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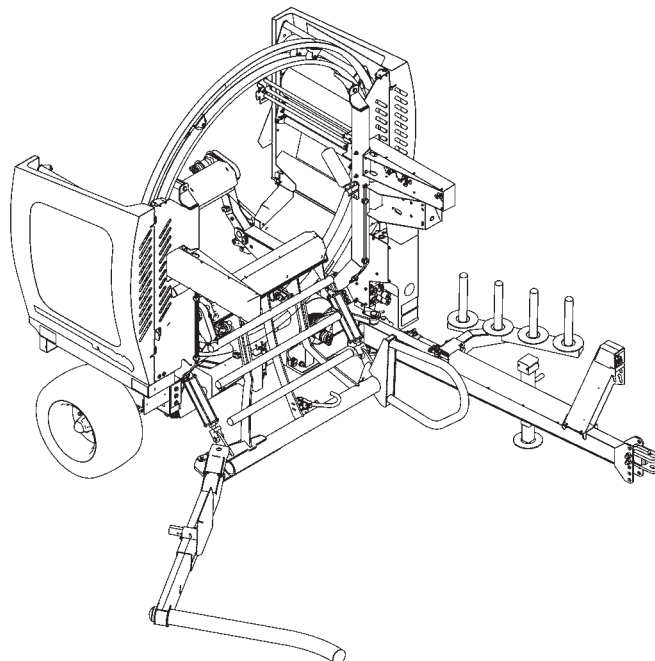
Parts Manual

Keep this manual with the machine at all times.



Balewrapper

TL360



Parts Manual

Thank you for choosing the Tubeline TL360 Balewrapper. Our hope is that it will give you many years of productive service. This machine is designed to wrap bales in a continual line with plastic film.

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.php. 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 Number

The implement serial number is located on the front right corner of the frame. (See below) This number helps us to track changes and improvements and must be mentioned when ordering parts or requesting service. For your convenience, a space has been provided inside the front cover of this manual to record the serial number, model number, purchase date, and dealer name.

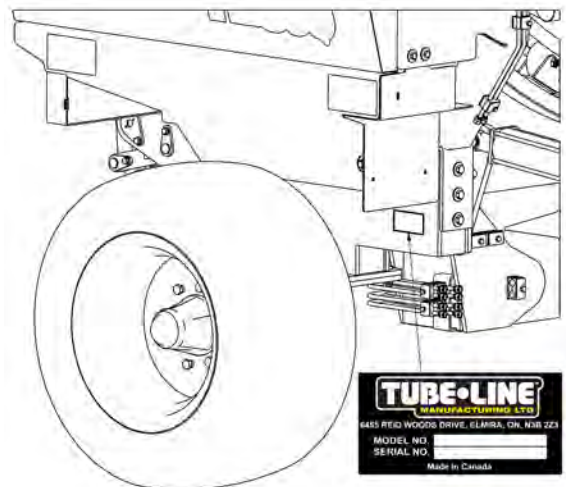
Model No: _____ TL360

Serial No: _____

Date Purchased: _____

Dealer Name: _____

Dealer Contact: _____



Warranty and Limitation of Liability

All equipment is sold subject to mutual agreement that it is warranted by the company to be free from defects of materials and workmanship. But the company shall not be liable for special, indirect or consequential, damages of any kind under this contract or otherwise. The company's liability shall be limited exclusively to replacing or repairing without charge, at its factory or elsewhere, at its discretion.

Any material, or workmanship defects which become apparent within one year from the date on which the equipment was purchased, and the company shall have no liability for damages of any kind. The buyer by the acceptance of the equipment will assume all liability for any damages, which may result from the use or misuse by his employees or others.

Warranty coverage is null and void unless Warranty Registration form has been completely filled in and is on file at Tube-Line Manufacturing Ltd.

Orientation

Directional references in this manual are dependant on the operator's position from a forward pointed position while towing this machine.

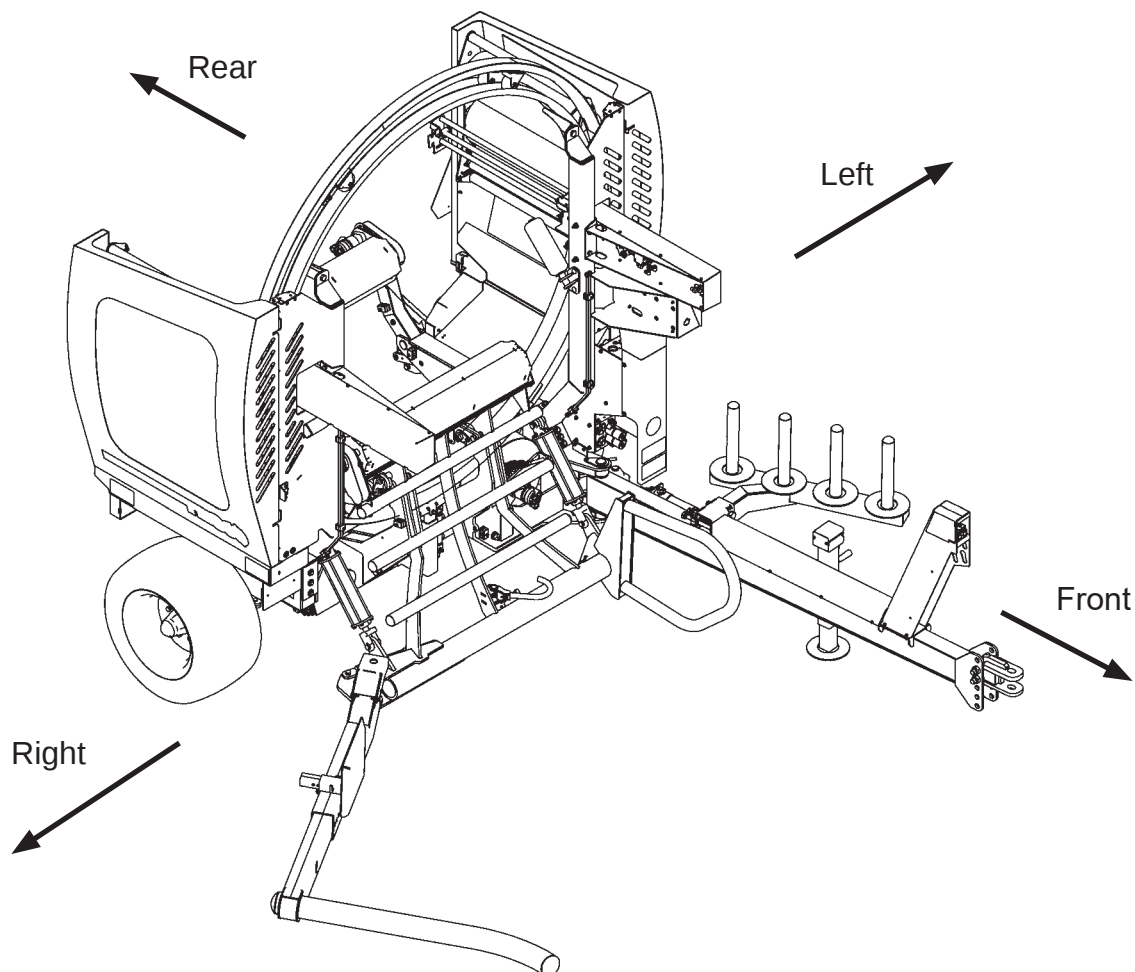


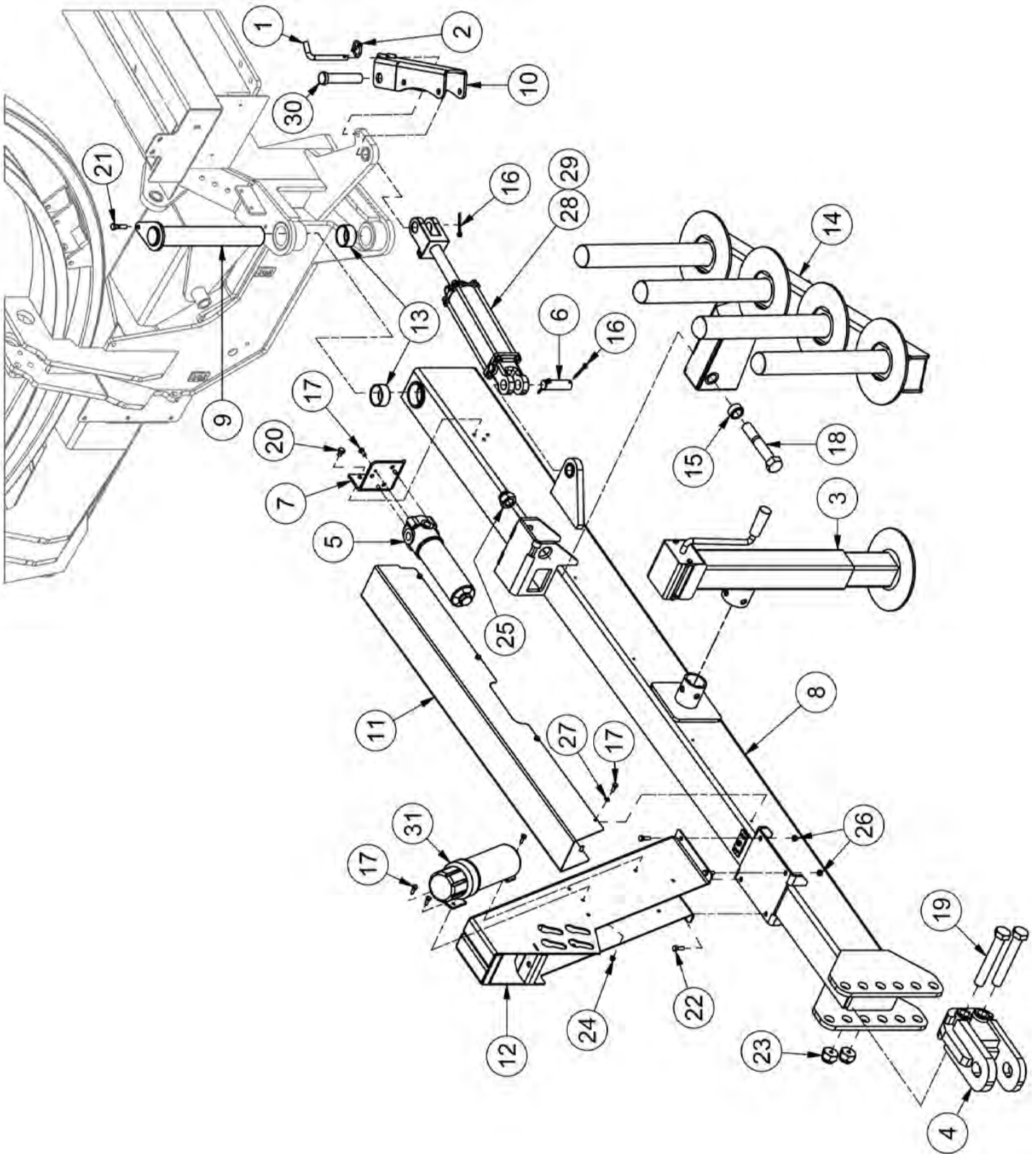
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Section 1: Basic Parts

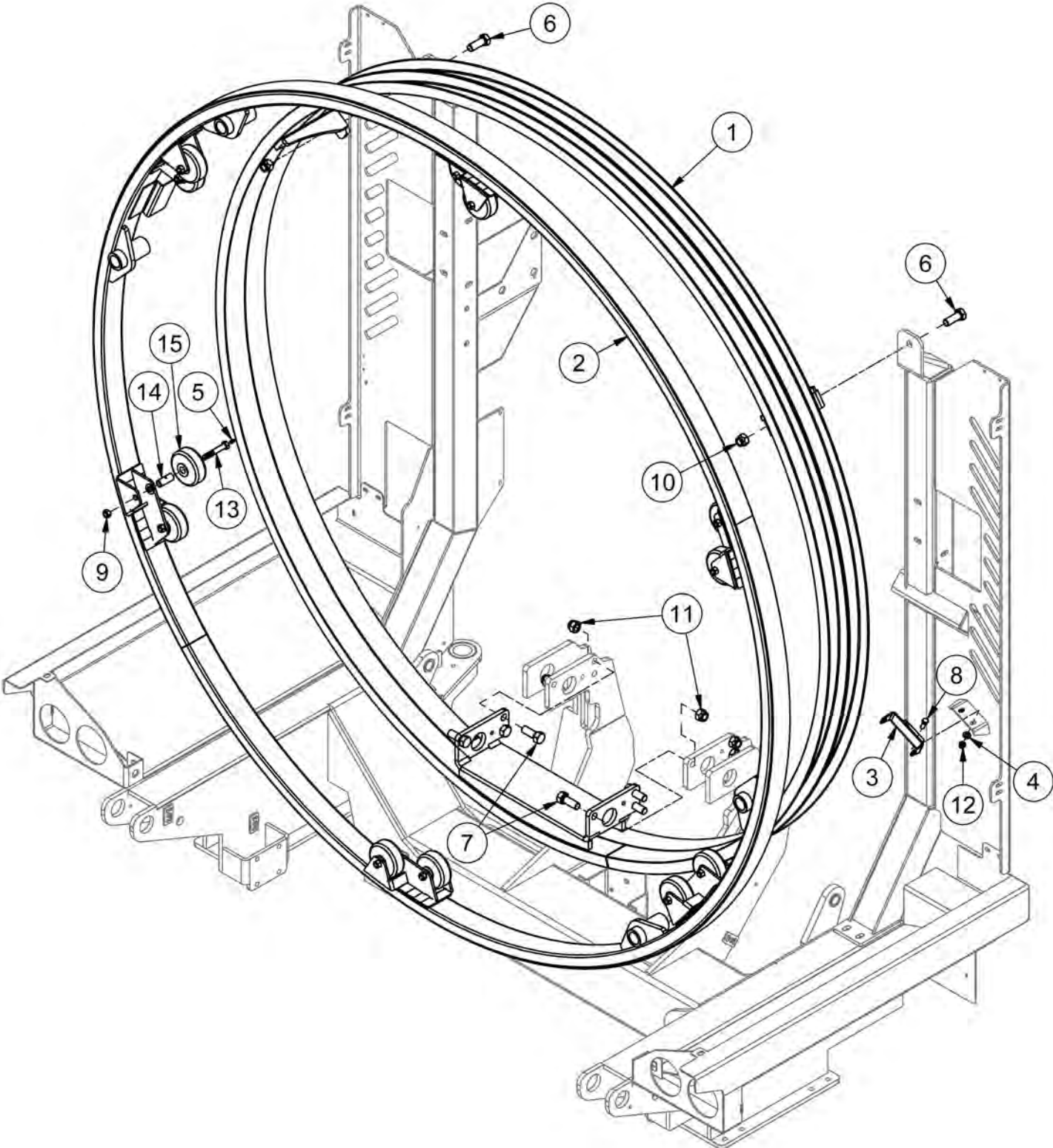
Tongue



Tongue

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	21021	Bent Pin 1/2 X 4.5
2	1	25680	Linch Pin 3/16 X 1.5
3	1	25719	Heavy Duty Jack
4	1	40471	Clevis Hitch Weldment
5	1	41878	High Pressure Filter
6	1	43229	1" Cylinder Pin
7	1	44358	High Pressure Filter Bracket
8	1	46509	Tongue
9	1	46558	Tongue Pivot Pin
10	1	46865	Cylinder Lock Out
11	1	47488	Steel Line Shield
12	1	48440	Hydraulic Hose Hanger
13	2	48443	2.25 OD x 2 ID x 1 LG Igus [Q2SI-3236-20]
14	1	48725	Wrap Holder
15	1	48732	Bolt Tightening Bushing
16	3	CP.188 X 2	3-16 x 2.25 Cotter Pin, Brass
17	14	HB1/4-20X0.75Z5	Hex Bolt 1/4-20x3/4 Grade 5 Zinc Plated Hex Cap Screw
18	1	HB1-8X6Z5	Hex Bolt 1-8x6 Grade 5 Zinc Plated Hex Cap Screw
19	2	HB1-14X6.5YZ8	Hex Bolt 1-14x6 1/2 Grade 8 Zinc Hex Cap Screw
20	3	HB3/8-16X0.5Z5	Hex Bolt 3/8-16x1/2 Grade 5 Zinc Plated Hex Cap Screw
21	1	HB3/8-16X1.5Z5	Hex Bolt 3/8-16x1 1/2 Grade 5 Zinc Plated Hex Cap Screw
22	4	HB5/16-18X1Z5	Hex Bolt 5/16-18x1 Grade 5 Zinc Plated Hex Cap Screw
23	2	LN 1 F	Center Locknuts (1-14) 2-Way Fine Thread
24	3	LN1/4-20NCZ5	LN 1/4-20 Zinc Plated Nylon Insert Lock Nut
25	1	LN1-8NCZ5	LN 1-8 Zinc Plated Nylon Insert Lock Nut
26	4	LN5/16-18NCZ5	LN 5/16-18 Zinc Plated Nylon Insert Lock Nut
27	8	LW 1/4	LW - 1/4" Zinc Plated Medium Split
28	1	TL500-100-082	Hydraulic Cylinder 2.5" Bore x 8" Stroke
29	1	SK AGU251125-10	Seal Kit for 25 Series Cylinder
30	1	TL550-100-042	Ram Cylinder Pin
31	1	TL5X2-201-111	Operator's Manual Holder

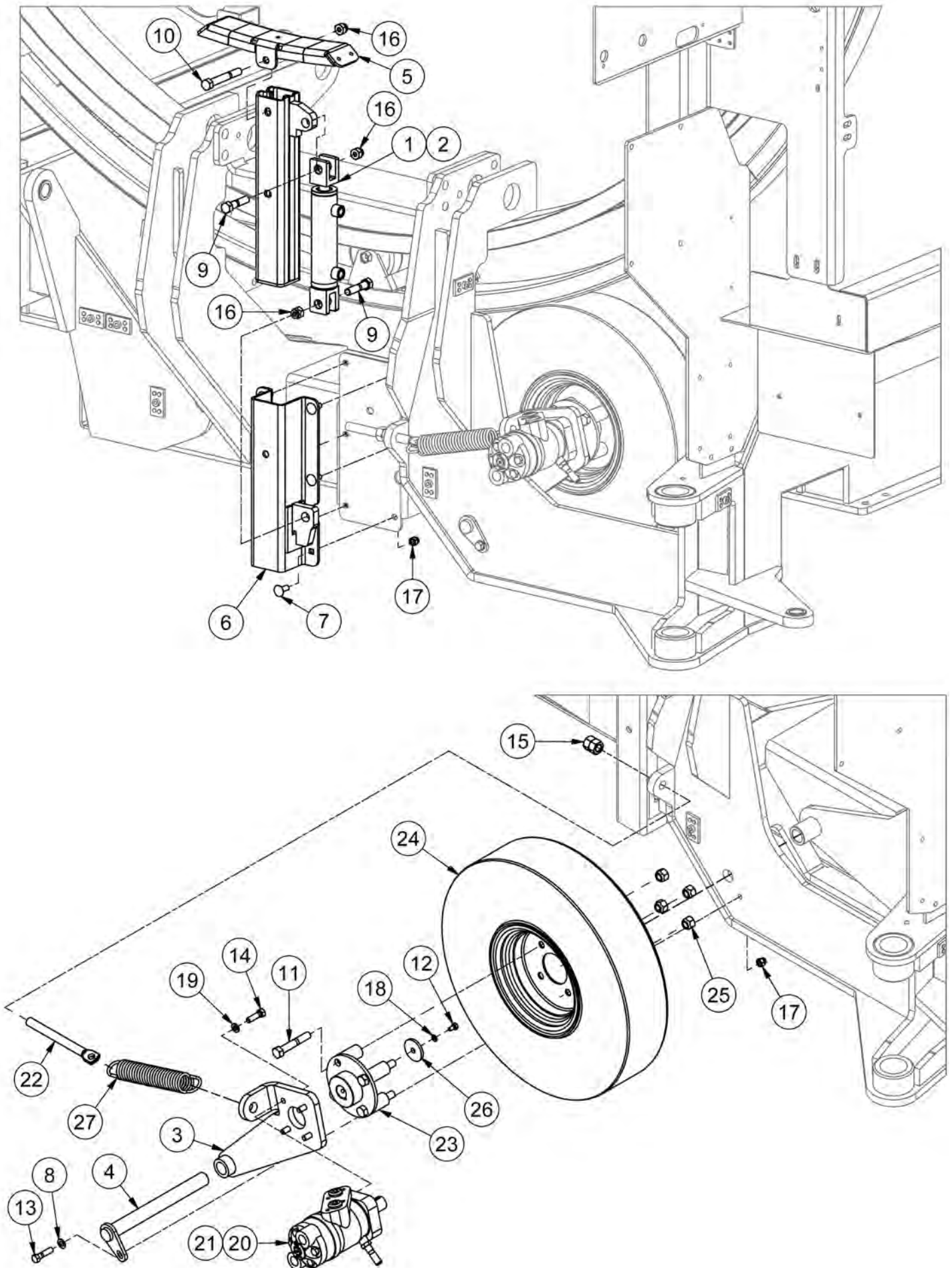
Hoop



Hoop

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	46548	Orbital Inner Hoop
2	1	46555	Outer Mesh Hoop
3	1	47628	Hoop Home Sensor Bracket
4	2	FW 3/8	Flatwasher - 3/8" Zinc Plated USS
5	12	GR 1/4 X 28	Grease Fitting 1/4-28 Straight Standard Zerk
6	2	HB3/4-10X2YZ8	Hex Bolt 3/4-10x2 Grade 8 Zinc Hex Cap Screw
7	6	HB3/4-16X2Z5	Hex Bolt 3/4-16x2 Grade 5 Zinc Plated Hex Cap Screw
8	2	HB3/8-16X1Z5	Hex Bolt 3/8-16x1 Grade 5 Zinc Plated Hex Cap Screw
9	12	LN1/2-13TCZ5	LN1/2-13 Gr.C Zinc Top Lock Nut
10	2	LN3/4-10NCZ5	LN 3/4-10 Zinc Plated Nylon Insert Lock Nut
11	6	LN3/4-16TFZ5	Center Locknuts (3/4-16) 2-Way Fine Thread
12	3	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut
13	12	TL500-100-015	Hoop Wheel Axle Bolt
14	12	TL550-200-016	Spanner
15	12	TLWHEEL01	Hoop Wheel

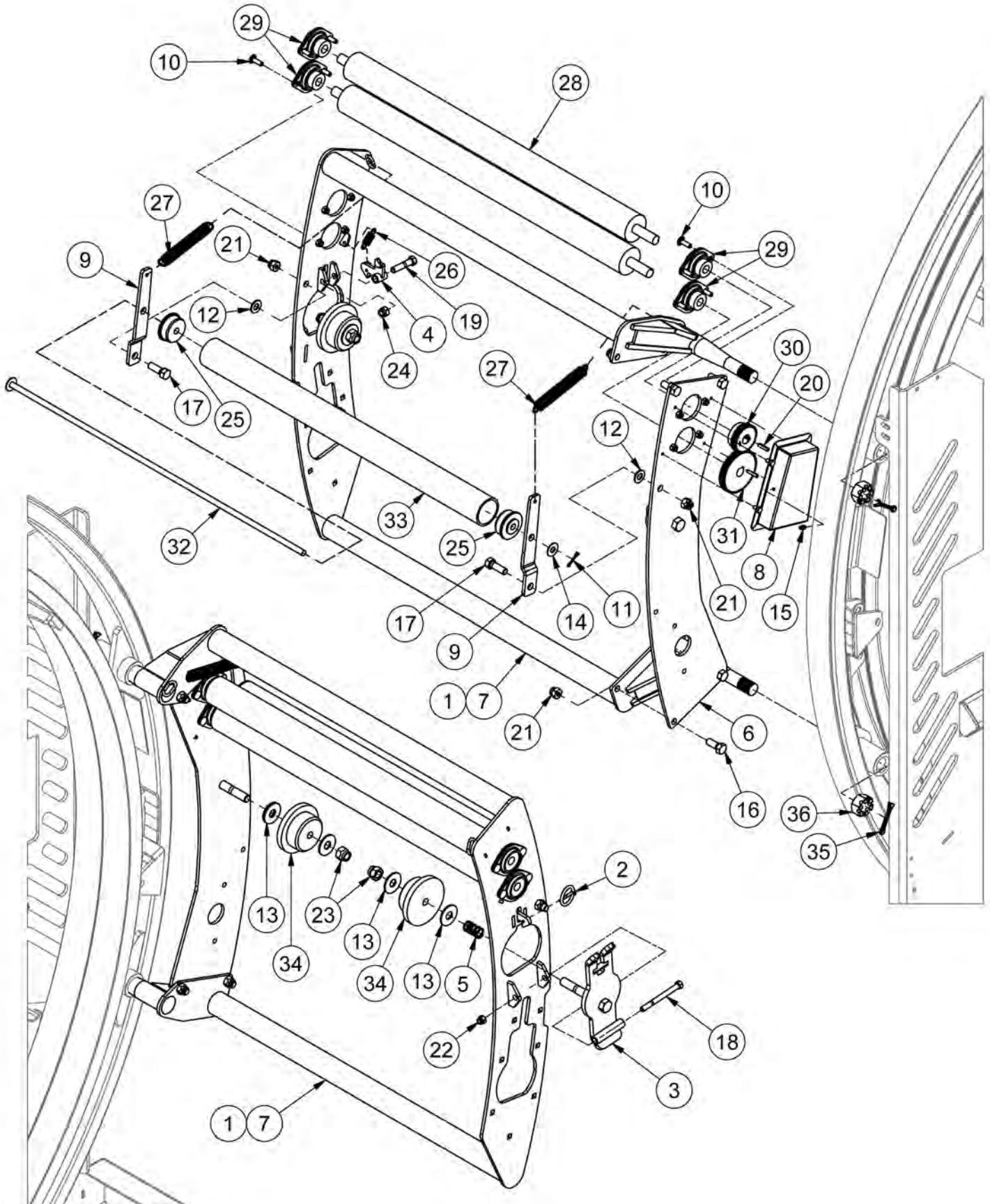
Hoop Brake & Drive



Hoop Brake & Drive

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	31326	Hydraulic Cylinder
2	1	SL SLK-1510	1.5" Bore Cylinder Seal Kit
3	1	46387	Hoop Motor Pivot
4	1	46592	Hoop Drive Pin
5	1	48370	Brake Pad Bkt
6	1	48376	Brake Outer Shell
7	6	CB3/8-16X1CZ5	Carriage Bolt - 3/8-16 x 1" Grade 5 Zinc
8	3	FW 3/8	Flatwasher - 3/8" Zinc Plated USS
9	2	HB1/2-13X2.25Z5	Hex Bolt 1/2-13x2 1/4 Grade 5 Zinc Plated Hex Cap Screw
10	1	HB1/2-13X3.75Z5	Hex Bolt 1/2-13x3 3/4 Grade 5 Zinc Plated Hex Cap Screw
11	4	HB1/2-13X3Z5	Hex Bolt 1/2-13x3 Grade 5 Zinc Plated Hex Cap Screw
12	1	HB1/4-20X0.5Z5	Hex Bolt 1/4-20x1/2 Grade 5 Zinc Plated Hex Cap Screw
13	1	HB3/8-16X1.5Z5	Hex Bolt 3/8-16x1 1/2 Grade 5 Zinc Plated Hex Cap Screw
14	4	HB3/8-16X1.25Z5	Hex Bolt 3/8-16x1 1/4 Grade 5 Zinc Plated Hex Cap Screw
15	2	HN5/8-11CZ5	Hex Nut 5/8"-11 Grade 5 Zinc Plated Finished
16	3	LN1/2-13NCZ5	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut
17	9	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut
18	1	LW 1/4	LW - 1/4" Zinc Plated Medium Split
19	4	LW 3/8	LW - 3/8" Zinc Plated Medium Split
20	1	VAL MLHPQ200CN4D	Hyd. Motor w/ Needle Brgs.
21	1	SKMLHPQUDE	Seal Kit 200 & 400 Series Motors (for MLHPQ-U/D)
22	1	PP00051	Flat Eyebolt - 5/8 X 7
23	1	TL500-100-051	Hoop Drive Wheel Hub
24	1	TL500-100-052	Hoop Drive Wheel
25	4	TL500-100-054	1/2 Wheel Nut
26	1	TL500-100-060	Power Drive Washer
27	1	TL500-101-231	Wheel Tensioner Spring

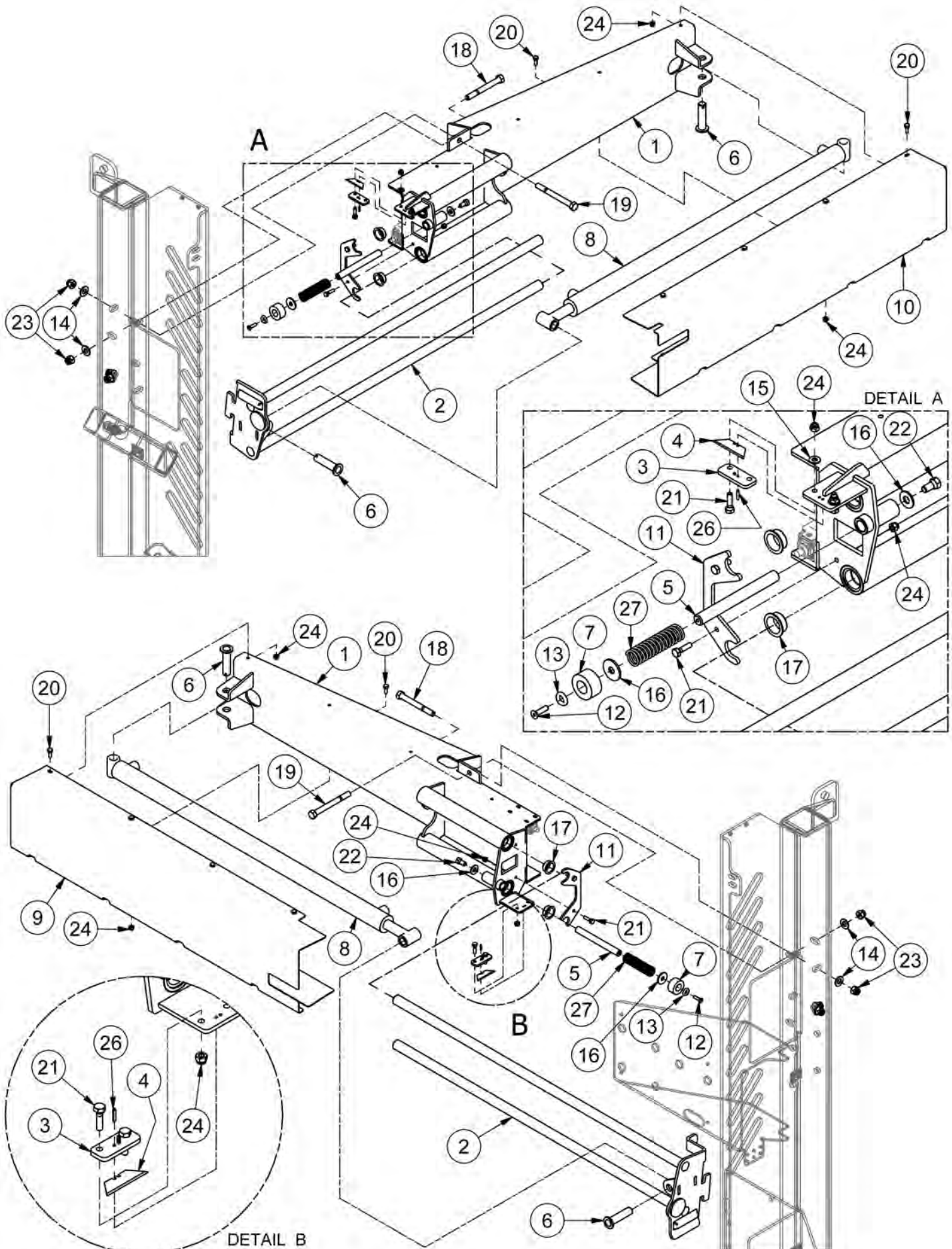
Plastic Film Carrier



Plastic Film Carrier

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	2	46570	Tensioner Assembly	Incl. Items 2-34
2	1	25680	Linch Pin 3/16 X 1.5	
3	1	41641	Spool Latch	
4	1	41645	Latch Hook	
5	1	41916	Twin Wrap Spring	
6	1	46560	Main Wrap Side Plate	
7	1	46569	Main Wrap Bracket	
8	1	47647	Tensioner Grease Box	
9	2	47648	Plastic Roller Mount	
10	8	CB5/16-18X1CZ5	Carriage Bolt - 5/16-18 x 1" Grade 5 Zinc	
11	1	CP 1/8 X 1	Pin,Cotter - 1/8" X 1" Zinc Finish Extended Prong	
12	2	FW 1/2	Flatwasher - 1/2" Zinc Plated USS	
13	5	FW 5/8	Flatwasher - 5/8" Zinc Plated USS	
14	1	FW 7/16	Flatwasher - 7/16" Zinc Plated USS	
15	1	GR 1/4 X 28	Grease Fitting 1/4-28 Straight Standard Zerk	
16	4	HB1/2-13X1.25Z5	Hex Bolt 1/2-13x1 1/4 Grade 5 Zinc Plated Hex Cap Screw	
17	2	HB1/2-13X1.5Z5	Hex Bolt 1/2-13x1 1/2 Grade 5 Zinc Plated Hex Cap Screw	
18	1	HB3/8-16X4Z5	Hex Bolt 3/8-16x4 Grade 5 Zinc Plated Hex Cap Screw	
19	1	HB7/16-14X2Z5	Hex Bolt 7/16-14x2 Grade 5 Zinc Plated Hex Cap Screw	
20	2	KS44823	Keystock .188 X 1	
21	6	LN1/2-13NCZ5	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut	
22	1	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut	
23	2	LN5/8-11NCZ5	LN 5/8-11 Zinc Plated Nylon Insert Lock Nut	
24	1	LN7/16-14NCZ5	LN 7/16-14 Zinc Plated Nylon Insert Lock Nut	
25	2	TL500-100-021	Plastic Roller Cap	
26	1	TL500-100-062	Extension Spring	
27	2	TL500-100-135	Spring - Tensioner	
28	2	TL550-100-006	Tensioner Roller	
29	4	TL550-100-007	3/4" Flange Bearing (Flangettes & Bearing)	
30	1	TL550-100-008	Small Gear - 3/4 Bore, KW, SS, 14 1/2 Deg, 2.25 P.D.	
31	1	TL550-100-009	Large Gear - 3/4 Bore, KW, SS, 14 1/2 Degree, 3.50 P.D.	
32	1	TL550-100-018	Plastic Roller Pin	
33	1	TL550-100-022	Plastic Roller	
34	2	TL550-200-012	Plastic Wrap Spool	
35	4	CP 1/4 X 2	Pin,Cotter - 1/4" X 2" Zinc Finish Extended Prong	
36	4	HN1-12 UNFCastle	Hex Nut 1"-12 Slotted Plain Finish (NF Castle Nut Bare)	

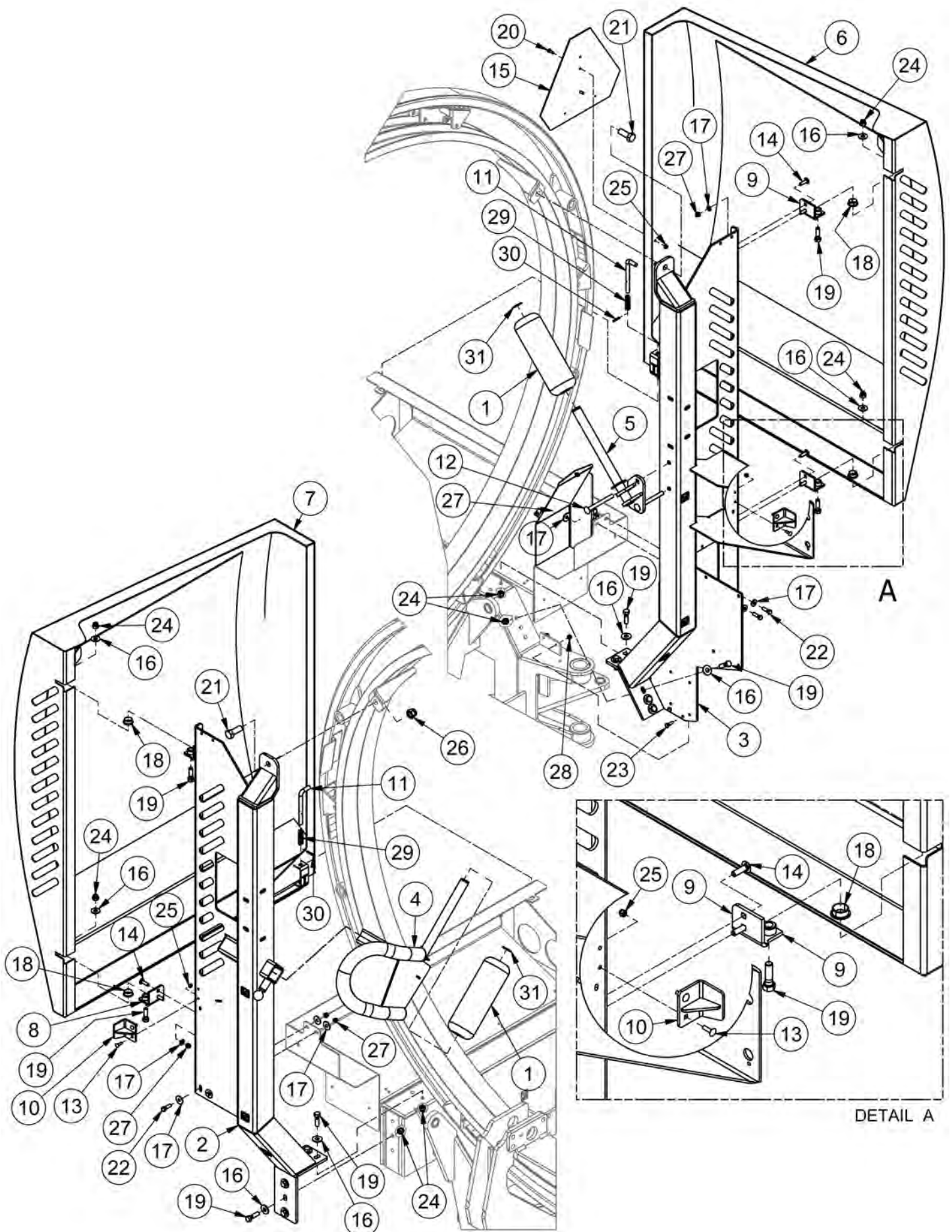
Cut & Hold



Cut & Hold

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	47600	Cut & Hold Base
2	2	47611	Cut & Hold Plastic Slider
3	2	47617	Knife Support
4	2	47618	Cut & Hold Knife
5	2	47619	Plunger Shaft
6	4	47622	Long Cylinder Pin
7	2	47626	Polyurethane Bumper
8	2	47786	Cut and Hold Cylinder
9	1	47826	Cut & Hold Shield L
10	1	47827	Cut & Hold Shield R
11	2	47828	Bushing Holder
12	2	FHSCS1/4-20X1	Hex Bolt - 1/4"-20 x 1" Flat Socket Cap Screw
13	2	FIW 3/8 S	3/8" Finished Washer - Stainless
14	8	FW 1/2	Flatwasher - 1/2" Zinc Plated USS
15	4	FW 1/4	Flatwasher - 1/4" Zinc Plated USS
16	4	FW 3/8	Flatwasher - 3/8" Zinc Plated USS
17	4	GFI-1618-08	IGUS Iglide G300 - Flange Bearing - Inch
18	4	HB1/2-13X4.5Z5	Hex Bolt 1/2-13x4 1/2 Grade 5 Zinc Plated Hex Cap Screw
19	4	HB1/2-13X5Z5	Hex Bolt 1/2-13x5 Grade 5 Zinc Plated Hex Cap Screw
20	16	HB1/4-20X0.75Z5	Hex Bolt 1/4-20x3/4 Grade 5 Zinc Plated Hex Cap Screw
21	8	HB1/4-20X1Z5	Hex Bolt 1/4-20x1 Grade 5 Zinc Plated Hex Cap Screw
22	2	HB3/8-16X0.75Z5	Hex Bolt 3/8-16x3/4 Grade 5 Zinc Plated Hex Cap Screw
23	8	LN1/2-13NCZ5	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut
24	24	LN1/4-20NCZ5	LN 1/4-20 Zinc Plated Nylon Insert Lock Nut
26	4	RP 1/8 x 5/8	Pin - Roll Pin 1/8 x 5/8
27	2	TL6X2-101-148	C2464-267-0889 Compression Spring

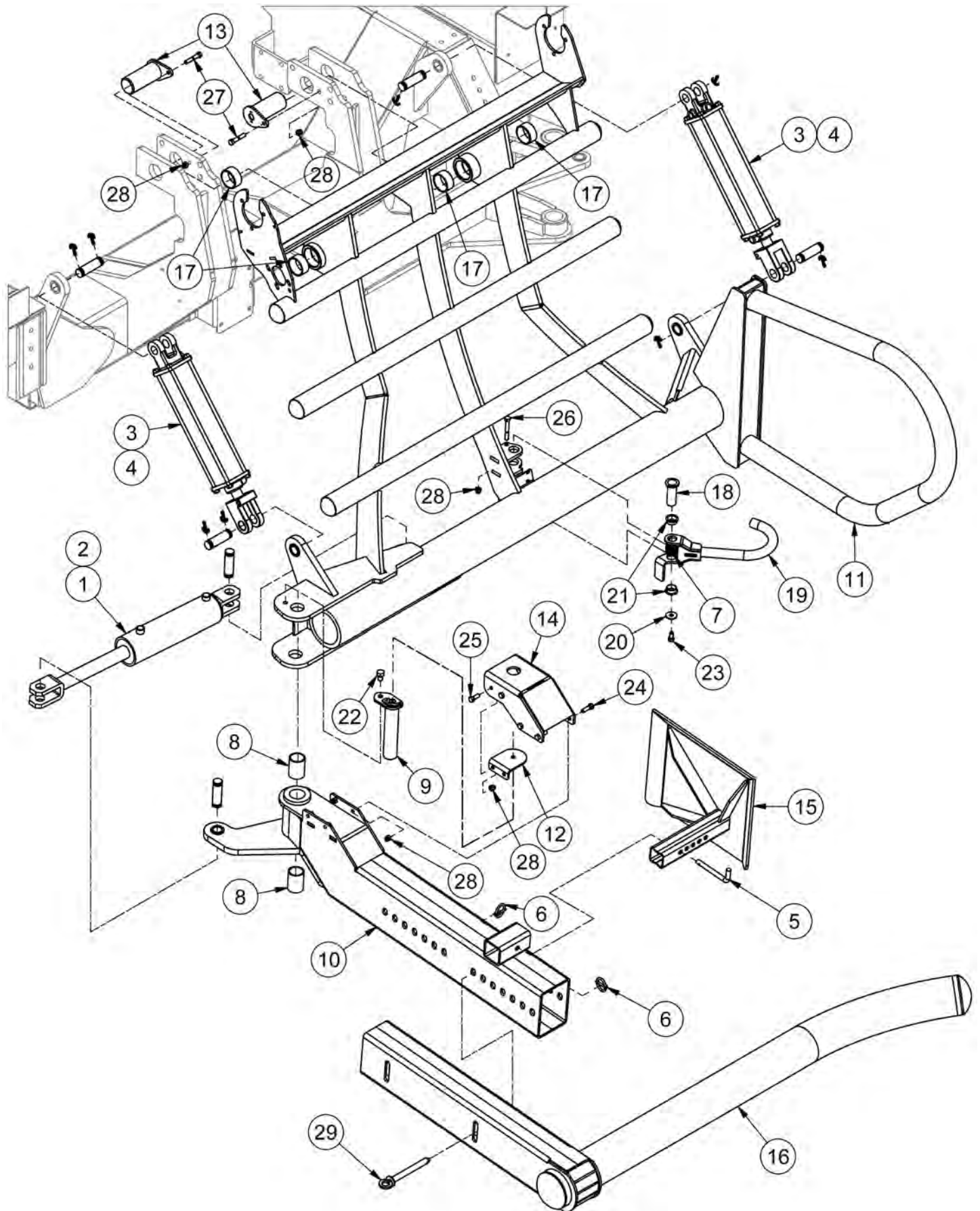
Safety Guards



Safety Guards

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	43631	Guide Roller (4" X 12" UHMW)
2	1	46525	Right Hoop Post
3	1	46531	Left Side Hoop Post
4	1	46545	Front Right Guide Roller
5	1	46547	Front Left Guide Roller
6	1	46804	Left TL360 Door
7	1	46805	Right TL360 Door
8	2	46806	Right Door Hinge
9	2	46809	Left Door Hinge
10	2	47580	Door Stop
11	2	48390	Door Latch Pin
12	2	CB1/2-13X5CZ5	Carriage Bolt - 1/2-13 x 5" Grade 5 Zinc
13	4	CB1/4-20X0.875CZ5	Carriage Bolt - 1/4-20 x 7/8" Grade 5 Zinc
14	6	CB3/8-16X1.25CZ5	Carriage Bolt - 3/8-16 x 1 1/4" Grade 5 Zinc
15	1	DESMV	Slow Moving Vehicle Sign
16	16	FW 1/2	Flatwasher - 1/2" Zinc Plated USS
17	16	FW 3/8	Flatwasher - 3/8" Zinc Plated USS
18	4	GFI-1618-08	IGUS Iglide G300 - Flange Bearing - Inch
19	14	HB1/2-13X1.75Z5	Hex Bolt 1/2-13x1 3/4 Grade 5 Zinc Plated Hex Cap Screw
20	5	HB1/4-20X0.75Z5	Hex Bolt 1/4-20x3/4 Grade 5 Zinc Plated Hex Cap Screw
21	2	HB3/4-10X2YZ8	Hex Bolt 3/4-10x2 Grade 8 Zinc Hex Cap Screw
22	4	HB3/8-16X1.25Z5	Hex Bolt 3/8-16x1 1/4 Grade 5 Zinc Plated Hex Cap Screw
23	2	HB5/16-18X1Z5	Hex Bolt 5/16-18x1 Grade 5 Zinc Plated Hex Cap Screw
24	16	LN1/2-13NCZ5	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut
25	9	LN1/4-20NCZ5	LN 1/4-20 Zinc Plated Nylon Insert Lock Nut
26	2	LN3/4-10NCZ5	LN 3/4-10 Zinc Plated Nylon Insert Lock Nut
27	12	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut
28	2	LN5/16-18NCZ5	LN 5/16-18 Zinc Plated Nylon Insert Lock Nut
29	2	PP00677	Spring,.080 x .708 x 2.982"
30	2	RP 3/16 x 1 1/4	Pin - Roll Pin 3/16 x 1 1/4
31	2	RR 1.25	Retaining Ring-1 1/4- External

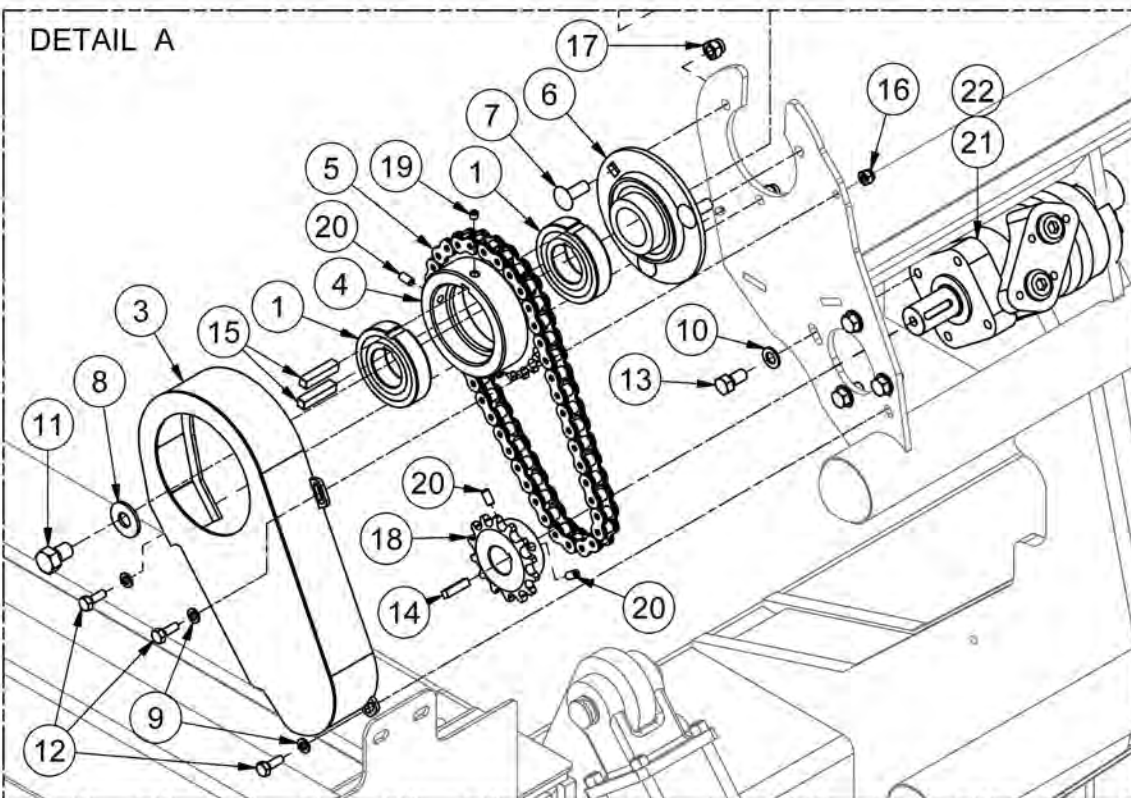
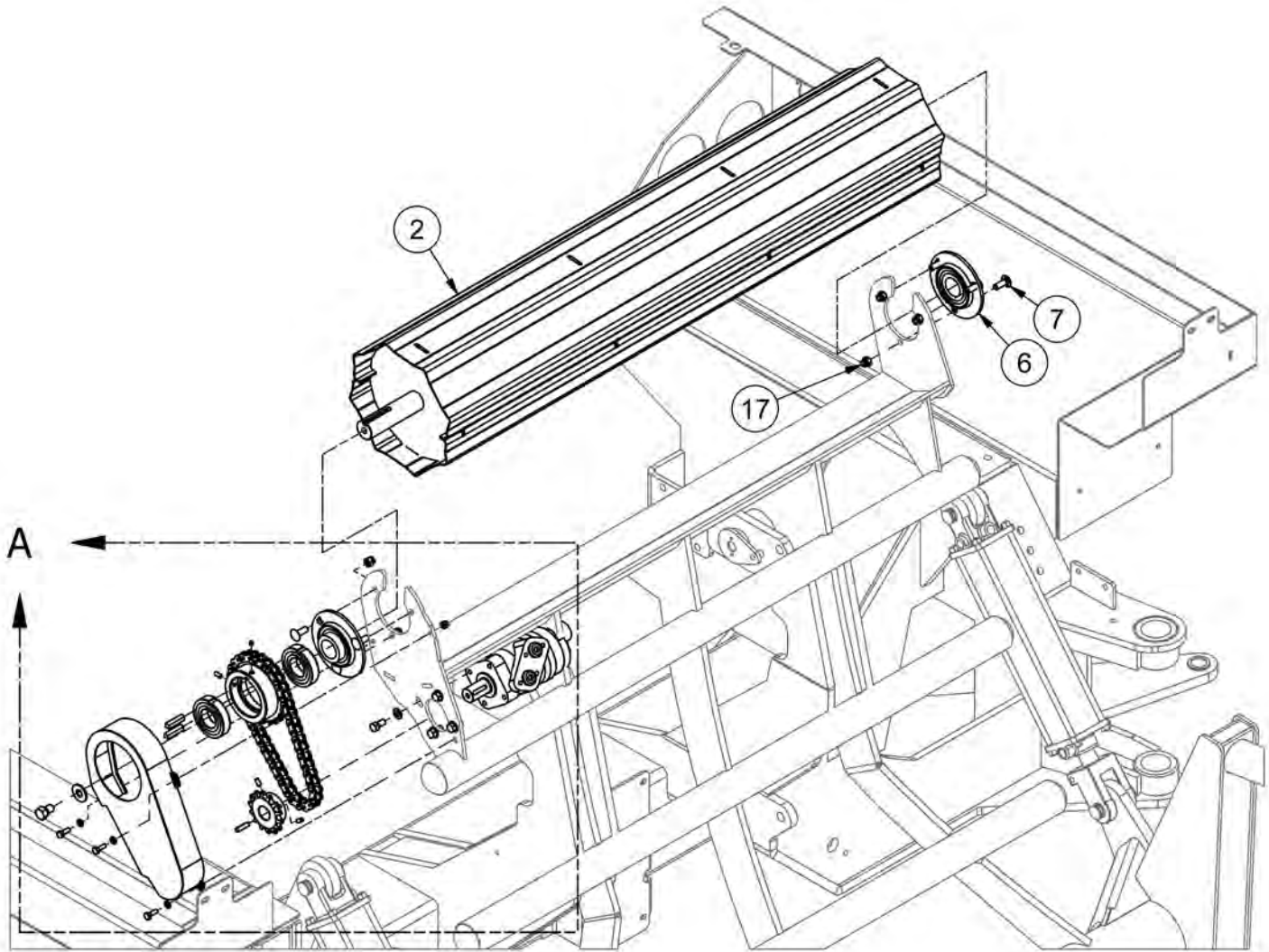
Fork



Fork

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	36422	Hydraulic Cylinder 3" Bore x 8" Stroke x 1.5" Rod
2	1	SK 03-14AG	3" 300401 Cylinder Seal Kit
3	2	TL550-100-107	3 X 12 Hydraulic Cylinder
4	2	SK-HYS30SPE12-2177	3 X 12 Tie Rod Cylinder Seal Kit
5	1	21021	Bent Pin 1/2 X 4.5
6	2	25680	Linch Pin 3/16 X 1.5
7	1	33230	Dispatch Arm Torsion Spring
8	2	37845	Polygon 1.75 OD x1.52 ID x2.38 LG
9	1	46389	Angle Sensor Pivot Pin
10	1	46405	Bale Finger Arm
11	1	46430	Bale Loading Arm
12	1	46527	Angle Sensor Bolt On
13	1	46600	Hoop Roller Pin
14	1	46846	Outer Shield Mount
15	1	46857	Arm Push Plate
16	1	46866	Bale Finger Assembly
17	4	48443	2.25 OD x 2 ID x 1 LG Igus [Q2SI-3236-20]
18	1	48452	Bale Trigger Pin
19	1	49447	Bale Trigger
20	1	FW 3/8	Flatwasher - 3/8" Zinc Plated USS
21	2	GFI-1618-08	IGUS Iglide G300 - Flange Bearing - Inch
22	1	HB1/2-13X0.75Z5	Hex Bolt 1/2-13x3/4 Grade 5 Zinc Plated Hex Cap Screw
23	1	HB3/8-16X0.75Z5	Hex Bolt 3/8-16x3/4 Grade 5 Zinc Plated Hex Cap Screw
24	4	HB3/8-16X1.25Z5	Hex Bolt 3/8-16x1 1/4 Grade 5 Zinc Plated Hex Cap Screw
25	2	HB3/8-16X1Z5	Hex Bolt 3/8-16x1 Grade 5 Zinc Plated Hex Cap Screw
26	1	HB3/8-16X2.75Z5	Hex Bolt 3/8-16x2 3/4 Grade 5 Zinc Plated Hex Cap Screw
27	1	HB3/8-16X2Z5	Hex Bolt 3/8-16x2 Grade 5 Zinc Plated Hex Cap Screw
28	9	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut
29	1	TL550-200-104	Front Bale Saddle Pin

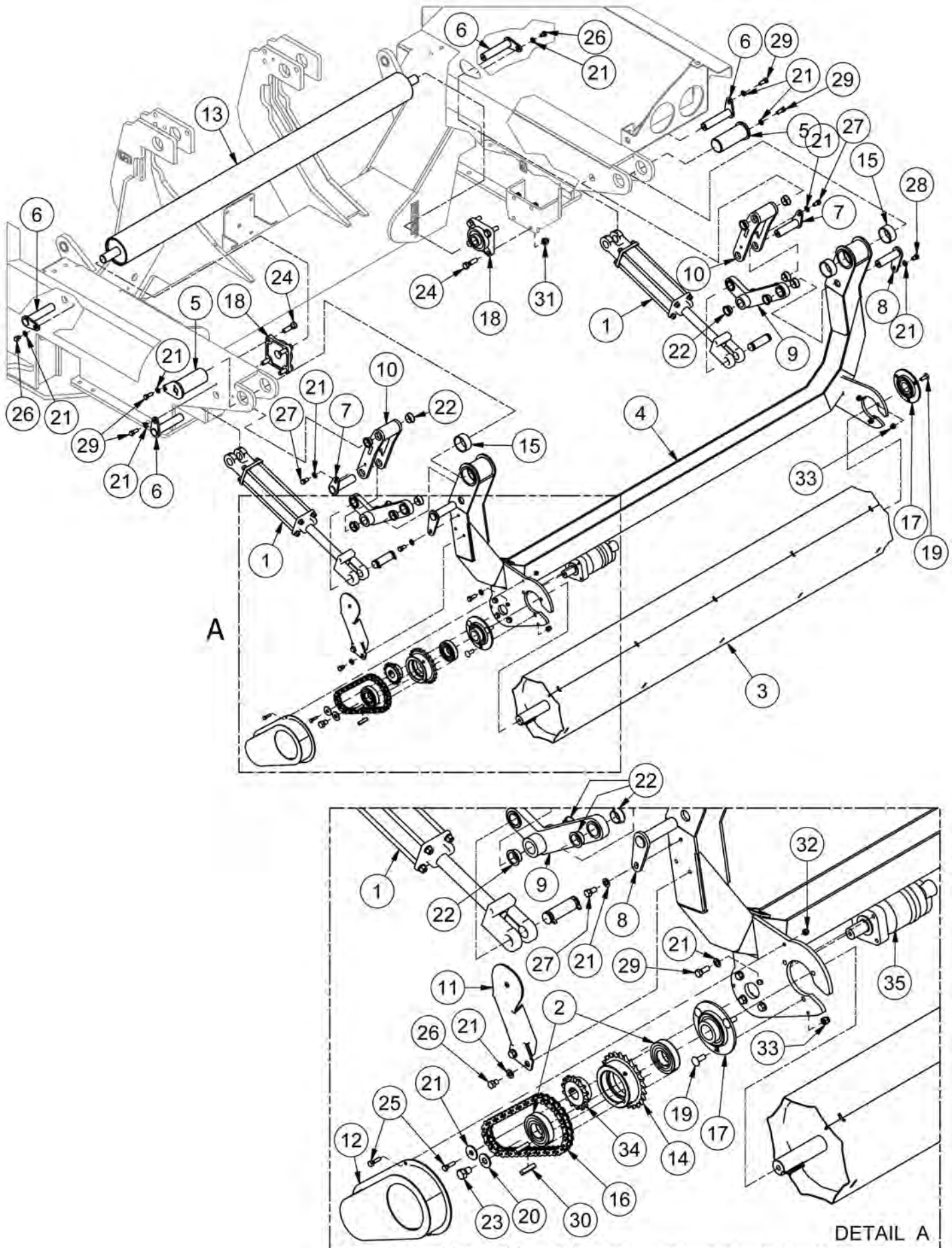
Fork Roller



Fork Roller

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	45903	Keyway One Way Bearing 35X72X17
2	1	46377	TL360 Front Roller
3	1	46379	Front Top Chain Guard (TL360)
4	1	47649	Roller Drive Sprocket
5	1	48588	Chain - #50, 41 Link + Conn
6	2	BEA SA207-22-P5Z	Bearing, Insert 1.375"- BEA SB207-22 Plated Flange Bearing
7	6	CB3/8-16X1CZ5	Carriage Bolt - 3/8-16 x 1" Grade 5 Zinc
8	1	FW 1/2	Flatwasher - 1/2" Zinc Plated USS
9	3	FW 1/4	Flatwasher - 1/4" Zinc Plated USS
10	4	FW 3/8	Flatwasher - 3/8" Zinc Plated USS
11	1	HB1/2-13X0.75Z5	Hex Bolt 1/2-13x3/4 Grade 5 Zinc Plated Hex Cap Screw
12	3	HB1/4-20X0.75Z5	Hex Bolt 1/4-20x3/4 Grade 5 Zinc Plated Hex Cap Screw
13	4	HB3/8-16X0.75Z5	Hex Bolt 3/8-16x3/4 Grade 5 Zinc Plated Hex Cap Screw
14	1	KS40254	Keystock .250 X 1.000
15	2	KS48073	5/16 X 1 1/2" Key
16	3	LN1/4-20NCZ5	LN 1/4-20 Zinc Plated Nylon Insert Lock Nut
17	7	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut
18	1	SPR5014F-1	#50 14 Tooth 1" Bore Chain Sprocket
19	1	SS1/4-20CX0.25CP	Allan Head Set Screw, 1/4-20 x 1/4
20	3	SS1/4-20CX0.51CP	Allan Head Set Screw, 1/4-20 x 1/2
21	1	VAL MLHPQ200C7URS-NE	Hyd. Motor Rear Ported w/ Sensor
22	1	SKMLHPQUDE	Seal Kit 200 & 400 Series Motors (for MLHPQ-U/D)

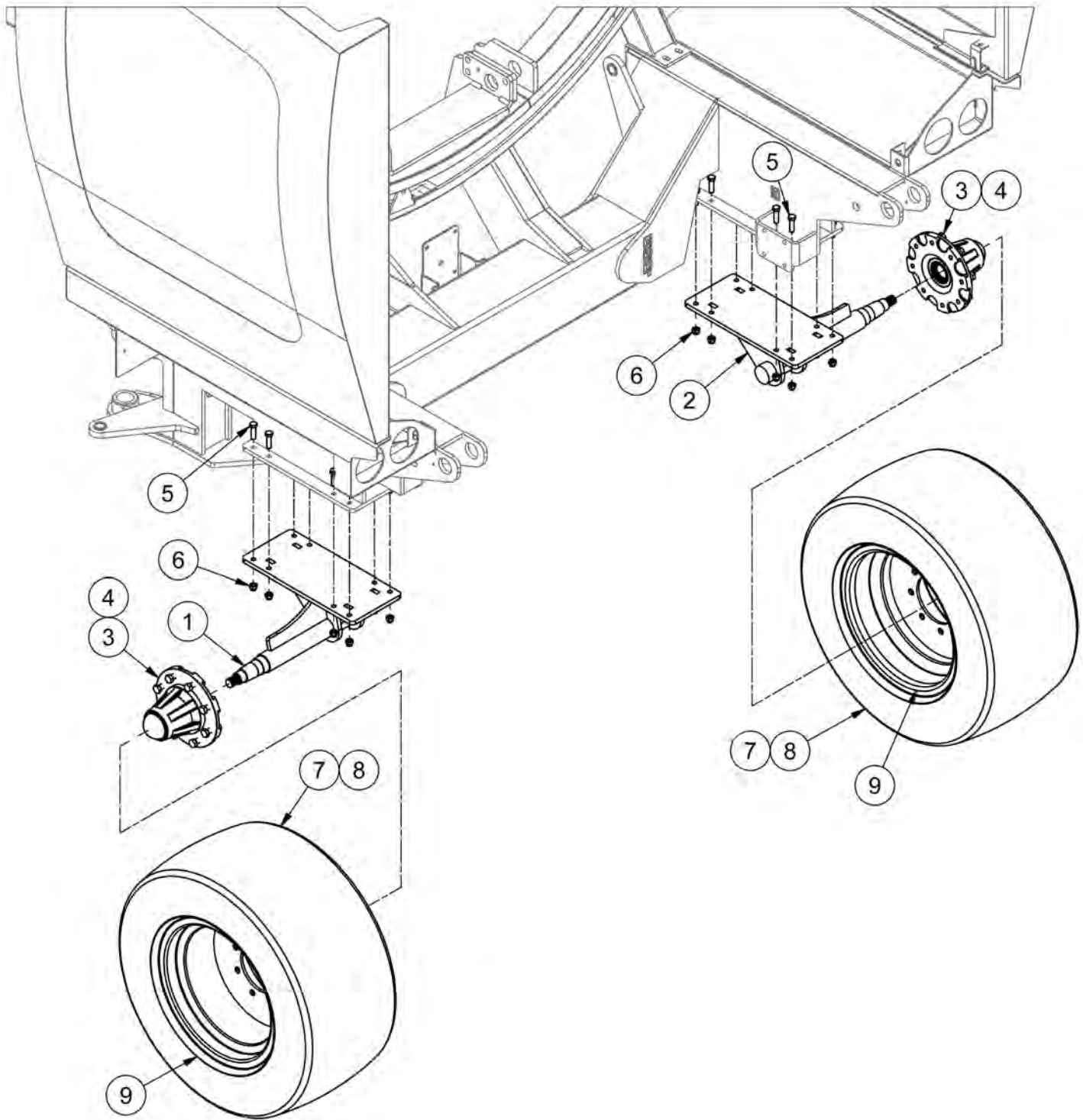
Rear Rollers



Rear Rollers

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	45092	CYL 2.5 X 12 (25FEM12-10)
2	2	45903	Keyway One Way Bearing 35X72X17
3	1	46370	TL360 Rear Roller
4	1	46502	Rear Roller Arm
5	2	46534	Rear Roller Arm Pin
6	4	46537	Rear Roller Pin
7	2	46539	Rear Elbow Pin
8	2	46541	Rear Roller Attachment Pin
9	2	46574	Back Roller Arm Linkage
10	2	46578	Roller Arm Inside Linkage
11	1	46607	Roller Arm Angle Sensor
12	1	46630	Rear Chain Guard (TL360)
13	1	46841	Bale Bumper Roller
14	1	47649	Roller Drive Sprocket
15	4	48443	2.25 OD x 2 ID x 1 LG Igus [Q2SI-3236-20]
16	1	48588	Chain - #50, 41 Link + Conn
17	2	BEA SA207-22-P5Z	Bearing, Insert 1.375" - BEA SB207-22 Plated Flange Bearing
18	2	BEA UCF206-18	Flange Block, UCF206-18 National 4-Bolt 1.12" Bearing
19	6	CB3/8-16X1CZ5	Carriage Bolt - 3/8-16 x 1" Grade 5 Zinc
20	1	FW 1/2	Flatwasher - 1/2" Zinc Plated USS
21	17	FW 3/8	Flatwasher - 3/8" Zinc Plated USS
22	12	GFI-1618-08	IGUS Iglide G300 - Flange Bearing - Inch
23	1	HB1/2-13X0.75Z5	Hex Bolt 1/2-13x3/4 Grade 5 Zinc Plated Hex Cap Screw
24	8	HB1/2-13X1.75Z5	Hex Bolt 1/2-13x1 3/4 Grade 5 Zinc Plated Hex Cap Screw
25	4	HB1/4-20X1Z5	Hex Bolt 1/4-20x1 Grade 5 Zinc Plated Hex Cap Screw
26	4	HB3/8-16X0.5Z5	Hex Bolt 3/8-16x1/2 Grade 5 Zinc Plated Hex Cap Screw
27	3	HB3/8-16X0.75Z5	Hex Bolt 3/8-16x3/4 Grade 5 Zinc Plated Hex Cap Screw
28	1	HB3/8-16X0.625Z5	Hex Bolt 3/8-16x5/8 Grade 5 Zinc Plated Hex Cap Screw
29	8	HB3/8-16X1Z5	Hex Bolt 3/8-16x1 Grade 5 Zinc Plated Hex Cap Screw
30	2	KS48073	Keystock .313 X 1.500
31	8	LN1/2-13NCZ5	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut
32	3	LN1/4-20NCZ5	LN 1/4-20 Zinc Plated Nylon Insert Lock Nut
33	6	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut
34	1	SPR50B141.0	Sprocket 50B14 1.0 Bore .25 Key
35	1	VAL MLHPQ200CN4D	Hyd. Motor w/ Needle Brgs. (Hoop Motor)

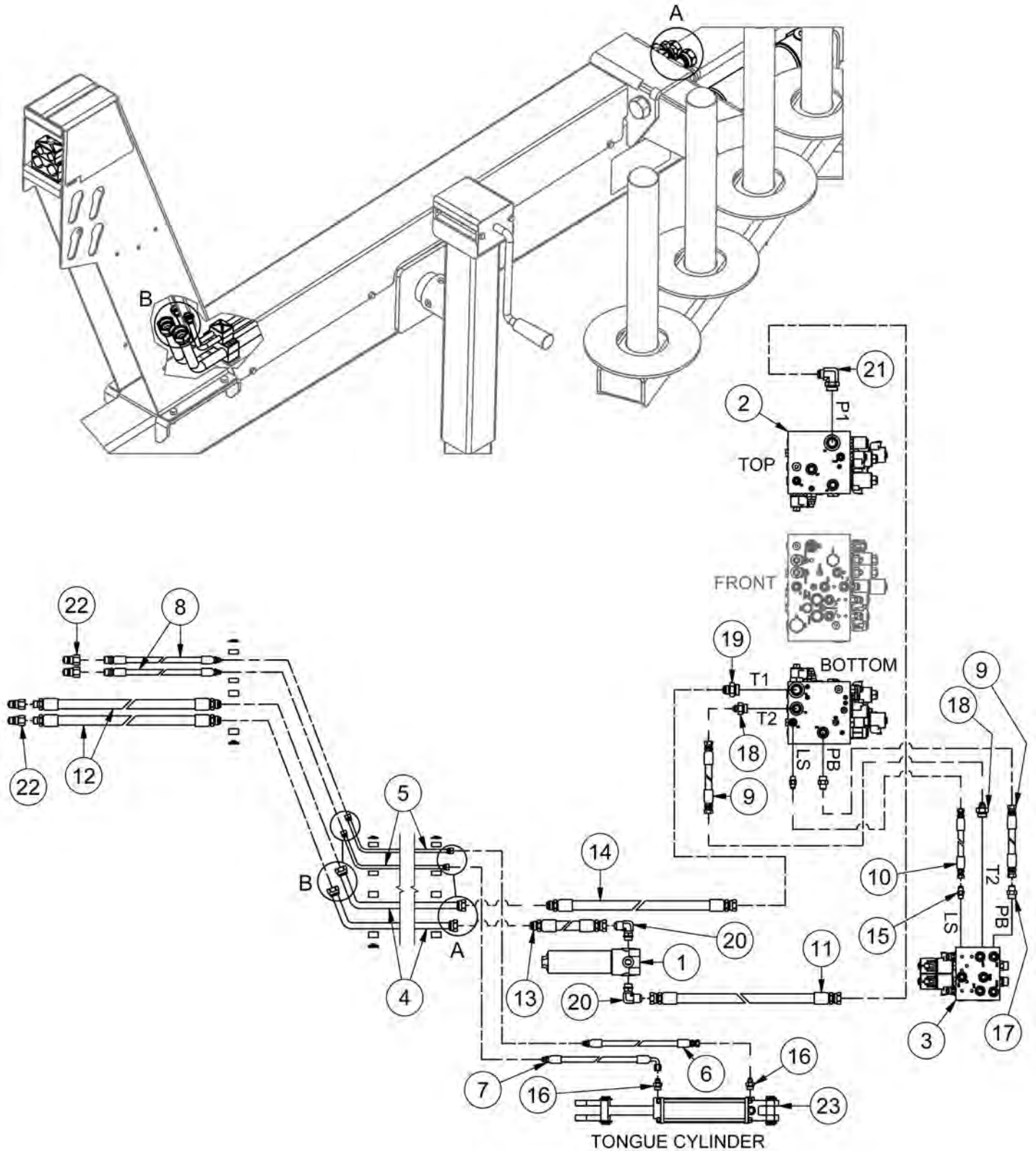
Axles



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	46583	Left Side Axle
2	1	46585	Right Side Axle
3	2	HUB 6500	6500 Hub c/w Parts
4	2	HUB 6500-CCS	HUB 6500 Bearing & Seal Kit
5	16	HB1/2-20X1.75YZ8	Hex Bolt 1/2-20x1 3/4 Grade 8 Zinc Hex Cap Screw
6	16	LN1/2-20TFZ5	Center Locknuts (1/2-20) 2-Way Fine Thread
7	2	WHE 15X55X17	Complete Wheel & Tire
8	1	WHE 15X55X17T	15/55-17 18 Ply (Tire Only)
9	1	WHE 17138	Rim - 17 X 15 X 8 Bolt -16mm Offset

Section 2: Hydraulics

Hydraulic Layout - Power Unit Circuits

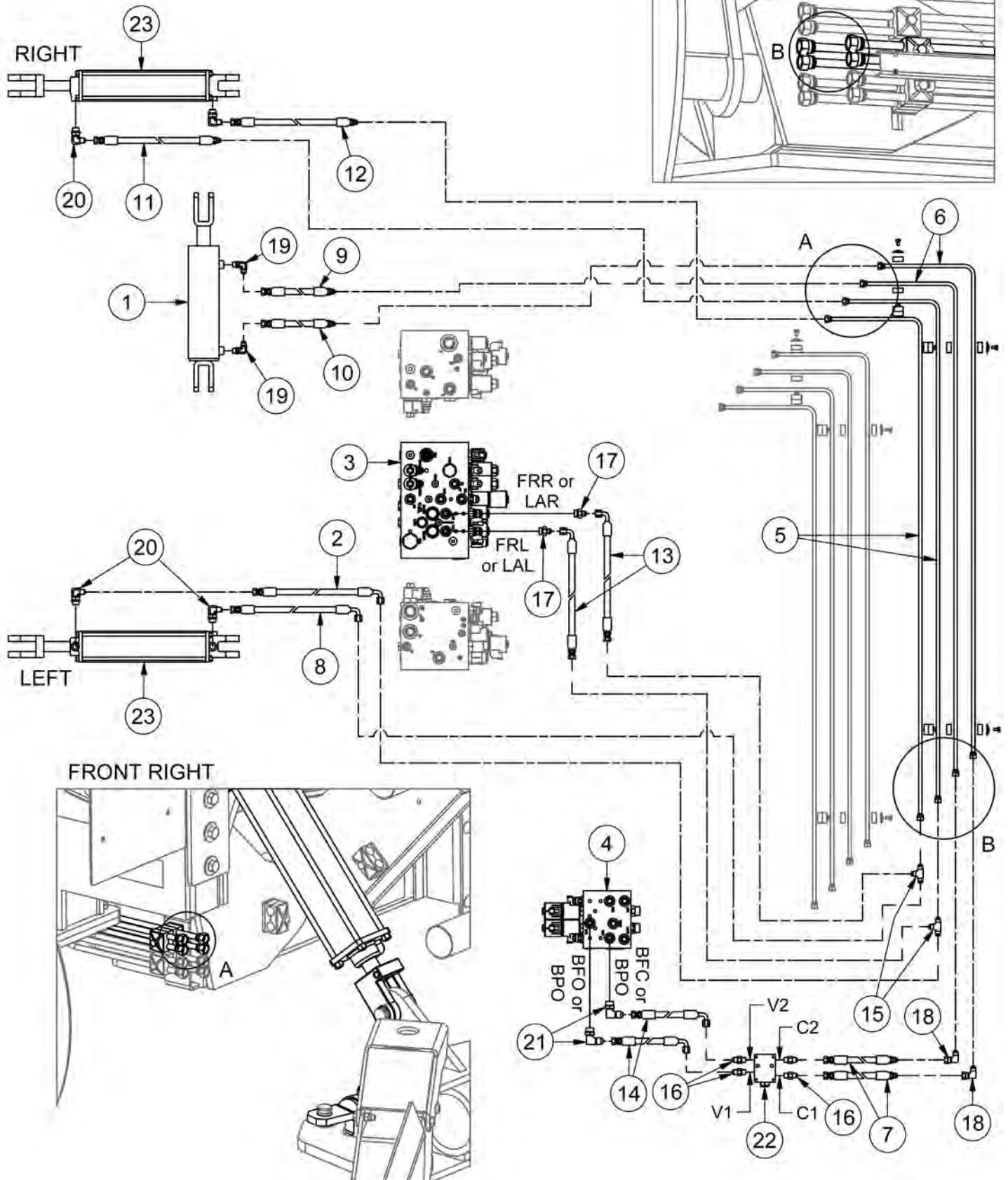


Hydraulic Layout - Power Unit Circuits

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	41878	High Pressure Filter
2	1	46201	TL360 Primary Manifold
3	1	46202	TL360 Secondary Manifold
4	2	46838	Main Tractor Line
5	2	48491	Tongue Cylinder Line
6	1	48752	Hose - HH31 - 6AT1(6FJX,6MJ) HCL 31"
7	1	48753	Hose - HH38 - 6AT1(6FJX90,6MJ) HCL 38"
8	2	48754	Hose - HH84 - 6AT1(8MP,6MJ) HCL 84"
9	2	48755	Hose - HH24 - 8AT1(8FJXH,8FJXH) HCL 24"
10	1	48756	Hose - HH21 - 6AT1(6FJXH,6FJXH) HCL 21"
11	1	48792	Hose - HH50 - 12AT1(12FJX,12FJX) HCL 50"
12	2	48793	Hose - HH84 - 12AT1(8MP,12MJ) HCL 84"
13	1	48794	Hose - HH7.5 - 12AT1(12FJX,12MJ) HCL 7.5"
14	1	48795	Hose - HH35 - 12AT1(12FJX,12MJ) HCL 35"
15	2	HF 6400-6-6	Hydraulic Fitting - Male JIC - Male ORB
16	2	HF 6400-6-8	Hyd Fitting -Male JIC - Male ORB
17	2	HF 6400-8-10	Hyd Fitting - Male JIC - Male ORB
18	2	HF 6400-8-12	Hyd. Fitting
19	1	HF 6400-12-16	Hydraulic Adapter JIC to O-Ring
20	2	HF 6801-12-10	Forged Fitting - 3/4" JIC X 5/8" SAE 90 Degree Elbow
21	1	HF 6801-12-16	Forged Fitting - JIC x SAE 90 Deg. Elbow
22	4	HF 8010-4	Quickcoupler 1/2" Male Tip
23	1	TL500-100-082	Hydraulic Cylinder 2.5" Bore x 8" Stroke

Hydraulic Layout - Fork Circuits

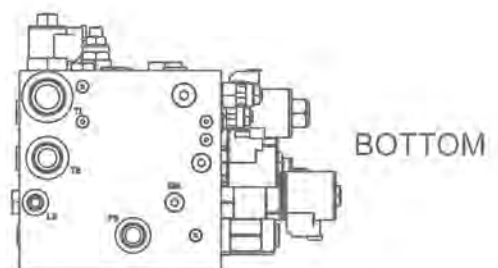
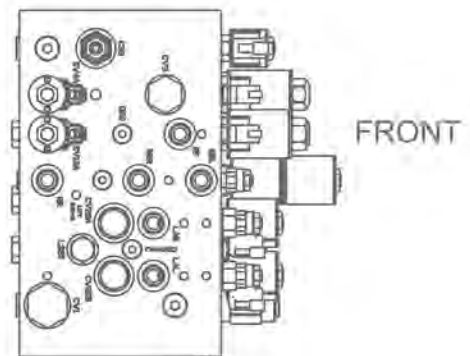
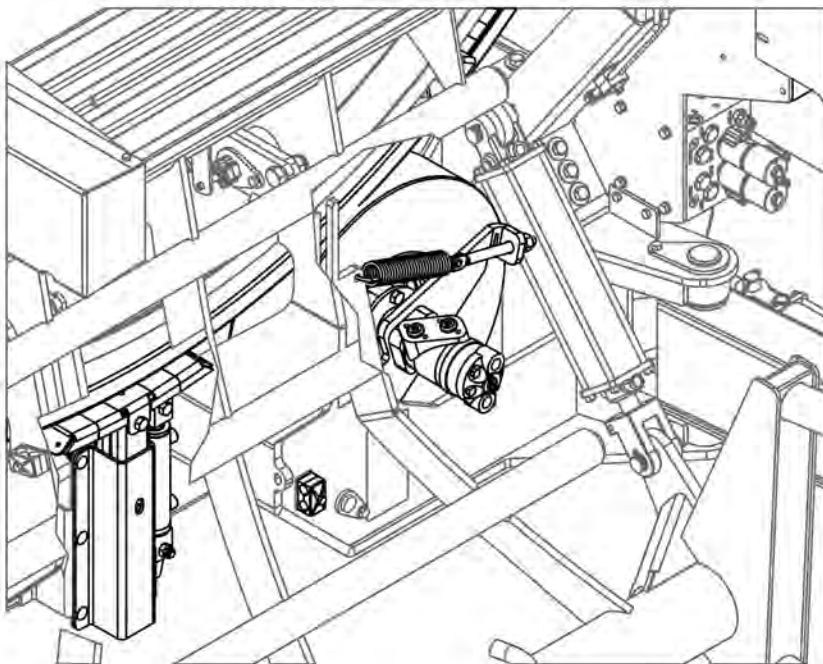
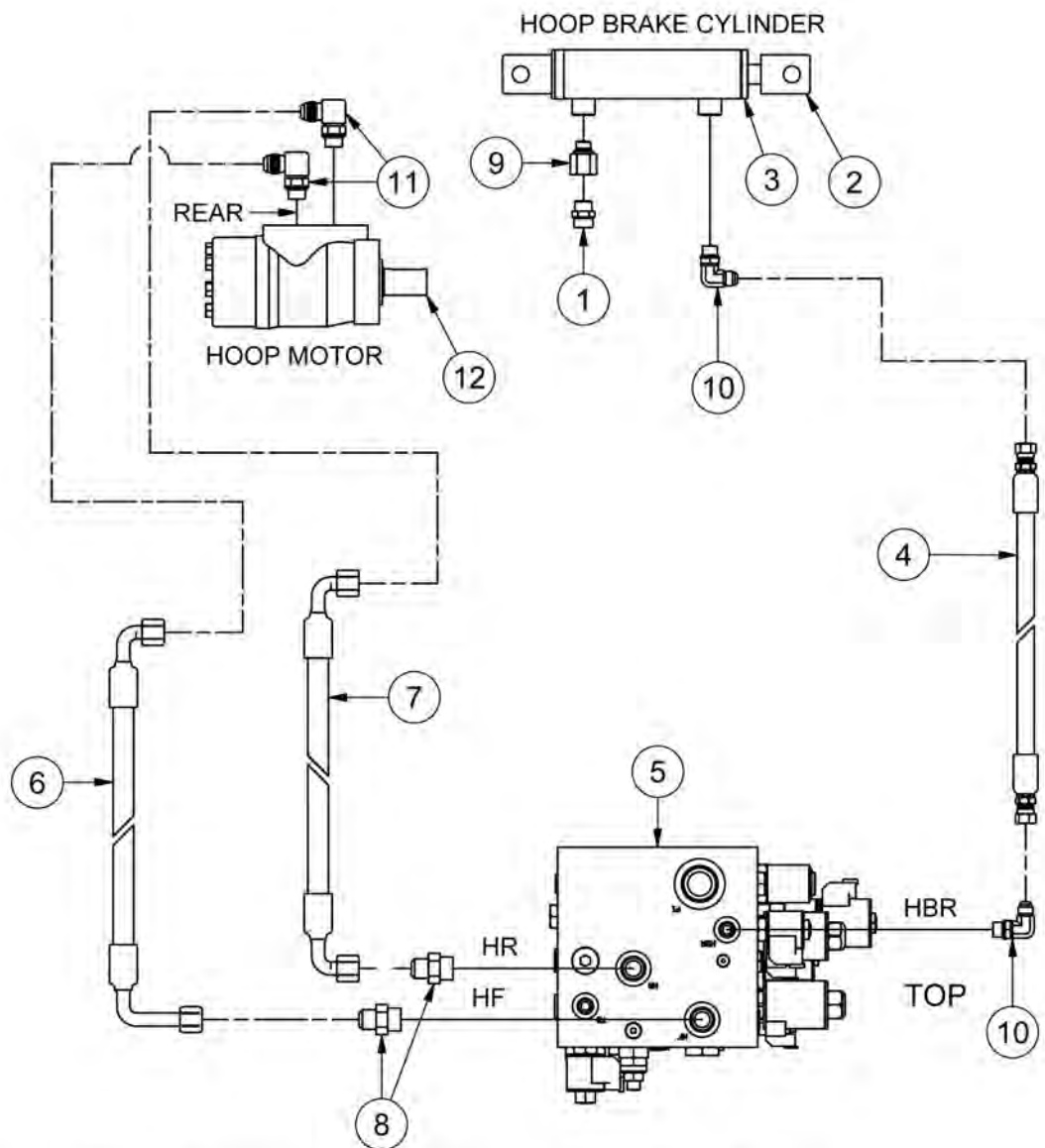
REAR LEFT



Hydraulic Layout - Fork Circuits

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	1	36422	Hydraulic Cylinder 3" Bore x 8" Stroke x 1.5" Rod	Bale Finger Function
2	1	41548	Hose - HH44-6AT1(6FJX-6FJX90S) HCL 44"	
3	1	46201	TL360 Primary Manifold	
4	1	46202	TL360 Secondary Manifold	
5	2	46807	Inner Line	
6	2	46812	Outer Line	
7	2	48670	Hose - HH44 - 6AT1(6FJXH,6MJ) HCL 44"	
8	1	48771	Hose - HH29 - 6AT1(6FJX,6FJX90S) HCL 29"	
9	1	48772	Hose - HH60 - 6AT1(6FJX,6MJ) HCL 60"	
10	1	48773	Hose - HH67 - 6AT1(6FJX,6MJ) HCL 67"	
11	1	48774	Hose - HH25 - 6AT1(6FJX,6MJ) HCL 25"	
12	1	48775	Hose - HH35 - 6AT1(6FJX,6MJ) HCL 35"	
13	2	48779	Hose - HH68 - 6AT1(6FJX,6FJX90S) HCL 68"	
14	2	49181	Hose - HH10 - 6AT1(6FJX,6FJX90S) HCL 10"	
15	2	HF 2603-6-6-6	Male JIC Tee	
16	4	HF 6400-6-6	Hydraulic Fitting - Male JIC - Male ORB	
17	2	HF 6400-6-8	Hyd Fitting -Male JIC - Male ORB	
18	2	HF 6500-6-6	Elbow 6MJIC to 6FJIC	
19	2	HF 6801-6-6	Hydraulic Fitting - 90 Degree JIC to O-Ring	
20	4	HF 6801-6-8 NWO	Adapter	
21	2	HF 6801-8-6	Hydraulic Fitting - Male JIC - Male ORB 90°	
22	1	LA-VBSL08S	Pilot Operated Check Valve	
23	2	TL550-100-107	3 X 12 Hydraulic Cylinder	Loading Arm Function

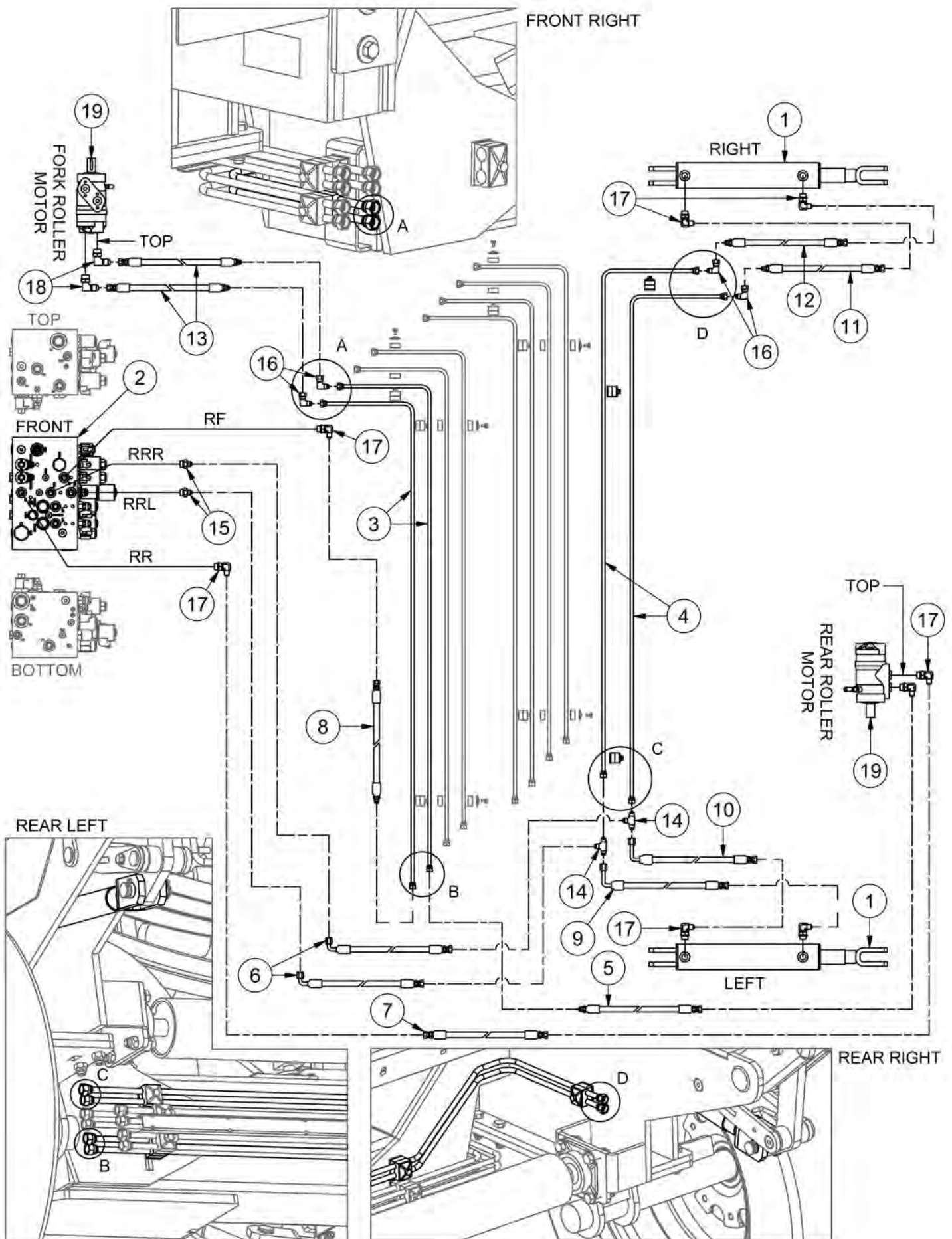
Hydraulic Layout - Hoop Circuits



Hydraulic Layout - Hoop Circuits

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	28598	Air Breather
2	1	31326	Hydraulic Cylinder
3	1	SK SLK-1510	Seal Kit
4	1	31642	Hose - HH76- 6AT1(6FJX-6FJX) HCL 76"
5	1	46201	TL360 Primary Manifold
6	1	48777	Hose - HH58 - 8AT1(8FJX90,8FJX90L) HCL 58"
7	1	48778	Hose - HH58 - 8AT1(8FJX90,8FJX90) HCL 58"
8	2	HF 6400-8-10	Hyd Fitting - Male JIC - Male ORB
9	1	HF 6405-6-6	Hydraulic Fitting- 6 Male SAE-ORB - 6 Female NPT
10	2	HF 6801-6-6	Hydraulic Fitting - 90 Degree JIC to O-Ring
11	2	HF 6801-8-8	Hyd. Fitting- 1/2" JIC- 1/2" SAE 90 Deg Elbow
12	1	VAL MLHPQ200CN4D	Hyd. Motor w/ Needle Brgs.

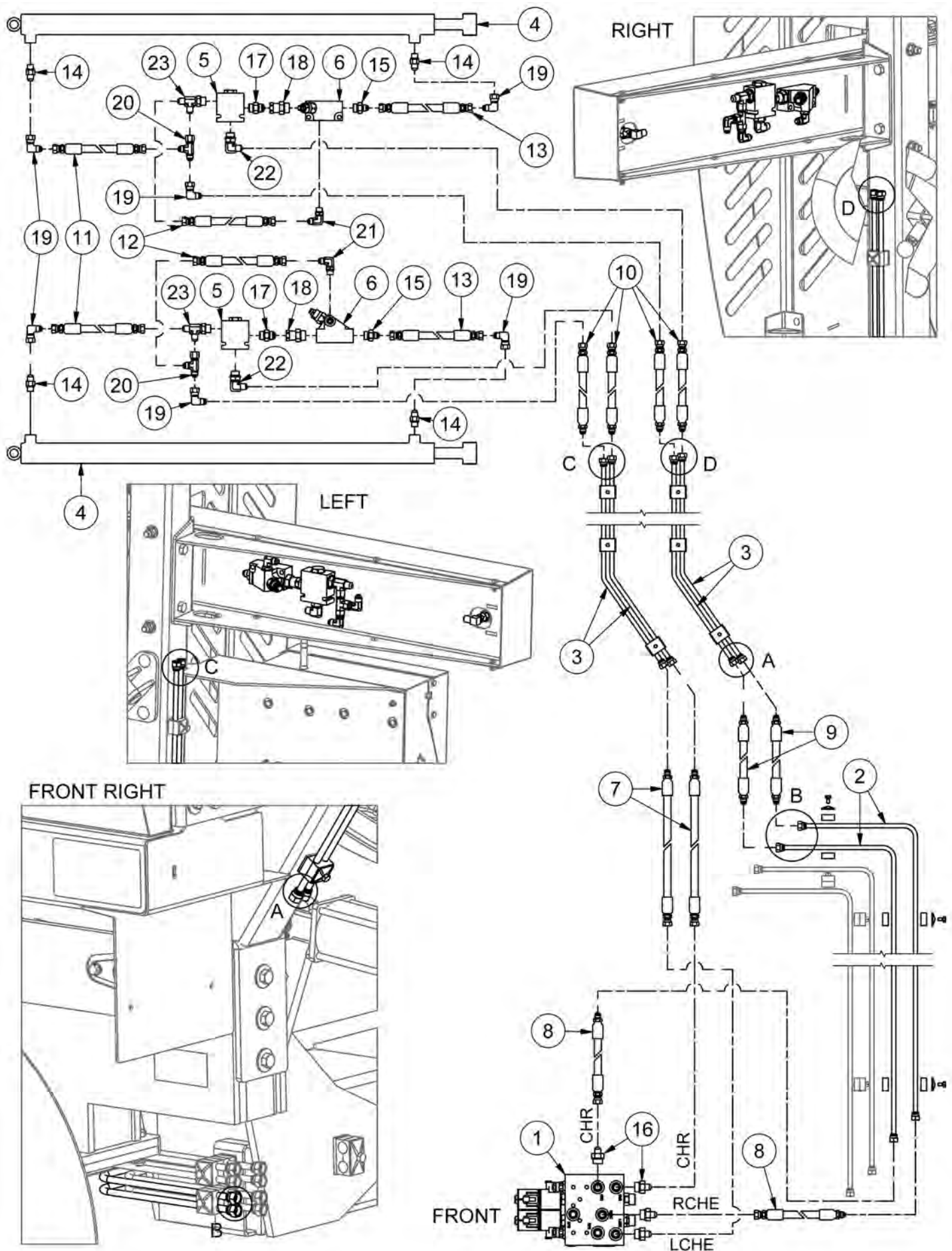
Hydraulic Layout - Roller Circuits



Hydraulic Layout - Roller Circuits

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	45092	CYL 2.5 X 12 (25FEM12-10)
2	1	46201	TL360 Primary Manifold
3	2	46807	Inner Line
4	2	46808	Back Roller Line
5	1	48773	Hose - HH67 - 6AT1(6FJX,6MJ) HCL 67"
6	2	48779	Hose - HH68 - 6AT1(6FJX,6FJX90S) HCL 68"
7	1	48780	Hose - HH110- 6AT1(6FJX-6FJX) HCL 110"
8	1	48782	Hose - HH58 - 6AT1(6FJX,6MJ) HCL 58"
9	1	48783	Hose - HH25 - 6AT1(6FJX,6FJX90L) HCL 25"
10	1	48784	Hose - HH39 - 6AT1(6FJX,6FJX90L) HCL 39"
11	1	48785	Hose - HH34 - 6AT1(6FJX,6MJ) HCL 34"
12	1	49178	Hose - HH20 - 6AT1(6FJX,6MJ) HCL 20"
13	2	49179	Hose - HH51 - 6AT1(6FJX,6MJ) HCL 51"
14	2	HF 2603-6-6-6	Male JIC Tee
15	2	HF 6400-6-8	Hyd Fitting -Male JIC - Male ORB
16	4	HF 6500-6-6	Elbow 6MJIC to 6FJIC
17	8	HF 6801-6-8 NWO	Adapter
18	2	HF 6801-8-6	Hydraulic Fitting - Male JIC - Male ORB 90°
19	2	VAL MLHPQ200C7URS-NE	Hydraulic Motor Rear Ported w/ Sensor

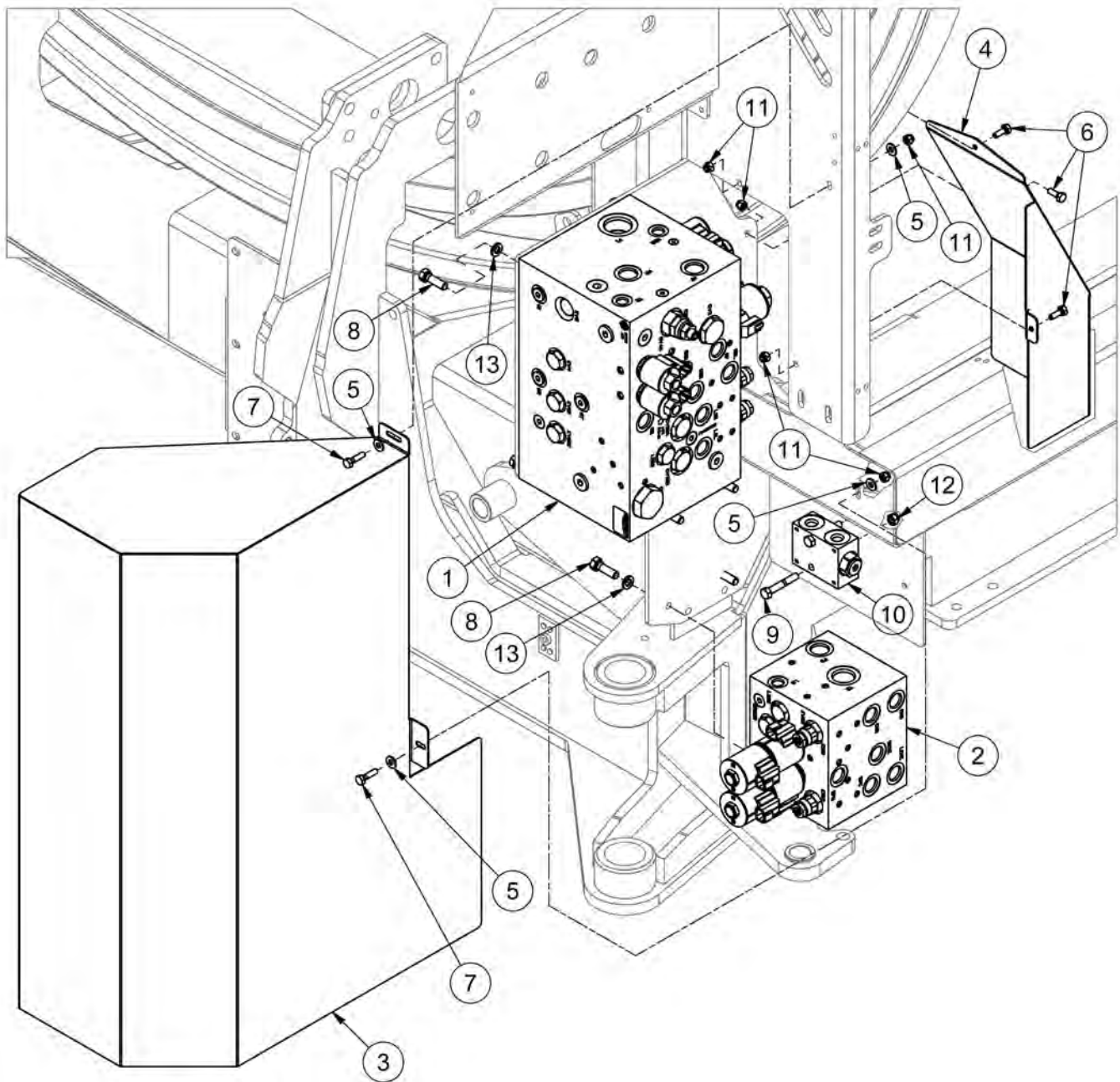
Hydraulic Layout - Cut & Hold Circuits



Hydraulic Layout - Cut & Hold Circuits

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	46202	TL360 Secondary Manifold
2	2	46812	Outer Line
3	4	46813	Post Tube
4	2	47786	Hydraulic Cylinder 1.5 x 34 x 1.0 Shaft
5	2	48757	Pilot Operated Check Valve - 8ORB 3 Port
6	2	48758	C'Bal Valve - 8ORB 2 Port, 6ORB Valve & Return
7	2	48768	Hose - HH30 - 6AT1(6FJXH,6MJ) HCL 30"
8	2	48769	Hose - HH37 - 6AT1(6FJXH,6MJ) HCL 37"
9	2	48776	Hose - HH25 - 6AT1(6MJ,6MJ) HCL 25"
10	4	49180	Hose - HH18 - 6AT1(6FJX,6MJ) HCL 18"
11	2	49182	Hose - HH10 - 6AT1(6FJX,6FJX) HCL 10"
12	2	49183	Hose - HH20 - 6AT1(6FJX,6FJX) HCL 20"
13	2	49184	Hose - HH13 - 6AT1(6FJX,6FJX) HCL 13"
14	4	HF 6400-6-6	Hydraulic Fitting - Male JIC - Male ORB
15	2	HF 6400-6-8	Hyd Fitting -Male JIC - Male ORB
16	4	HF 6400-6-10	Hydraulic Fitting - Male JIC - Male ORB
17	2	HF 6400-8-8	Hydraulic Fitting - O-Ring to JIC Adapter
18	2	HF 6402-10-8	Hyd. Fitting #10 Male O-Ring to #8 F JIC
19	6	HF 6500-6-6	Elbow 6MJIC to 6FJIC
20	2	HF 6602-6-6-6	Hyd. Fitting Run Tee M-JIC/F-JIC-M-JIC
21	2	HF 6801-6-6	Hydraulic Fitting - 90 Degree JIC to O-Ring
22	2	HF 6801-6-8 NWO	Adapter
23	2	HF 6804-6-8-6	Hydraulic Fitting - Male JIC - Male ORB Tee

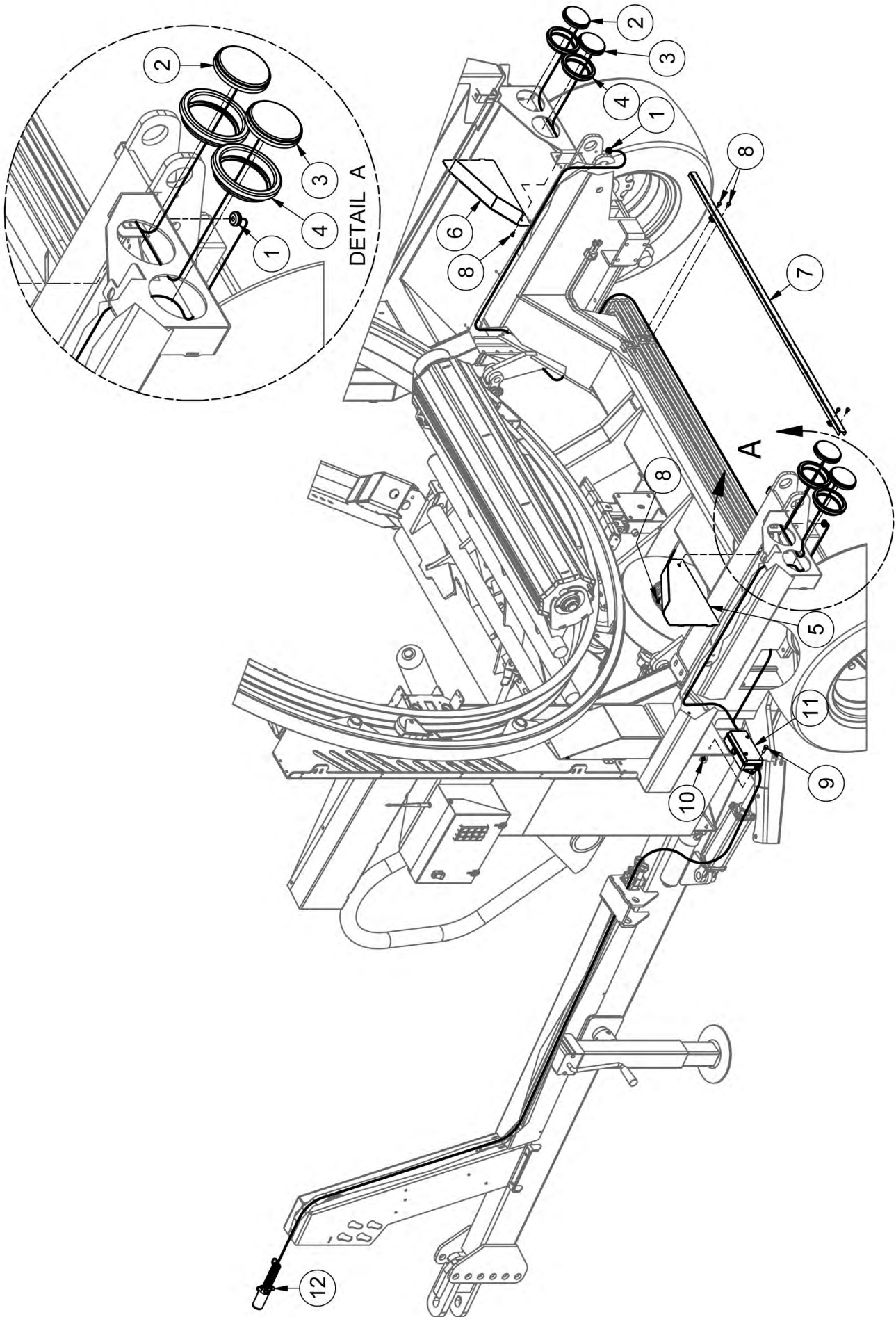
Hydraulic Manifolds



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	46201	TL360 Primary Manifold
2	1	46202	TL360 Secondary Manifold
3	1	46854	Valve Shield
4	1	47471	HRP 0.075 in
5	4	FW 1/4	Flatwasher - 1/4" Zinc Plated USS
6	3	HB1/4-20X0.75Z5	Hex Bolt 1/4-20x3/4 Grade 5 Zinc Plated Hex Cap Screw
7	2	HB1/4-20X1Z5	Hex Bolt 1/4-20x1 Grade 5 Zinc Plated Hex Cap Screw
8	8	HB3/8-16X1.25Z5	Hex Bolt 3/8-16x1 1/4 Grade 5 Zinc Plated Hex Cap Screw
9	2	HB5/16-18X2Z5	Hex Bolt 5/16-18x2 Grade 5 Zinc Plated Hex Cap Screw
10	1	LA-VBSL08S	Pilot Operated Check Valve
11	5	LN1/4-20NCZ5	LN 1/4-20 Zinc Plated Nylon Insert Lock Nut
12	2	LN5/16-18NCZ5	LN 5/16-18 Zinc Plated Nylon Insert Lock Nut
13	8	LW 3/8	LW - 3/8" Zinc Plated Medium Split

Section 3: Electrical

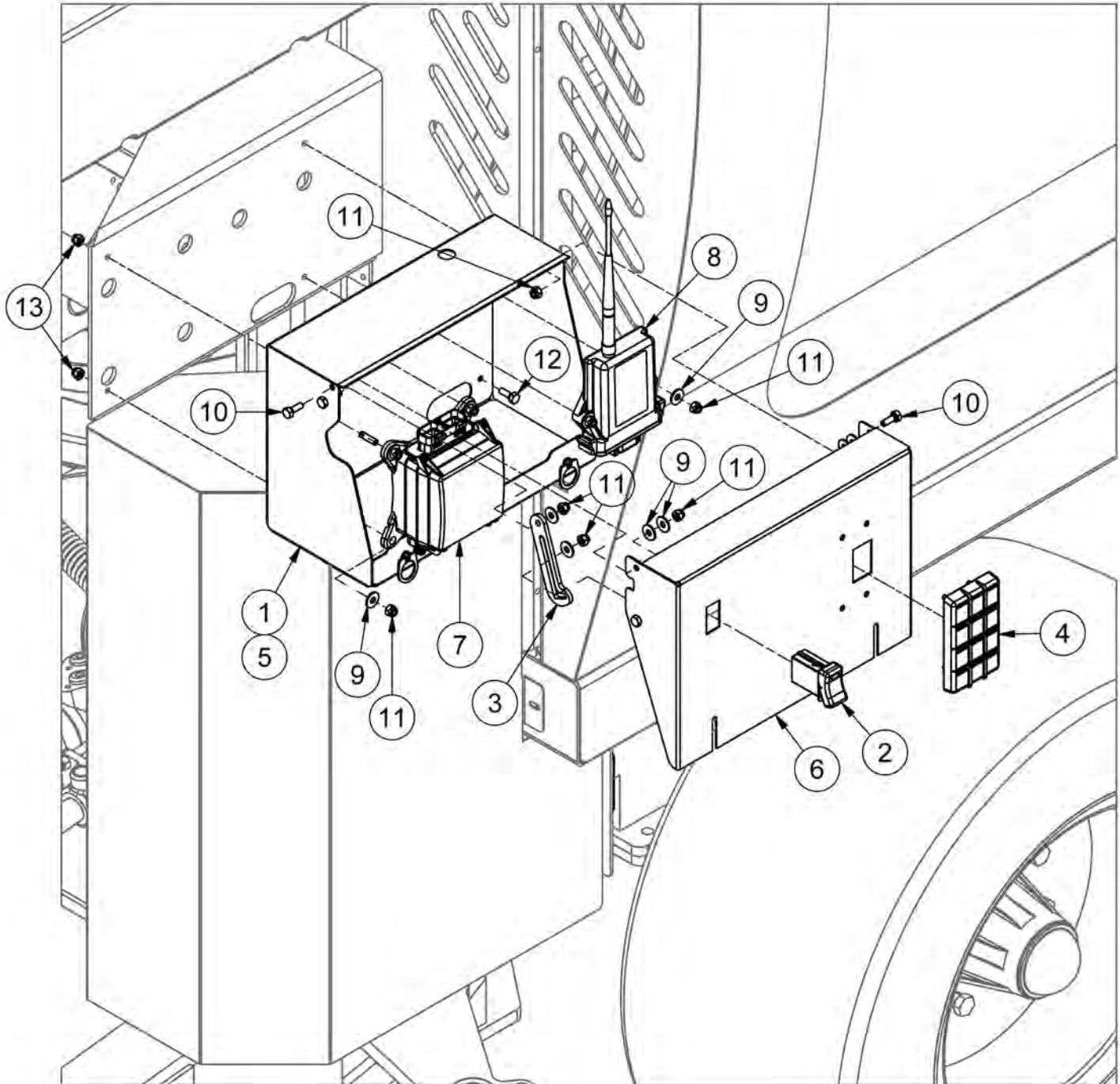
Rear Lights



Rear Lights

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	30862	5/16 ID Rubber Grommet
2	2	31788	Round Red Tail Light
3	2	31789	Amber Tail Light
4	4	31798	4" Rubber Grommet
5	1	46811	Left Light Cover
6	1	46814	Right Light Cover
7	1	48595	TL360 Harness Guard
8	6	HB1/4-20X0.5Z5	Hex Bolt 1/4-20x1/2 Grade 5 Zinc Plated Hex Cap Screw
9	2	HB5/16-18X1Z5	Hex Bolt 5/16-18x1 Grade 5 Zinc Plated Hex Cap Screw
10	2	LN5/16-18NCZ5	LN 5/16-18 Zinc Plated Nylon Insert Lock Nut
11	1	TL82-1000	Junction Box, 7 Terminal
12	1	TL550-200-117	7 Pin Plug

Control Panel



Control Panel

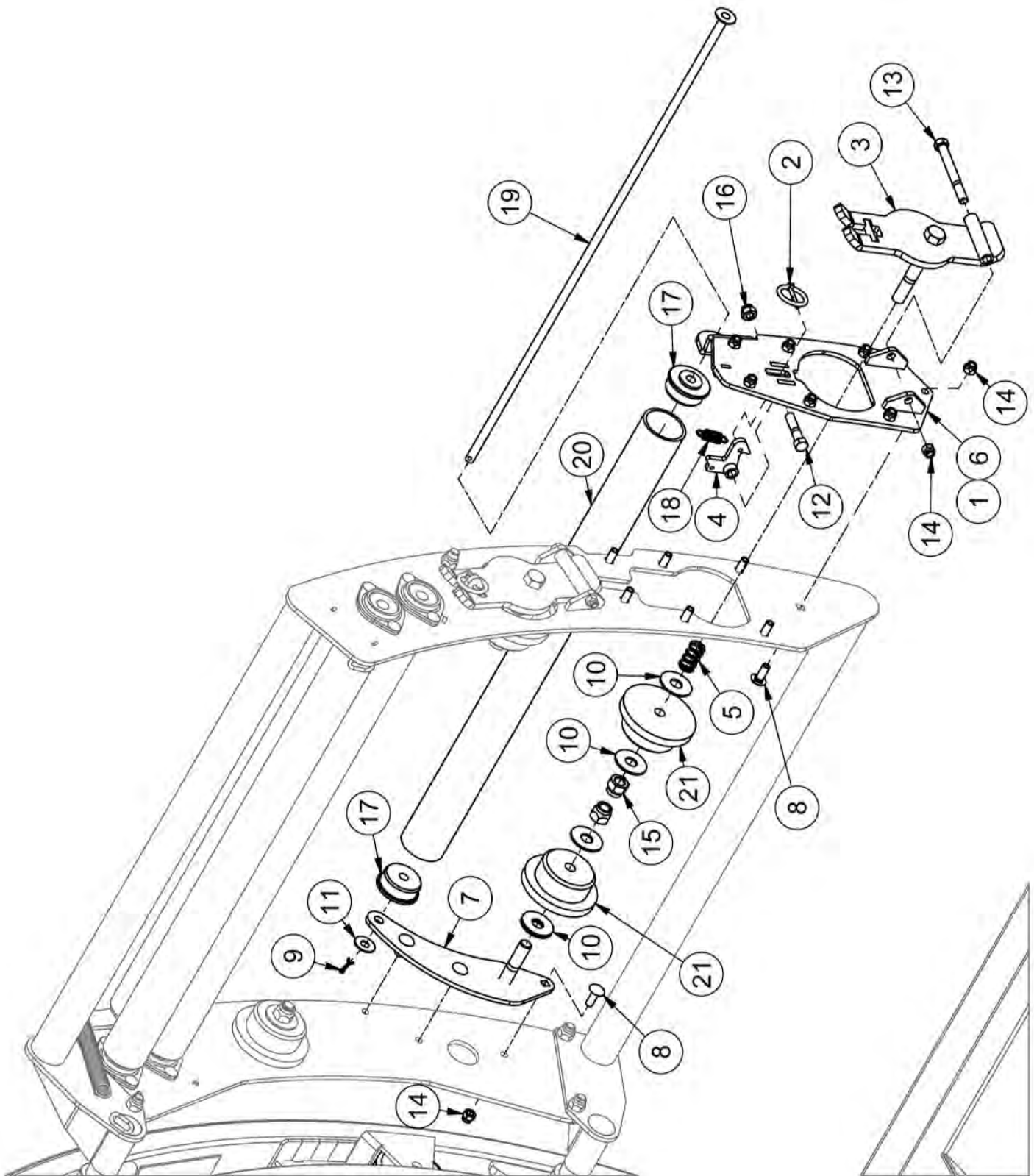
ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	1	46588	Control Panel	Incl. Items 2-11
2	1	33322	Function Switch w/ Light	
3	1	35637	Control Panel Link	
4	1	46206	12-Button Keypad	
5	1	46587	Control Panel Base	
6	1	46603	Front Control Box Panel	
7	1	47481	Severe Electrical Center PDM	
8	1	47482	Remote Receiver	
9	12	FW 1/4	Flatwasher - 1/4" Zinc Plated USS	
10	2	HB1/4-20X0.75Z5	Hex Bolt 1/4-20x3/4 Grade 5 Zinc Plated Hex Cap Screw	
11	10	LN1/4-20NCZ5	LN 1/4-20 Zinc Plated Nylon Insert Lock Nut	
12	4	HB1/4-20X0.75Z5	Hex Bolt 1/4-20x3/4 Grade 5 Zinc Plated Hex Cap Screw	
13	4	LN1/4-20NCZ5	LN 1/4-20 Zinc Plated Nylon Insert Lock Nut	

Wiring Harness

Not available at time of publication.

Section 4: Options

Twin Wrap



Twin Wrap

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	48384	TL360 Twin Wrap Assembly
2	1	25680	Linch Pin 3/16 X 1.5
3	1	41641	Spool Latch
4	1	41645	Latch Hook
5	1	41916	Twin Wrap Spring
6	1	48385	Bolt-on Latch Bracket
7	1	48387	Bolt-on Roller Bracket
8	10	CB3/8-16X1CZ5	Carriage Bolt - 3/8-16 x 1" Grade 5 Zinc
9	1	CP 1/8 X 1	Pin,Cotter - 1/8" X 1" Zinc Finish Extended Prong
10	5	FW 5/8	Flatwasher - 5/8" Zinc Plated USS
11	1	FW 7/16	Flatwasher - 7/16" Zinc Plated USS
12	1	HB7/16-14X2Z5	Hex Bolt 7/16-14x2 Grade 5 Zinc Plated Hex Cap Screw
13	1	HB7/16-14X4Z5	Hex Bolt 7/16-14x4 Grade 5 Zinc Plated Hex Cap Screw
14	11	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut
15	2	LN5/8-11NCZ5	LN 5/8-11 Zinc Plated Nylon Insert Lock Nut
16	1	LN7/16-14NCZ5	LN 7/16-14 Zinc Plated Nylon Insert Lock Nut
17	2	TL500-100-021	Plastic Roller Cap
18	1	TL500-100-062	Extension Spring
19	1	TL550-100-018	Plastic Roller Pin
20	1	TL550-100-022	Palstic Roller
21	2	TL550-200-012	Plastic Wrap Spool

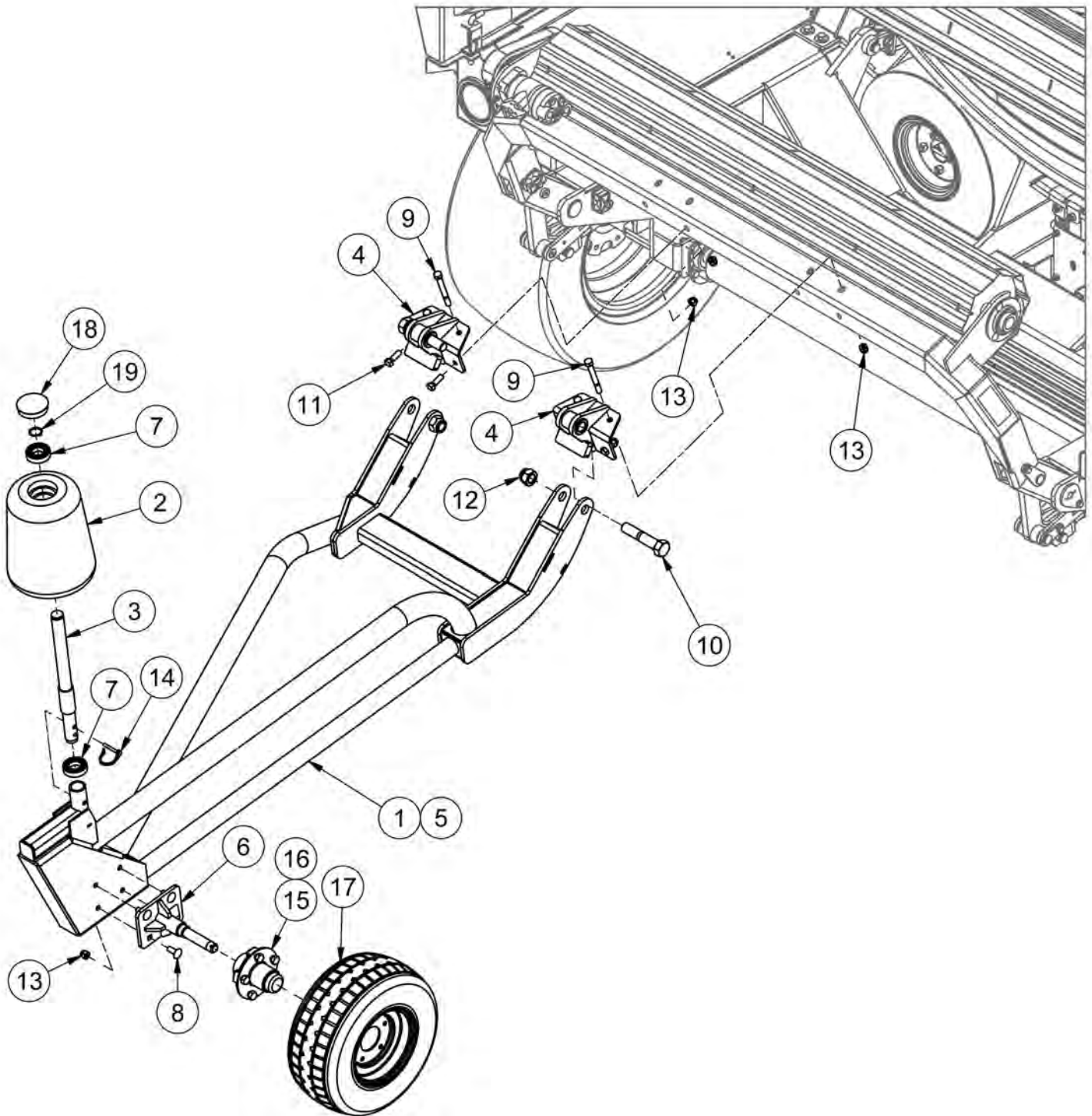
TLPSSKW - Wireless Plastic Sensor Shutdown Kit

Not available at time of publication.

TLPSSKW - Wireless Plastic Sensor Shutdown Kit

Not available at time of publication.

48528 - Bale Tip



48528 - Bale Tip

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	1	48528	Complete TL360 Bale Tipper Assembly	Incl. All Items
2	1	25717	Guide Roller Bobbin	
3	1	47294	Guide Roller Shaft	
4	2	47490	Bale Side Tip Mount	
5	1	48506	Bale Side Tip	
6	1	48520	Bale Tipper Spindle Assembly	
7	2	BEA 25716	Guide Roller Bearing - 1.25 "	
8	3	CB1/2-13X1.25CZ5	Carriage Bolt - 1/2-13 x 1 1/4" Grade 5 Zinc	
9	4	HB1/2-13X4.5Z5	Hex Bolt 1/2-13x4 1/2 Grade 5 Zinc Plated Hex Cap Screw	
10	2	HB1-8X5Z5	Hex Bolt 1-8x5 Grade 5 Zinc Plated Hex Cap Screw	
11	4	HB1/2-13X1.5Z5	Hex Bolt 1/2-13x1 1/2 Grade 5 Zinc Plated Hex Cap Screw	
12	2	LN1-8NCZ5	LN 1-8 Zinc Plated Nylon Insert Lock Nut	
13	12	LN1/2-13NCZ5	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut	
14	1	LP B1995	Pin - Lock Pin 1/4 X 1 3/4	
15	1	PP00665	HUB1000	
16	1	HUB1000-CCS	Bearing and Seal Kit HUB1000	
17	1	PP00825	Tire and Rim 16.5 X 6.5-8	
18	1	TL245-057	3" Plug	
19	1	RR 1.188	Retaining Ring-1 3/16- External	

Night Lights

Not available at time of publication.

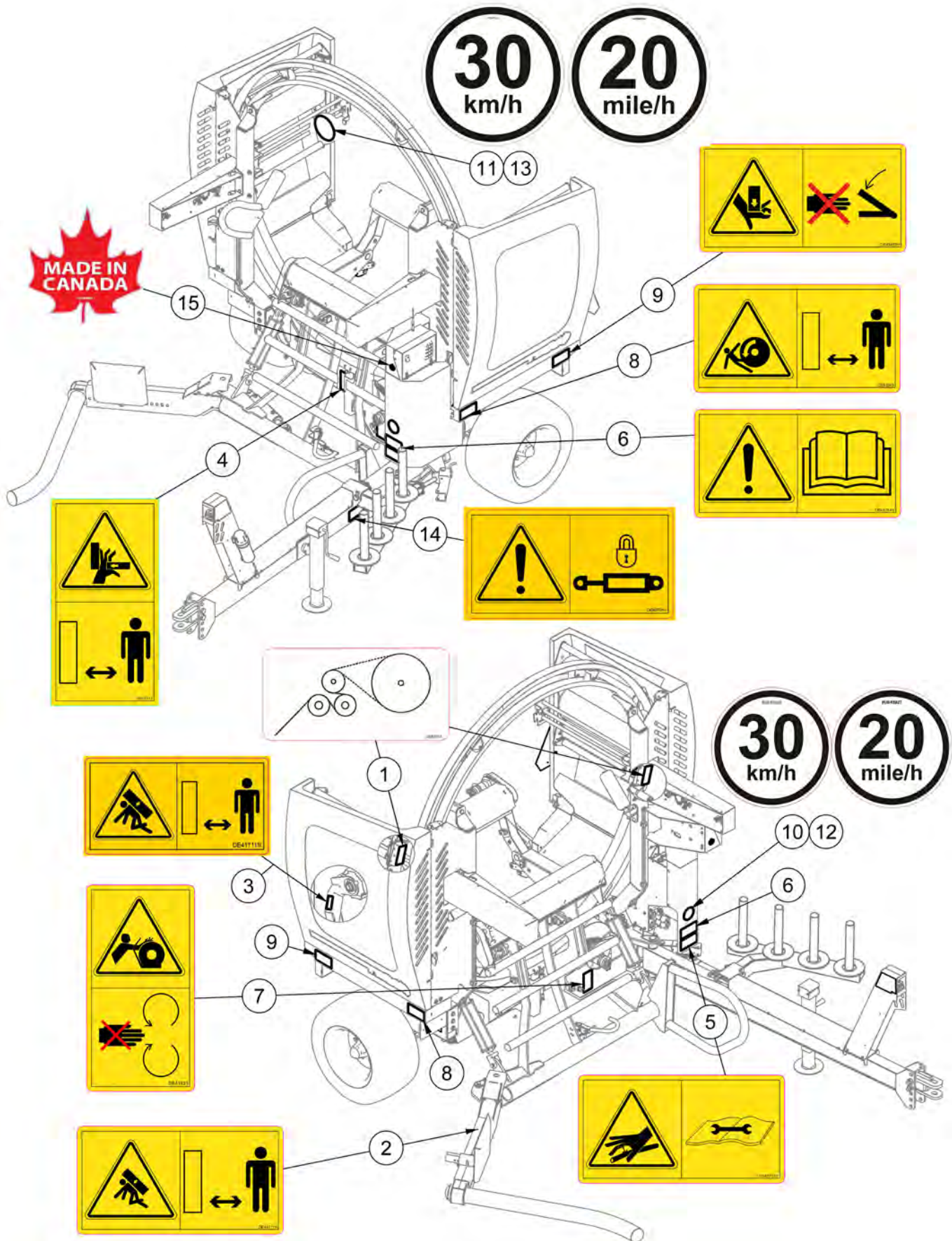
Night Lights

Not available at time of publication.

Section 5: Decals

Safety Decal Locations

NOTE: Decals not to scale.



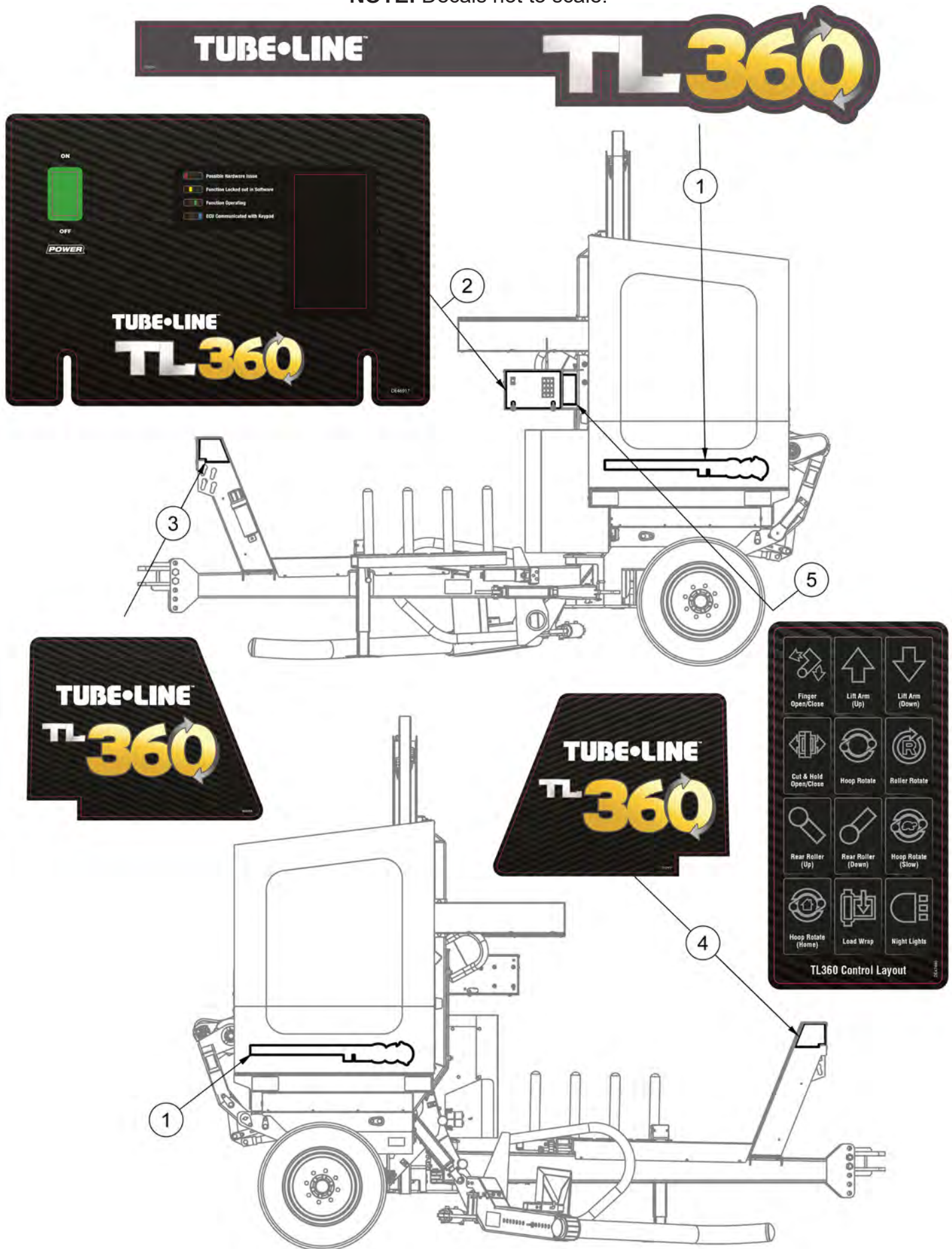
Safety Decal Locations

NOTE: See Operator's Manual for in depth decal explanations.

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	2	DE23974	Wrap Instruction Decal	
2	1	DE41711H	ISO Decal - Angled Crush Horizontal	
3	2	DE41711S	ISO Decal - Angled Crush Small	
4	1	DE41712	ISO Decal - Hand Pinch Point	
5	1	DE41713H	ISO Decal - High Pressure Fluid Horizontal	
6	1	DE41714H	ISO Decal - Read OM Horizontal	
7	1	DE41925	ISO Decal - Hoop Wheel Entanglement	
8	2	DE43049	ISO Decal - Wheel Crush	
9	2	DE43875H	ISO Decal - Hand Crush	
10	1	DE45925	Decal - Small SIS 30kmh	Intl Models
11	1	DE45926	Decal - Large SIS 30kph	Intl Models
12	1	DE45927	Decal - Small SIS 20mph	U.S. Models
13	1	DE45928	Decal - Large SIS 20mph	U.S. Models
14	1	DE48701H	ISO Decal - Cylinder Lock Horizontal	
15	1	DECANADA	Decal Made In Canada	

Model Decal Locations

NOTE: Decals not to scale.



Model Decal Locations

NOTE: See Operator's Manual for in depth decal explanations.

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	DE46902	TL360 Model Decal
2	1	DE46917	TL360 Control Panel Decal
3	1	DE47478	TL360 Left Hose Hanger Decal
4	1	DE47479	TL360 Right Hose Hanger Decal
5	1	DE47480	TL360 Control Panel Button Guide Decal

Imperial Torque Value Chart

UNIFIED INCH BOLT AND CAP SCREW TORQUE VALUES

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

Tested - 10-04-06

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	38	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	54	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.

^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.

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.

DL TOR01 -19-20JUL96

Metric Torque Value Chart

METRIC BOLT AND CAP SCREW 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 	12 	

Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated*		Dry*		Lubricated*		Dry*		Lubricated*		Dry*		Lubricated*		Dry*	
	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.

* "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.

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.

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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.

