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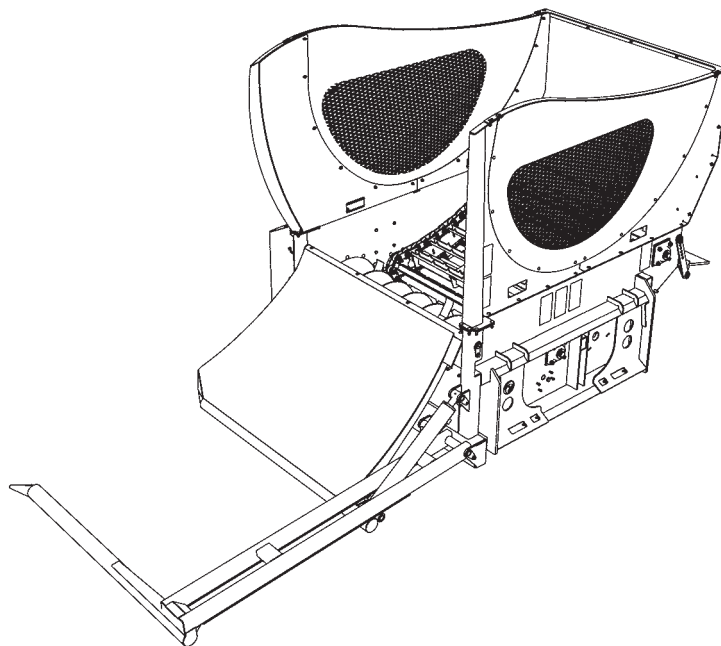
Parts Manual

Keep this manual with the machine at all times.



Bale Processor Boss R

4520



Do not attempt to operate this machine without thoroughly reviewing this manual for safe and proper operation.

Parts Manual

Thank you for choosing the Tubeline Boss R 4520 Bale Processor. We know that it will give you many years of productive service. This manual is to be used for identifying required replacement parts.

NOTE: Parts illustrations may vary slightly from actual machine.

Parts Manual Usage

This parts manual is used to order replacement parts by means of part breakdowns and their corresponding part lists. Each page contains a different range of integrated parts. Each illustration visually represents machine components. The part lists contain information needed to order replacement parts. Part lists include the following columns:

ITEM - Number matching parts breakdown balloons.

QTY - Quantity of components included in this breakdown, not entire machine.

PART NUMBER - The number to be used when placing an order.

DESCRIPTION - Term used to confirm its matching part number.

NOTE - Column may be added to part lists when a serial break or additional information is required.

Remember to always have your machine model and serial number on hand when ordering parts.

Part Orders

Part orders are taken by your local Tubeline dealer and fulfilled through a regional distributor. For quick service please record your dealer name and contact information in the *Serial Number* section.

Manuals

Parts manuals are printed and shipped with machines as they leave the manufacturer. Your machine may include parts or features not yet included in the initially shipped manual. The latest manual version can be found at www.tubeline.ca/support. Tubeline reserves the right to update and change manuals as seen fit. Dealers are informed of any pressing changes/ modifications. They can help you with any questions regarding replacement parts.

Serial Plate Location

Model No: _____ Boss R 4520

Serial No: _____

Date Purchased: _____

Dealer Name: _____

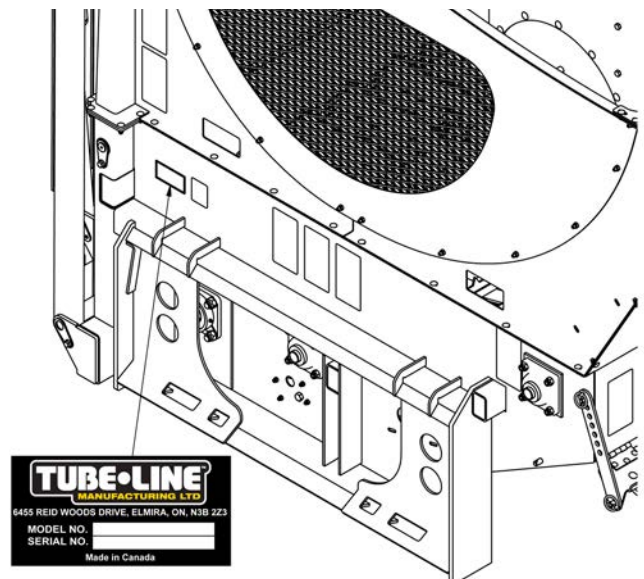
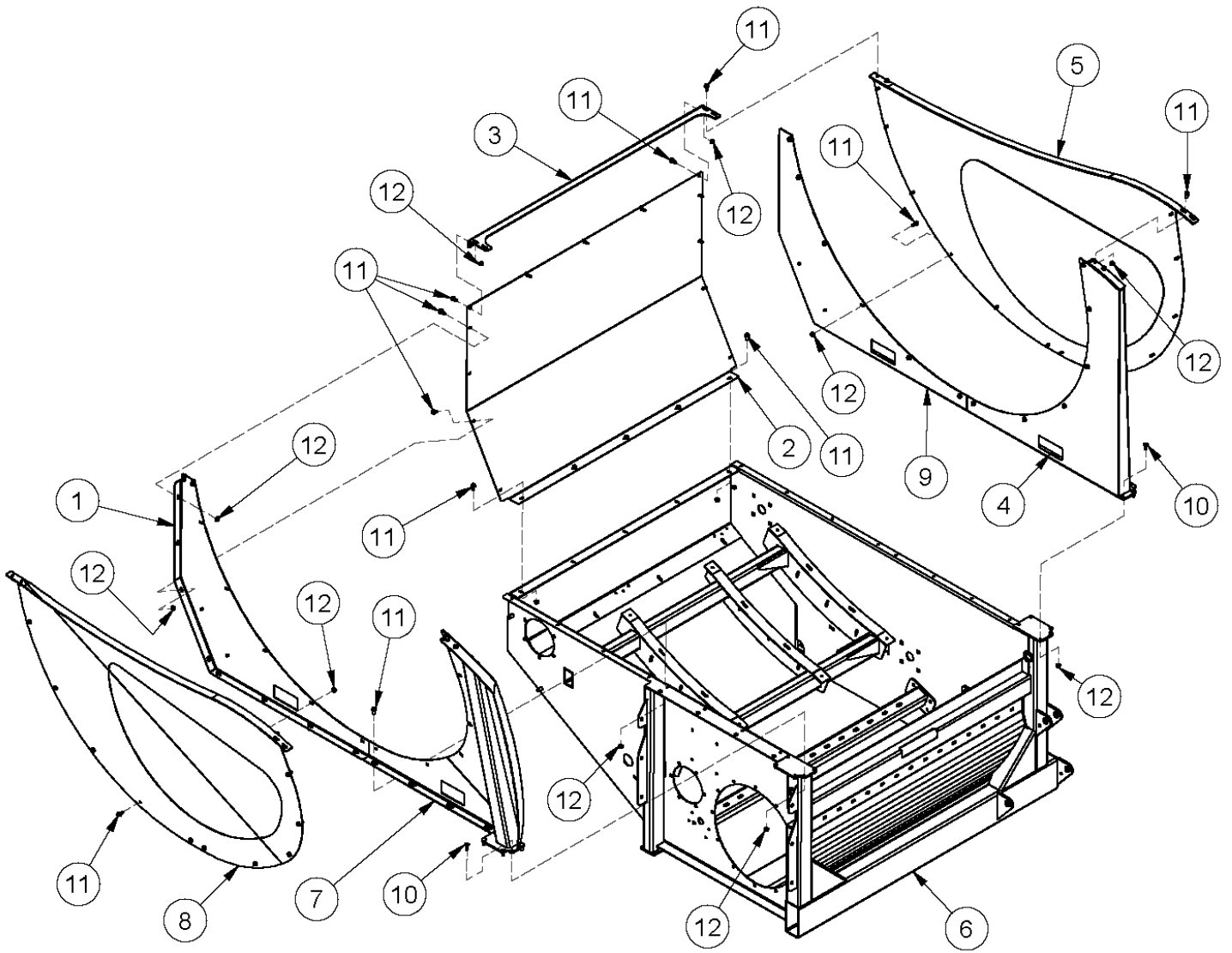


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Section 1 - Part Breakdowns & Lists

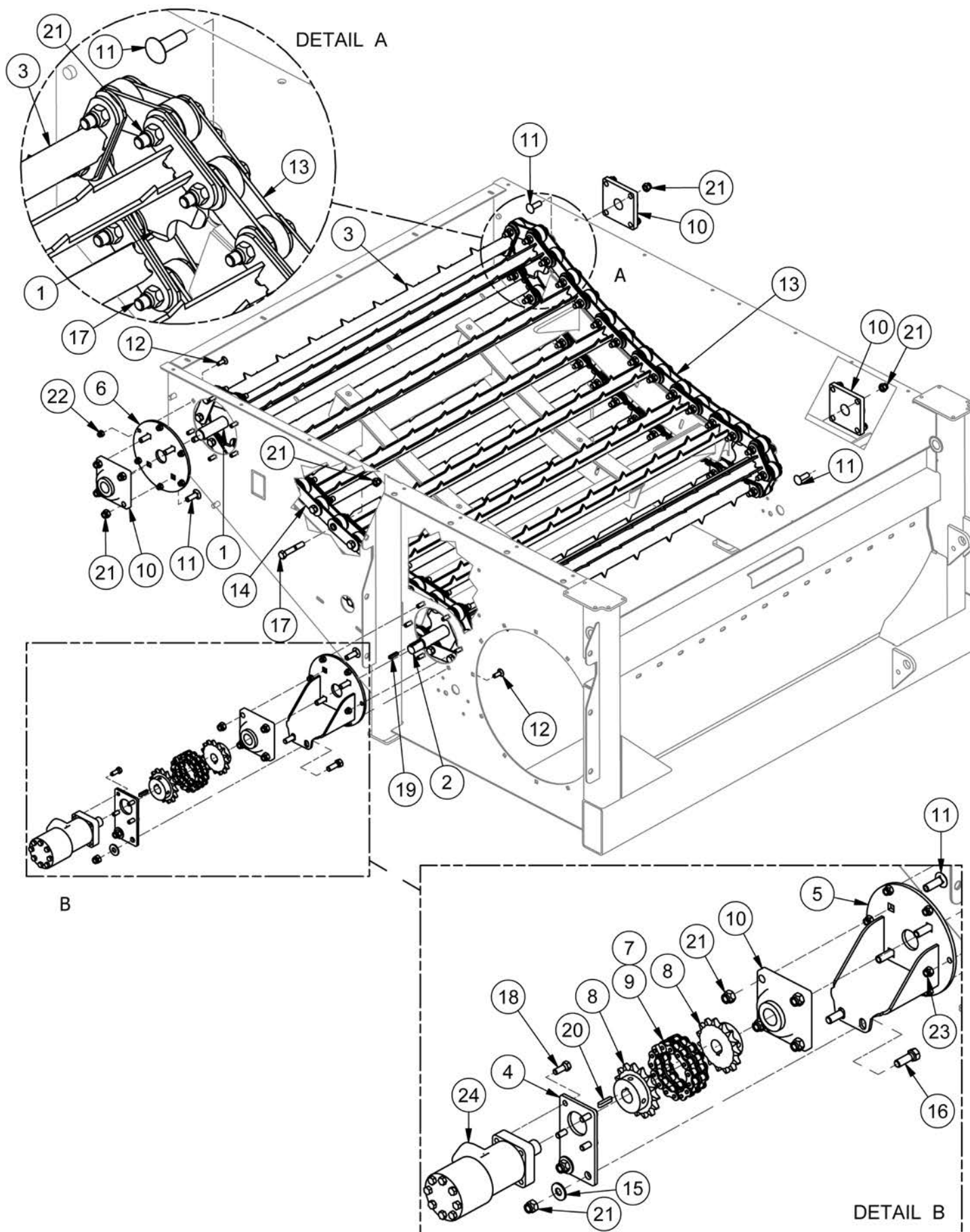
Frame



Frame

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	37438	Front Side Panel
2	1	37461	Right Panel
3	1	37463	Right Top Cross Member
4	1	37491	Rear Corner Post
5	1	37494	Rear Side Shield
6	1	37499	Main Frame
7	1	40239	Front Angled Corner Post
8	1	41524	Front Side Shield
9	1	41586	Rear Side Panel
10	10	CB 5/16-18X1.0 Z5	Carriage Bolt - 5/16-18 x 1" Zinc Plated Grade 5
11	59	HBC516X34	Hex Bolt Cerrated
12	69	HNC516	Hex Nut Cerrated

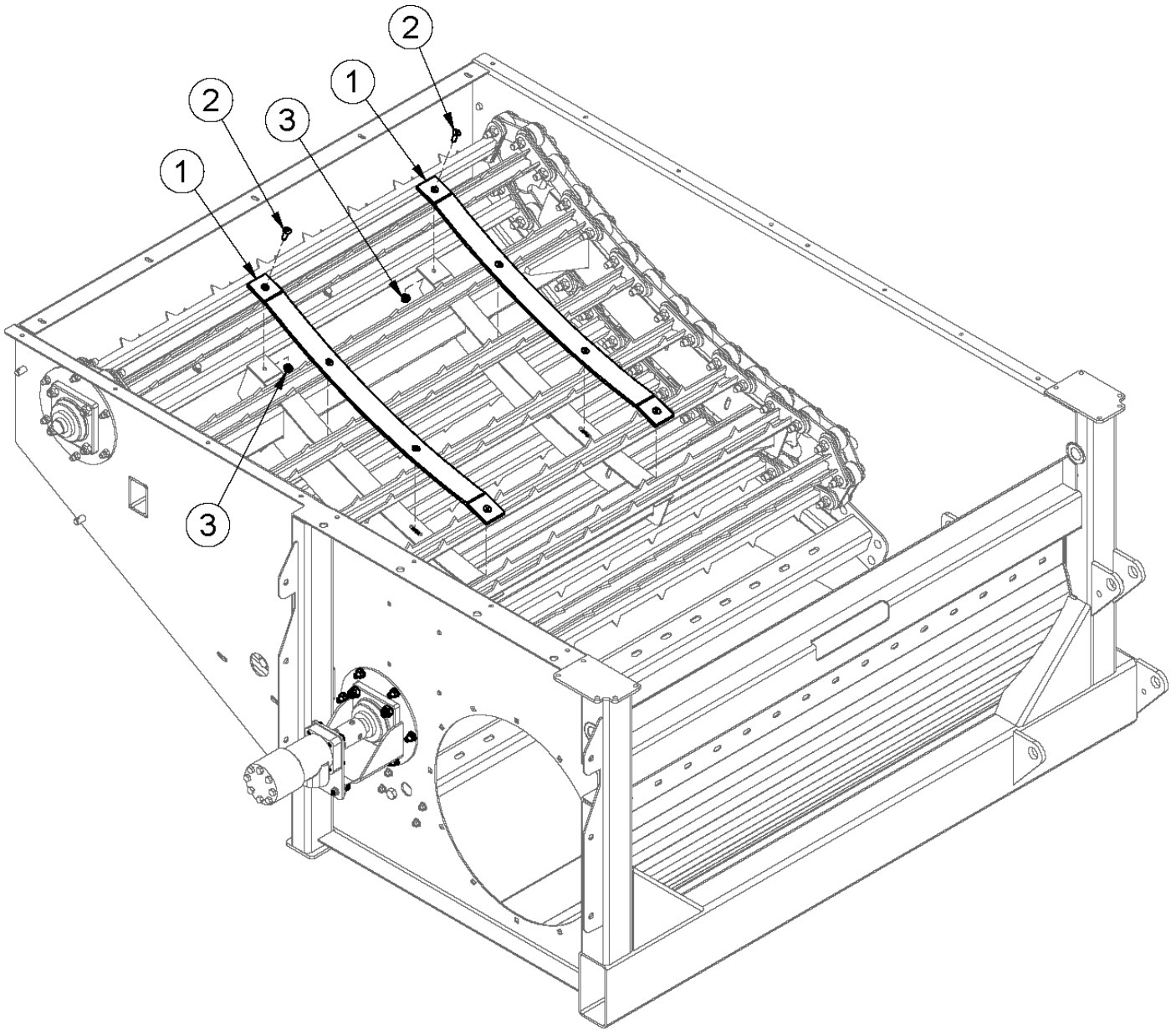
Bed Chain



Bed Chain

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	1	36101	Bed Idler Shaft	
2	1	36102	Bed Drive Shaft	
3	15	36103	Slat Boss R	
4	1	37486	Moter MT.	
5	1	37488	Apron Motor Mount	
6	1	39610	Bearing Mount	
7	1	50213	Apron Chain Coupler	Inc Items 8,9
8	2	SPR60B15-1	Sprocket 60B15 1.0 Bore Idler 1/4 Keyway- 2 Set Screws	
9	1	SPR6015CC	Coupling Chain For SPR6015	
10	4	BEA UCF207-20	Flange Block, UCF207-20 National 4-Bolt, 1.25 ID	
11	16	CB1/2-13X1.5CZ5	Carriage Bolt - 1/2-13 x 1 1/2" Grade 5 Zinc	
12	12	CB3/8-16X1CZ5	Carriage Bolt - 3/8-16 x 1" Grade 5 Zinc	
13	9ft/side	CHAIN ZC60	Chain ZC60-76.2-ZP	
14	2	CHAIN ZC60-CON	Chain ZC60-76.2-ZP Connector	
15	2	FW 1/2	Flatwasher - 1/2" Zinc Plated USS	
16	2	HB1/2-13X1.5Z5	Hex Bolt 1/2-13x1 1/2 Gr 5 Zinc Plated Hex Cap Screw	
17	60	HB1/2-13X3Z5	Hex Bolt 1/2-13x3 Grade 5 Zinc Plated Hex Cap Screw	
18	4	HB3/8-16X1Z5	Hex Bolt 3/8-16x1 Grade 5 Zinc Plated Hex Cap Screw	
19	1	KS41536	Keystock .25 x 1.25	
20	1	KS41589	1/4 Keystock	
21	78	LN1/2-13NCZ5	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut	
22	6	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut	
23	6	LN3/8-24NFZ5	Center Locknuts (3/8-24) 2-Way Fine Thread	
24	1	VAL 1008	Motor, Hydraulic - (BS208107A)	

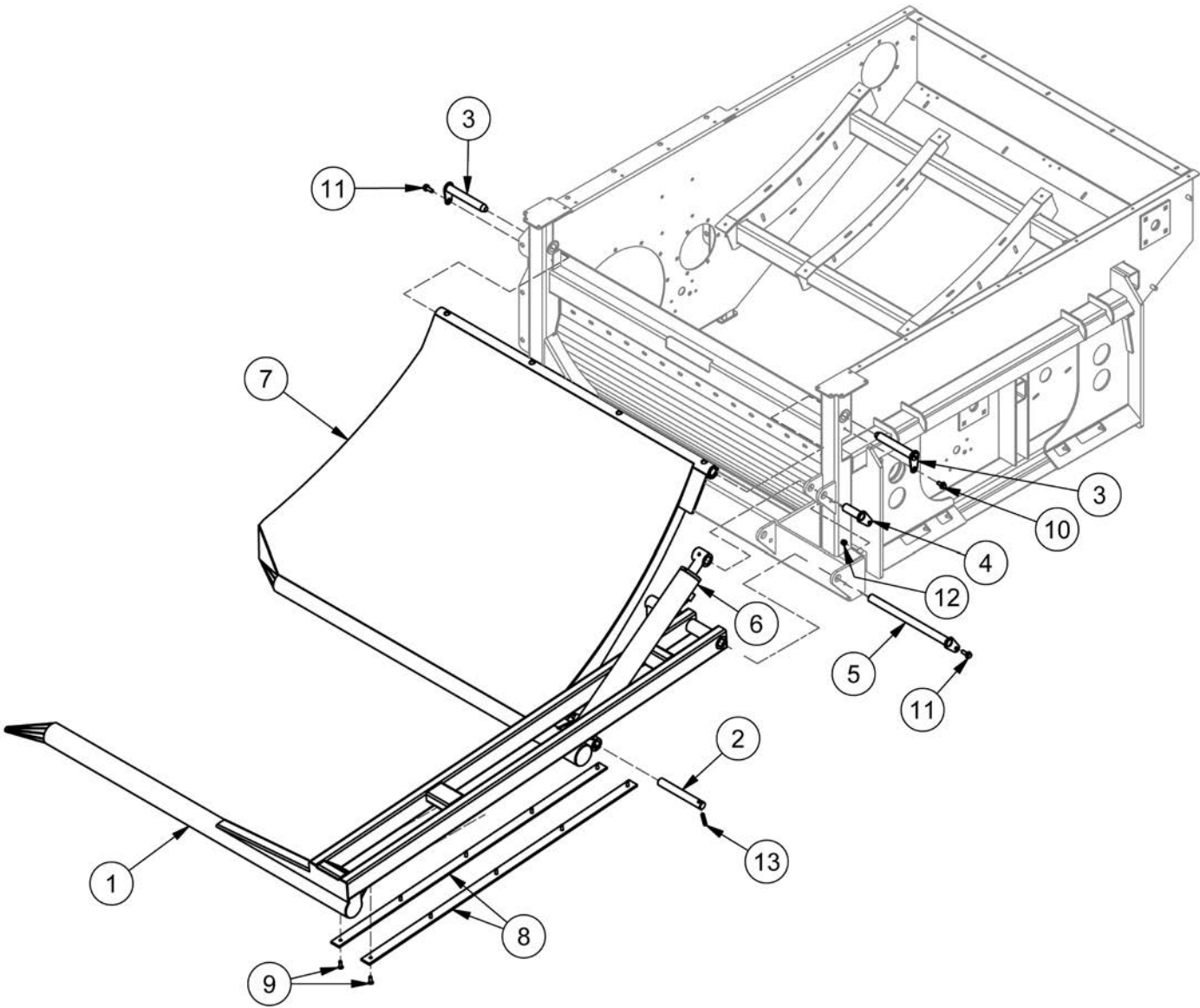
Bed Chain Sliders



Bed Chain Sliders

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	41541	Bed Sliders
2	8	HB 5/16-18X1.0 FHSCS	Hex Bolt - 5/16-18 x 1" Zinc Plated Flat Head Socket Cap Screw
3	8	HNC516	Hex Nut Cerrated

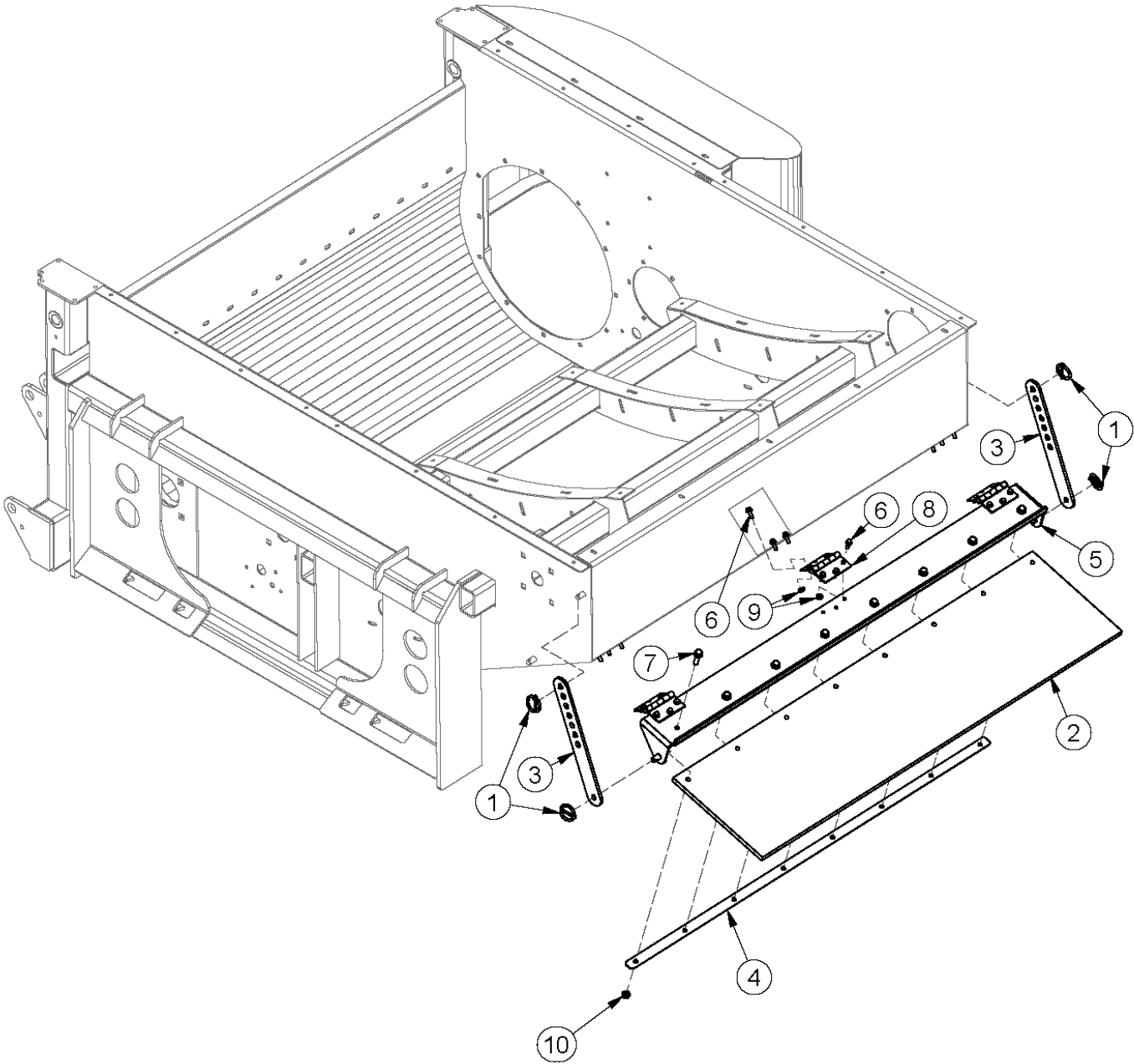
Loading Arm



Loading Arm

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	37422	Outside Loading Arm
2	1	37474	Loading Arm Pin
3	2	37489	Loading Cradle Pin
4	1	37497	Cylinder Pin
5	1	37498	Loading Arm Pin
6	1	39628	2-1/2" Bore x 20" Stroke
7	1	40989	Inside Loading Arm
8	2	41540	Loading Arm Slide
9	10	FHSCS5/16-18X1	Hex Bolt - 5/16"-18 x 1" Flat Socket Cap Screw
10	1	HBC3/8X0.75	Hex Bolt Cerrated 3/8-16 x 3/4 Zinc Flange Bolt
11	2	HBC3/8X1	Hex Bolt Cerrated 3/8-16 x 1 Zinc Flange Bolt
12	1	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut
13	1	RP 3/8 x 2	Pin - Roll Pin 3/8 x 2

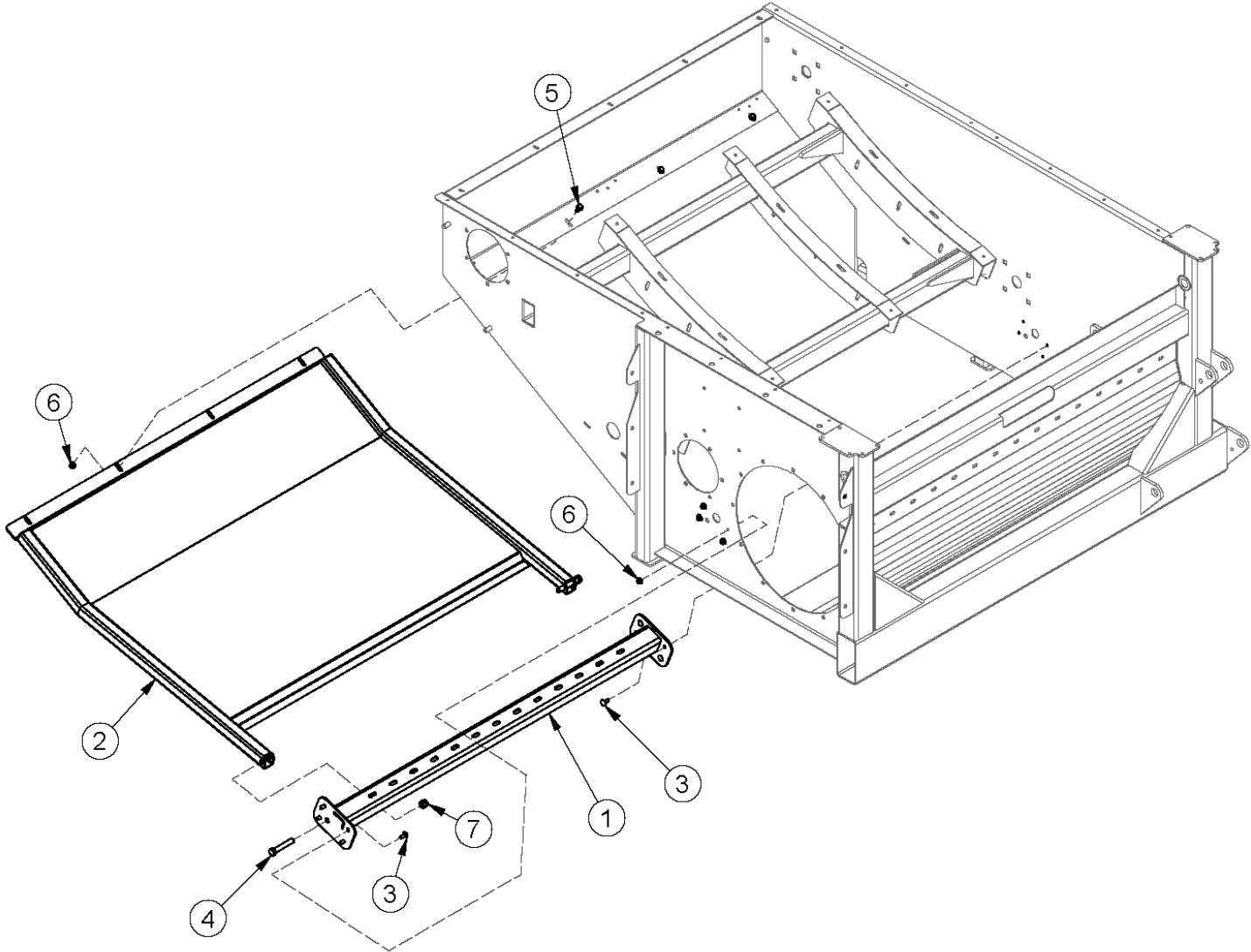
Deflector



Deflector

ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	25680	Lynch Pin 3/16 x 1.5
2	1	39354	Rubber Deflector
3	2	39356	Deflector Link
4	1	39358	Deflector Strip
5	1	40237	Deflector
6	18	HBC14X34	Hex Bolt - 1/4-20 x 3/4 Grade 8.2 Zinc Flange Bolt SAE
7	8	HBC38X114	Hex Bolt Cerrated - 3/8-16 x 1-1/4 Case Hardened Zinc Flange Bolt
8	3	HIN 3.5 X 3.5	Hinge - 3 1/2 x 3 1/2 Butt Hinge - Plain Weldable
9	18	HNC14	Hex Nut Cerrated
10	8	HNC38	Hex Nut Cerrated

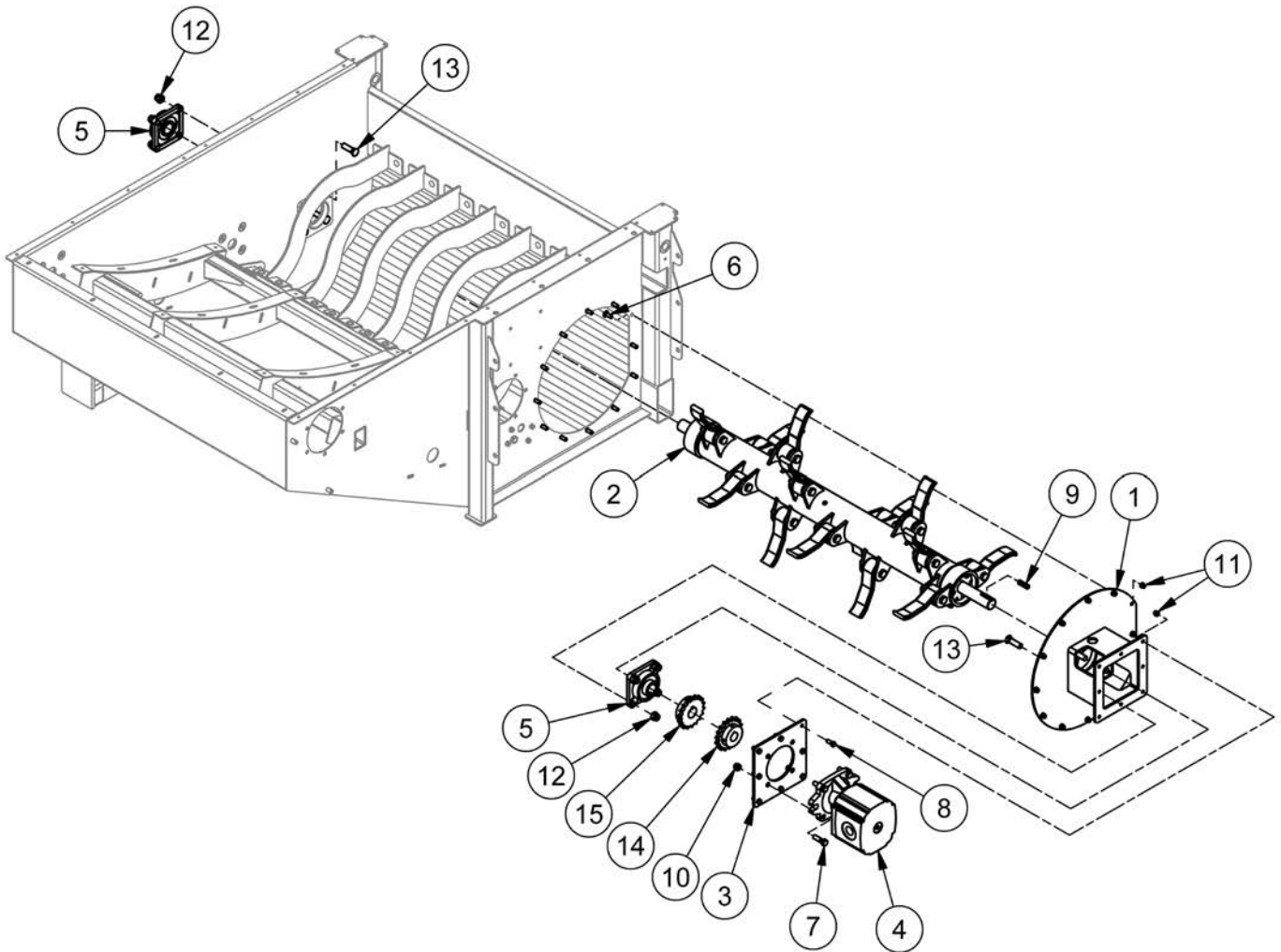
Bed Dropout



Bed Dropout

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	36111	Bottem MT. for Retainer Bars
2	1	39629	Bottom Pan
3	8	CB 5/16-18X 3/4 Z5	Carriage Bolt - 5/16-18 x 3/4" Zinc Plated Grade 5
4	2	HB 1/2-13X3.0 Z5	Hex Bolt 1/2-13 x 3" Grade 5 Zinc Plated Hex Cap Screw NC
5	4	HBC516X34	Hex Bolt Cerrated
6	8	HNC516	Hex Nut Cerrated
7	8	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut

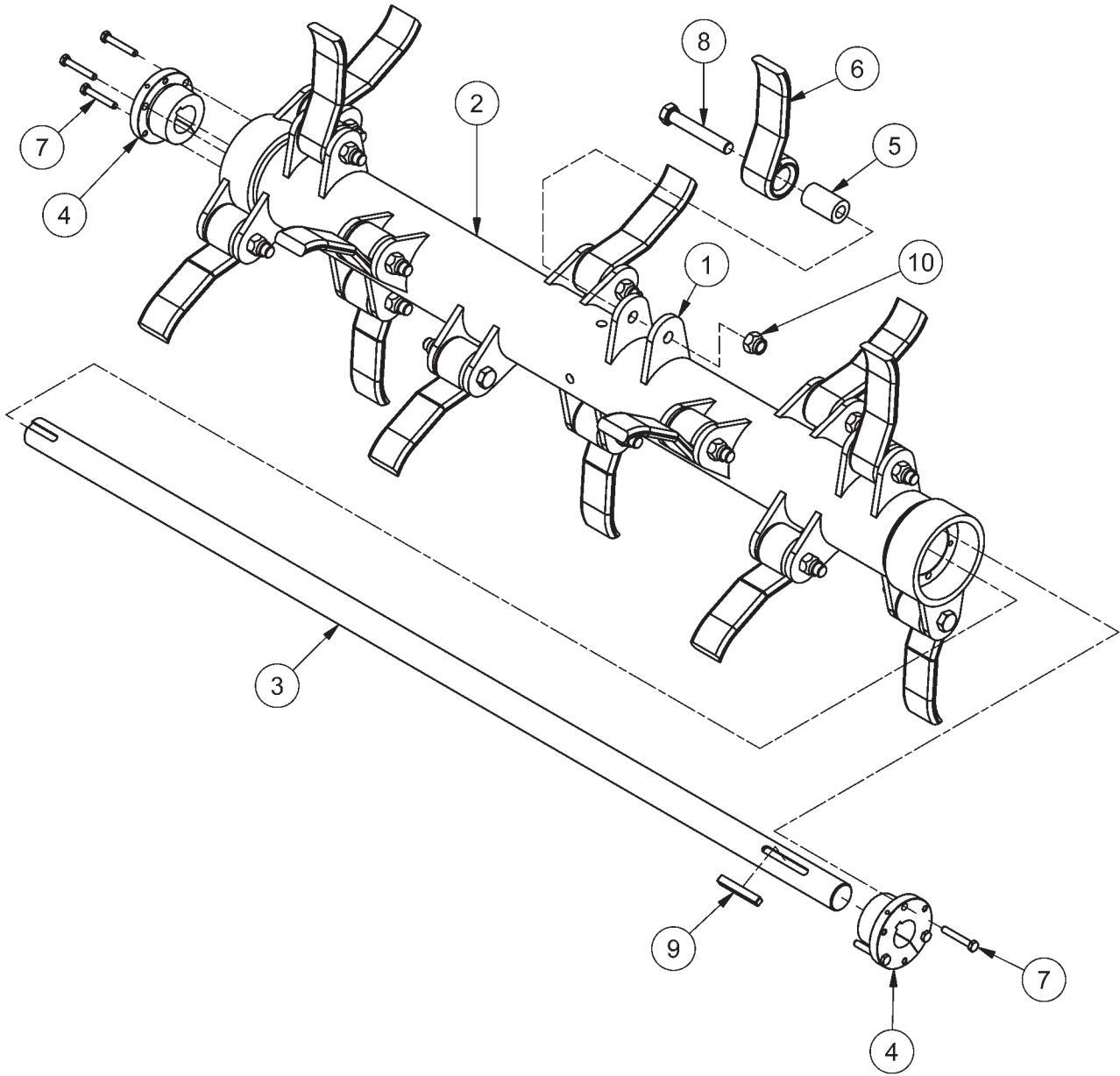
Flail Drum



Flail Drum

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	37496	Flail Housing Mount
2	1	39603	Flail Drum Assembly
3	1	39611	Cassapa Moter Mount
4	1	40580	Beater Motor
5	2	BEA UCF208-24R3	Bearing -Triple Seal- Ductile Iron
6	12	CB3/8-16X1CZ5	Carriage Bolt - 3/8-16 x 1" Grade 5 Zinc
7	4	HB1/2-13X1.75Z5	Hex Bolt 1/2-13x1 3/4 Grade 5 Zinc Plated Hex Cap Screw
8	8	HB3/8-16X1Z5	Hex Bolt 3/8-16x1 Grade 5 Zinc Plated Hex Cap Screw
9	1	KS41537	Keystock 3/8 X 3/8
10	6	LN1/2-13NCZ5	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut
11	20	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut
12	8	LN5/8-11NCZ5	LN 5/8-11 Zinc Plated Nylon Insert Lock Nut
13	8	PB 5/8-11X2.25	Plow Bolts - 5/8-11 x 2 1/4 Flat Head Gr.5
14	1	SPR60B18-1.25	60B18 Sprocket w/1.25 Bore 5/16 kwy
15	1	SPR60B18-1.5	60B18 Sprocket w/1.5 Bore 3/8 kwy

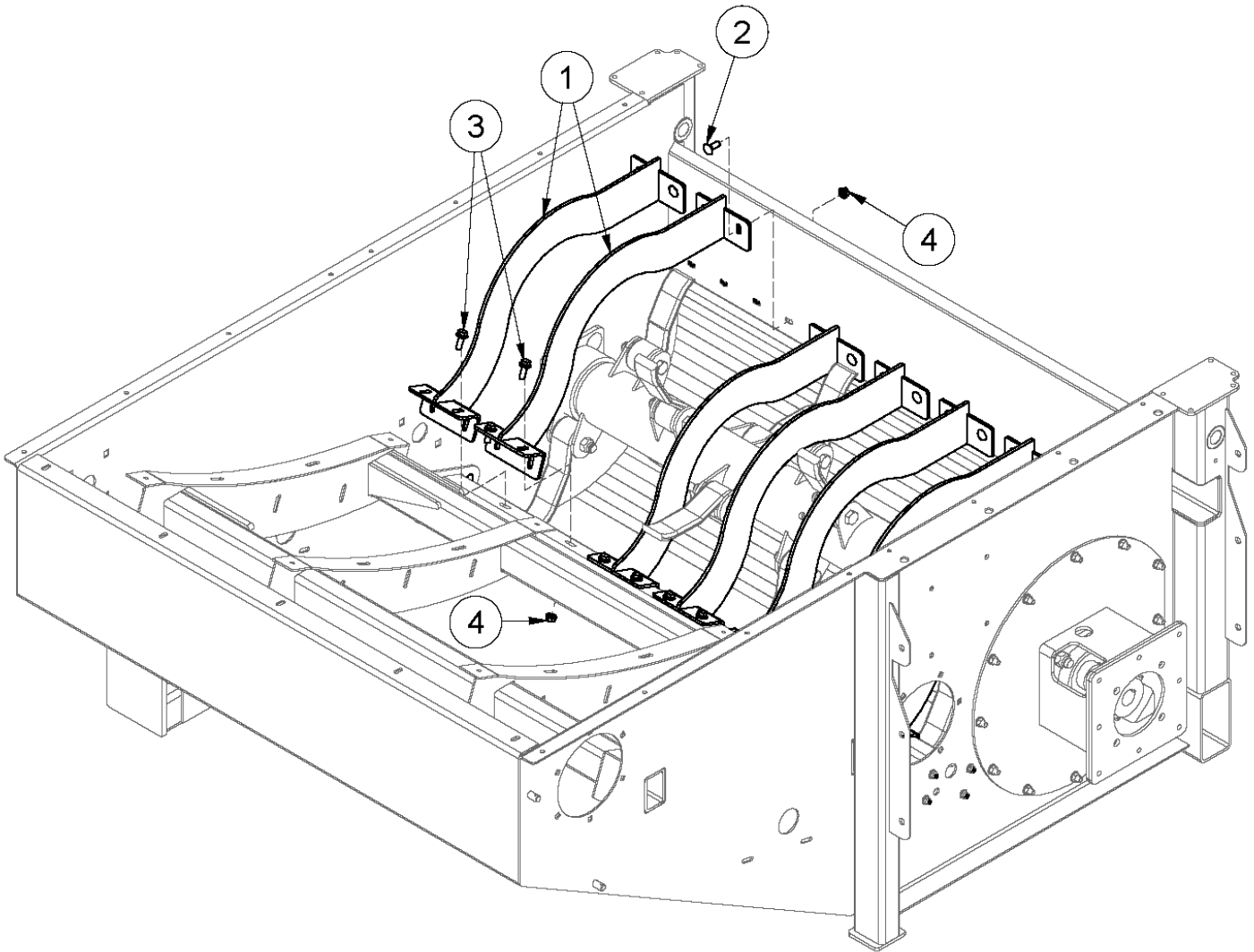
Flail Drum Assembly



Flail Drum Assembly

ITEM	QTY	PART NUMBER	DESCRIPTION
1	32	30070	Flail Mount Lug
2	1	39601	Flail Drum Weldment
3	1	39604	Drum Shaft
4	2	BS BUSK-1.5	SK Taper Lock Bush 1 1/2
5	16	BS SAW200059	Flail Bushing
6	16	BS200060A-1	Hammers, Heavy for Boss Shredder - 7/16 Material
7	6	HB5/16-18X2.0TCZ8	Hex Bolt 5/16-18X2 Hex Tap Bolt Ful Thrd Gr8 Zinc Yellow
8	16	HB5/8-18X4YZ8	Hex Bolt 5/8-18x4 Grade 8 Zinc Hex Cap Screw
9	1	KS41594	Keystock .375 x .375 x 2.75
10	16	LN5/8-18NFZ2	Locknut - 5/8-18 Zinc Plated Nylon Insert Lock Nut

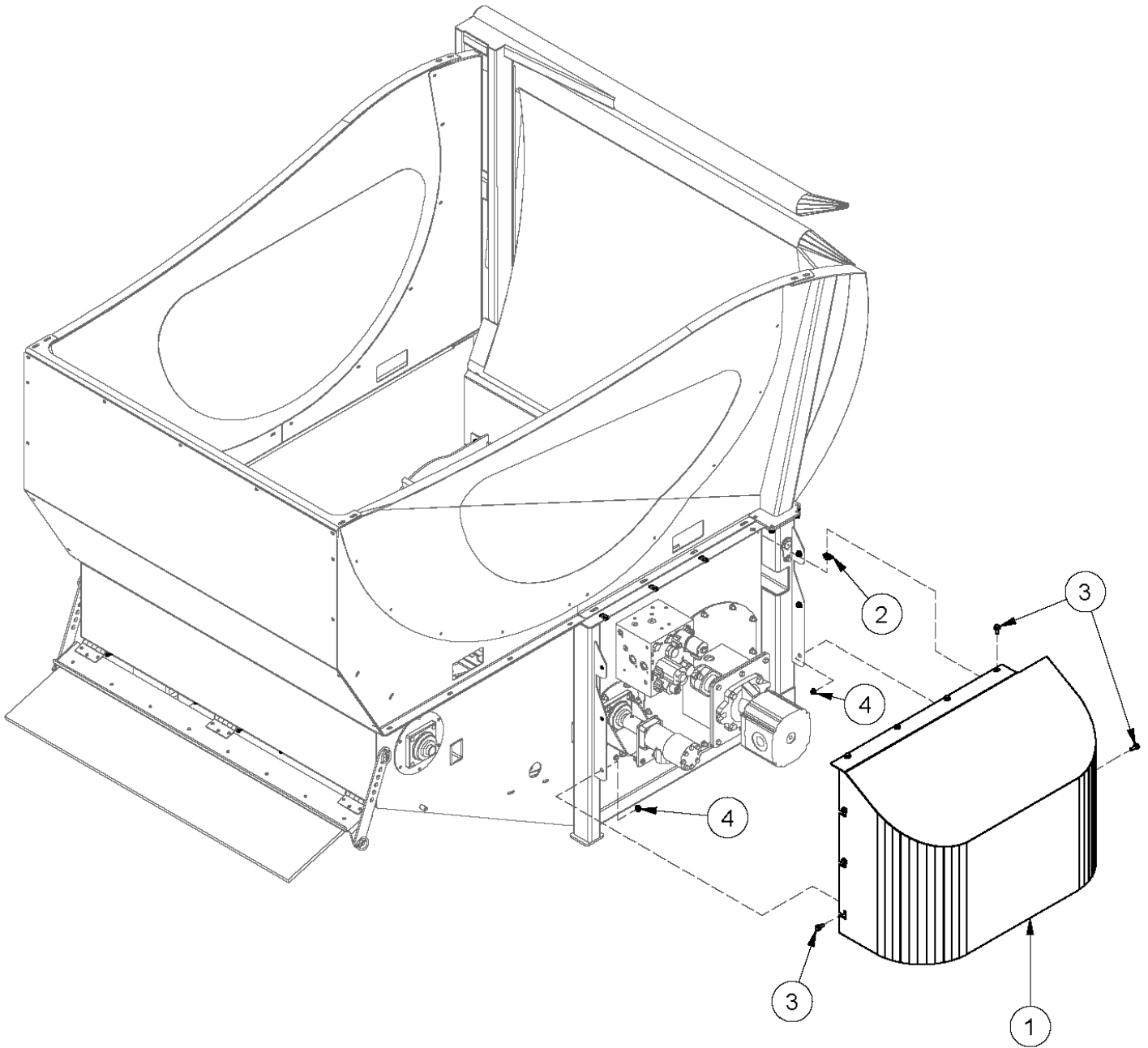
Flail Drum Guards



Flail Drum Guards

ITEM	QTY	PART NUMBER	DESCRIPTION
1	7	36106	Restrictor Bars
2	38	CB 3/8-16X1.0 Z5	Carriage Bolt - 3/8-16 x 1" Grade 5 Zinc
3	15	HBC38X1	Hex Bolt Cerrated
4	53	HNC38	Hex Nut Cerrated

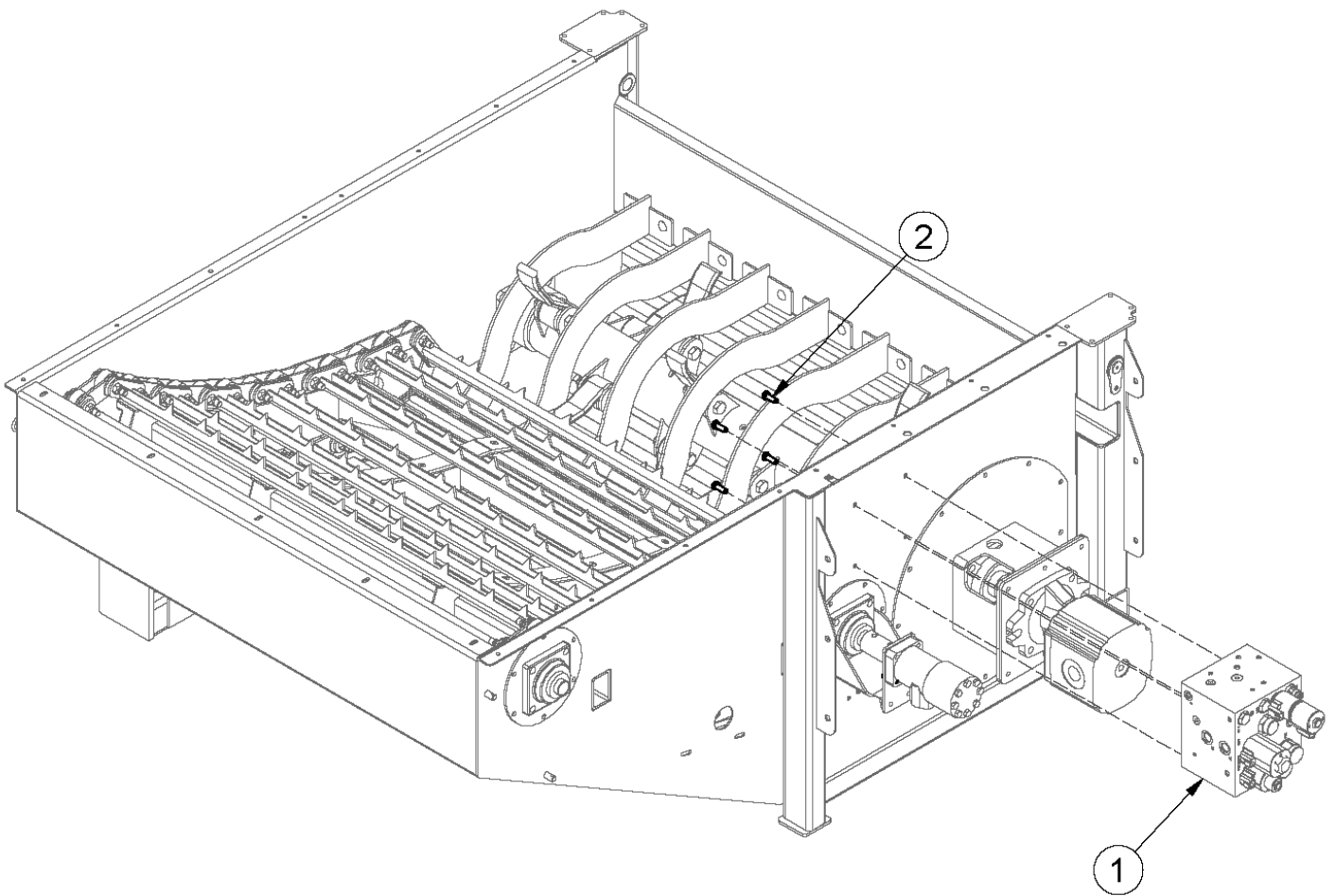
Front Cover



Front Cover

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	37495	Front Cover
2	4	HNP 5/16	Panel Nut - 5/16" U-Type Spring
3	10	HBC516X34	Hex Bolt Cerrated
4	4	HNC516	Hex Nut Cerrated

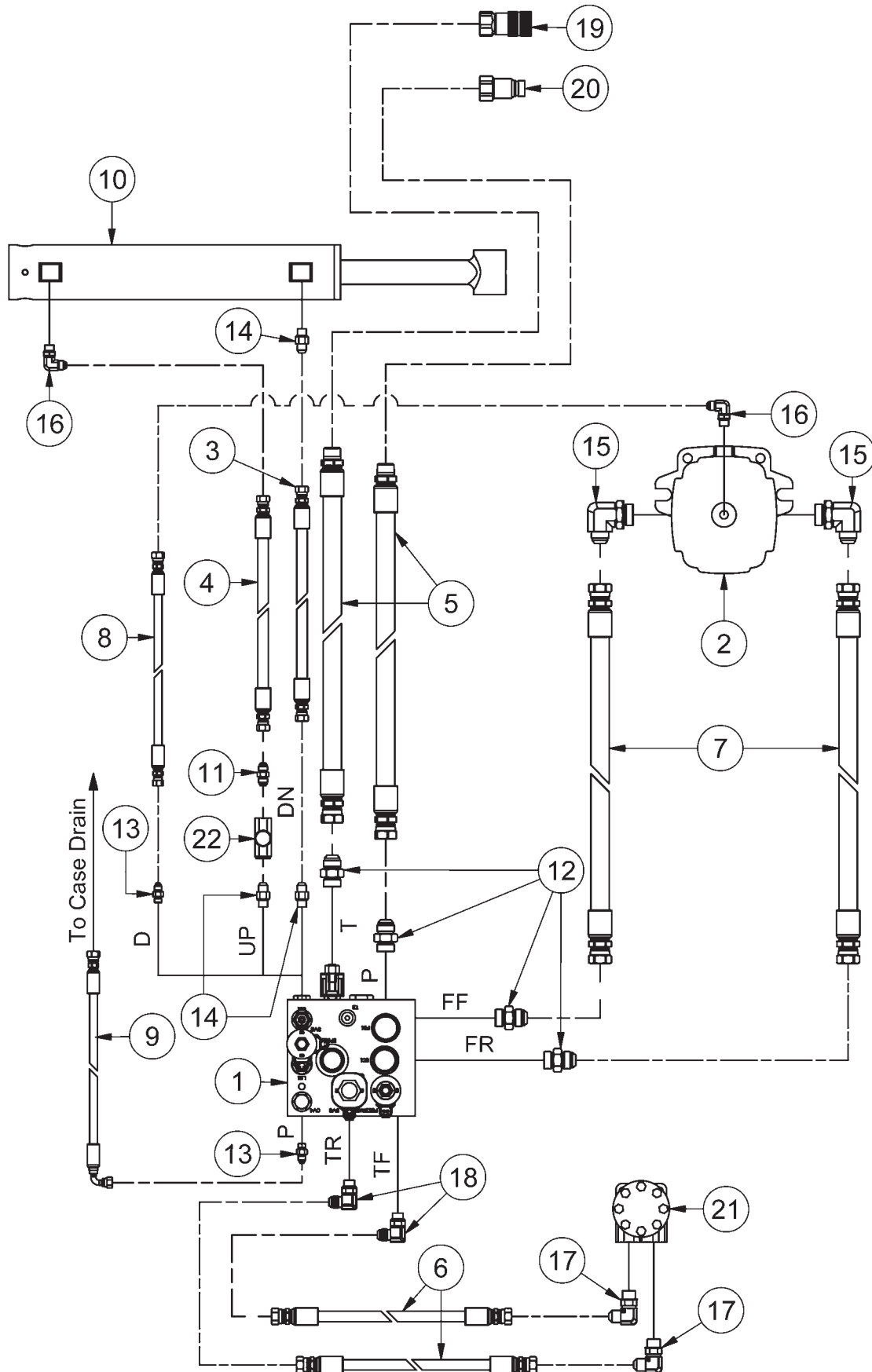
Manifold Block



Manifold Block

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	37835	Manifold
2	4	HB 3/8-16X1.0 Z5	Hex Bolt 3/8-16 x 1" Grade 5 Zinc Plated Hex Cap Screw NC

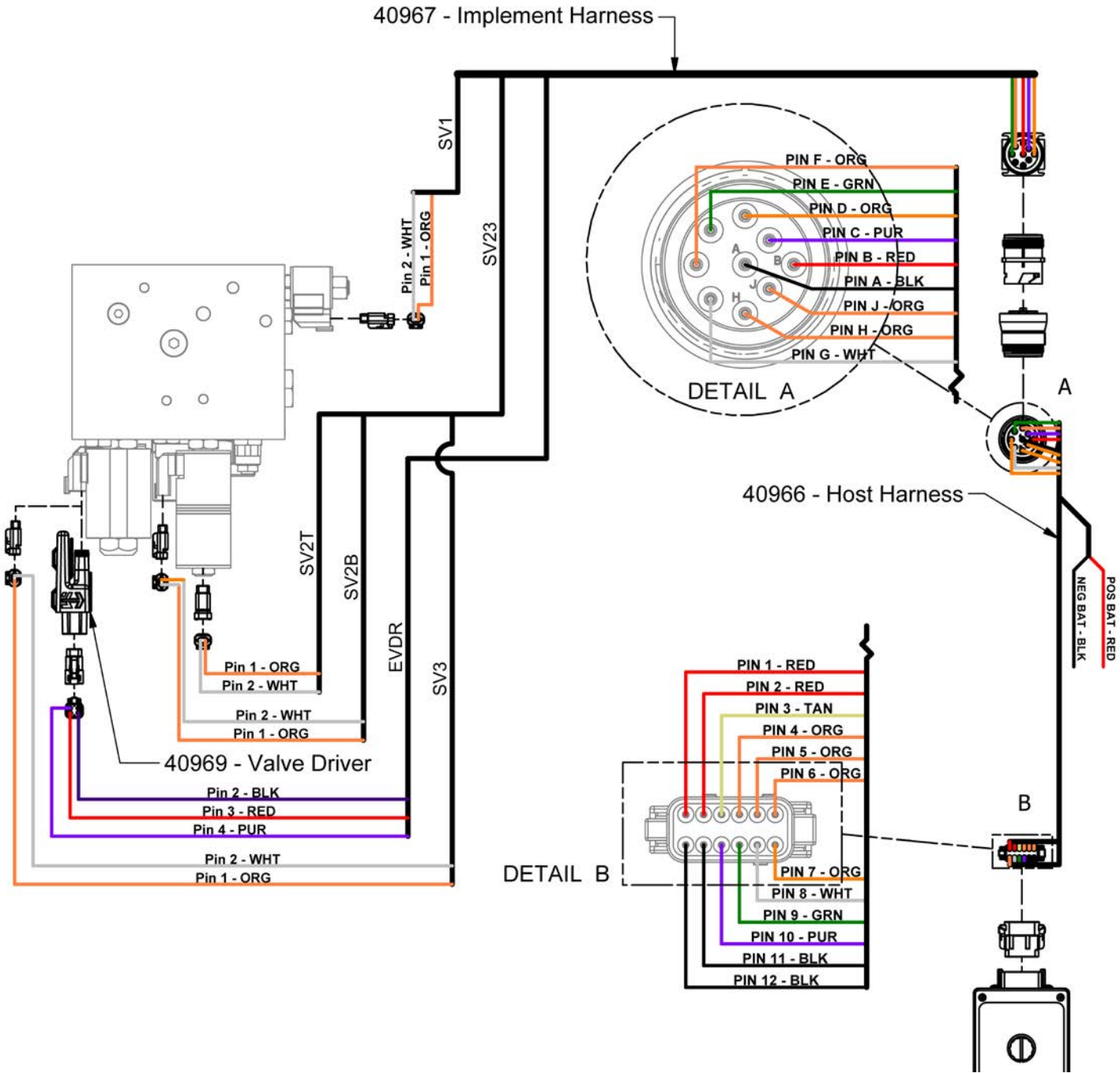
Hydraulic Schematic



Hydraulic Schematic

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	37835	Manifold
2	1	40580	Beater Motor
3	1	41426	HH112 - 6AT1(6FJIC,6FJIC) HCL112"
4	1	41427	HH130- 6AT1(6FJIC,6FJIC) HCL130"
5	2	41428	HH156 - 12AT1(12FJXH,12MP) HCL 156"
6	2	41429	HH19- 6AT1(8FJIC,8FJIC) HCL19"
7	2	41430	HH29 - 12AT1(12FJXH,12FJXH) HCL 29"
8	1	41431	HH29 - 4AT1(4FJX,6FJX) HCL 29"
9	1	50056	Hose - HH174 - 4AT1(6FJX,4FJX90S) HCL 174"
10	1	CYL39628	Hydraulic Cylinder
11	1	HF 2403-6-6	FJIC- MJIC Reducer
12	4	HF 6400-12-12	Hyd. Fitting O-Ring to JIC Adapter, Male JIC to 3/4" Male BSPP
13	2	HF 6400-4-4	Hyd Fitting - Male JIC - Male ORB
14	3	HF 6400-6-6	Hyd Fitting
15	2	HF 6801-12-16	Forged Fitting - JIC x SAE 90 Deg. Elbow
16	2	HF 6801-6-6	Hyd. Fitting 90 Deg.0-Ring to JIC
17	2	HF 6801-8-10	Hyd. Fitting -1/2" JIC - 5/8" 90 Degree Elbow
18	2	HF 6801-8-8	Hyd. Fitting- 1/2" JIC- 1/2" SAE 90 Deg Elbow
19	1	HF QCFF-1	Quickcoupler 3/4" Flat Face Pipe -Female
20	1	HF QCFF-2	Quickcoupler 3/4" Flat Face Pipe -Male
21	1	VAL 1008	Motor, Hydraulic - (BS208107A)
22	1	VAL FT-03-2090	Flow Control Valve



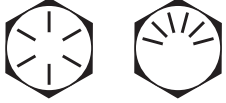



Electrical Schematic



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Section 2 - Torque Value Charts

Imperial Torque Values

SAE Grade and Head Markings	NO MARK	1 or 2^b 	5 5.1 5.2 	8 8.2 
SAE Grade and Nut Markings	NO MARK	2 	5 	8 

Size	Grade 1				Grade 2 ^b				Grade 5, 5.1, or 5.2				Grade 8 or 8.2			
	Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a	
	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft
1/4	3.7	2.8	4.7	3.5	6	4.5	7.5	5.5	9.5	7	12	9	13.5	10	17	12.5
5/16	7.7	5.5	10	7	12	9	15	11	20	15	25	18	28	21	35	26
3/8	14	10	17	13	22	16	27	20	35	26	44	33	50	36	63	46
7/16	22	16	28	20	35	26	44	32	55	41	70	52	80	58	100	75
1/2	33	25	42	31	53	39	67	50	85	63	110	80	120	90	150	115
9/16	48	36	60	45	75	56	95	70	125	90	155	115	175	130	225	160
5/8	67	50	85	62	105	78	135	100	170	125	215	160	240	175	300	225
3/4	120	87	150	110	190	140	240	175	300	225	375	280	425	310	550	400
7/8	190	140	240	175	190	140	240	175	490	360	625	450	700	500	875	650
1	290	210	360	270	290	210	360	270	725	540	925	675	1050	750	1300	975
1-1/8	400	300	510	375	400	300	510	375	900	675	1150	850	1450	1075	1850	1350
1-1/4	570	425	725	530	570	425	725	530	1300	950	1650	1200	2050	1500	2600	1950
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2150	1550	2700	2000	3400	2550
1-1/2	1000	725	1250	925	990	725	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

^a "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated without any lubrication.

^b Grade 2 applies for hex cap screws (not hex bolts) up to 152 mm (6-in.) long. Grade 1 applies for hex cap screws over 152 mm (6-in.) long, and for all other types of bolts and screws of any length.

Metric Torque Values

Property Class and Head Markings	4.8		8.8		9.8		10.9		12.9	
Property Class and Nut Markings	5		10		10		10		12	

Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a	
	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft
M6	4.8	3.5	6	4.5	9	6.5	11	8.5	13	9.5	17	12	15	11.5	19	14.5
M8	12	8.5	15	11	22	16	28	20	32	24	40	30	37	28	47	35
M10	23	17	29	21	43	32	55	40	63	47	80	60	75	55	95	70
M12	40	29	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	47	80	60	120	88	150	110	175	130	225	165	205	150	260	190
M16	100	73	125	92	190	140	240	175	275	200	350	255	320	240	400	300
M18	135	100	175	125	260	195	330	250	375	275	475	350	440	325	560	410
M20	190	140	240	180	375	275	475	350	530	400	675	500	625	460	800	580
M22	260	190	330	250	510	375	650	475	725	540	925	675	850	625	1075	800
M24	330	250	425	310	650	475	825	600	925	675	1150	850	1075	800	1350	1000
M27	490	360	625	450	950	700	1200	875	1350	1000	1700	1250	1600	1150	2000	1500
M30	675	490	850	625	1300	950	1650	1200	1850	1350	2300	1700	2150	1600	2700	2000
M33	900	675	1150	850	1750	1300	2200	1650	2500	1850	3150	2350	2900	2150	3700	2750
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2750	4750	3500

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class.

Fasteners should be replaced with the same or higher property class. If higher property class fasteners are used, these should only be tightened to the strength of the original.

Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

a "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated without any lubrication.

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Scan with smartphone to
download latest manual.

CALIFORNIA

Proposition 65 Warning

Battery posts, terminals, and similar parts may contain lead which are known to the State of California to cause cancer and reproductive harm. Wear gloves and wash hands after handling.

TUBE•LINE™