



3231
MANURE
SPREADER
PARTS BOOK

Part #85973 HSMFG121622 Rev. #07 Starting Ser. #322MS31031

STRONG HERITAGE - STRONG PEOPLE - STRONGER FUTURE



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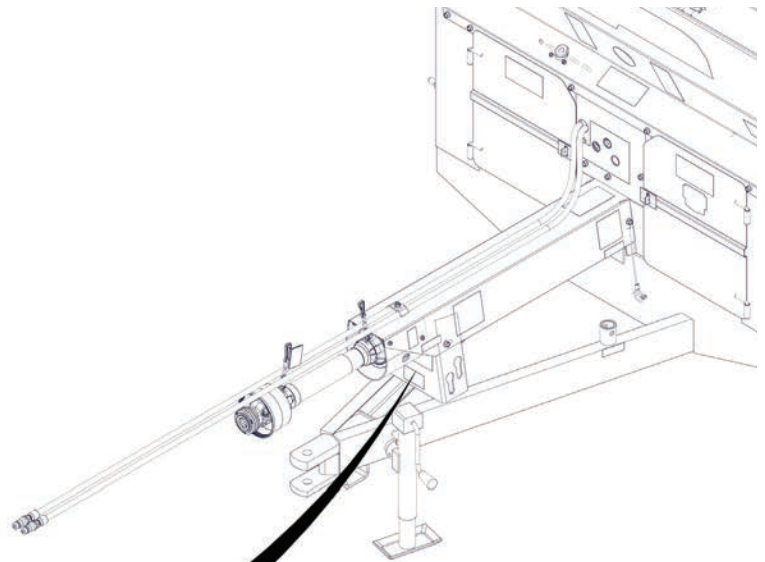


INSTRUCTIONS FOR ORDERING PARTS

All service parts should be ordered through your authorized H&S dealer. Your Dealership will be able to give you faster service if you will provide them with the following:

1. All references to left or right apply to the machine as viewed from the rear.
2. Parts should not be ordered from illustration only. Please order complete part number.
3. If your dealer has to order parts - give shipping instructions:

VIA truck - large pieces (please specify local truck lines)



H&S MFG. CO. INC. MARSHFIELD, WIS.	
MOD. NO.	<input type="text"/>
SER. NO.	<input type="text"/>
DESCR.	<input type="text"/>

PLEASE RECORD NUMBERS FOR YOUR UNIT FOR QUICK REFERENCE

H&S IS CONTINUALLY STRIVING TO IMPROVE ITS PRODUCTS

We must, therefore, reserve the right to make improvements or changes whenever it becomes practical to do so, without incurring any obligation to make changes or additions to the equipment previously sold.





FIGURE 1 JACK SHAFT SHIELD & COMPONENTS

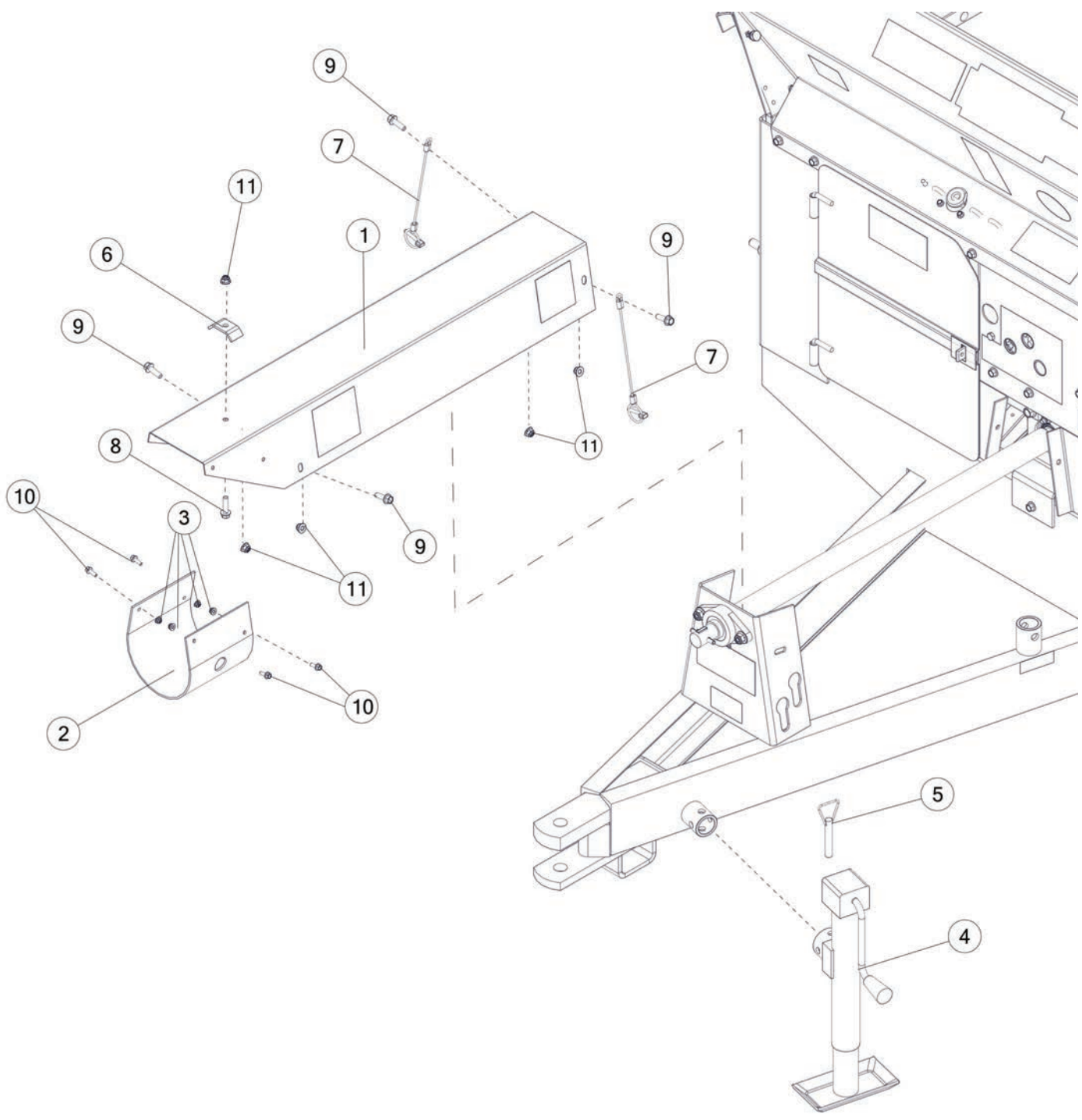




FIGURE 2

FRONT SHIELDS & COMPONENTS

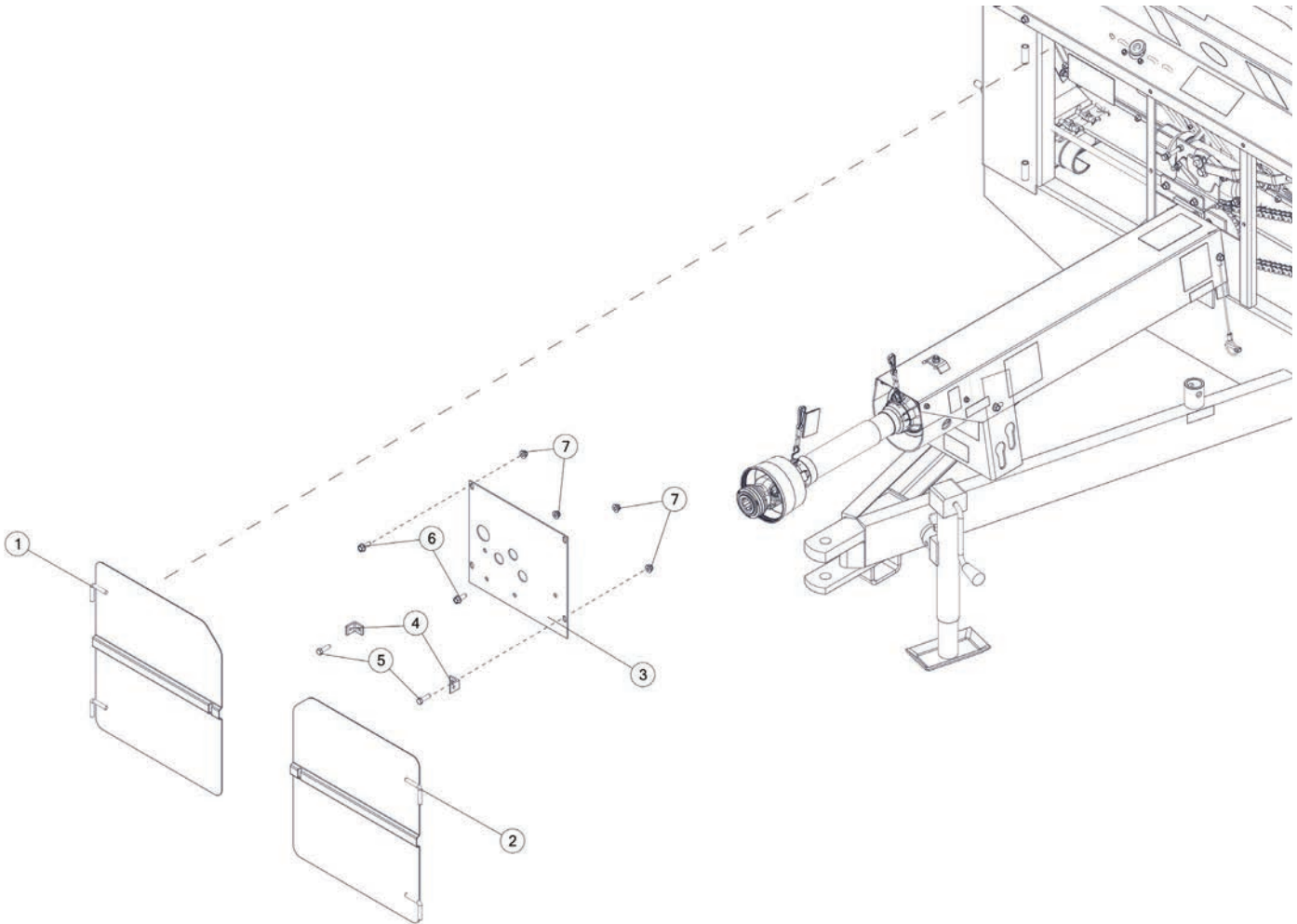




FIGURE 3
FRONT SHAFT & COMPONENTS

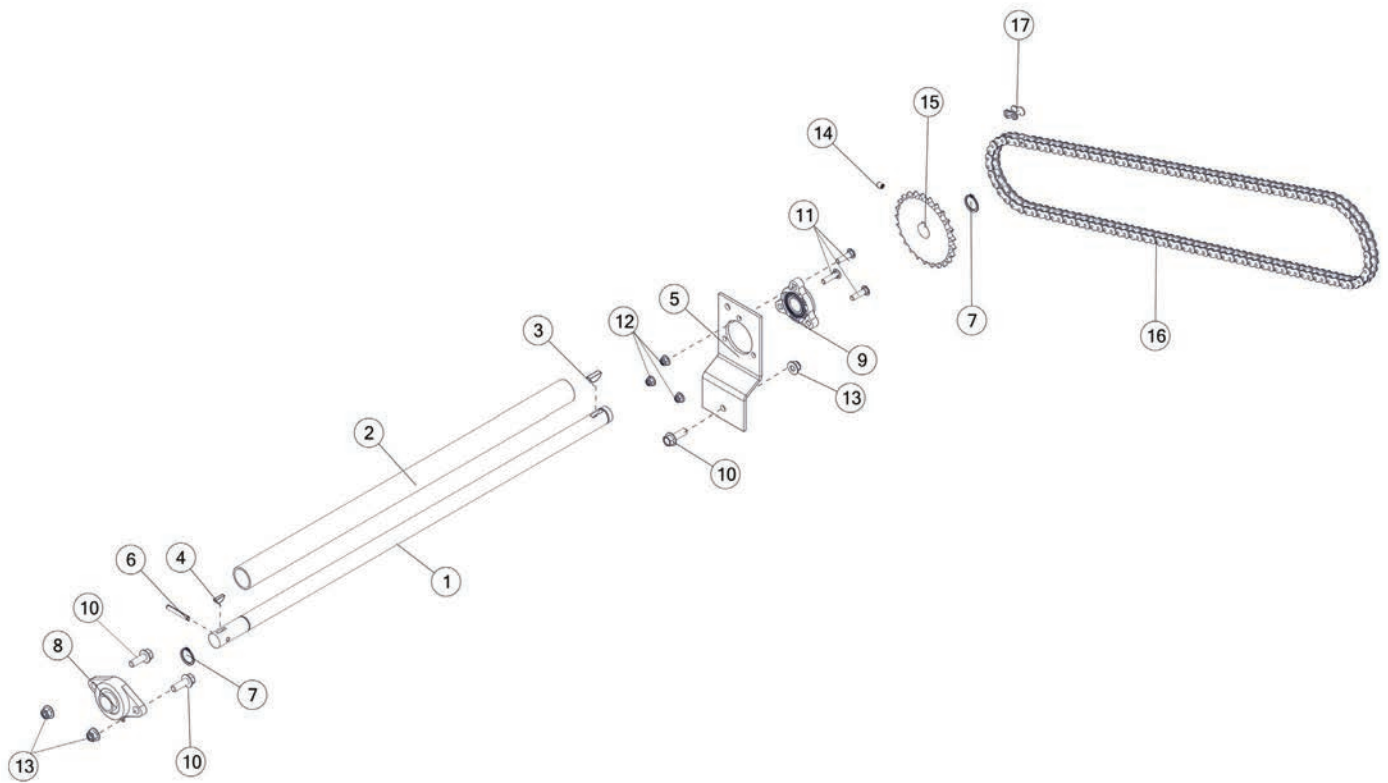
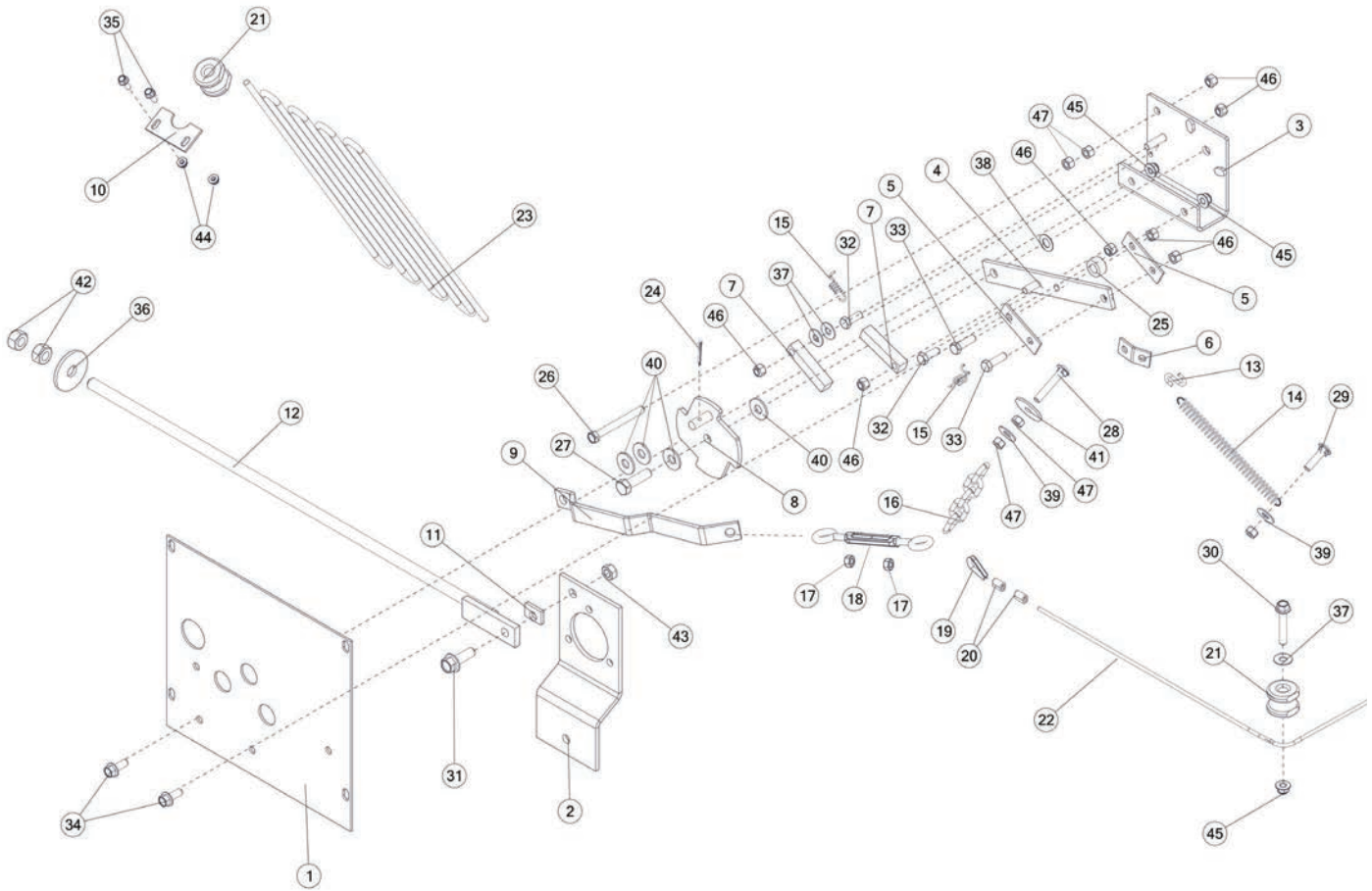




FIGURE 4 SHIFTING LINKS & COMPONENTS



REF #	PART #	DESCRIPTION	QTY
1	23N195	SHIFTER PANEL	1
2	23N68	FRONT ADJUSTMENT PLATE	1
3	23N188	FRONT SHIFTER ASSEMBLY	1
4	23N192	SHIFTING DOG LEVER ASSEMBLY	1
5	23N184	SHIFTER ROPE BRACKET	2
6	23N185	FRONT SPRING RETURN BRACKET	1
7	23N193	SHIFTER DOG	2
8	23N196	FRONT SHIFTER ASSEMBLY	1
9	23N197	SHIFTER ARM	1
10	23N182	CABLE GUIDE BRACKET	1
11	23N278	TIGHTENER SPACER	1
12	23N63	TIGHTENER ROD	1
13	YMHK91005	S-HOOK 0.162 X 1-1/4	1
14	23N187	EXTENSION SPRING	1
15	23N186	TORSION SPRING	2
16	23N198	CHAIN, 1/4, 5P	1
17	YNHX10005	NUT HEX, 5/16-18	2
18	F84	TURNBUCKLE ASSEMBLY	1
19	ES14	THIMBLE	1
20	71279	SLEEVE, .13 X .63	2
21	F33	SIDE CABLE GUIDE	2
22	31N27	CABLE, 3/16, 198	1
23	77192	ROPE, 5/16, 180	1
24	YPCT04005	COTTER PIN, 1/8 X 1	1
25	D107	ROPE ROLLER	1
26	YNHX12005	BOLT FLANGE, 3/8 X 3-1/2 G5	1
27	YBHH16065	BOLT HEX, 1/2-13 X 2 G5	1
28	YBCR12045	BOLT CARRIAGE, 3/8-16 X 2-1/4 G5 ZC	1
29	YBCR12015	BOLT CARRIAGE, 3/8-16 X 1-1/2 G5 ZC	1
30	YBFB12225	BOLT FLANGE, 3/8 X 2-1/4 G5	1
31	YBFB16125	BOLT FLANGE, 1/2 X 1-1/4 G5	1
32	YBHH12010	BOLT HEX, 3/8 X 1 G5	2
33	YBHH12035	BOLT HEX, 3/8-16 X 1-1/4 G5	2
34	YBFB12003	BOLT FLANGE, 3/8 X 1 G5	2
35	YBFB08075	BOLT FLANGE, 1/4 X 3/4 G5	2
36	F129	TIGHTENER WASHER	1
37	YWFL12005	WASHER, FLAT, 3/8	3
38	31N51	SHIFTER SPACER WASHER	1
39	YWFL14005	WASHER, FLAT, 7/16 ZC	2





FIGURE 4

SHIFTING LINKS & COMPONENTS

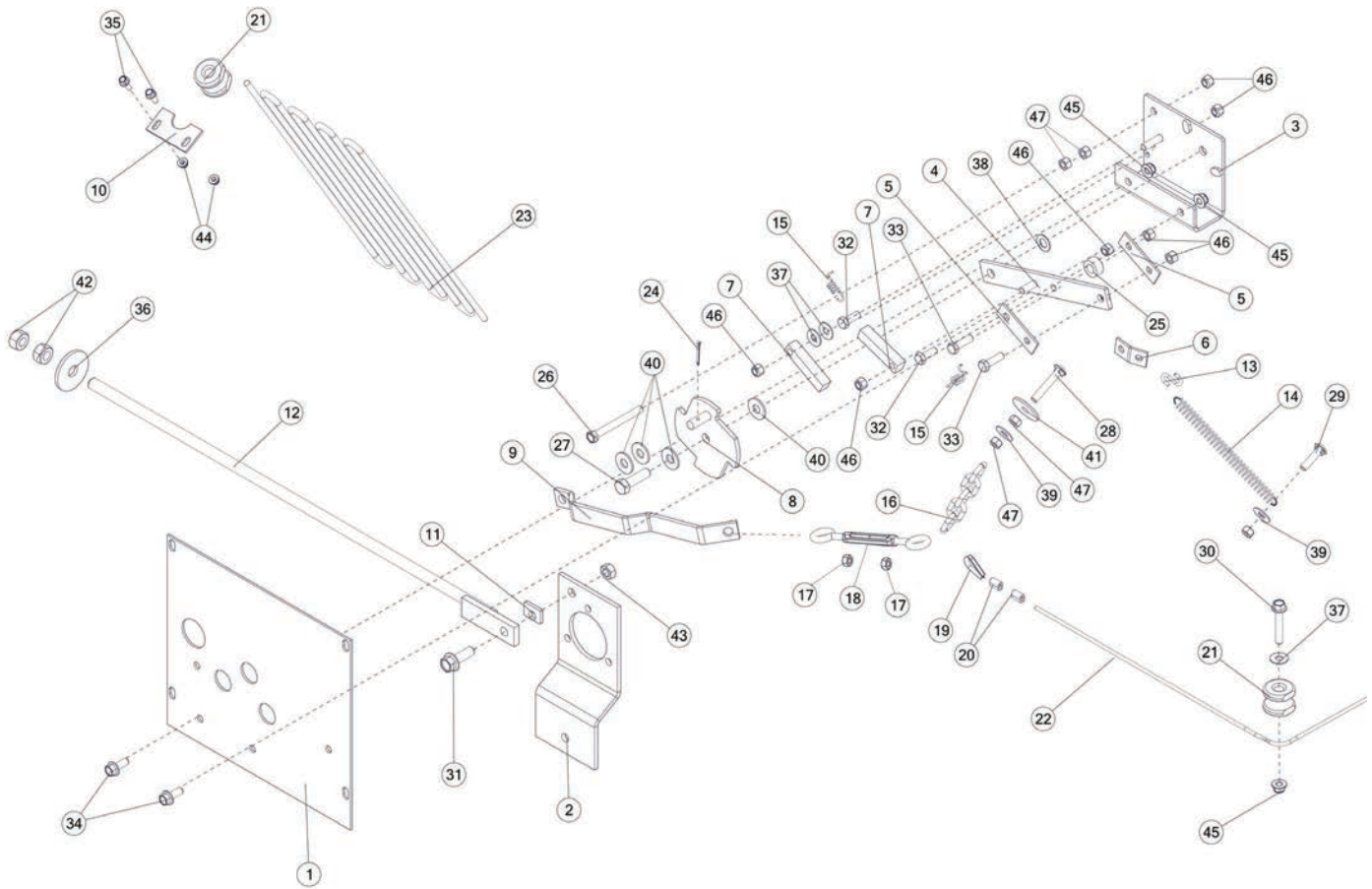




FIGURE 5
FRONT SHAFT, SHIELDS AND COMPONENTS

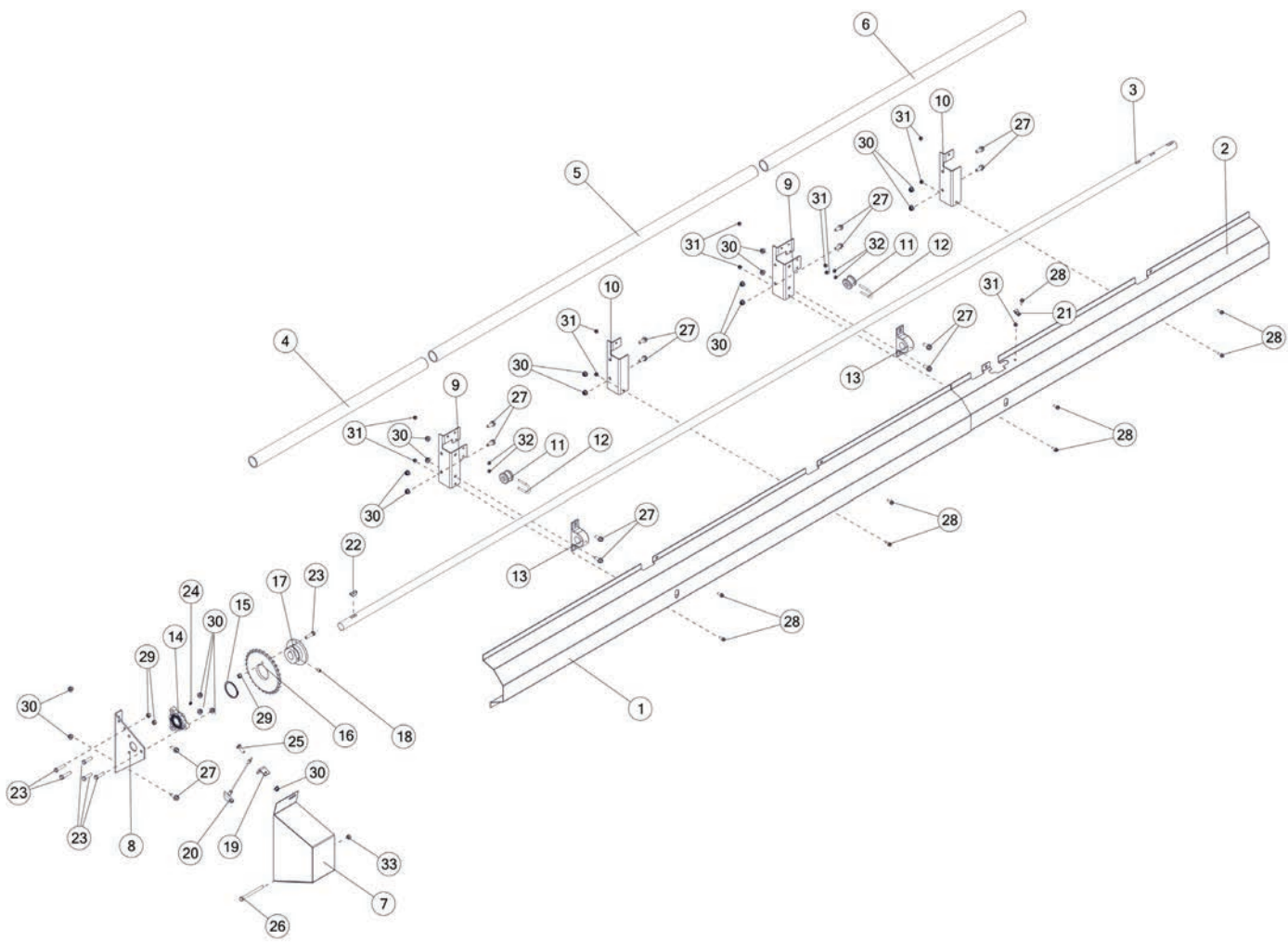




FIGURE 5

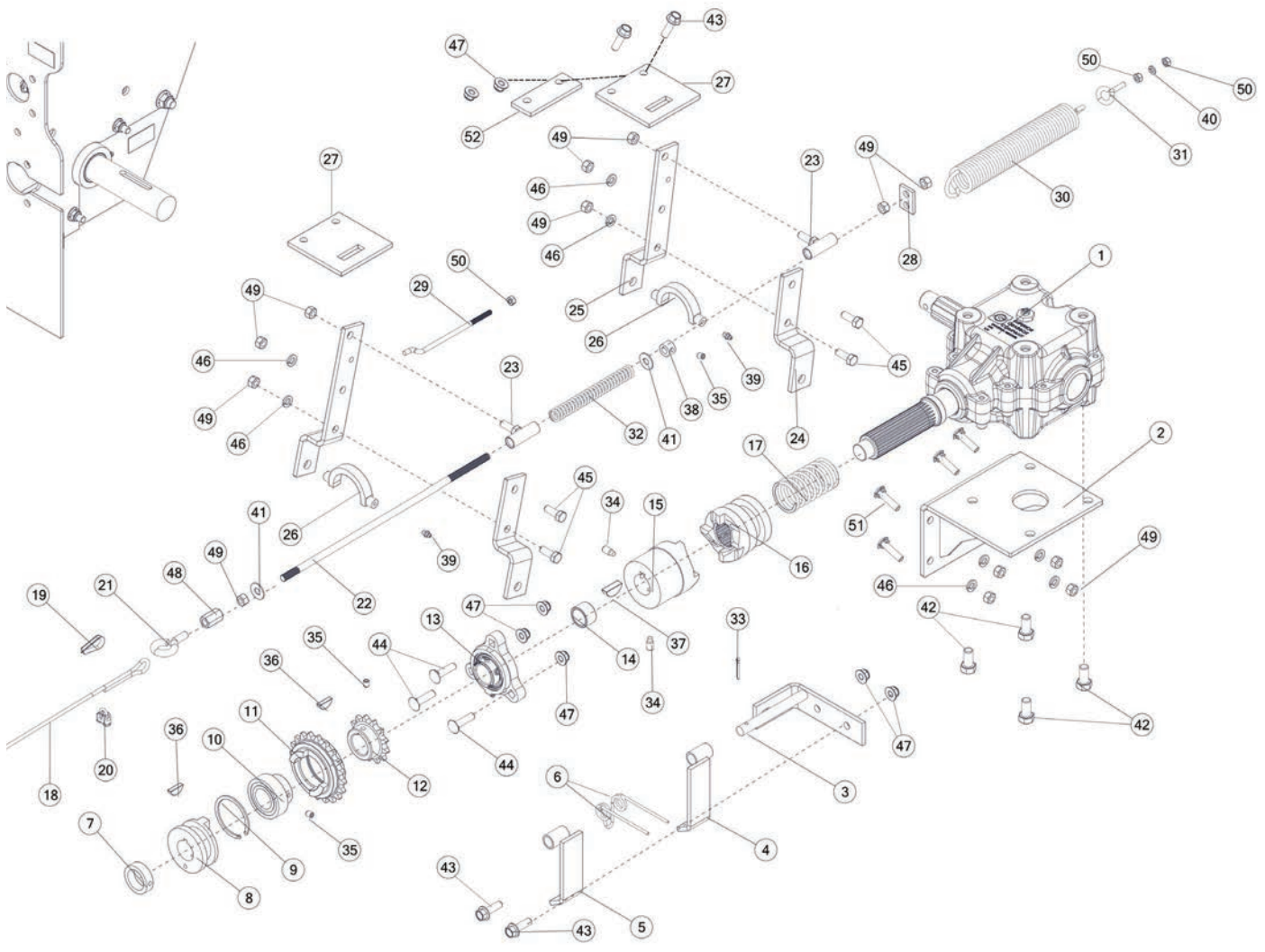
FRONT SHAFT, SHIELDS AND COMPONENTS

REF #	PART #	DESCRIPTION	QTY
1	86094B	SIDE SHIELD, FRONT W/DECALS	1
2	86096B	SIDE SHIELD, REAR W/DECALS	1
3	31N29	SIDE SHAFT	1
4	31N45	#1 SIDE SHAFT GUARD, 37-1/4	1
5	31N44	#2 SIDE SHAFT GUARD, 70	1
6	31N46	#4 SIDE SHAFT GUARD, 56-1/2	1
7	85034B	SIDE SHIELD W/DECALS	1
8	85014B	BEARING PLATE W/DECALS	1
9	86104	BEARING BRACKET	2
10	86291	SHIELD BRACKET	2
11	F33	SIDE CABLE GUIDE	2
12	YBPU08005	PIPE U-BOLT, 1/4 X 3/4	2
13	12N36	BEARING, PILLOW BLOCK, 1-1/4	2
14	80662	BEARING, 1-1/4	1
15	23N189	SNAP RING, EXTERNAL, 2.44	1
16	C1MS01	SHEAR SPROCKET	1
17	45N71	SHEAR HUB	1
18	YSKP12010	SET SCREW, SCKT, KNURLED CUP PT, 3/8-16 X 1/2	1
19	23N242	SHIELD ANGLE	1
20	S122	LANYARD, CLIP PIN CABLE	1
21	87705	CUSHION WIRE CLAMP, 3/8	1
22	5B9	WOODRUFF KEY, 3/8 X 1-1/4	1
23	YBHH12025	BOLT HEX, 3/8-16 X 1-1/2 G5	6
24	G89	STRAIGHT ZERK, 1/4-28	1
25	YBCR12020	BOLT CARRIAGE, 3/8-16 X 1-1/4 G5 ZC	1
26	YBHH12185	BOLT HEX, 3/8 X 4-1/2 G5	1
27	YBFB12003	BOLT FLANGE, 3/8 X 1 G5	14
28	YBFB08075	BOLT FLANGE, 1/4 X 3/4 G5	8
29	YNL12005	NUT HEX, 3/8-16 LKTL ZC	3
30	YNFG12006	NUT FLANGE, 3/8 GF	18
31	YNFG08010	NUT FLANGE, 1/4 GF	11
32	YNHX08005	NUT HEX, 1/4-20 ZC	4
33	YNRL12005	NUT HEX, 3/8-16 LKRS ZC	1





FIGURE 6 BEATER GEARBOX & COMPONENTS



REF #	PART #	DESCRIPTION	QTY
1	85385	GEARBOX ASSY	1
2	85205	GEARBOX BOTTOM BRACKET	1
3	31N36	TIGHTENER BRACKET	1
4	31N35	TIGHTENER BAR RH	1
5	31N34	TIGHTENER BAR LH	1
6	31N33	SPRING	1
7	F6	COLLAR FOR SHAFT	1
8	23N215	CLUTCH THROWOUT	1
9	3G19	SNAP RING, INTERNAL, 2.59 X 2.22	1
10	BFR525	BEARING W/LOCK COLLAR	1
11	23N216	HIGH SPEED DRIVE SPROCKET	1
12	10R11	SPROCKET, 13T	1
13	80662	BEARING, 1-1/4	1
14	D68	BUSHING, BRONZE, 1.25 OD X 1 ID X .75 LONG	1
15	23N241	CLUTCH	1
16	23N90	CLUTCH W/SPLINE	1
17	23N89	COMPRESSION SPRING	1
18	31N27	CABLE, 3/16, 198	1
19	ES14	THIMBLE	1
20	BFR220	CABLE CLAMP, 3/16	1
21	YBTE12005	BOLT TURNED EYE, 3/8 X 1	1
22	23N205	CLUTCH ROD	1
23	23N206	CLUTCH ROD HOLDER	2
24	D57B	BEATER CLUTCH	2
25	D57A	D-BEATER CLUTCH	2
26	57265	CLUTCH YOKE	2
27	85006	SHIFTER BRACKET	2
28	23N207	SHIFTING SPRING BRACKET	1
29	23N210	SHIFTING ROD	1
30	K103	SPRING, ROPE RETURN SP-10	1
31	YBTE08005	BOLT TURNED EYE, 1/4 X 1	1
32	23N211	SPRING	1
33	YPCT04005	COTTER PIN, 1/8 X 1	1
34	YSFD12005	SET SCREW, SOCKET, FULL DOG PT, 3/8-16 X 3/4	2
35	YSKP10010	SET SCREW, SCKET, KNURLED CUP, 5/16 - 18 X 3/8	3
36	5B10	WOODRUFF KEY, 1/4 X 1	2
37	5B9	WOODRUFF KEY, 3/8 X 1-1/4	1
38	23N209	ROD COLLAR	1
39	G89	STRAIGHT ZERK, 1/4-28	2





FIGURE 7 APRON GEARBOX & COMPONENTS

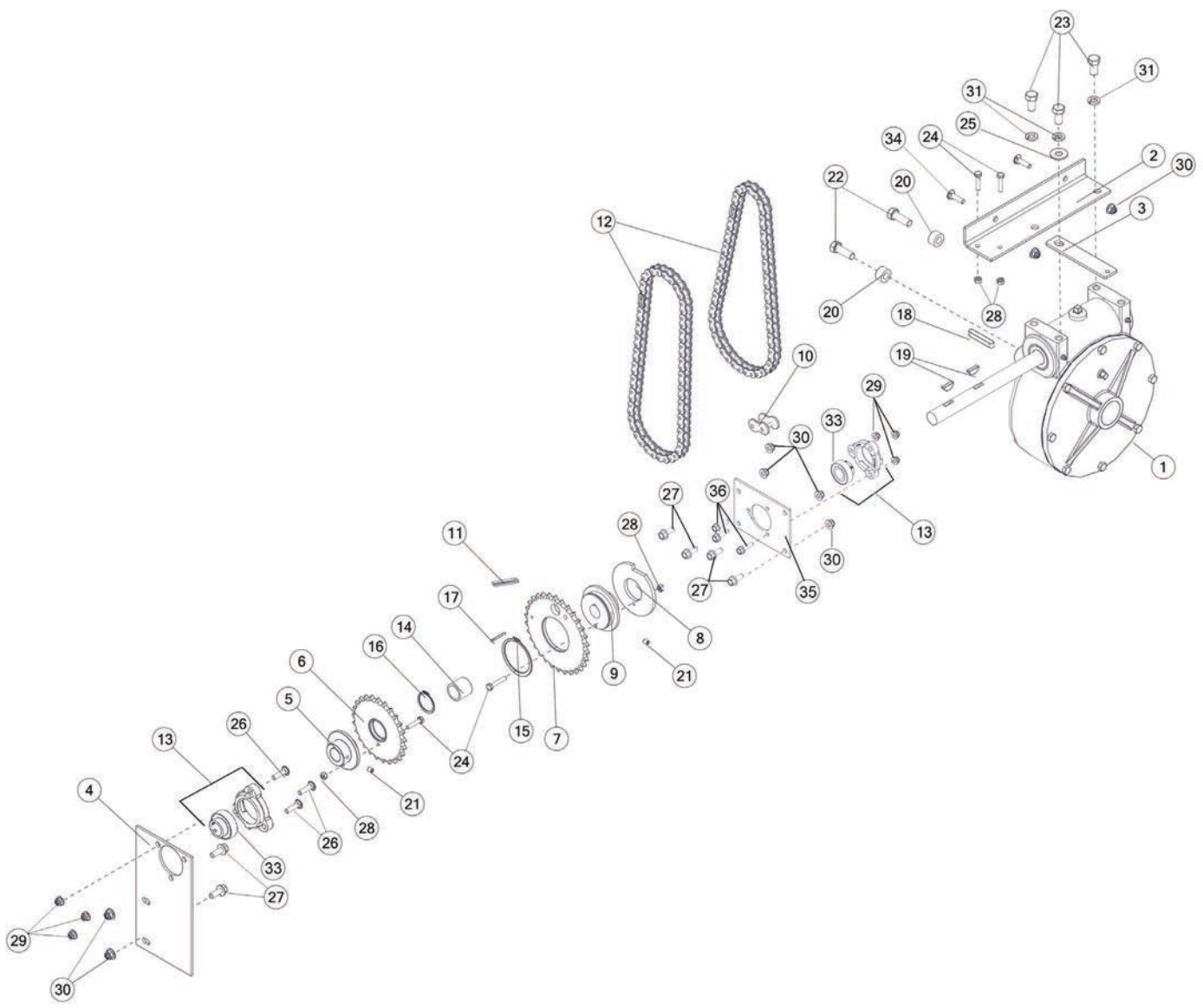




FIGURE 7

APRON GEARBOX & COMPONENTS

REF #	PART #	DESCRIPTION	QTY
1	G122	WORM GEARBOX	1
2	23N95	GEARBOX HOLDER	1
3	86101	SHIELD BRACKET	1
4	23N230	BEARING PANEL	1
5	56025	SHEAR HUB	1
6	56036	SPROCKET BUSHING ASSY.	1
7	23N226	SPROCKET W/BUSHING, 50T A 30T	1
8	23N222	SHEAR PLATE	1
9	23N224	LOW SPEED SHEAR HUB	1
10	X61	CONNECTOR LINK	2
11	23N229	DOG SPRING	1
12	23N93	ROLLER CHAIN, #50, 60P	2
13	80530	PILLOW BLOCK BEARING, 1IN	2
14	56029	SPACER	1
15	23N227	SNAP RING	1
16	56024	STANDARD EXTERNAL SNAP RING, 1-1/2	1
17	YPCT04005	COTTER PIN, 1/8 X 1	1
18	S138	SQUARE KEY, 3/8 X 2-3/8	1
19	5B10	WOODRUFF KEY, 1/4 X 1	2
20	23N94	WORM BOX SPACER	2
21	YSKP10010	SET SCREW, SCKT, KNURLED CUP, 5/16 - 18 X 3/8	2
22	YBHH16030	BOLT HEX, 1/2-13 X 1-1/2 G5	2
23	YBHH16010	BOLT HEX, 1/2-13 X 1 G5	3
24	YBHH08035	BOLT HEX, 1/4-20 X 1-1/4 G5	3
25	YBHH08025	BOLT HEX, 1/4-20 X 1-1/2 G5	1
26	YBCR10020	BOLT CARRIAGE, 5/16-18 X 1-1/4 G5 ZC	3
27	YBFB12003	BOLT FLANGE, 3/8 X 1 G5	6
28	YNTL08005	NUT HEX, 1/4-20 LKTL ZC	4
29	YNFG10005	NUT FLANGE, 5/16 GF	6
30	YNFG12006	NUT FLANGE, 3/8 GF	8
31	YWLO16005	WASHER, LOCK, 1/2	3
32	YWFL16005	WASHER, FLAT, 1/2	1
33	23N221	BEARING W/SET SCREWS, 1IN	2
34	YBCR12010	BOLT CARRIAGE, 3/8 X 1 G5	2
35	96463	COVER PLATE	1
36	YBFB10125	BOLT FLANGE, 5/16 X 1-1/4 G5	3



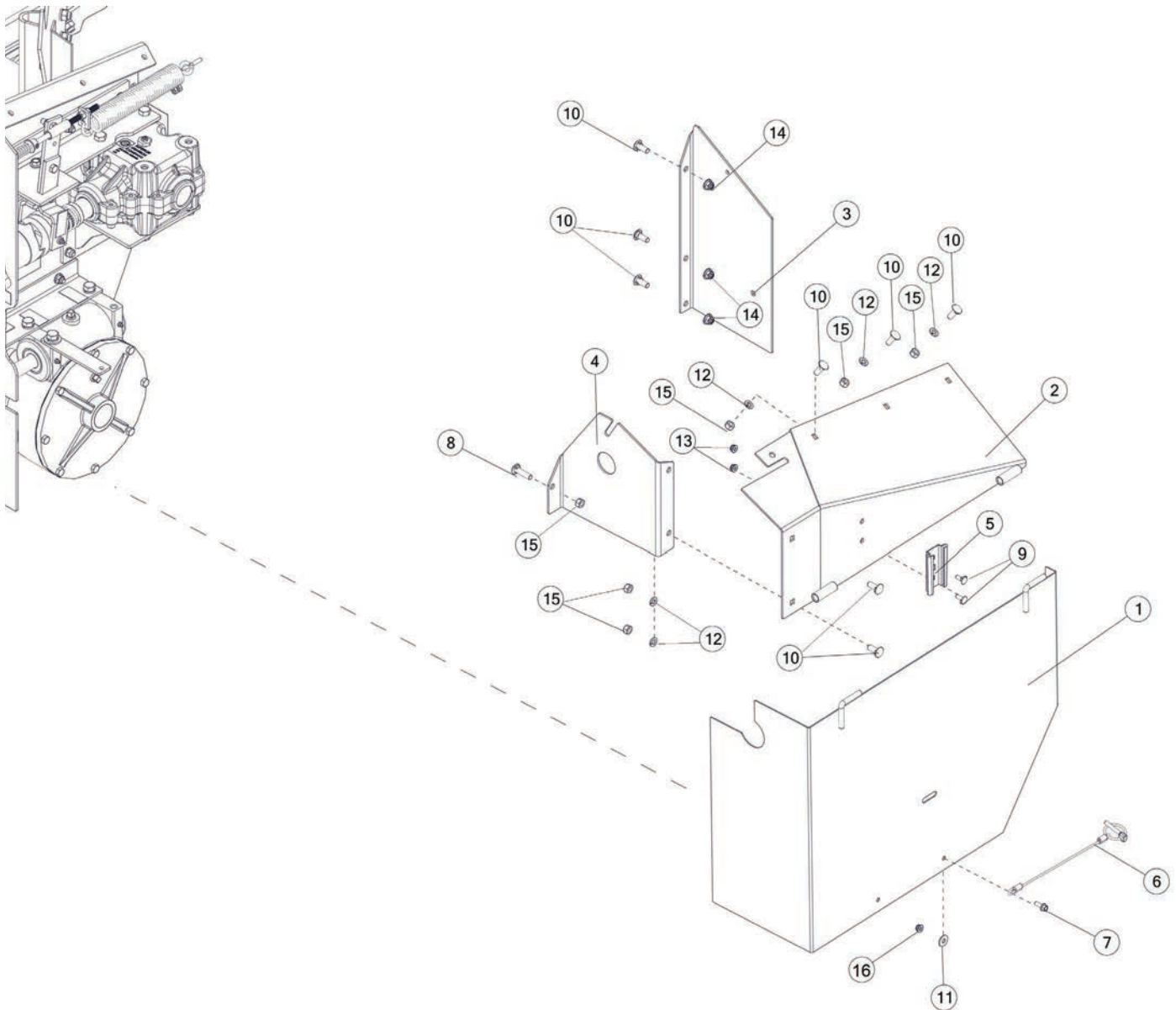




FIGURE 9 BOTTOM BEATER & COMPONENTS

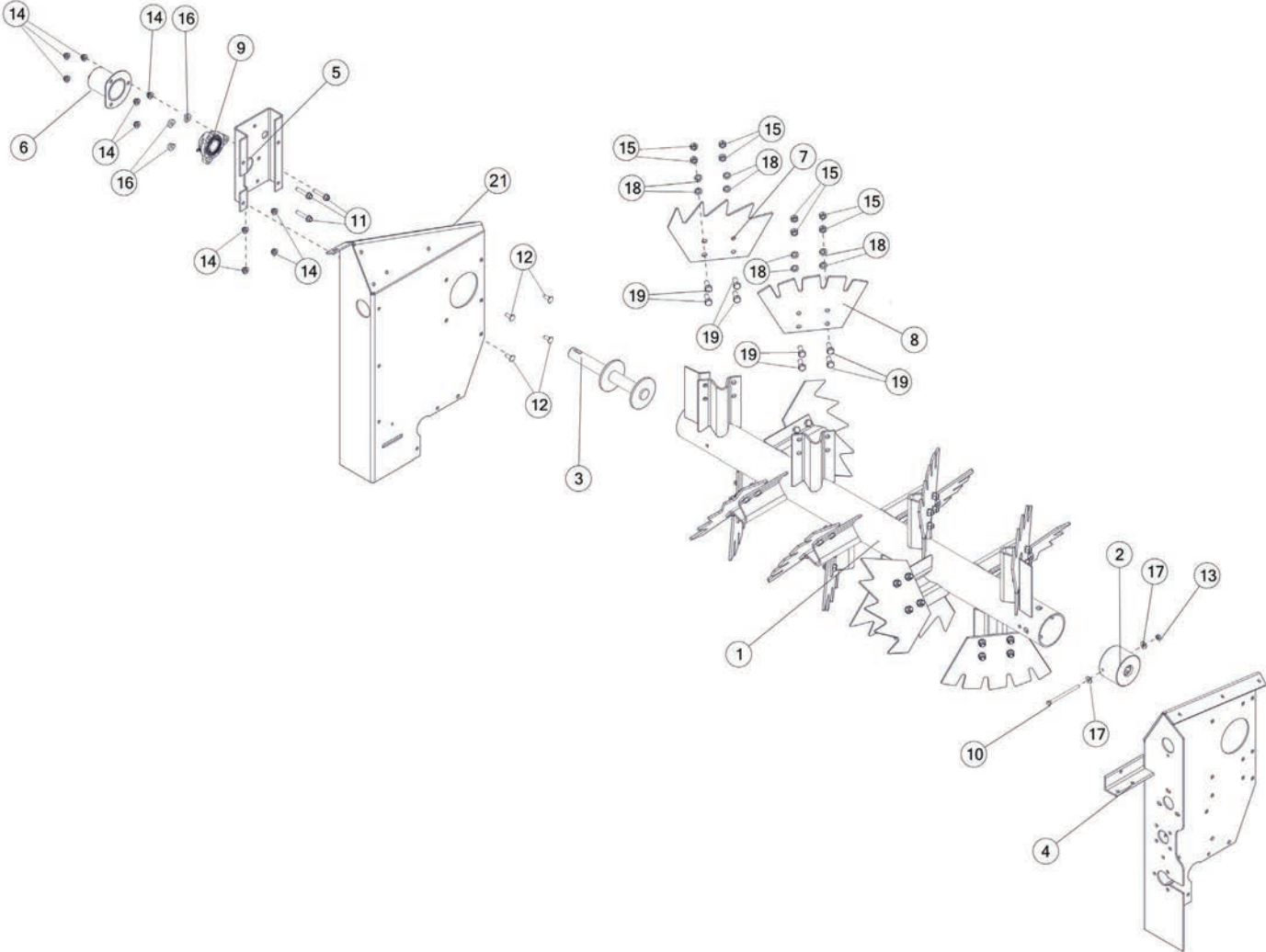




FIGURE 10 SPLASH GUARD & COMPONENTS

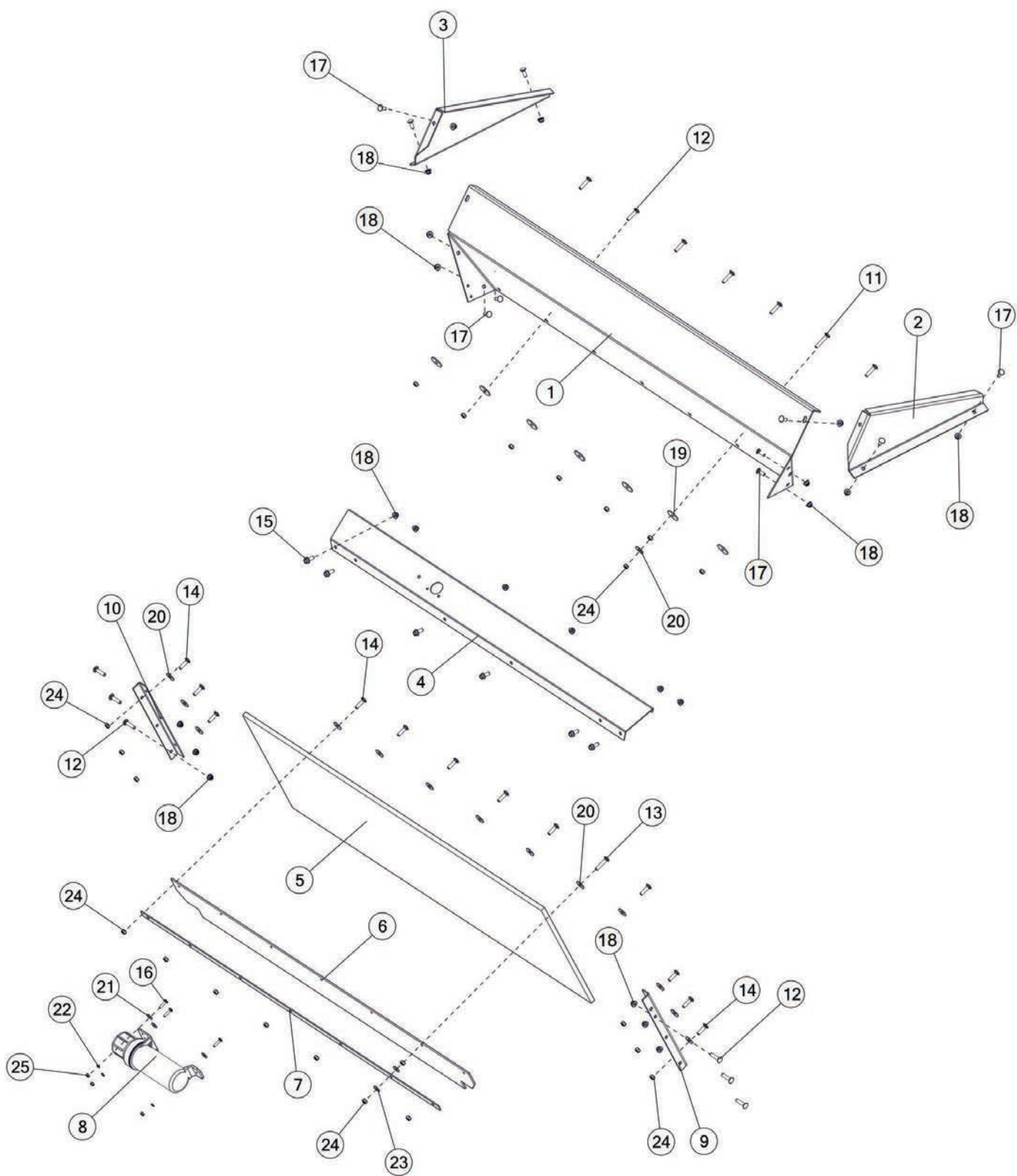




FIGURE 11 APRON CHAIN TIGHTENER & COMPONENTS

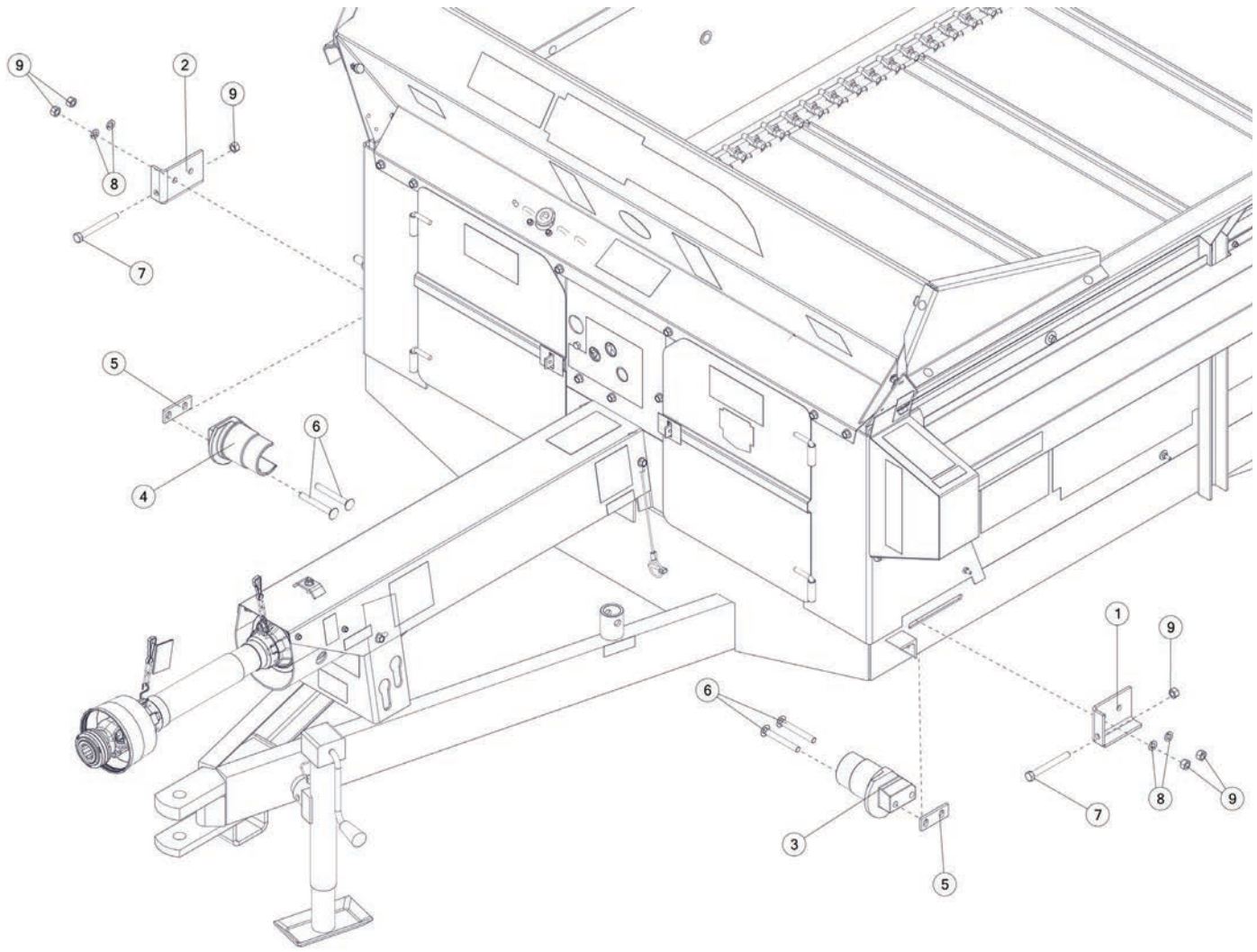




FIGURE 12

DRIVE SHAFT & COMPONENTS

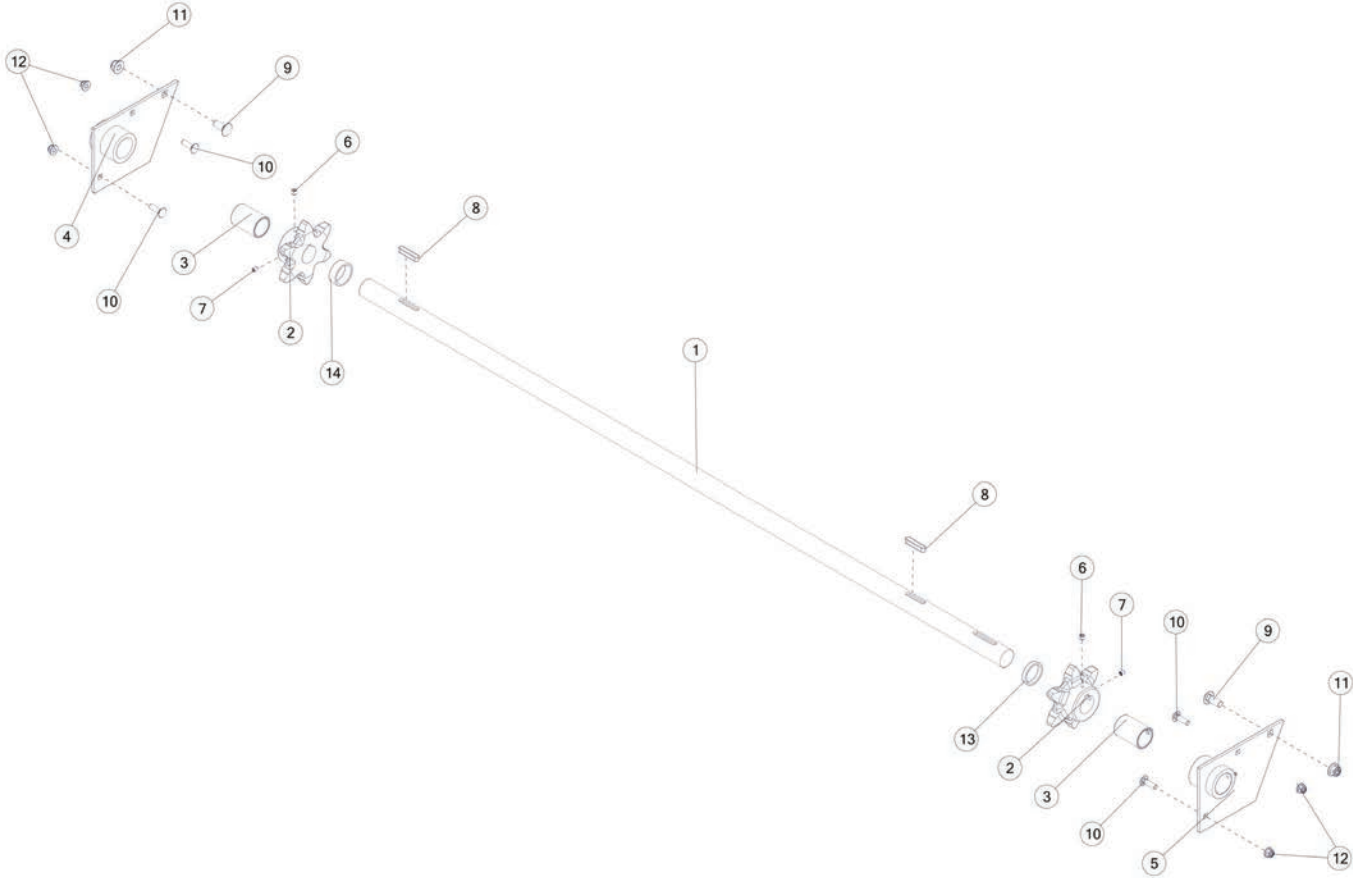




FIGURE 13
FLOOR, SIDE PANELS & COMPONENTS

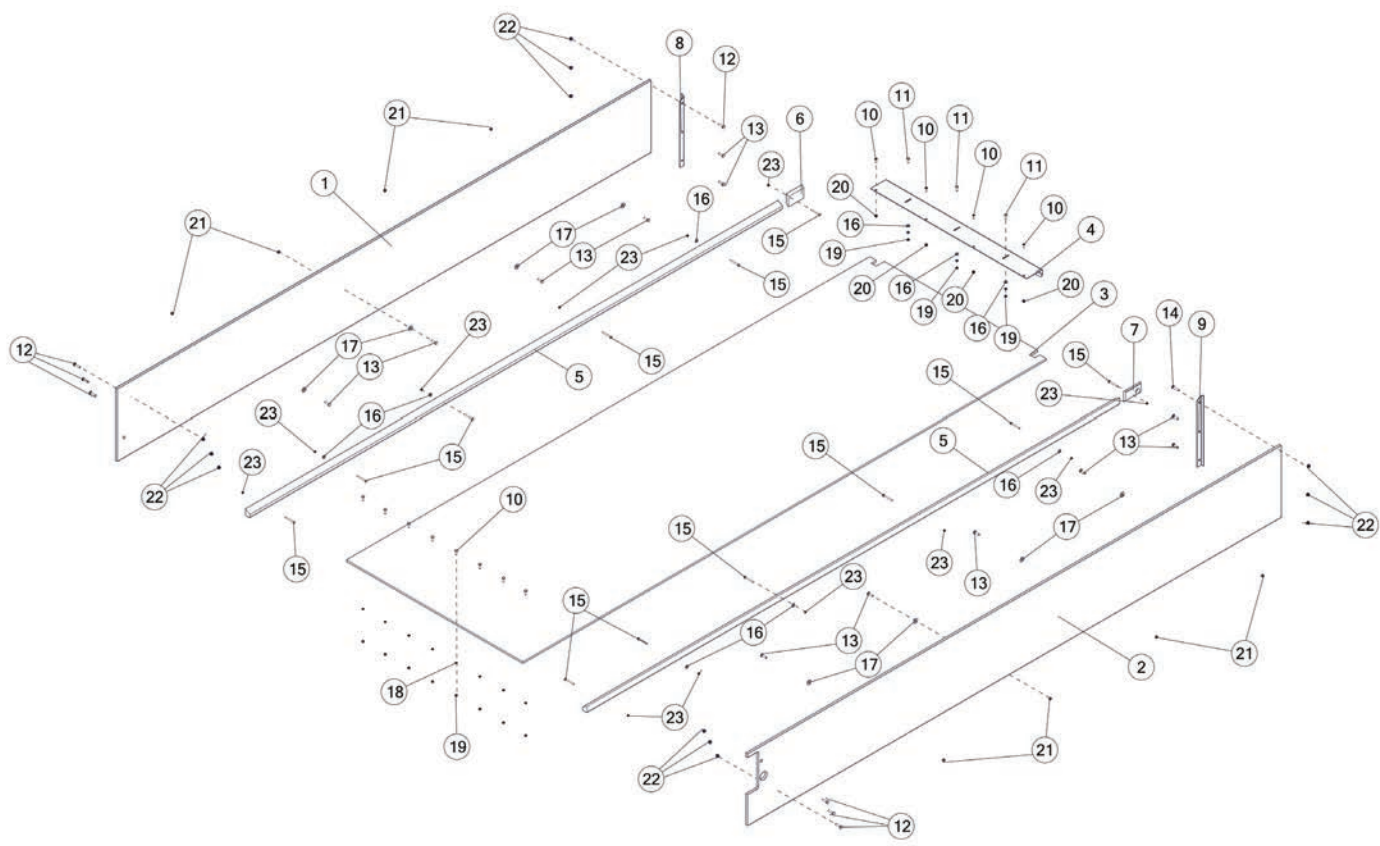




FIGURE 14 SIDE FLARES & COMPONENTS

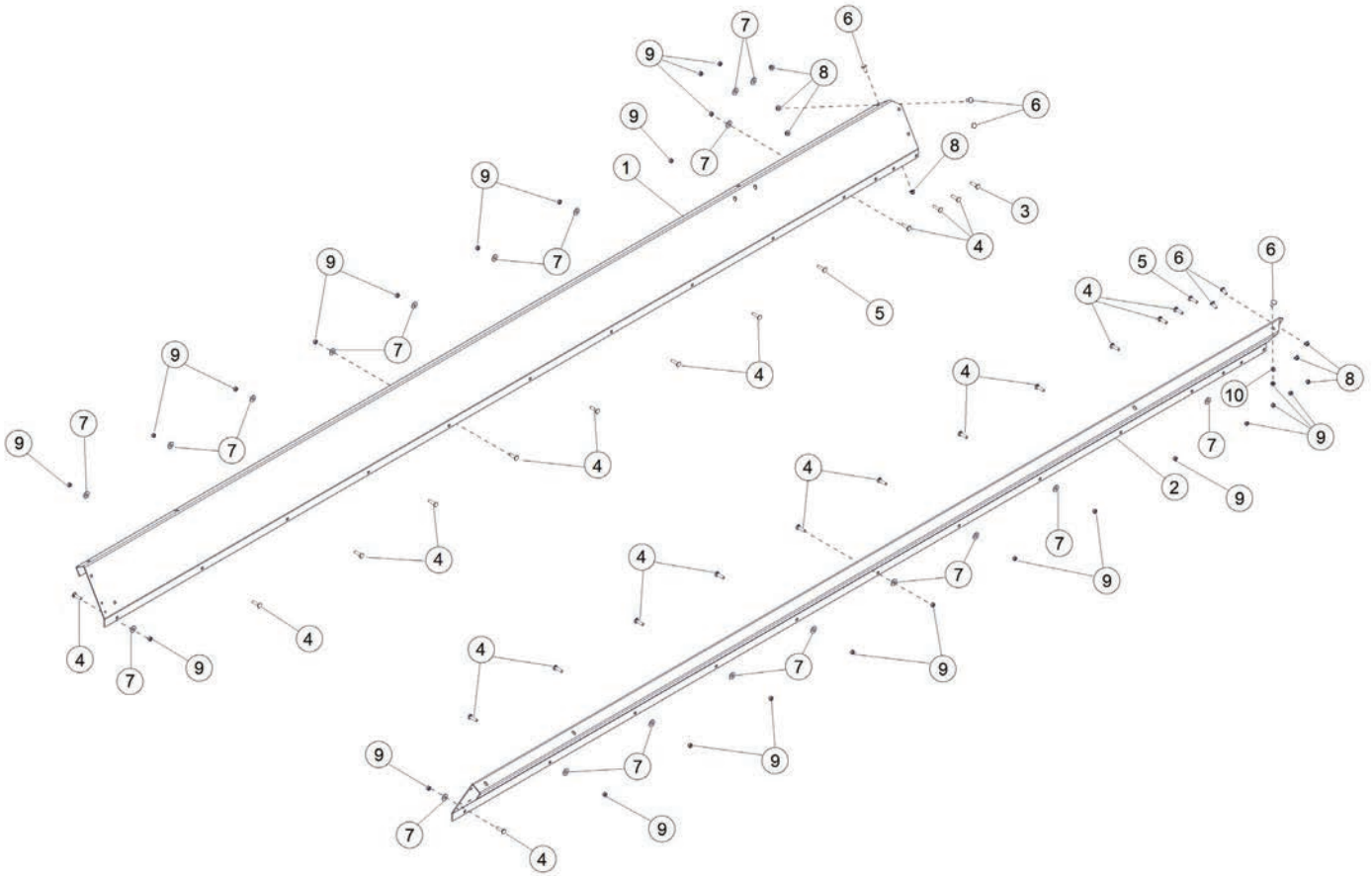




FIGURE 15
APRON CHAIN

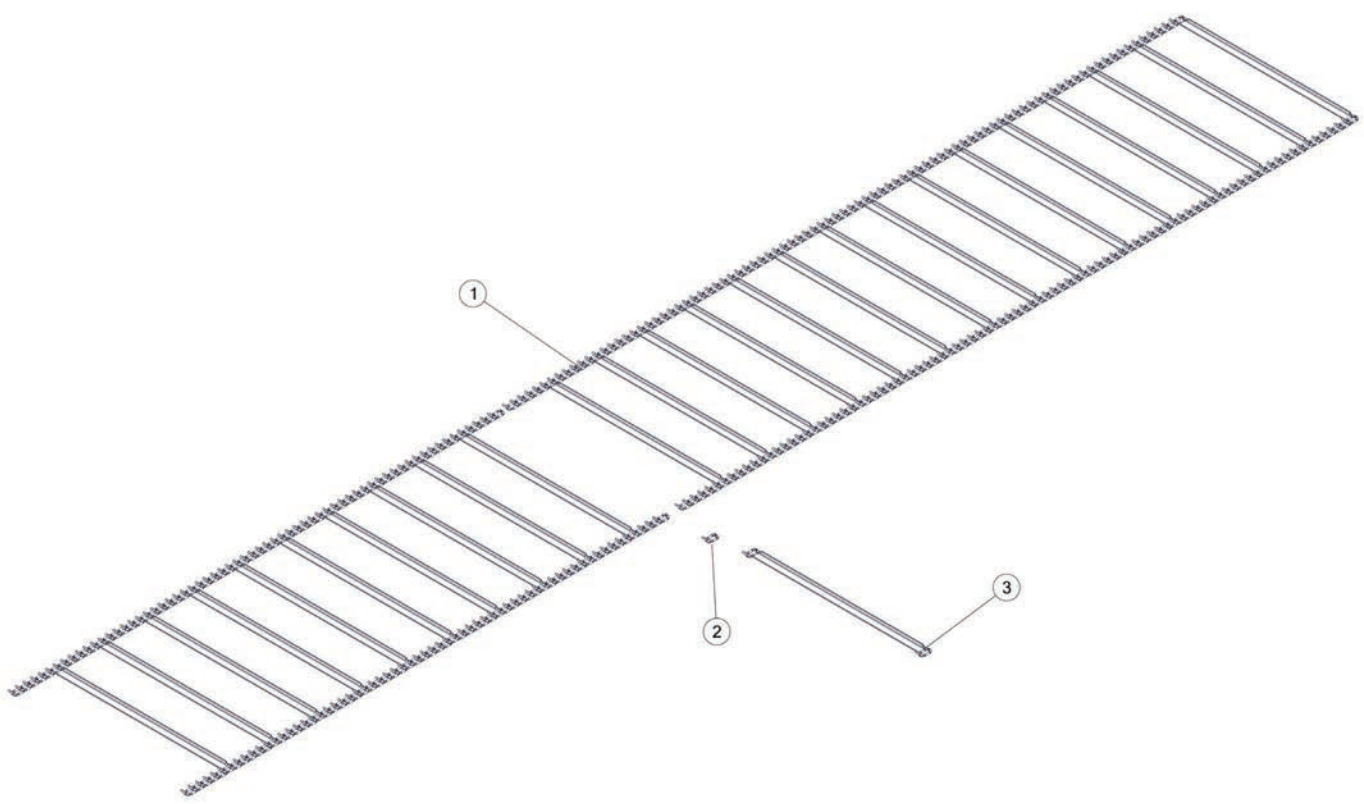




FIGURE 16 TAILGATE & COMPONENTS

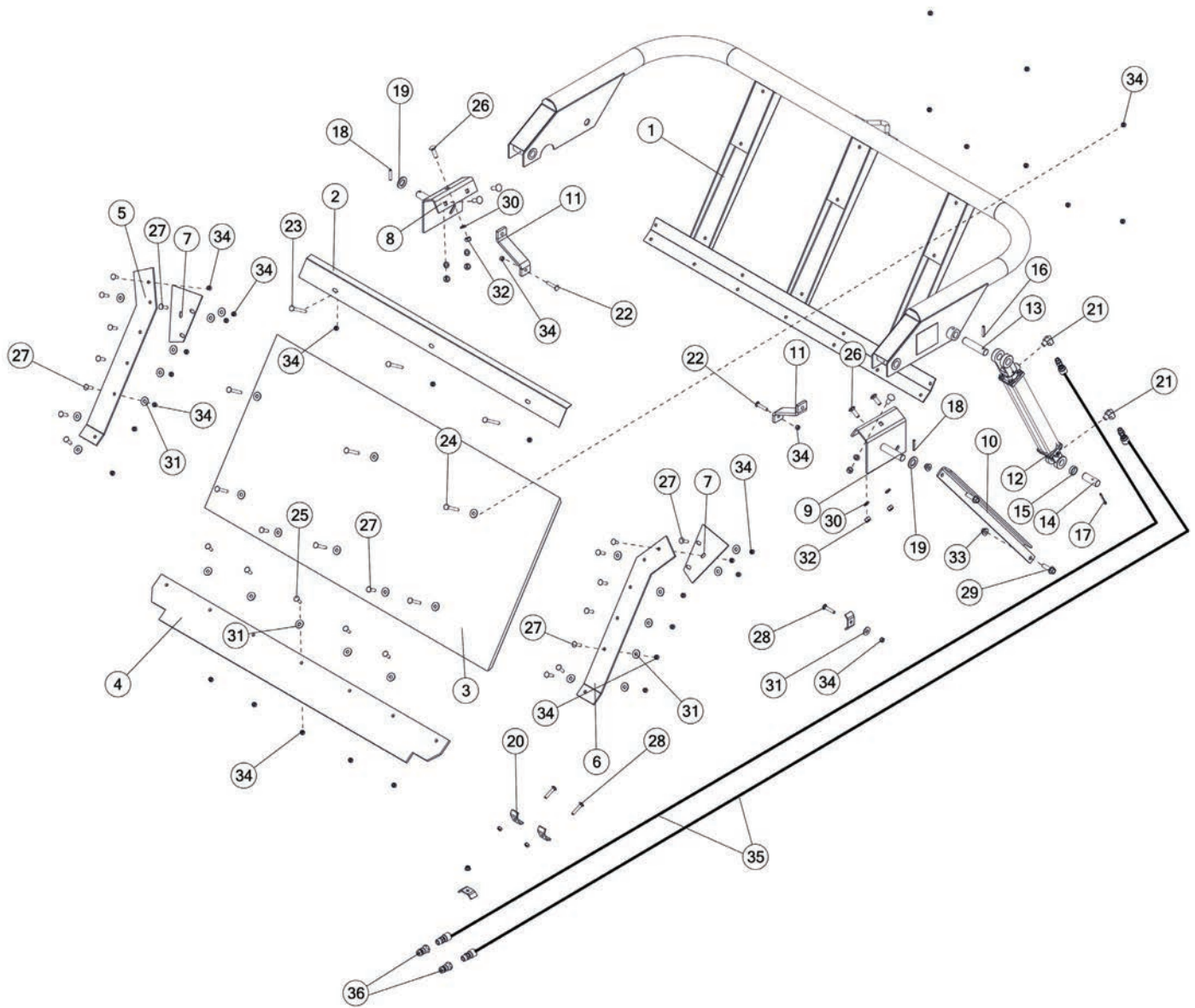




FIGURE 16

TAILGATE & COMPONENTS

REF #	PART #	DESCRIPTION	QTY
1	23N298B	TAILGATE FRAME W/DECALS	1
2	23N163	TAILGATE POLY HOLD	1
3	31N37A	TAILGATE PLYWOOD W/FIBERGLASS	1
4	23N105	TAILGATE RUBBER	1
5	23N99	SIDE RUBBER RH	1
6	23N100	SIDE RUBBER LH	1
7	23N104	TAILGATE FILLER	2
8	23N299	TAILGATE MOUNT RH	1
9	23N300	TAILGATE MOUNT LH	1
10	23N231	TAILGATE BRACE LH	1
11	23N232	TAILGATE BRACKET	2
12	56015	HYDRAULIC CYLINDER, 2 X 16	1
13	23N301	CYLINDER PIN	1
14	23N107	CYLINDER PIN	1
15	K132	SPACER, 3/8	1
16	YPEX10015	EXPANSION PIN, 5/16 X 1-3/4	1
17	YPCT07005	COTTER PIN, 7/32 X 2	1
18	YPEX10015	EXPANSION PIN, 5/16 X 1-3/4	2
19	23N109	TAILGATE WASHER	2
20	23N67	FRONT HOSE BRACKET	1
21	23N234	FITTING, 90, 3/8NPT, 3/8NPT	2
22	YBCR12035	BOLT CARRIAGE, 3/8-16 X 2 G5 ZC	2
23	YBCR12070	BOLT CARRIAGE, 3/8-16 X 3-1/2 G5 ZC	1
24	YBCR12055	BOLT CARRIAGE, 3/8-16 X 3 G5 ZC	1
25	YBCR12020	BOLT CARRIAGE, 3/8-16 X 1-1/4 G5 ZC	1
26	YBCR16010	BOLT CARRIAGE, 1/2-13 X 1-1/2 G5 ZC	2
27	YBCR12015	BOLT CARRIAGE, 3/8-16 X 1-1/2 G5 ZC	5
28	YBCR12035	BOLT CARRIAGE, 3/8-16 X 2 G5 ZC	2
29	YBFB16175	BOLT FLANGE, 1/2 X 1-3/4 G5	1
30	YWLO16005	WASHER, LOCK, 1/2	2
31	YWFL14005	WASHER, FLAT, 7/16 ZC	5
32	YNHX16005	NUT HEX, 1/2-13 ZC	2
33	YNFG16003	NUT FLANGE, 1/2 GF	1
34	YNHX12005	NUT HEX, 3/8-16 ZC	11
35	31N50	HYDRAULIC HOSE, 6, 316	2
36	DWM205	MALE QUICK COUPLER W/HYD TIP	2





FIGURE 17

WHEEL & HUB ASSEMBLY

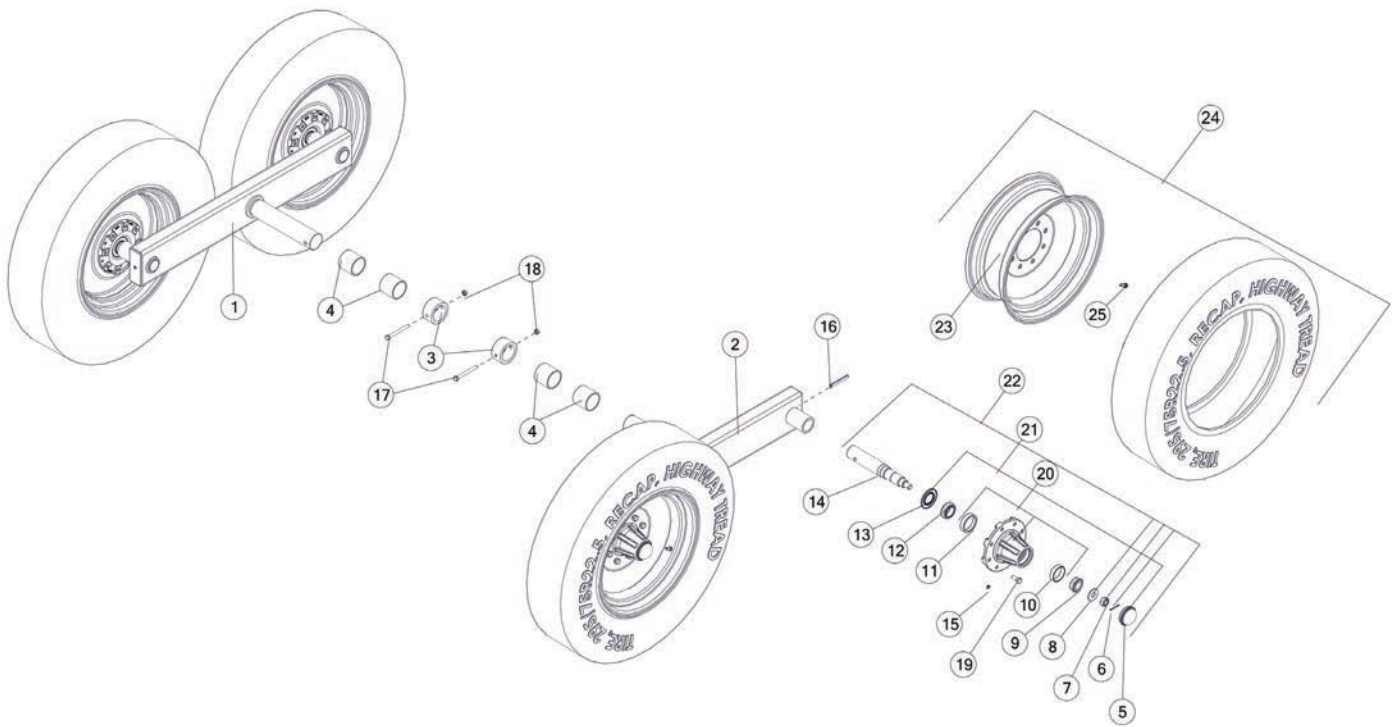




FIGURE 18

ENDGATE CYLINDER

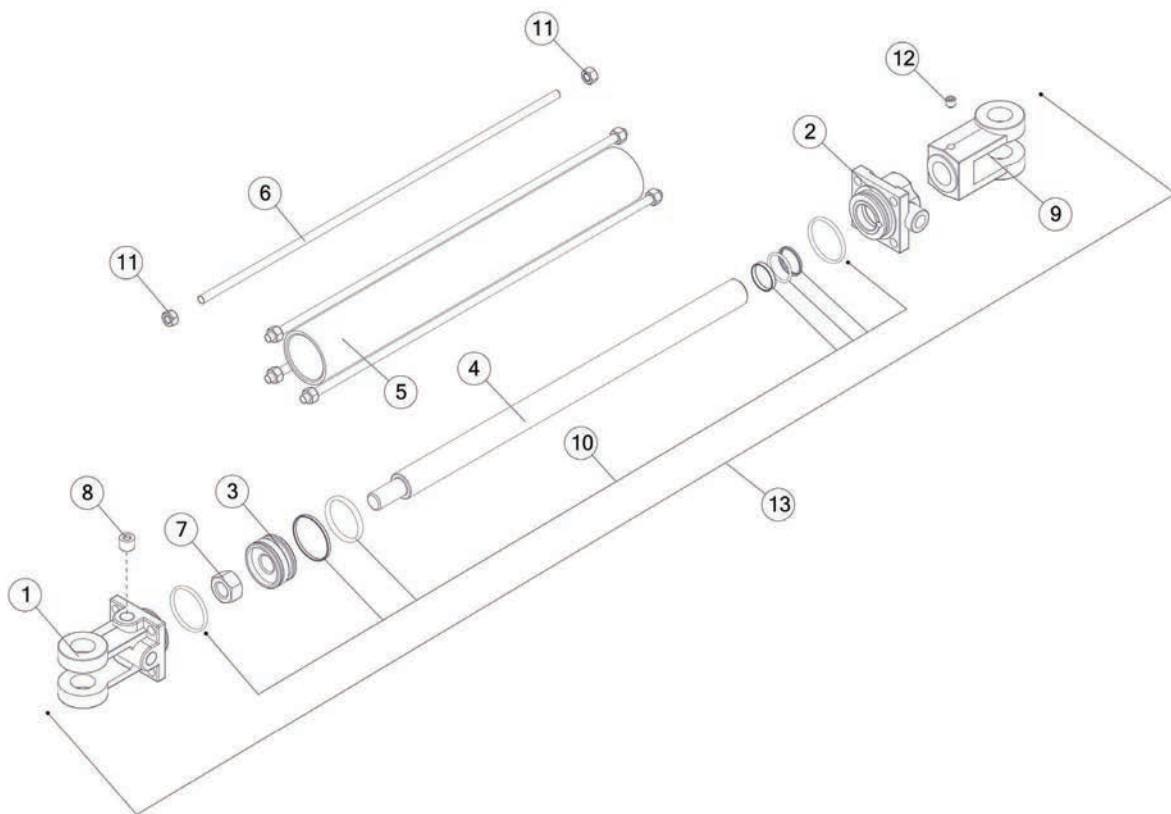




FIGURE 19
BEATER GEARBOX

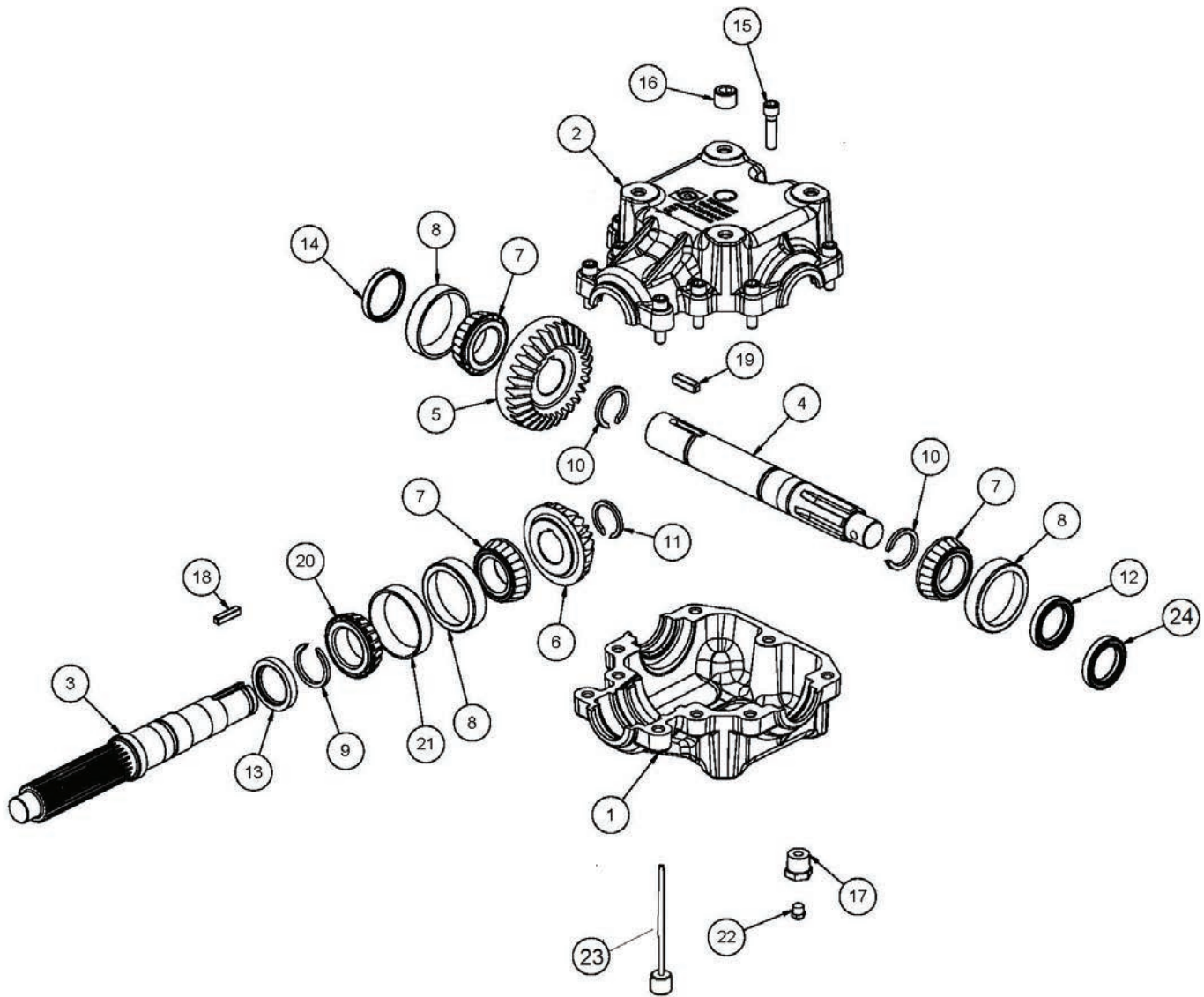
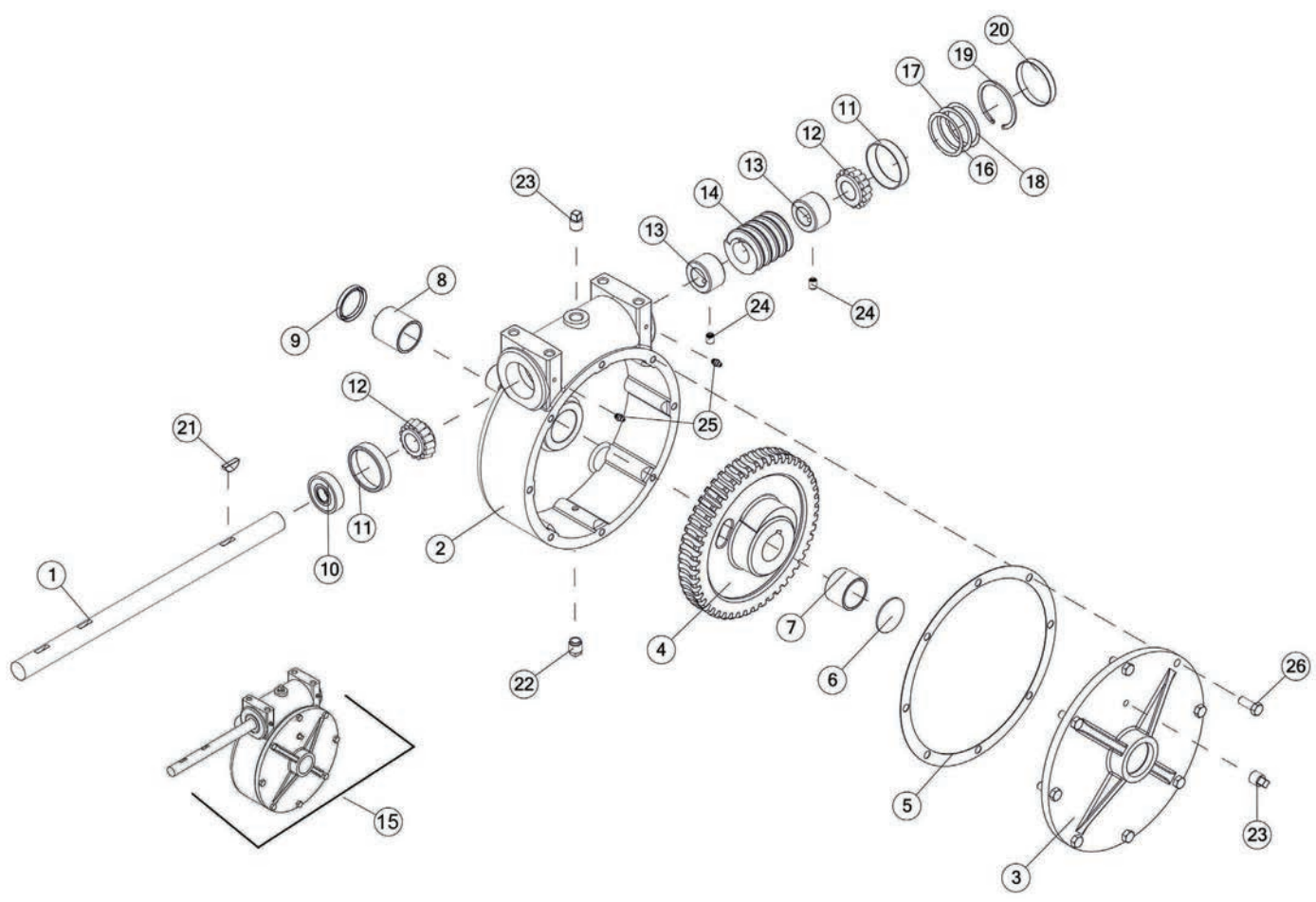




FIGURE 20 APRON GEARBOX



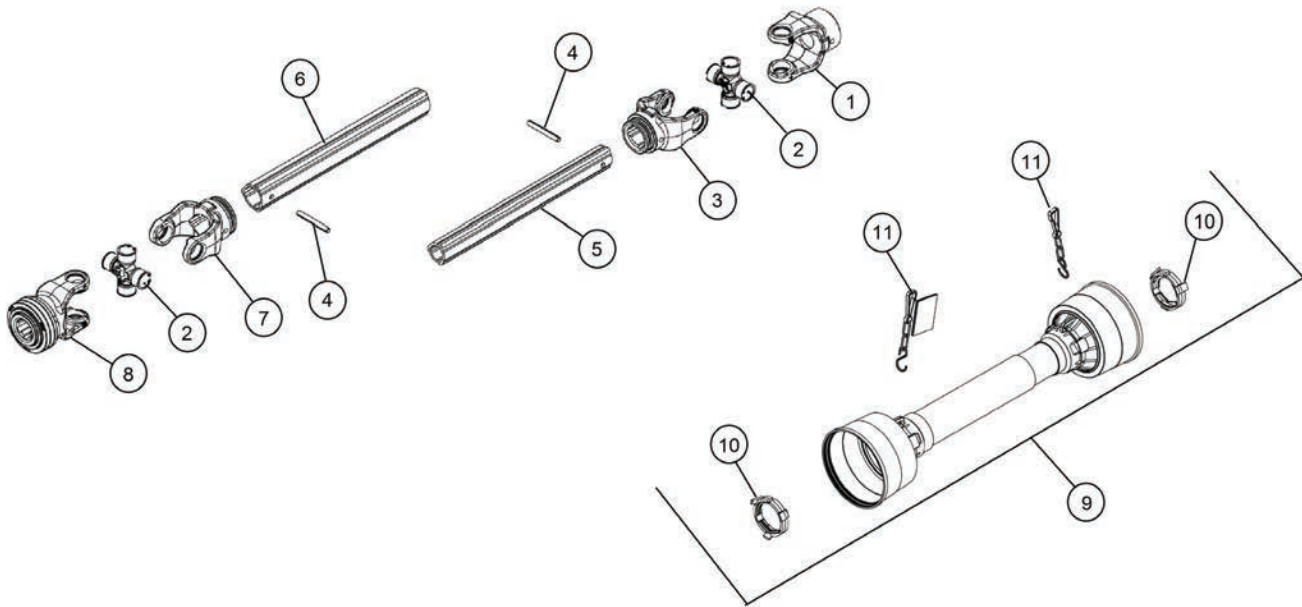




FIGURE 22

MSOPTO1038 OPTION - FACTORY INSTALLED
1000 RPM PTO

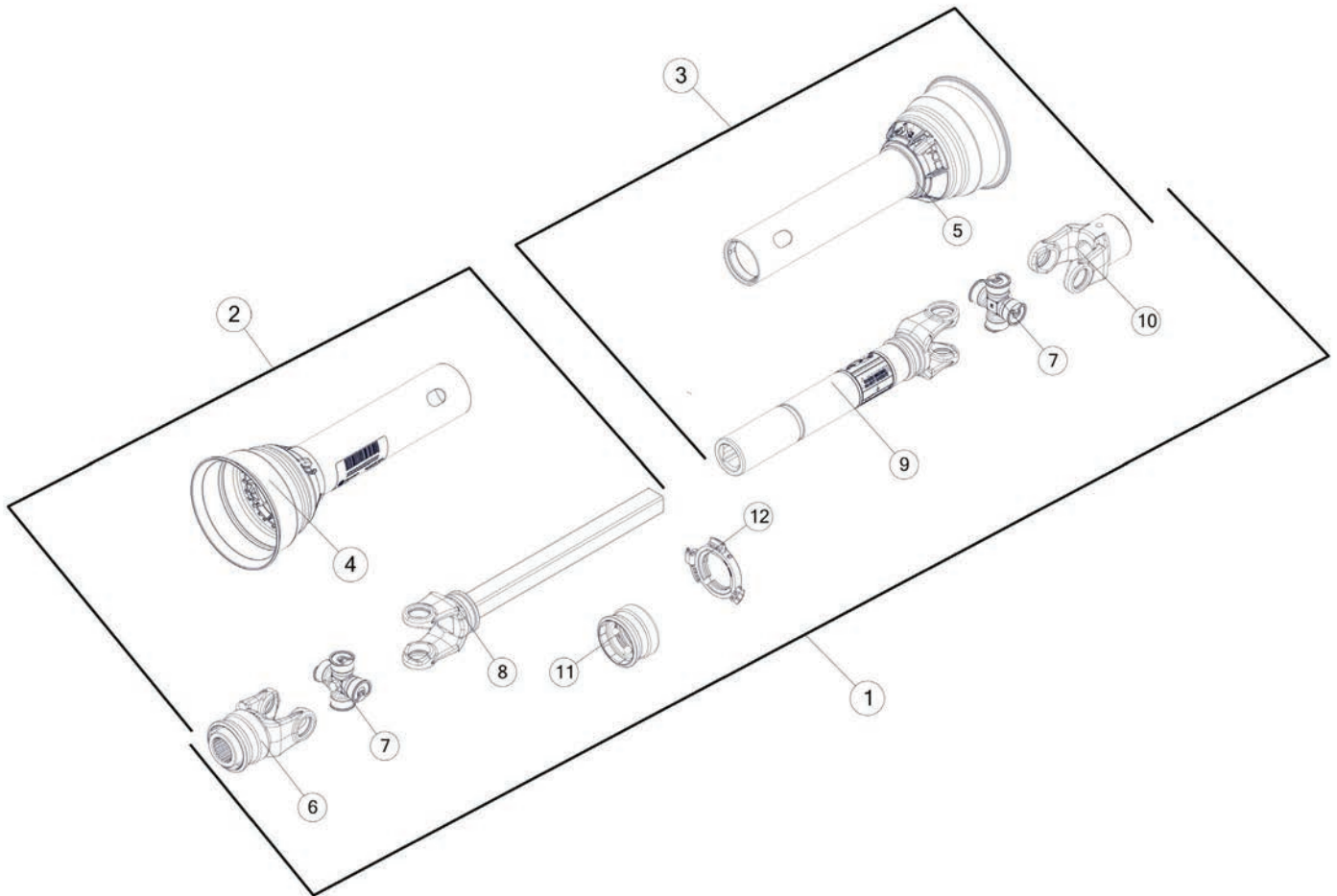




FIGURE 23

MSOTB327 OPTION
TOP BEATER

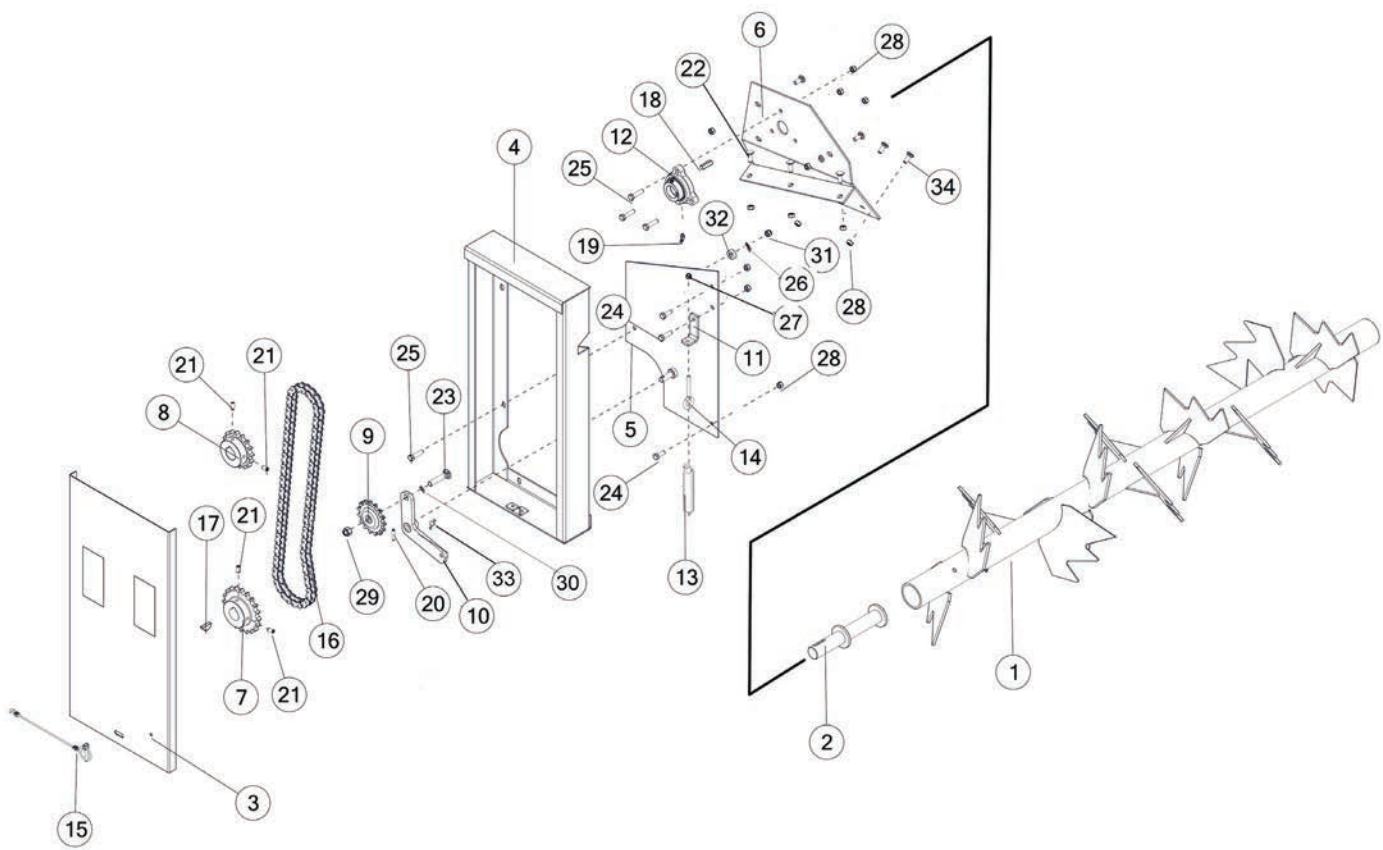




FIGURE 23

MSOTB327 OPTION

TOP BEATER

REF #	PART #	DESCRIPTION	QTY
1	80724	SECOND BEATER	1
2	80723	STUB SHAFT RH	1
3	81467	FRONT SHIELD W/DECAL	1
4	81471	BEATER SHIELD W/DECALS	1
5	81470	BACK SHIELD W/DECAL	1
6	80755	BEATER PANEL RH	1
7	80898	SPROCKET, 20T	1
8	D23	SPROCKET, 16T	1
9	12N42	IDLER SPROCKET, 15T	1
10	80728	SPRING TENSIONER ARM	1
11	80152	SPRING TENSIONER BRACKET	1
12	80725	BEATER BEARING	1
13	ST36	TENSION SPRING	1
14	YBTE10039	BOLT TURNED EYE, 5/16 X 4	1
15	S122	LANYARD CLIP PIN CABLE	1
16	37N49	ROLLER CHAIN, #60	1
17	5B9	WOODRUFF KEY, 3/8 X 1-1/4	1
18	A32	SQUARE KEY, .38 X .38 X 1.38	1
19	RG21	GREASE ZERK, 45 DEGREE	1
20	YPEX08010	EXPANSION PIN, 1/4 X 1-1/4	1
21	YSKP12035	SETSCREW, 3/8 X 3/4	4
22	YBCR12010	BOLT CARRIAGE, 3/8 X 1 G5	3
23	YBCR16025	BOLT CARRIAGE, 1/2 X 2-1/2 G2	1
24	YBFB12003	BOLT FLANGE, 3/8 X 1 G5	3
25	YBFB12150	BOLT FLANGE, 3/8 X 1-1/2 G5	3
26	YWFL12005	WASHER FLAT, 3/8	3
27	YNFG10005	NUT FLANGE, 5/16 GF	1
28	YNFG12006	NUT FLANGE, 3/8 GF	12
29	YNFG16003	NUT FLANGE, 1/2 GF	1
30	YWFL14005	WASHER FLAT, 7/16	4
31	YNNY12005	NUT HEX, 3/8 LKNY G2	1
32	S246	SPACER	1
33	G89	STRAIGHT ZERK, 1/4-28 X 90	1
34	YBCR12020	BOLT CARRIAGE, 3/8 X 1-1/4 G5	3





FIGURE 23
MSOTB327 OPTION
TOP BEATER

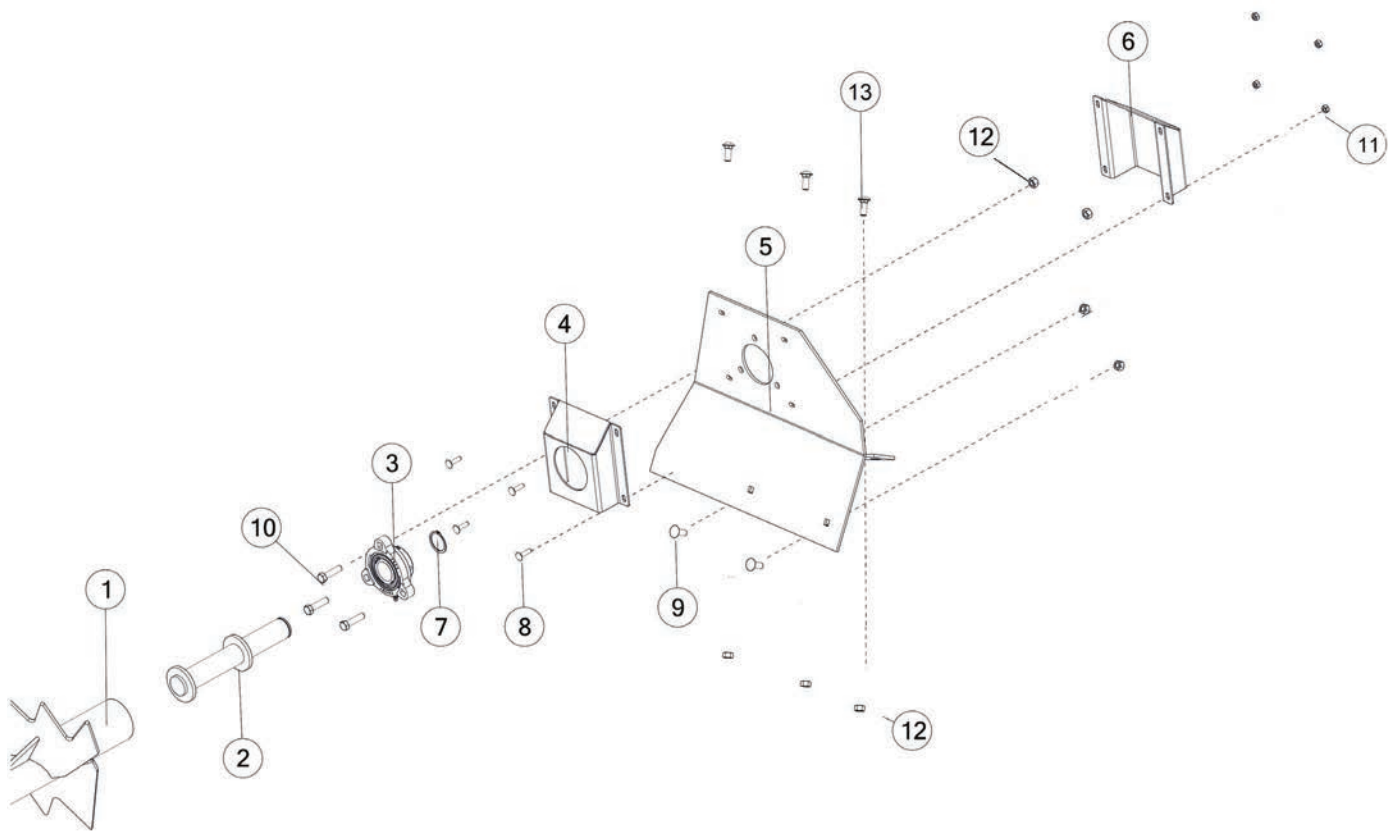




FIGURE 24

MSOPAN310 OPTION

REAR PAN

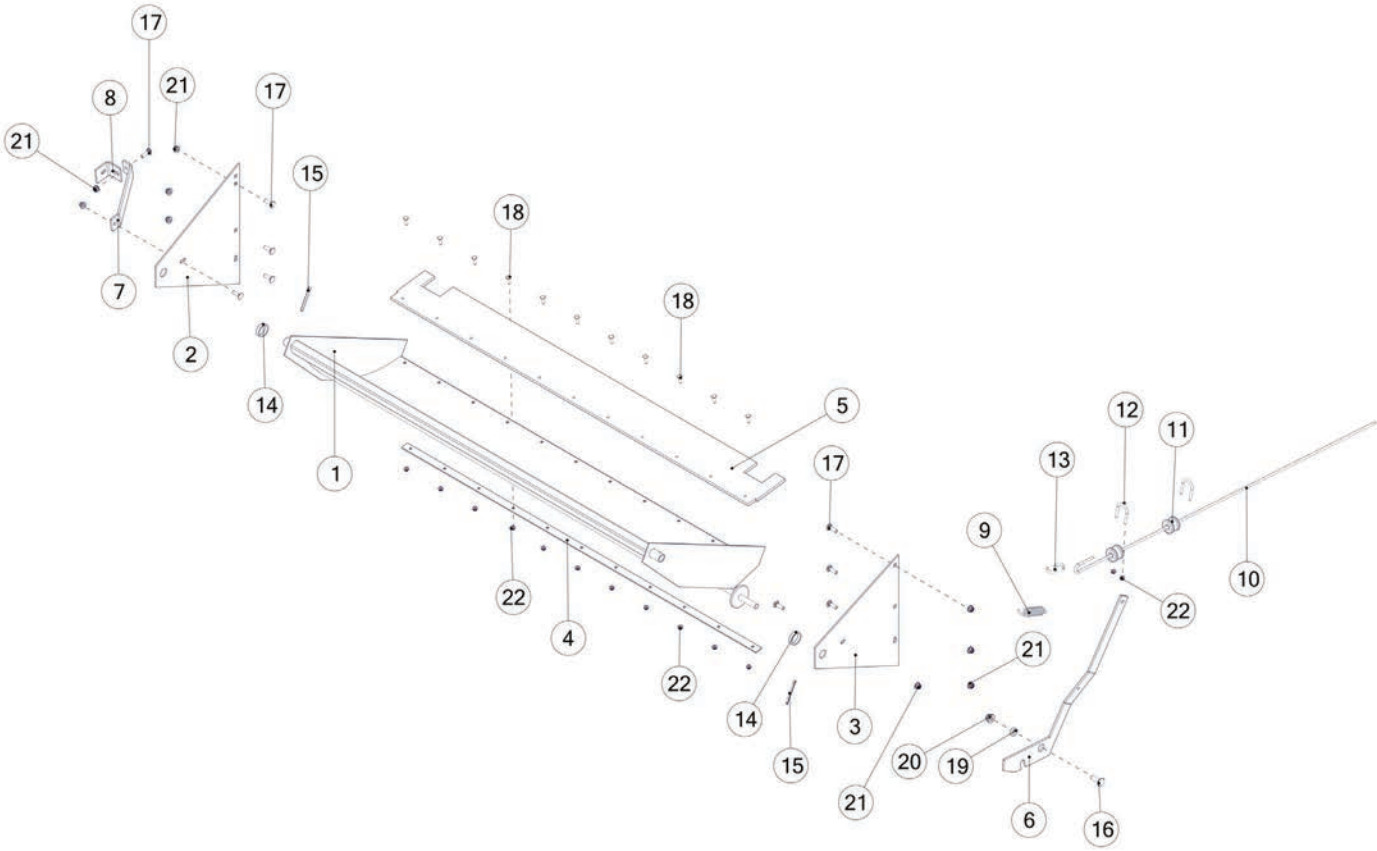




FIGURE 25

MSO310HD4 OPTION - FACTORY INSTALLED
HYD DRIVE KIT - 4 HOSE

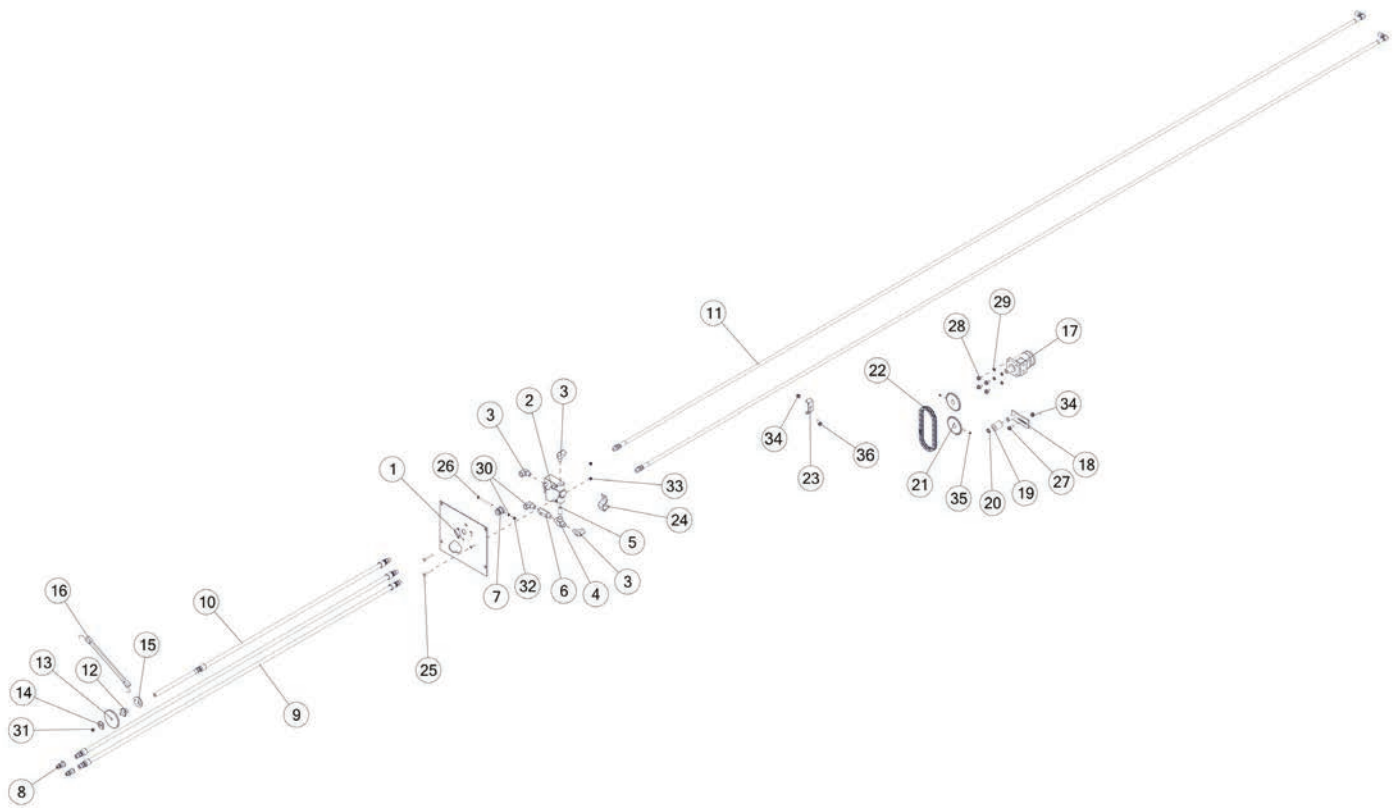




FIGURE 25

MSO310HD4 OPTION - FACTORY INSTALLED HYD DRIVE KIT - 4 HOSE

REF #	PART #	DESCRIPTION	QTY
1	23N133	HYDRAULIC CONTROL PANEL	1
2	DF15	SPEED CONTROL VALVE, NON-ADJUSTABLE	1
3	HE58	FITTING, 90, 1/2NPT, 1/2NPT	4
4	DF8	FITTING TEE, 1/2NPT, 1/2NPT, 1/2NPT	1
5	DF7	FIT STRAIGHT, 1/2NPT, 1/2NPT	1
6	DF18	CHECK VALVE, 1/2	1
7	60695	PIPE REDUCER, 3/4-1/2	1
8	DWM205	MALE QUICK COUPLER S71-4P HYD TIP	2
9	23N309	HYD HOSE, 8, 96IN	2
10	DF9	HYD HOSE, 8, 72IN	1
11	77330	HYD HOSE, 6X224, 8NPT, 8NPT	2
12	DF10	HANDLE BRACKET	1
13	DF11	CONTROL HANDLE	1
14	DF12	WASHER	1
15	DF22	RING FOR STRAP	1
16	DF14	STRAP	1
17	DF1	HYDRAULIC MOTOR	1
18	L10R35	TIGHTENER BRACKET	1
19	23N238	CHAIN TIGHTENER ROLLER	1
20	10R32	SNAP RING, EXTERNAL, .7	1
21	11S19	SPROCKET, 50B20, 1.000 ID	2
22	23N131	ROLLER CHAIN, #50, 40P	1
23	HE42	HOSE BRACKET	1
24	HE14	SMALL PIPE BRACKET	1
25	YBCR08025	BOLT CARRIAGE, 1/4-20 X 2-1/2 G5 ZC	2
26	YBHH08115	BOLT HEX, 1/4 X 4 G5 FULL THREAD	1
27	YBFB12003	BOLT FLANGE, 3/8 X 1 G5	1
28	YBFB12075	BOLT FLANGE, 3/8 X 3/4 G5	4
29	YWLO12005	WASHER, LOCK, 3/8	4
30	YWLO08005	WASHER, LOCK, 1/4, ZC	1
31	YNTL12005	NUT HEX, 3/8-16 LKTL ZC	1
32	YNHX08005	NUT HEX, 1/4-20 ZC	1
33	YNFG08010	NUT FLANGE, 1/4 GF	2
34	YNFG12006	NUT FLANGE, 3/8 GF	2
35	YSKP10010	SET SCRW, SCKT, KNURLED CUP PT, 5/16 - 18 X 3/8	2
36	YBFB12225	BOLT FLANGE, 3/8 X 2-1/4 G5	1



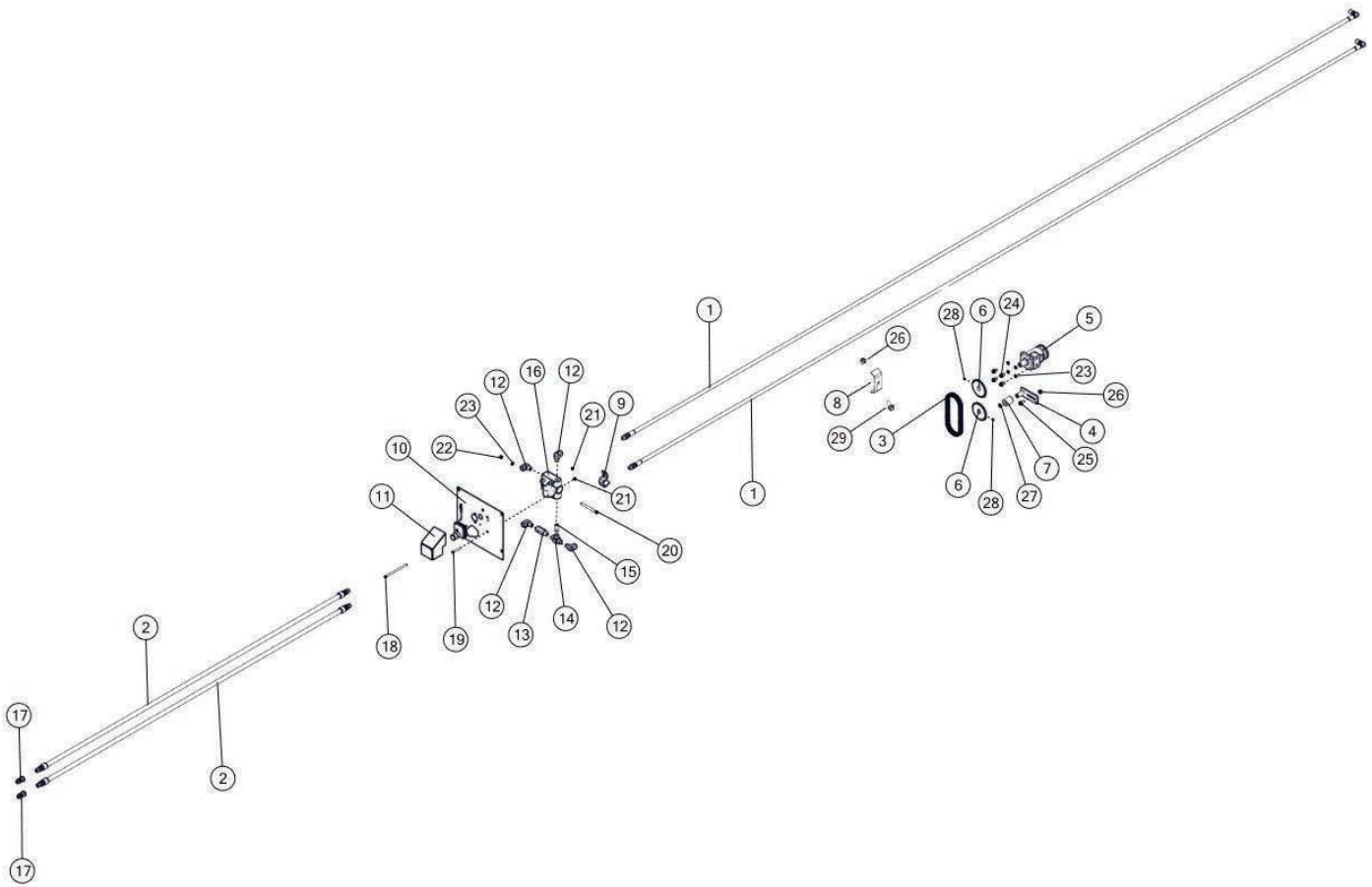




FIGURE 27
MSO-EC OPTION
ELEC CONTROLS - HYD DRIVE

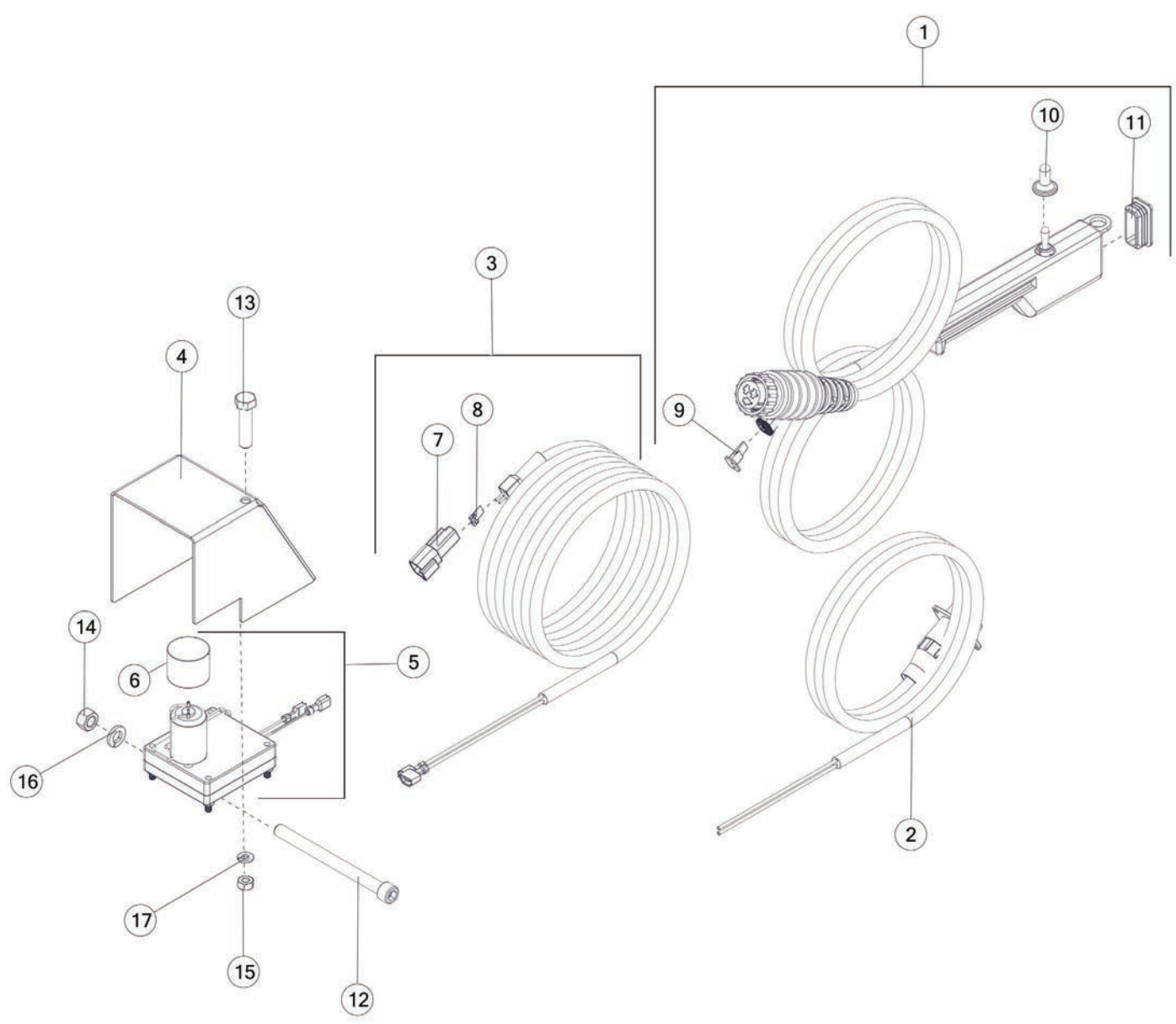




FIGURE 28
MSO14B OPTION
2ND CYL - HYD ENDGATE

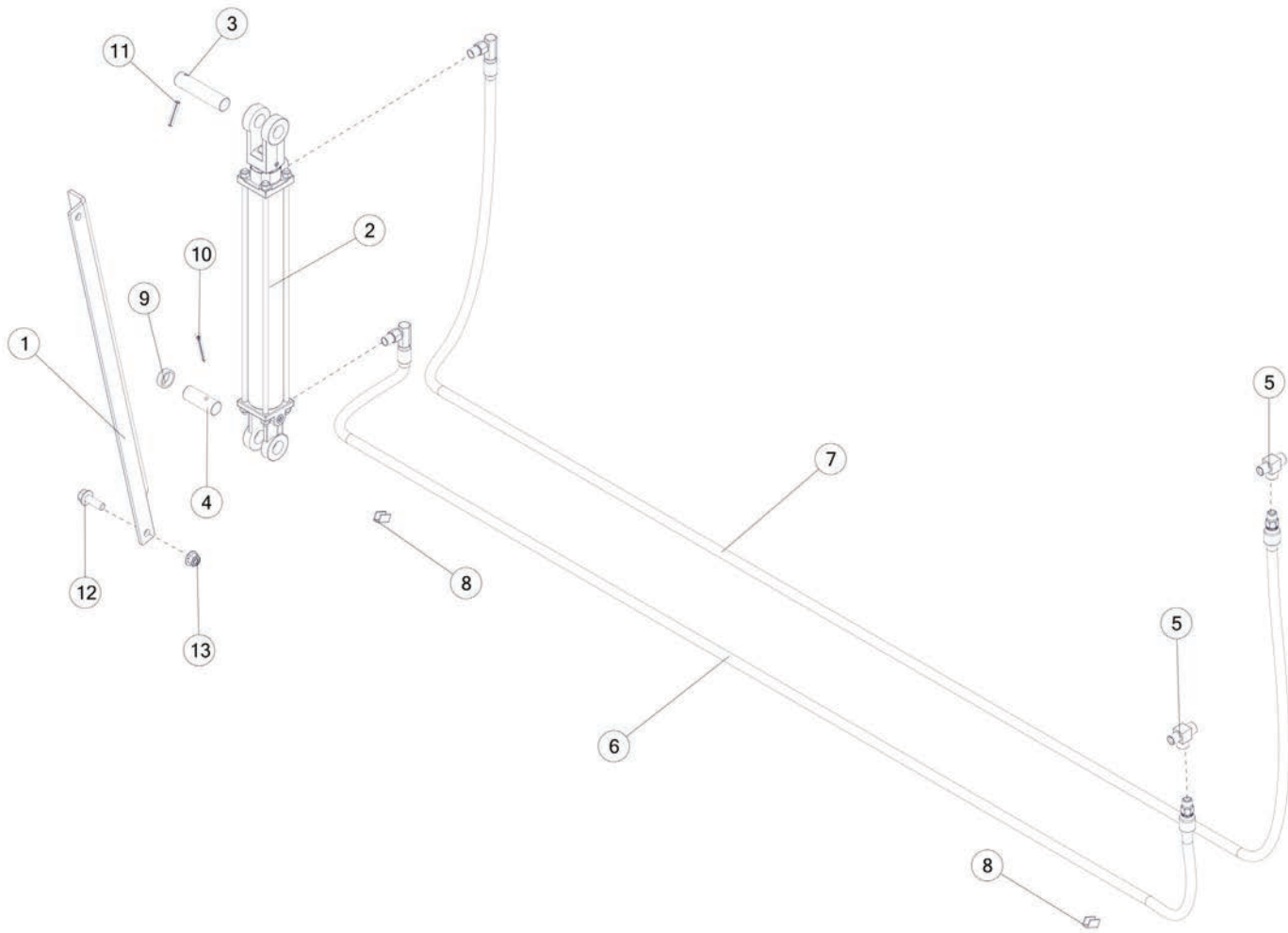




FIGURE 29

TWSHP310

16.5 X 16.1 TIRE/WHEEL/SPINDLE/HUB OPTION

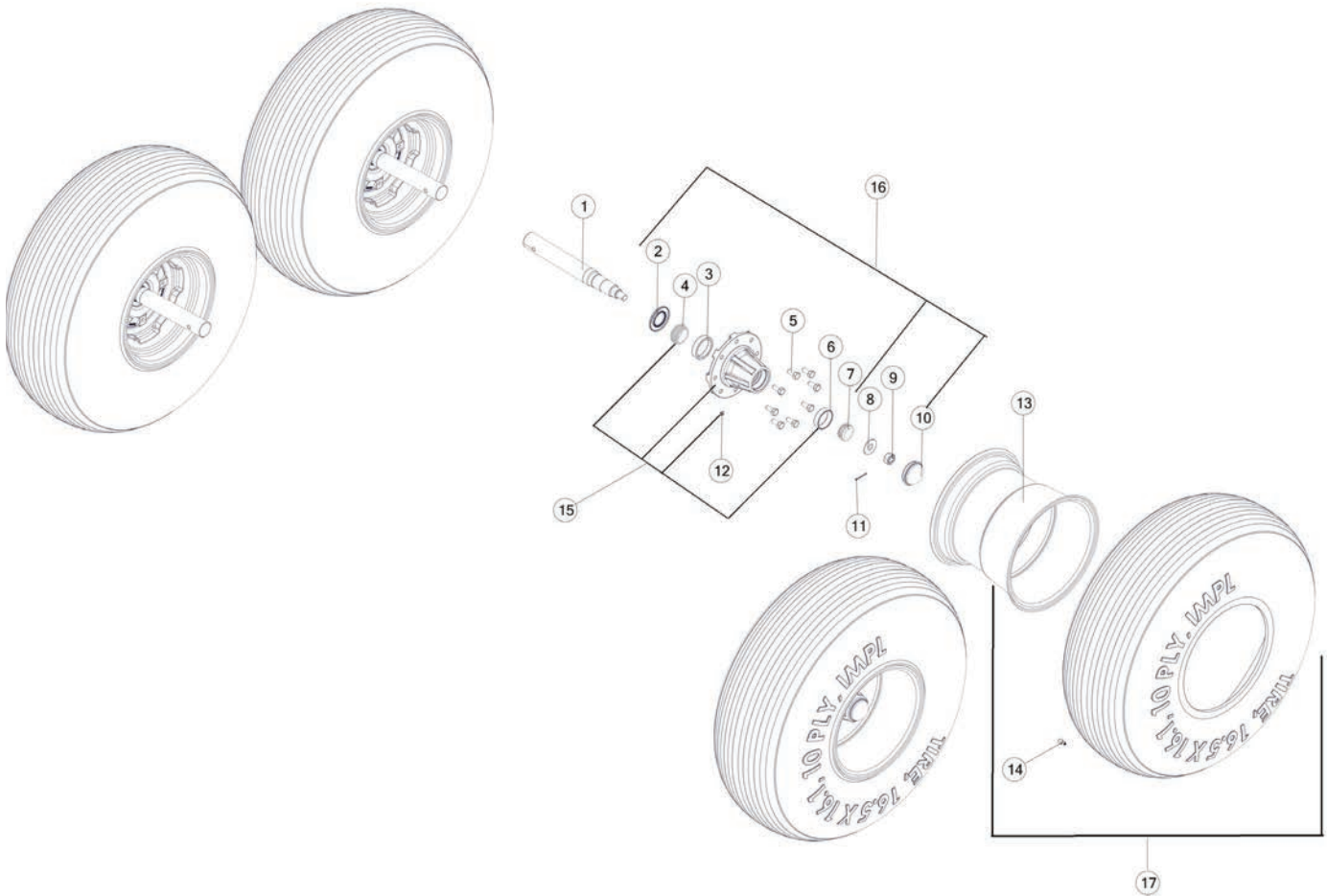
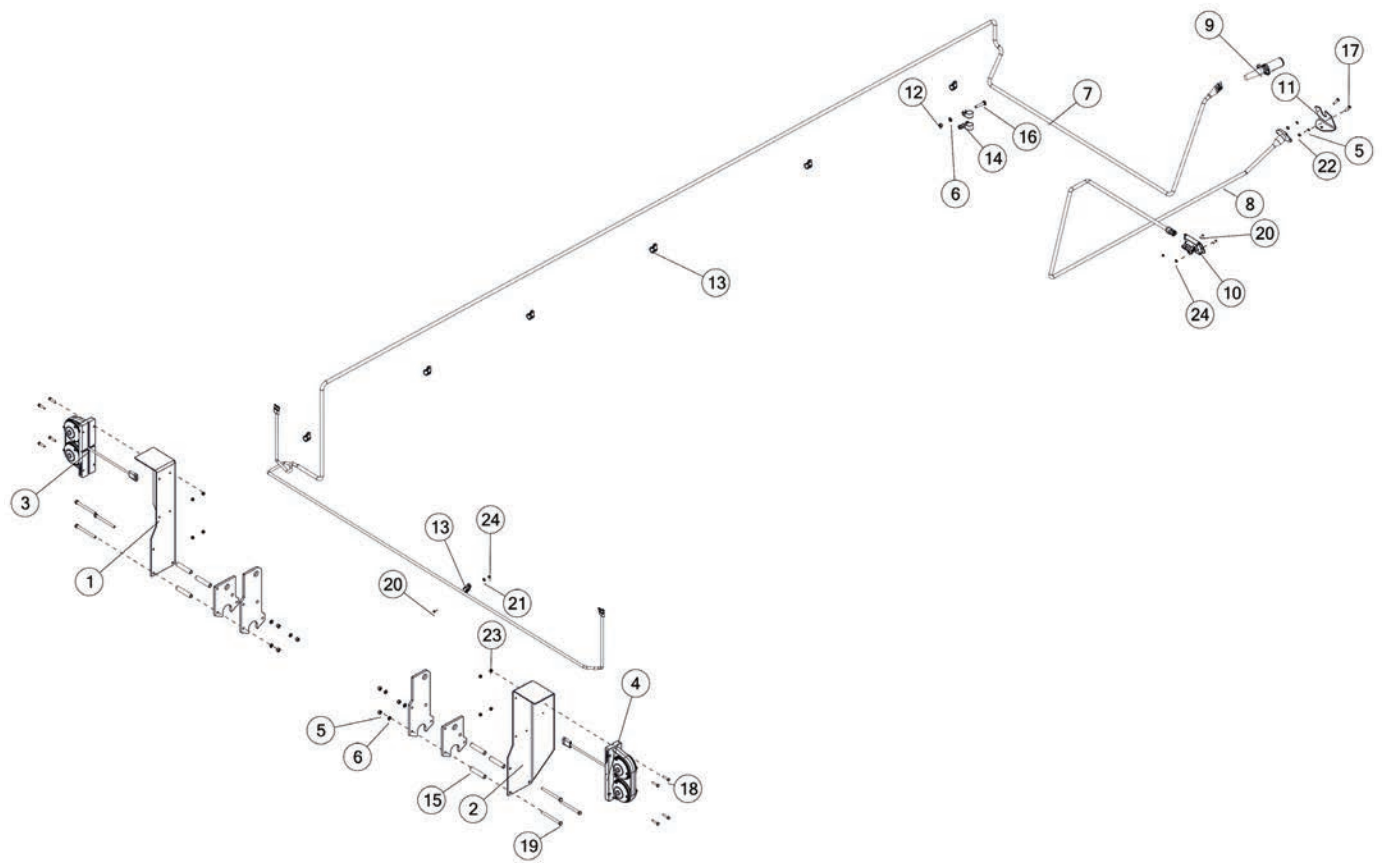




FIGURE 30

MSOLIGHT OPTION HIGHWAY LIGHTING KIT





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