0208X0308	U-bolt, Square, 1/2-13 x 2 1/2" ID width x 3 1/2" ID length, zinc
10	4	FN38	Nut, Flange 3/8-16
11	2	RBL132	Plastic Layer, Spacer
12	1	RBL160A	Plastic Layer, Roll Carriage, Side A
13	2	UBSQ06X0208X0308	U-bolt, Square, 3/8-16 x 2 1/2" ID width x 3 1/2" ID length, Zinc

ML4600 Assembly Instructions

Assembly Step 9

- Install roller tubes onto side toolbar.

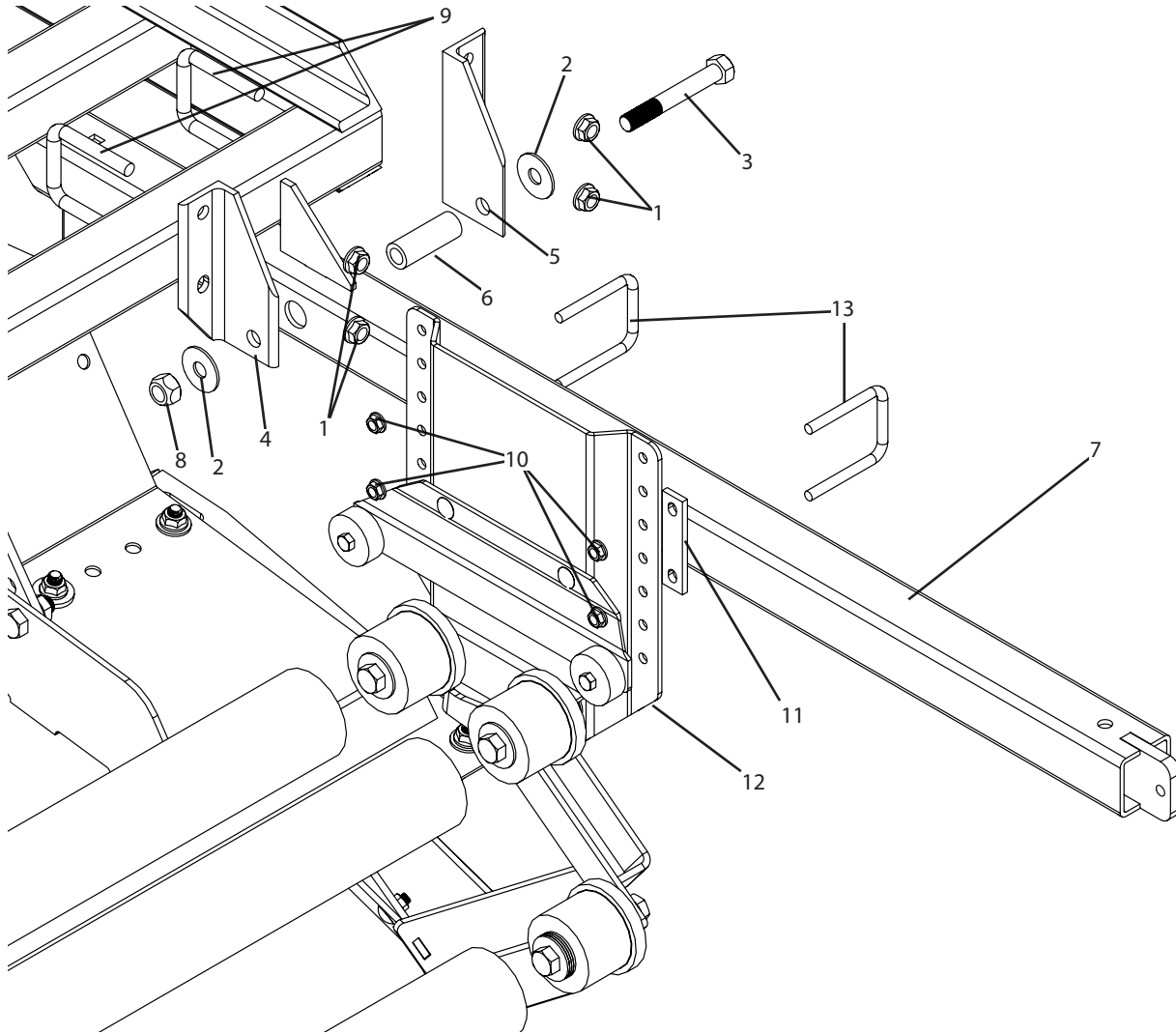


Ref#	Qty.	Part #	Description
1	3	RBL141	Plastic Layer, Roller 60in

ML4600 Assembly Instructions

Assembly Step 10

- Install opposite side toolbar onto frame. Make sure both sides are centered with the bed shapers. Refer to owner's manual for details on set up and adjustment.

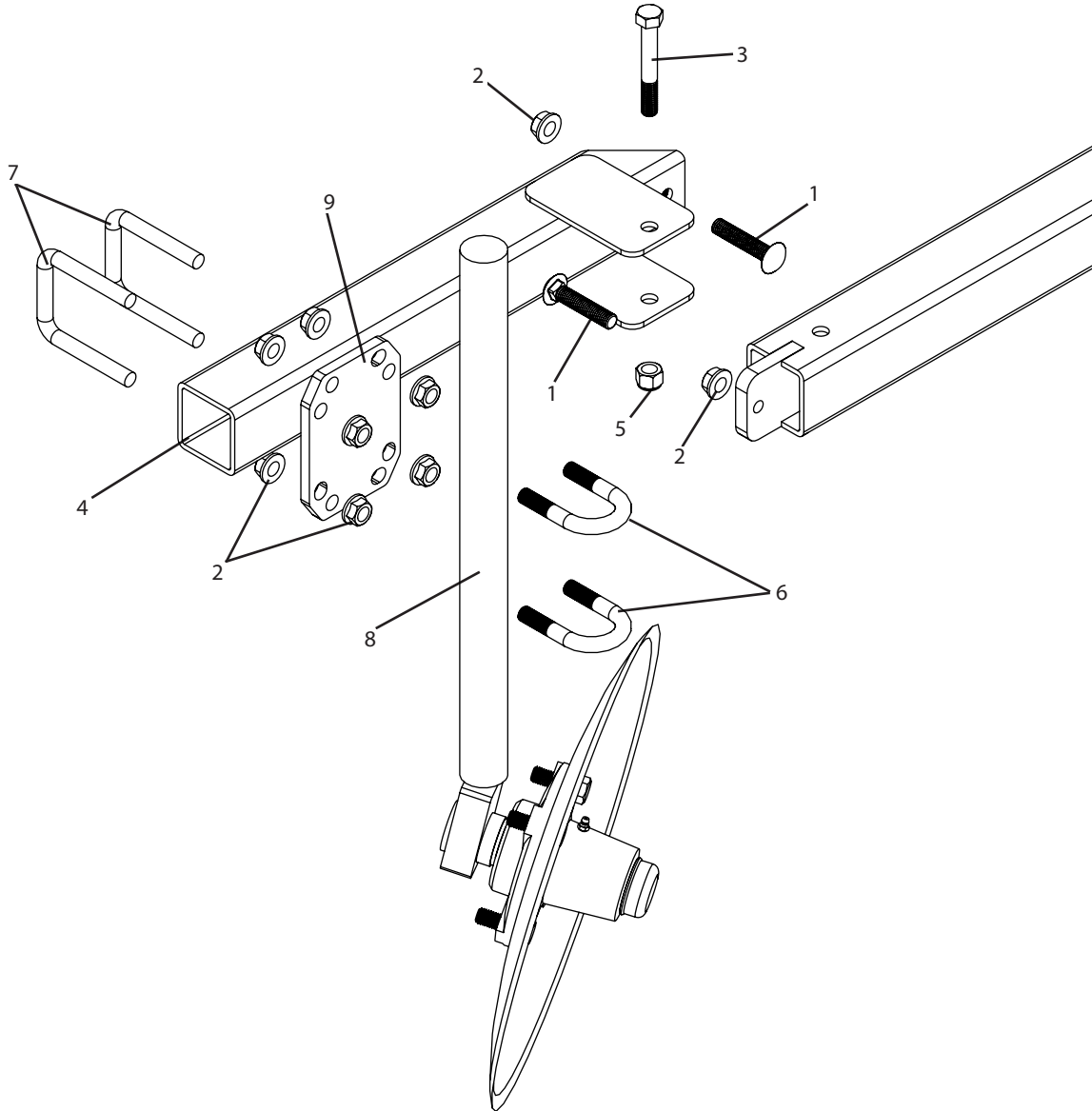


Ref#	Qty.	Part #	Description
1	4	FN12	Nut, Flange 1/2-13
2	2	FW58	Washer, Flat 5/8"
3	1	H5C58*412	Bolt, Hex 5/8-11 x 4-1/2" Gr 5
4	1	RBL120A	Plastic Layer, Hinge Bracket, Side A
5	1	RBL120B	Plastic Layer, Hinge Bracket, Side B
6	1	RBL121	Plastic Layer, Hinge Bushing
7	1	RBL122	Plastic Layer, Side Tool Bar
8	1	SNC58	Nut, Lock Steel 5/8-11
9	2	UBSQ08X0208X0308	U-bolt, Square, 1/2-13 x 2 1/2" ID width x 3 1/2" ID length, zinc
10	4	FN38	Nut, Flange 3/8-16
11	2	RBL132	Plastic Layer, Spacer
12	1	RBL160B	Plastic Layer, Roll Carriage, Side B
13	2	UBSQ06X0208X0308	U-bolt, Square, 3/8-16 x 2 1/2" ID width x 3 1/2" ID length, Zinc

ML4600 Assembly Instructions

Assembly Step 11

- Install Covering Disk toolbar and Covering Disk Assembly.
- NOTE: The Covering Disk Shank (Item 8) can be bolted onto either side of the toolbar as needed.
- Refer to owner's manual for adjustments and setup of the Covering Disk.

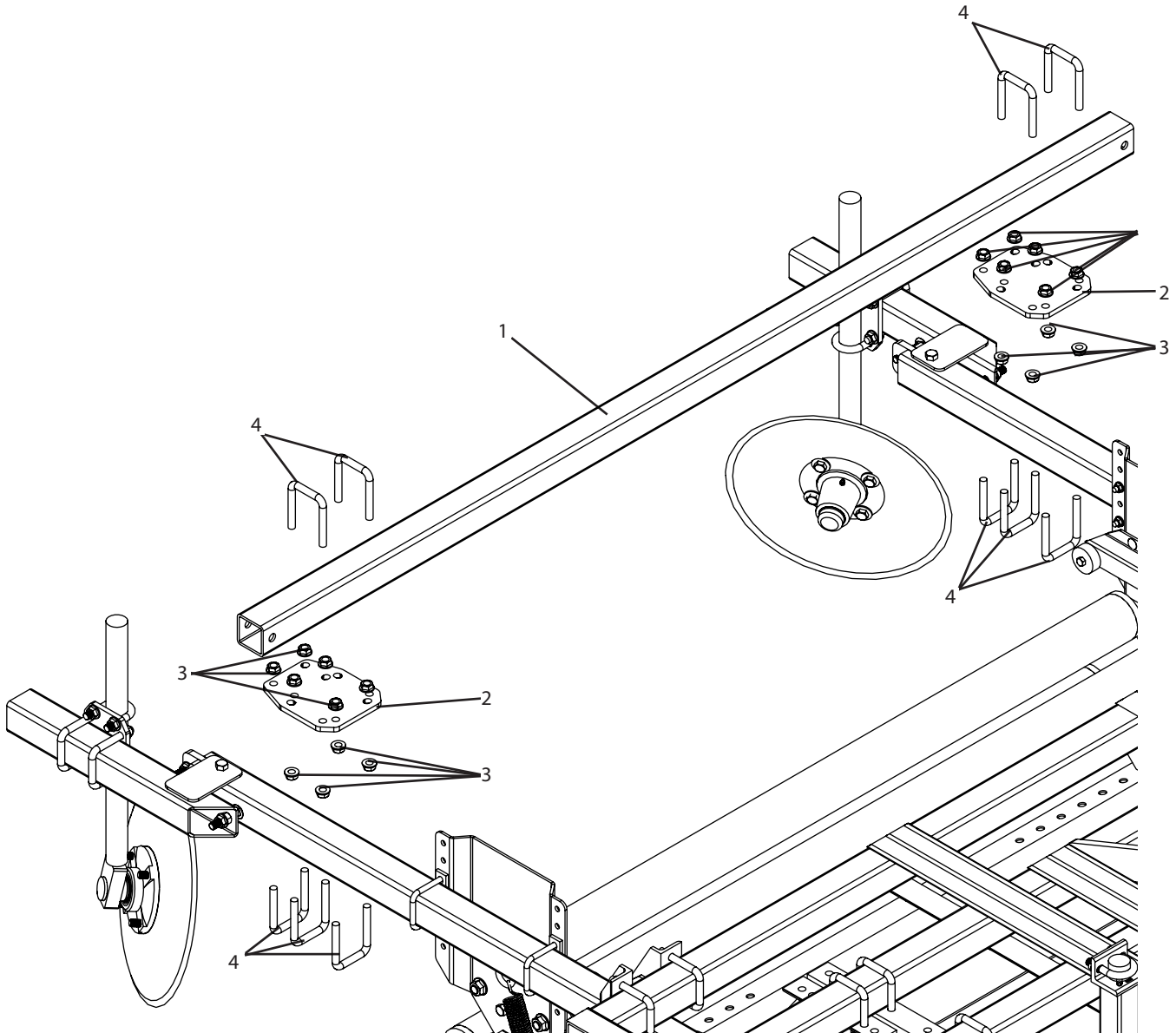


Ref#	Qty.	Part #	Description
1	4	CB12*212G5	Bolt, Carriage 1/2-13 x 2-1/2" Gr 5
2	12	FN12	Nut, Flange 1/2-13
3	2	H5C12*4	Bolt, Hex 1/2-13 x 4" Gr 5
4	2	RBL126	Plastic Layer, Rear Toolbar Extension
5	2	NNC12	Nut, Lock Nylon 1/2-13
6	4	UBR08X0108X0212	U-bolt, 1/2-13 x 1 1/2" ID width x 2 3/4" length, Zinc
7	4	UBSQ08X0208X0308	U-bolt, Square, 1/2-13 x 2 1/2" ID width x 3 1/2" ID length, zinc
8	2	RBL130	Plastic Layer, Covering Disk Assembly
9	2	RBL143	Plastic Layer, Covering Disk and Press Wheel Shank Clamp

ML4600 Assembly Instructions

Assembly Step 12

- Install rear toolbar onto frame.

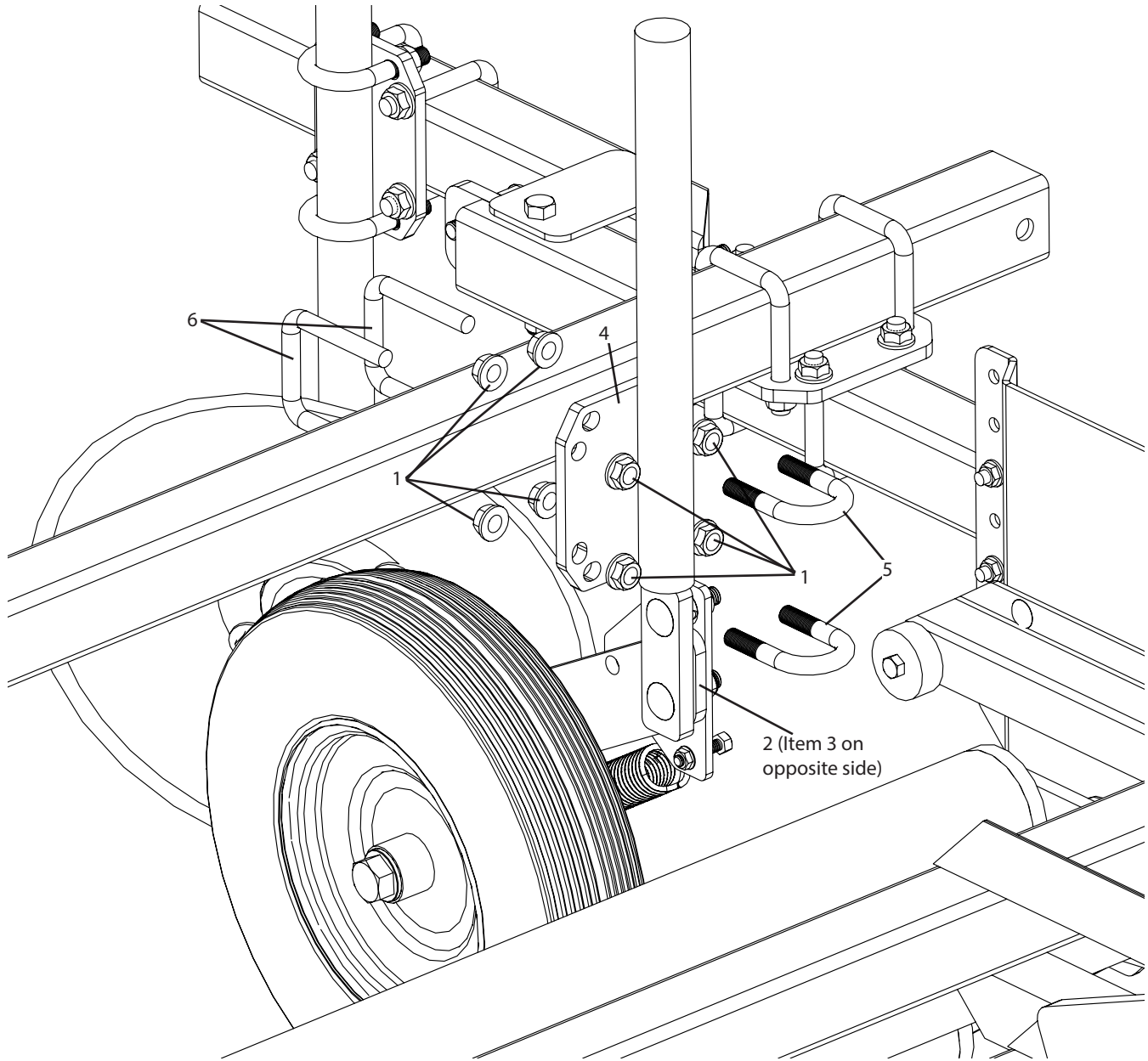


Ref#	Qty.	Part #	Description
1	1	RBL128	Plastic Layer, Toolbar 84in
2	2	RBL127	Plastic Layer, Toolbar Clamp Plate
3	20	FN12	Nut, Flange 1/2-13
4	10	UBSQ08X0208X0308	U-bolt, Square, 1/2-13 x 2 1/2" ID width x 3 1/2" ID length, zinc

ML4600 Assembly Instructions

Assembly Step 13

- Install Press Wheels onto toolbar. Refer to owner's manual for adjustments of the Press Wheels.

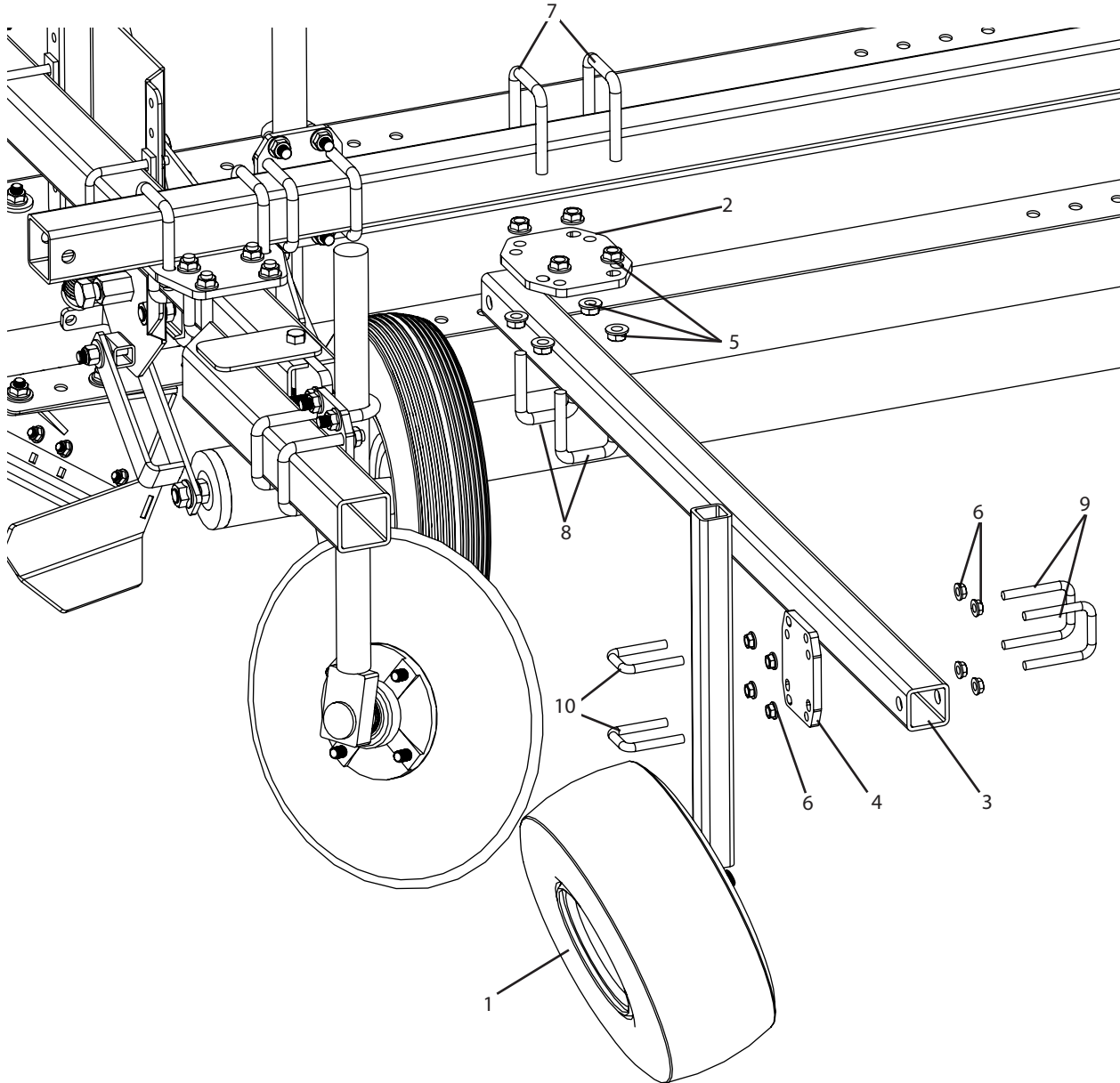


Ref#	Qty.	Part #	Description
1	16	FN12	Nut, Flange 1/2-13
2	1	RBL129A	Plastic Layer, Press Wheel Assembly, Side A
3	1	RBL129B	Plastic Layer, Press Wheel Assembly, Side B
4	2	RBL143	Plastic Layer, Covering Disk and Press Wheel Shank Clamp
5	4	UBR08X0108X0212	U-bolt, 1/2-13 x 1 1/2" ID width x 2 3/4" length, Zinc
6	4	UBSQ08X0208X0308	U-bolt, Square, 1/2-13 x 2 1/2" ID width x 3 1/2" ID length, zinc

ML4600 Assembly Instructions

Assembly Step 14

- Install gauge wheels onto toolbar. Refer to owner's manual for adjustments of the Gauge Wheels.

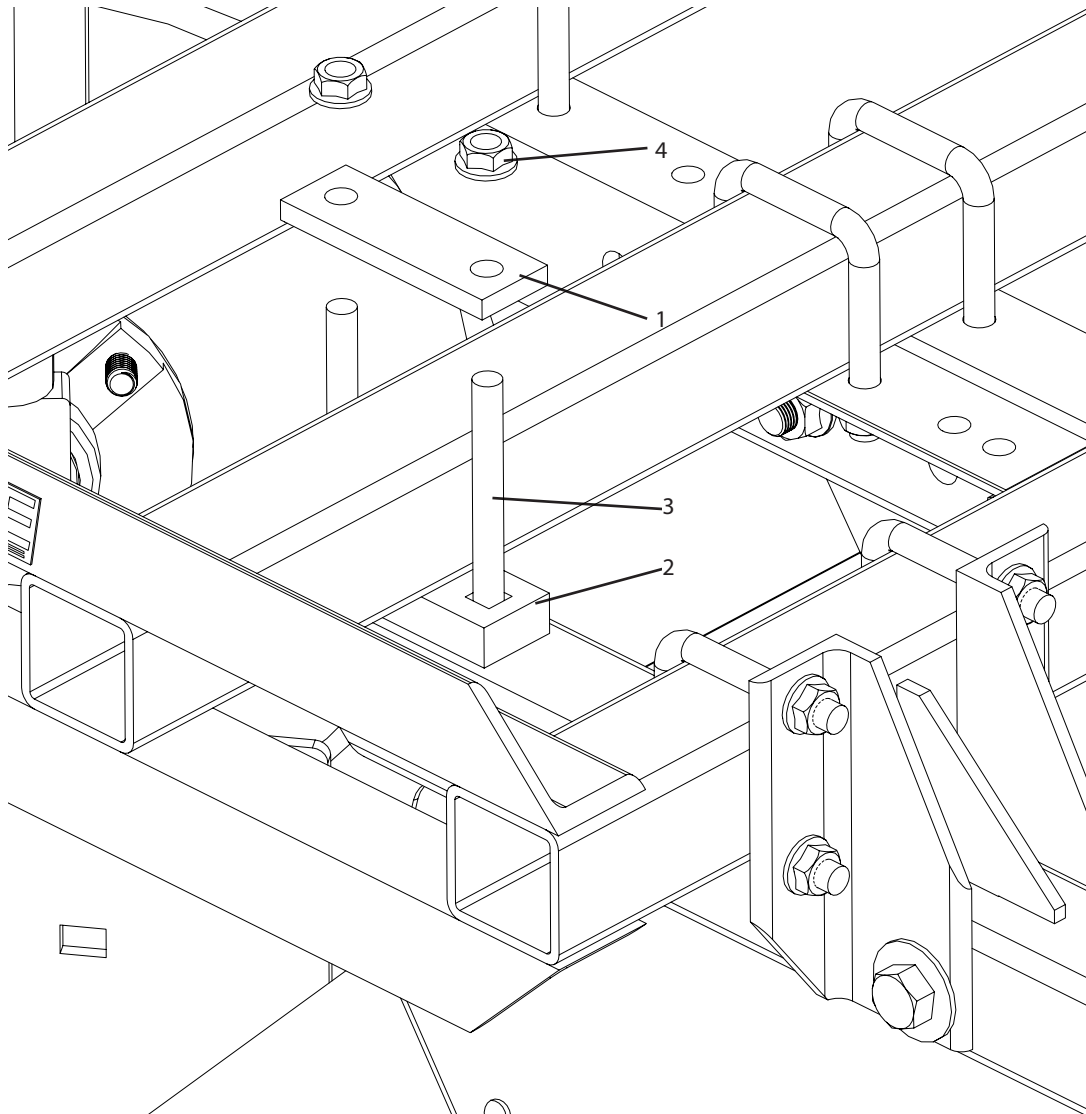


Ref#	Qty.	Part #	Description
1	2	RBL131	Plastic Layer, Gauge Wheel Assembly
2	2	RBL150	Plastic Layer, Toolbar Clamp Plate
3	2	RBL151	Plastic Layer, Rear Gauge Wheel Toolbar
4	2	RBL152	Plastic Layer, Rear Gauge Wheel Clamp
5	8	FN12	Nut, Flange 1/2-13
6	8	FN38	Nut, Flange 3/8-16
7	4	UBSQ08X0208X0308	U-bolt, Square, 1/2-13 x 2 1/2" ID width x 3 1/2" ID length, zinc
8	4	UBSQ08X02X03	U-bolt, Square, 1/2-13 x 2" ID width x 3" ID length, zinc
9	4	UBSQ06X02X03	U-bolt, Square, 3/8-16 x 2" ID width x 3" ID length, zinc
10	4	UBSQ06X0108X0208	U-bolt, Square, 3/8-16 x 1 1/2" ID width x 2 1/2" ID length, zinc

ML4600 Assembly Instructions

Assembly Step 15

- Optional. Install locking clamps to make the rear portion (plastic layer) of the machine rigid. NOTE: Remove rear gauge wheels if operating the machine with the rear frame rigid.



Ref#	Qty.	Part #	Description
1	2	RBL124	Plastic Layer, Clamp Bar
2	2	RBL125	Plastic Layer, Spacer Bar
3	4	CB12*5G5	Bolt, Carriage 1/2-13 x 5" Gr 5
4	4	FN12	Nut, Flange 1/2-13

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