

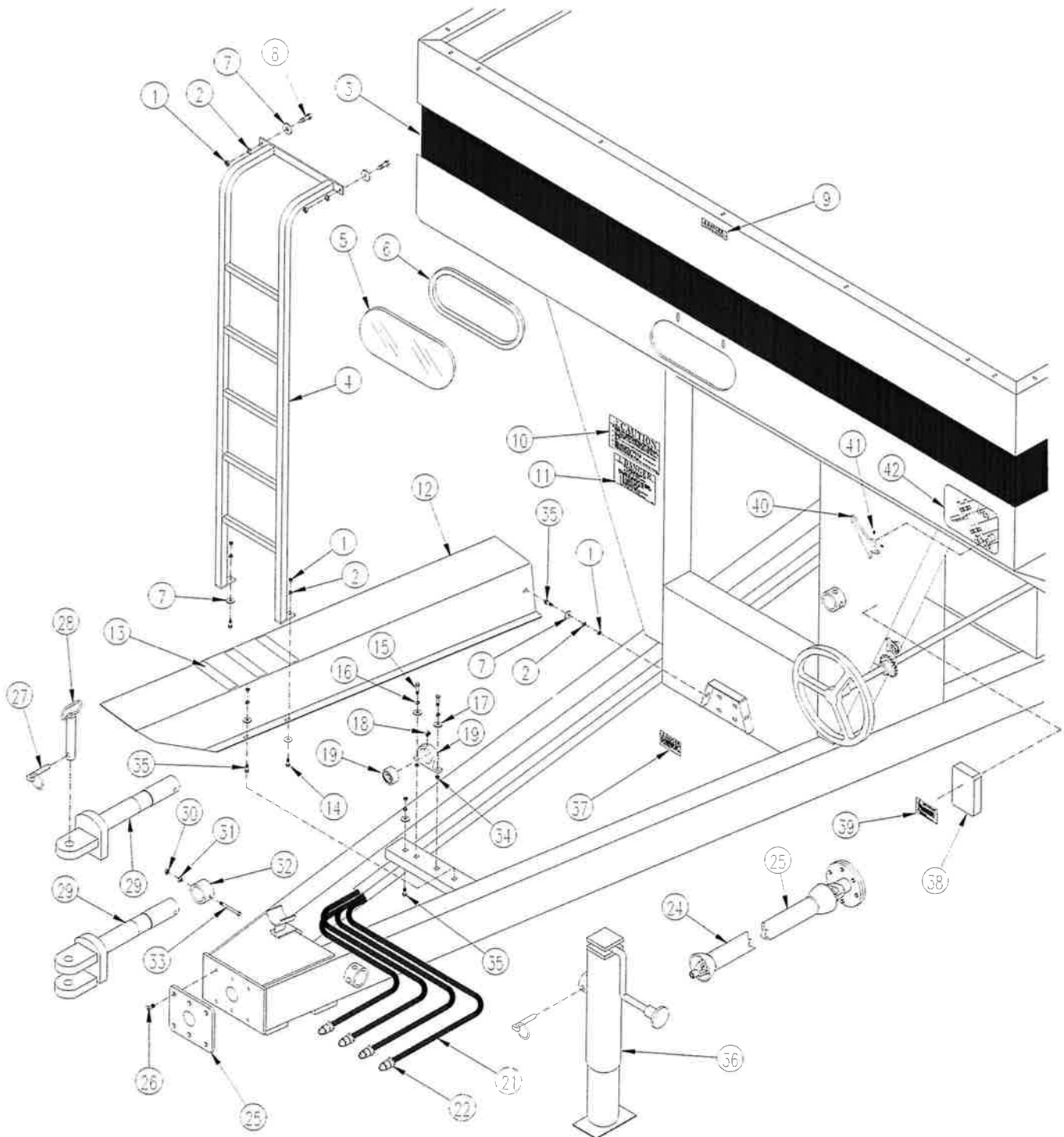
8 x 10 Orthman Photo

The 680 Grain Carts were introduced in 1986 and produced until 1990. A smaller 550 Model was also produced from 1986 until 1989. These two carts are virtually identical except the 550 used a smaller axle/tire assembly and no tank extensions. The 550 axle parts are included with the 680 parts listing on page A8. Prior to June 1989, a non-overriding clutch assembly was utilized on these carts. The following information pertains to carts manufactured from June 1989 to 1990 which featured an overriding clutch assembly.

There is an Operator's Manual available under part number **OM07/86/40** for this implement.

The following list of parts are intended as a guide. We feel that it would be prudent to carry the following items in stock at each dealership during the use season of this product. The quantities listed are for every 10 units which have been sold in the dealership trade area. As with any Orthman product, warning decals are available from us at no charge for this product.

Page	Item	Part Number	Description	Qty.	Comments
A7	19	152-196	Friction disc	4	
A7	39	180-147	Seal	2	CR13671
A7	40	180-145	Race	2	Timken™ # HN88610
A7	62	180-229	Shaft, input	1	Replaces 180-126 shaft
A7	42	180-139	Retaining ring	2	Used with #41 and 60
A7	43	180-142	Key	2	
A7	44	180-146	Bearing	2	Timken™ # HM88649
A7	45	180-124	Gear	1	Input gear
A7	48	180-144	Bearing	2	Timken™ # 2690
A7	49	180-143	Race	2	Timken™ # 2631
A7	59	180-125	Gear	1	Output
A7	61	180-127	Shaft, output	1	Replaces 180-170 shaft
A7	63	180-137	Retaining ring	2	Used with #61 and 62



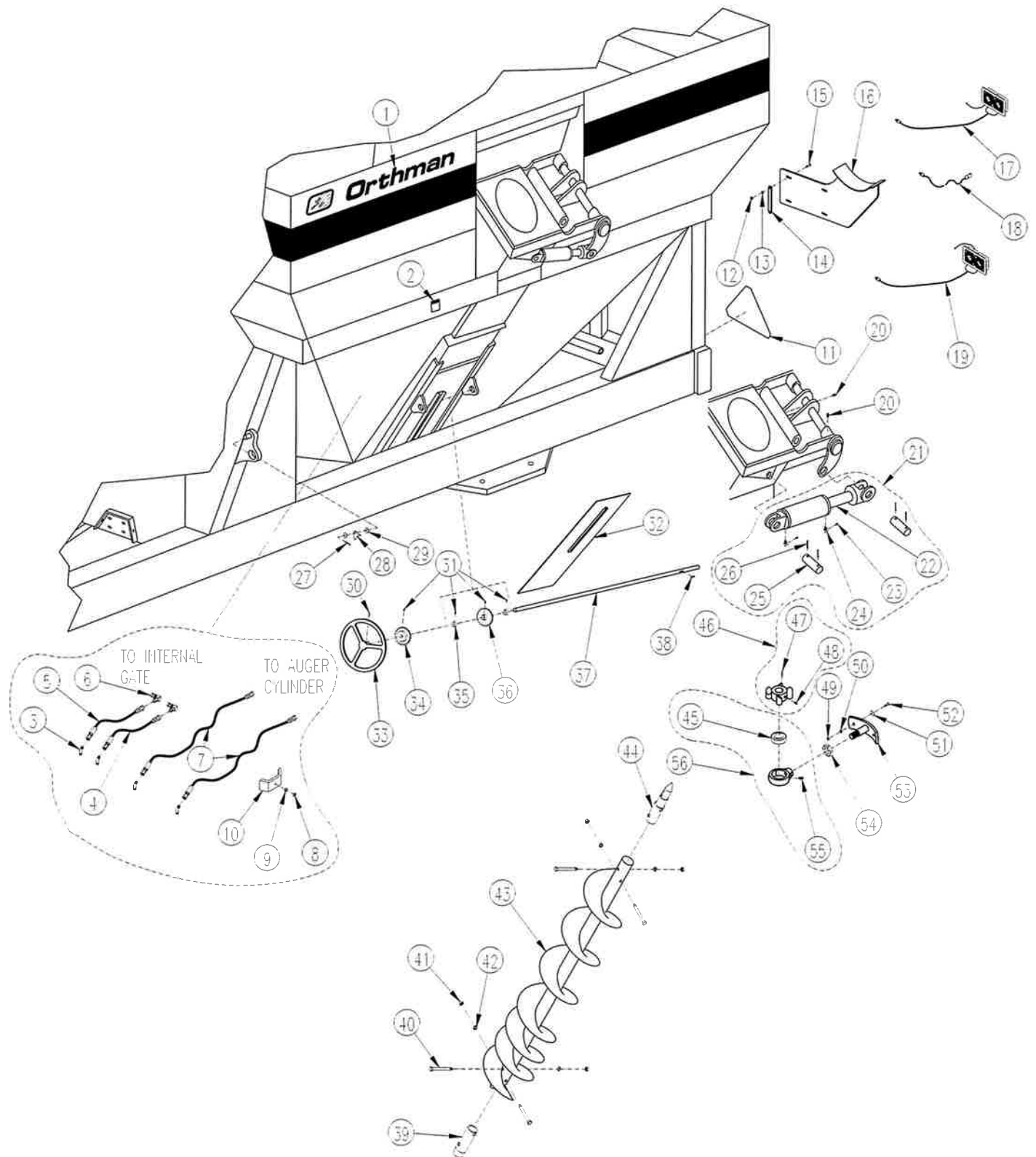
680 Typical Front View		(Revision 1)		
Key	Part #	Description	Qty.	Comments
	OM07/86/40	Operator's manual	1	
1.	102-005	Nut	8	3/8"
2.	108-018	Lock washer	8	3/8"
3.	153-075	Decal	47ft.	8" black strip
4.	318-342	Ladder	1	
5.	152-158	Window	2	Glass, 6" x 18"
6.	318-297	Molding	2	
7.	108-007	Flat washer	8	3/8"
8.	100-107	Bolt	2	3/8" x 1", Grade 5
9.	153-090	Decal	3	Do not enter grain cart
10.	153-082	Decal	1	Caution
11.	153-080	Decal	1	Danger
12.	318-351	Cover	1	Drive line
13.	153-079	Anti-slip strip	3	
14.	100-109	Bolt	2	3/8" x 1 1/2", Grade 5
15.	100-117	Bolt	2	1/2" x 1 3/4", Grade 5
16.	108-020	Lock washer	2	1/2"
17.	108-001	Flat washer	2	1/2" SAE
18.	110-008	Grease fitting	1	1/4"-28, 90°
19.	120-080	Pillow block bearing	1	Pillow block and bearing
	120-093	Bearing		1 3/8"ID (C1106KRRB)
20.	198-145	Union	4	Bulkhead, 37°, 3/8" hyd. pipe
21.	318-475	Hose	4	1/4" x 72" long, 9/16"-18FJX and 1/2"MP ends
22.	140-091	ISO hydraulic tip	4	For 1/2"MP
23.	152-265	Driveline	1	Back section, includes slip clutch and overriding clutch assembly
	152-266			Back section, includes slip clutch, for carts without overriding clutch
24.	152-190	Driveline	1	1 3/4" Yoke 20 spline, see page A7 for breakdown
	152-191			1 3/8" Yoke 21 spline, see page A7 for breakdown
25.	318-626	Frame end	1	Not used on carts equipped with weigh scales
26.	106-007	Bolt	6	1/2" x 1", flat socket head
27.	318-352	Hitch pin	1	
28.	104-036	Linch pin	1	7/16" x 2
29.	318-579	Tongue	1	Single tab
	318-330			Clevis type
30.	102-009	Nut	1	3/4"
31.	108-022	Lock washer	1	3/4"
32.	318-434	Collar	1	

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Typical Front View

(Revision 1)

Key	Part #	Description	Qty.	Comments
33.	100-163	Bolt	1	3/4" x 4", Grade 5
34.	102-007	Nut	2	1/2"
35.	100-004	Carriage bolt	4	3/8" x 1", Grade 5
36.	152-149	Jack	1	7000 # Capacity
37.	153-081	Decal	1	Danger
38.	152-252	Manual box	1	
39.	153-101	Decal	1	Manual enclosure
40.	318-453	Indicator arrow	1	
41.	106-002	Set screw	2	1/4" x 1/2", Socket head
42.	153-078	Decal	1	Open/Closed



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Typical Left Side

(Revision 2)

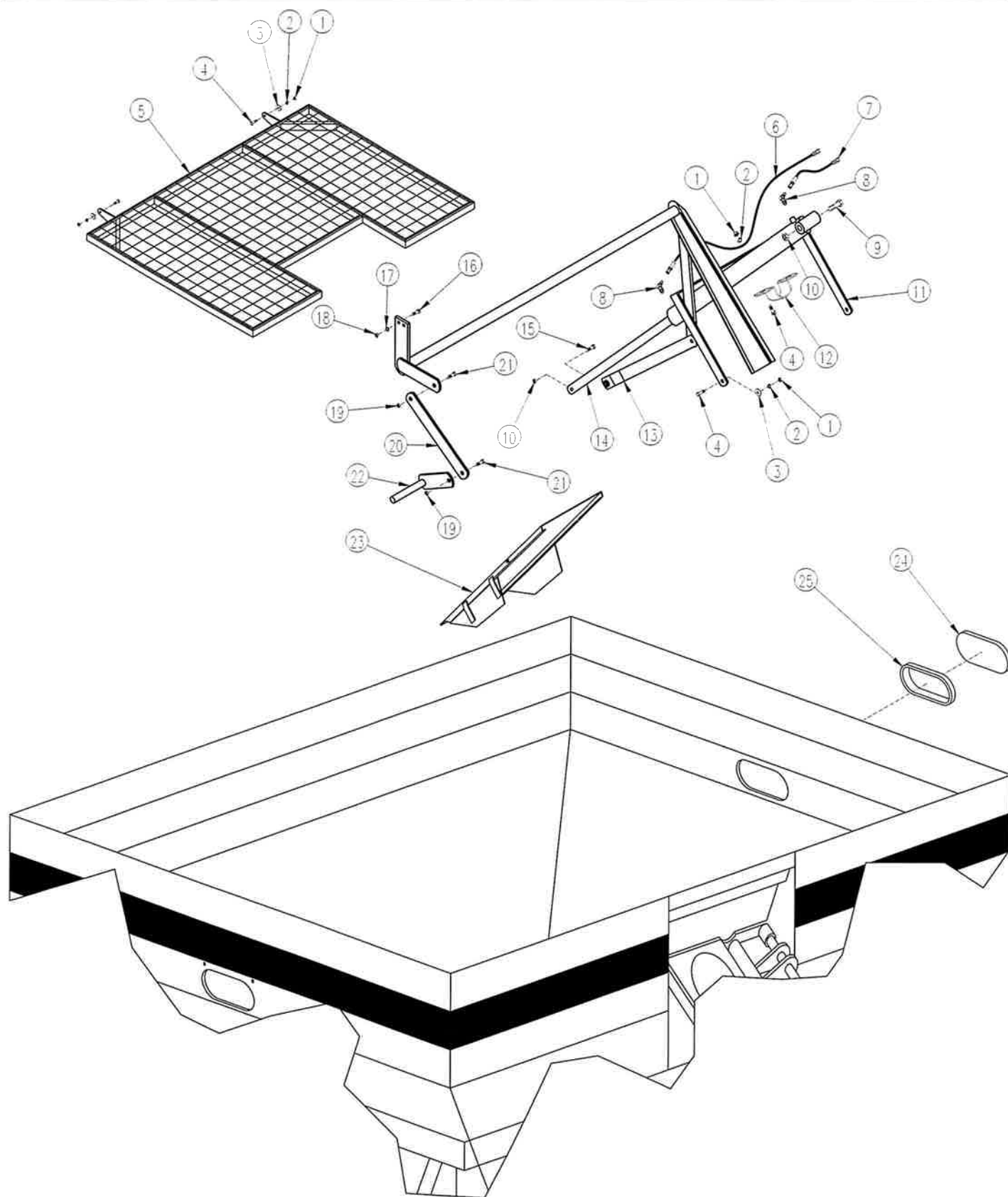
Key	Part #	Description	Qty.	Comments
1.	153-077	Decal	2	Trade mark
2.	153-083	Decal	2	Important
3.	198-147	Union	4	37°
4.	318-520	Hose	1	1/4" x 12 1/2" long, 9/16"-18FJX
5.	318-521	Hose	1	1/4" x 15 1/2" long, 9/16"-18FJX
6.	198-146	Elbow	2	3/8" Hyd. pipe bulkhead 90°
7.	318-524	Hose	2	1/4" x 65" long, 9/16"-18FJX
8.	102-004	Nut	2	5/16"
9.	108-017	Lock washer	2	5/16"
10.	318-460	Mount strap	2	
11.	153-084	Decal	2	SMV
12.	102-005	Nut	4	3/8"
13.	108-018	Lock washer	4	3/8"
14.	318-563	Auger rest strap	2	1 1/2" x 8 1/2" Long
15.	100-005	Carriage bolt	4	3/8" x 1 1/4", Grade 5
16.	318-509	Auger rest	1	
17.	318-583	Tail light assembly	1	Right, optional equipment
	152-174	Lens	1	Amber
	152-357		1	Red
18.	318-582	Main light cable	1	Optional equipment (does not include 7-way plug)
19.	318-584	Tail light assembly	1	Left, optional equipment
	152-174	Lens	1	Amber
	152-357		1	Red
20.	110-001	Grease fitting	2	1/4"-28, Straight
21.	318-469	Cylinder assembly	1	Includes items #22-26
	194-185	Seal kit	1	Cross, Base code = IZ 0 0 0 0
22.	194-172	Cylinder	1	2 1/2" x 8"
23.	340-032	Restrictor	2	.031"
24.	340-030	Elbow	2	9/16" MB - 9/16" MJ, 90°, Tapped
25.	104-085	Pin	2	3 5/8" Long
26.	104-028	Cotter pin	2	3/16" x 1 1/2"
27.	104-047	Cotter pin	1	1/8" x 1"
28.	318-323	Wheel lock	1	
29.	108-001	Flat washer	2	1/2", SAE
30.	104-001	Roll pin	1	5/16" x 1 1/2"
31.	106-003	Set screw	4	5/16" x 5/16"
32.	318-326	Trap door	1	
33.	318-316	Dump gate wheel	1	
34.	126-017	Sprocket	1	40 Tooth, 1" bore, includes item #31
35.	122-001	Lock collar	2	1" Bore, includes item #31

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Typical Left Side

(Revision 2)

Key	Part #	Description	Qty.	Comments
36.	126-062	Sprocket	1	60 Tooth, 1" bore, includes item #31
37.	318-325	Shaft	1	1" x 77 1/4" Long
38.	318-462	Key	1	1/4" x 1 5/8"
39.	318-634	Bottom insert	1	
40.	100-141	Bolt	4	5/8" x 4 1/2", Grade 5
41.	102-008	Nut	4	5/8"
42.	108-021	Lock washer	4	5/8"
43.	318-488	Auger	1	14" Diameter, bottom auger
44.	318-338	Auger bullet	1	
45.	120-094	Bearing	1	2"ID (UC210-32)
46.	608-100	Auger dog	1	Includes #47 and 48
47.	318-461	Key	1	1/2" x 1 3/4"
48.	106-030	Set screw	1	1/2" x 1/2"
49.	102-007	Nut	2	1/2"
50.	108-020	Lock washer	2	1/2"
51.	108-001	Flat washer	2	1/2" SAE
52.	100-116	Bolt	2	1/2" x 1 1/2", Grade 5
53.	318-420	Bearing hanger	1	
54.	102-087	Lock nut	1	1"-11, NPT
55.	110-006	Grease fitting	1	1/8" PTF, 45°
56.	120-082	Bearing hanger	1	Includes item # 45 and 55

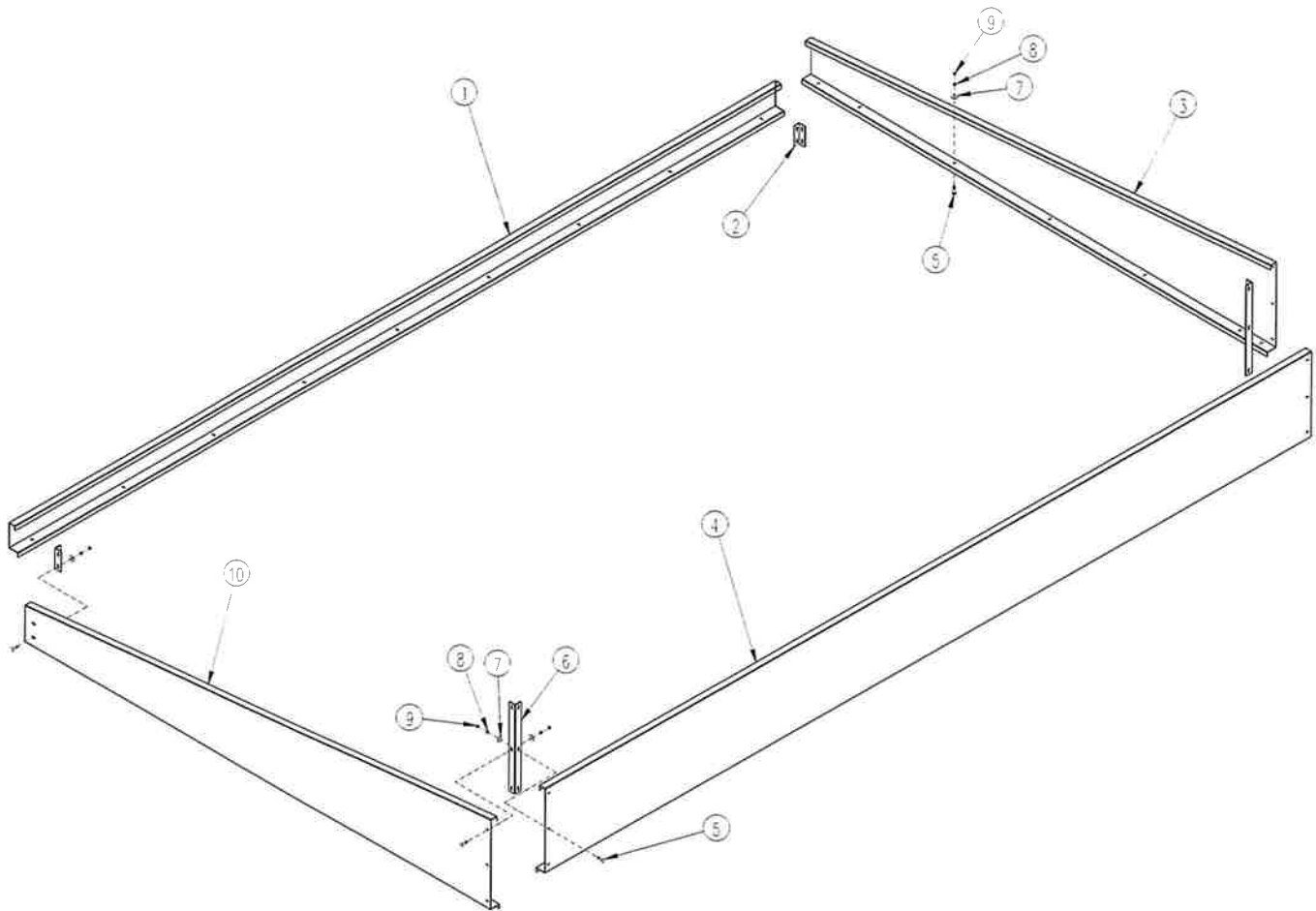


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Typical Top View

(Revision 1)

Key	Part #	Description	Qty.	Comments
1.	102-007	Nut	6	1/2"
2.	108-020	Lock washer	6	1/2"
3.	108-009	Flat washer	4	1/2"
4.	100-013	Carriage bolt	6	1/2" x 1 1/2", Grade 5
5.	318-649	Safety grate	1	
6.	318-522	Hose	1	1/4" x 29 1/2", 9/16"-18 FJK
7.	318-523	Hose	1	1/4" x 58", 9/16"-18FJX
8.	198-033	Elbow	2	9/16"-18MB - 9/16"-18MJ, 90°
9.	100-165	Bolt	1	3/4" x 5", Grade 5
10.	102-031	Lock nut	2	3/4"
11.	318-506	Mounting strap	1	
12.	318-501	Strap	1	Cylinder mount
13.	318-546	Indicator strap	1	
14.	194-161	Cylinder	1	2 1/2" x 42"
	194-174	Seal Kit	1	
15.	100-160	Bolt	1	3/4" x 3", Grade 5
16.	100-004	Carriage bolt	2	3/8" x 1", Grade 5
17.	108-018	Lock washer	2	3/8"
18.	102-005	Nut	2	3/8"
19.	102-069	Jam nut	2	3/8"
20.	318-543	Strap	1	1 1/2" x 13 1/2" long
21.	100-105	Bolt	2	3/8" x 3/4", Grade 5
22.	318-560	Indicator shaft	1	
23.	318-491	Gate	1	
24.	152-158	Window	2	Glass, 6" x 18"
25.	318-297	Moldings	2	

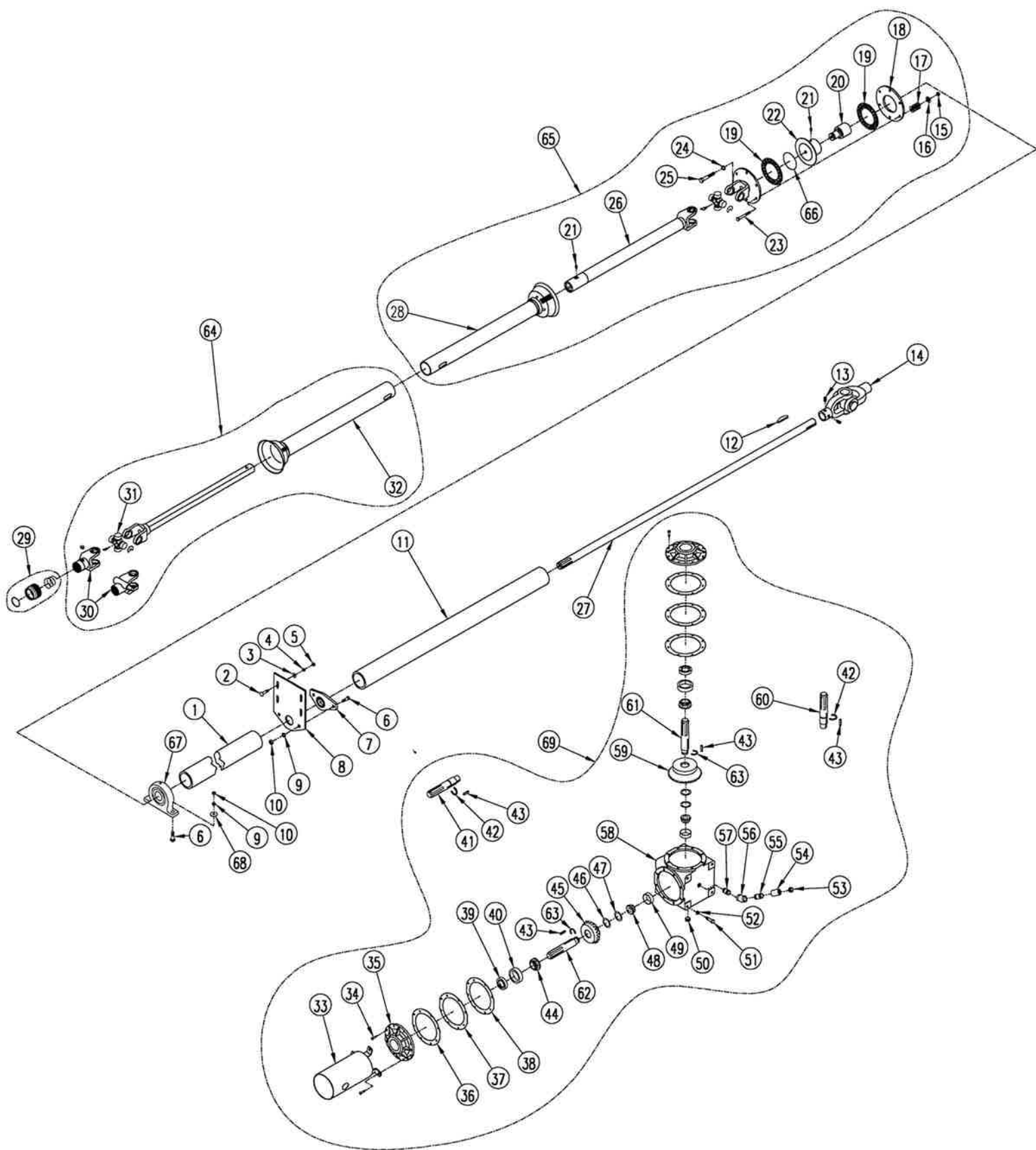


Key	Part #	Description	Qty.	Comments
1.	318-497	Extension	1	Right
2.	318-466	Corner bracket	2	5" long
3.	318-500	Extension	1	Back
4.	318-498	Extension	1	Left
5.	100-002	Carriage bolt	50	5/16" x 3/4", Grade 5
6.	318-467	Corner bracket	2	20" long
7.	108-006	Flat washer	50	5/16"
8.	108-017	Lock washer	50	5/16"
9.	102-004	Nut	50	5/16"
10.	318-499	Extension	1	Front

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Upper Auger**

(Revision 1)

Key	Part #	Description	Qty.	Comments
1.	318-336	Top insert	1	
2.	102-008	Nut	4	5/8"
3.	108-021	Lock washer	4	5/8"
4.	100-141	Bolt	4	5/8" x 4 1/2"
5.	318-487	Auger	1	14" Diameter, top auger
6.	318-337	Bottom insert	1	
7.	104-005	Roll pin	1	1/2" x 2 1/2", Spiral
8.	318-412	Shaft	1	1 3/4" x 17 3/8" Long
9.	318-413	Hinge lock screw	1	
10.	102-021	Jam nut	1	1"
11.	318-416	Adjusting screw	1	
12.	318-527	Adjusting screw assembly	1	Includes items #9-11
13.	318-596	Lock pin	2	1" x 3"
14.	104-028	Cotter pin	2	3/16" x 1 1/2"
15.	318-301	Auger tube	1	
16.	152-170	Spout	1	
17.	100-002	Carriage bolt	4	5/16" x 3/4", Grade 5
18.	318-464	Strap	2	1" x 11 1/4" Long
19.	102-004	Nut	10	5/16"
20.	108-017	Lock washer	10	5/16"
21.	318-465	Strap	2	1" x 13" Long
22.	100-003	Carriage bolt	6	5/16" x 1", Grade 5
23.	102-007	Nut	4	1/2"
24.	148-043	Spring	4	
25.	100-125	Bolt	1	1/2" x 4 1/2", Grade 5
26.	120-079	Flange	1	Includes item #30
27.	100-114	Bolt	1	1/2" x 1", Grade 5
28.	108-020	Lock washer	1	1/2"
29.	317-892	Spacer	1	1 3/16"
30.	120-093	Bearing	1	1 3/8"ID
31.	110-001	Grease fitting	1	1/4"-28, Straight
32.	318-581	Light assembly	1	Optional equipment, used when 680 light package is installed



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Drive Train

Key	Part #	Description	Qty.	Comments
1.	318-515	Cover	1	PVC, 1 1/4" x 39 1/2" long
2.	100-004	Carriage bolt	4	3/8" x 1", Grade 5
3.	108-007	Flat washer	4	3/8"
4.	108-018	Lock washer	4	3/8"
5.	102-005	Nut	4	3/8"
6.	100-116	Bolt	4	1/2" x 1 1/2", Grade 5
7.	120-081	Flange	1	1 3/8" ID, includes bearing
	120-093	Bearing		1 3/8"ID (C1106KRRB)
8.	318-404	Mounting plate	1	
9.	108-020	Lock washer	4	1/2"
10.	102-007	Nut	2	1/2"
11.	318-516	Cover	1	PVC, 1 1/4" x 50" long
12.	318-438	Key	1	5/16" x 2"
13.	106-005	Set screw	2	3/8" x 3/8"
14.	152-153	U-joint	1	1 3/8" round on front end and 1 3/8"-6 spline on back end
15.	102-027	Lock nut	6	3/8"
16.	152-272	Step washer	6	3/8"
17.	152-271	Spring	6	6000# Rating
18.	152-293	Friction plate	1	6 hole
19.	152-196	Friction disc	2	51/4"OD x 3 1/2"ID x 1/8"
20.	152-296	Clutch hub	1	Over running clutch inner hub
21.	110-001	Grease fitting	3	1/4"-28, Straight
22.	152-294	Clutch flange	1	Over running clutch outer housing
	152-367	Clutch repair kit		Includes item #66
23.	100-229	Bolt	6	3/8" x 3 3/4", Grade 5
24.	108-020	Lock washer	1	1/2"
25.	100-122	Bolt	1	1/2" x 3", Grade 5
26.	152-273	Drive shaft	1	Outer, includes item # 21
27.	318-637	Shaft	1	1 3/8" x 101" Long used with splined override clutch assy, June 1989-1990 3/8" x 147" Long 1 3/8" x 101" Long used with keyed non-overriding clutch driveline 1986- June 1989
	318-436			
28.	152-192	Cover	1	Inner (small)
29.	152-162	Repair kit	1	For 1 3/8"-21 spline coupler
30.	152-189	Yoke	1	1 3/8"-21 Spline
	152-187			1 3/4"-20 Spline
31.	152-193	Cross & bearing	2	
32.	152-194	Cover	1	Outer (large)
33.	318-510	Guard	1	For universal joint
34.	180-151	Bolt	16	3/8" x 1 1/4", Flanged

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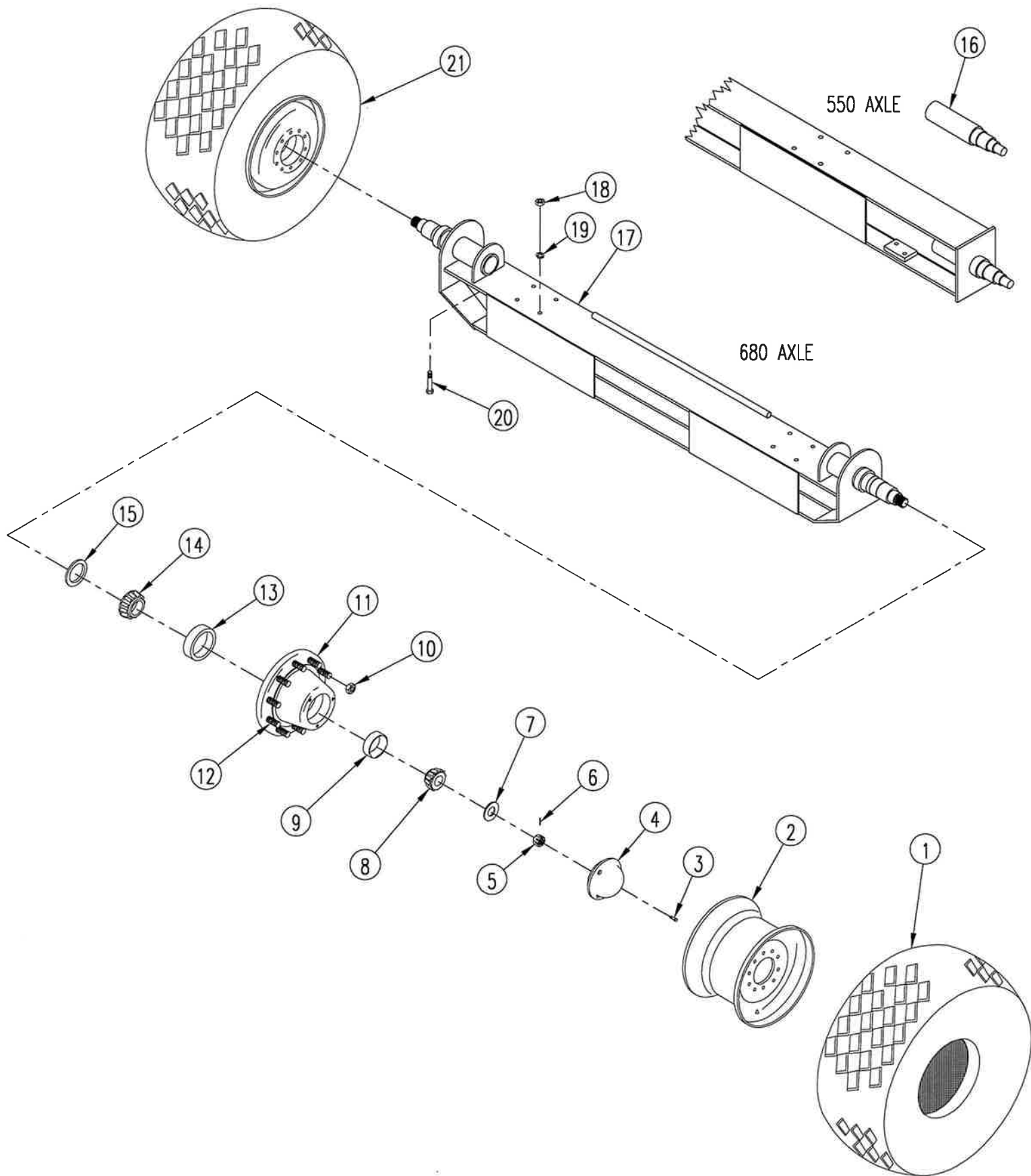
Drive Train

Key	Part #	Description	Qty.	Comments
35.	180-152	Cap	2	
36.	180-153	Gasket	vary	.015" Thick
37.	180-154	Gasket	vary	.005" Thick
38.	180-155	Gasket	vary	.003" Thick
39.	180-147	Seal	2	(CR13671)
40.	180-145	Race	2	Timken™ # HN88610
41.	N/A	Shaft	1	Obsolete, replace with shaft # 62
42.	180-139	Retaining ring	2	Used with shaft #41 & 60
43.	180-142	Key	2	
44.	180-146	Bearing	2	Timken™ # HM88649
45.	180-124	Gear	1	Input gear
46.	180-140	Shim	vary	.010" Thick
47.	180-141	Shim	vary	.005" Thick
48.	180-144	Bearing	2	Timken™ # 2690
49.	180-143	Race	2	Timken™ # 2631
50.	180-148	Plug	4	Solid
51.	100-114	Bolt	8	1/2" x 1", Grade 5
52.	108-020	Lock washer	8	1/2"
53.	180-149	Plug	1	Vented
54.	140-029	Fitting	1	1/2" NPT
55.	140-090	Nipple	1	1/2" NPT x 2" long
56.	140-088	Elbow	1	1/2" NPT 45°
57.	140-089	Nipple	1	1/2" NPT x 1 1/2" long
58.	180-150	Housing	1	
59.	180-125	Gear	1	Output gear
60.	N/A	Shaft	1	Obsolete, replace with shaft # 61
61.	180-127	Shaft	1	Output, 1 3/8" x 7 5/8", when ordering a new shaft order #63 also.
62.	180-229	Shaft	1	Input, 1 3/8" x 7 15/16", when ordering a new shaft order #63 also.
63.	180-137	Retaining ring	2	
64.	152-191	Driveline	1	Front section for 1 3/8"-21 PTO
	152-190			Front section for 1 3/4"-20 PTO
65.	152-265	Driveline	1	Back section, includes slip clutch and over running clutch
	152-266	Driveline	1	Back section, includes slip clutch, for carts without overriding clutch
66.	152-465	Seal	1	
67.	120-080	Pillow block bearing	1	Pillow block and bearing
	120-093	Bearing		1 3/8"ID (C1106KRRB)
68.	108-001	Flat washer	2	1/2" SAE

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Drive Train

Key	Part #	Description	Qty.	Comments
69.	180-171	Gear box	1	Includes item # 33-63



680, 550

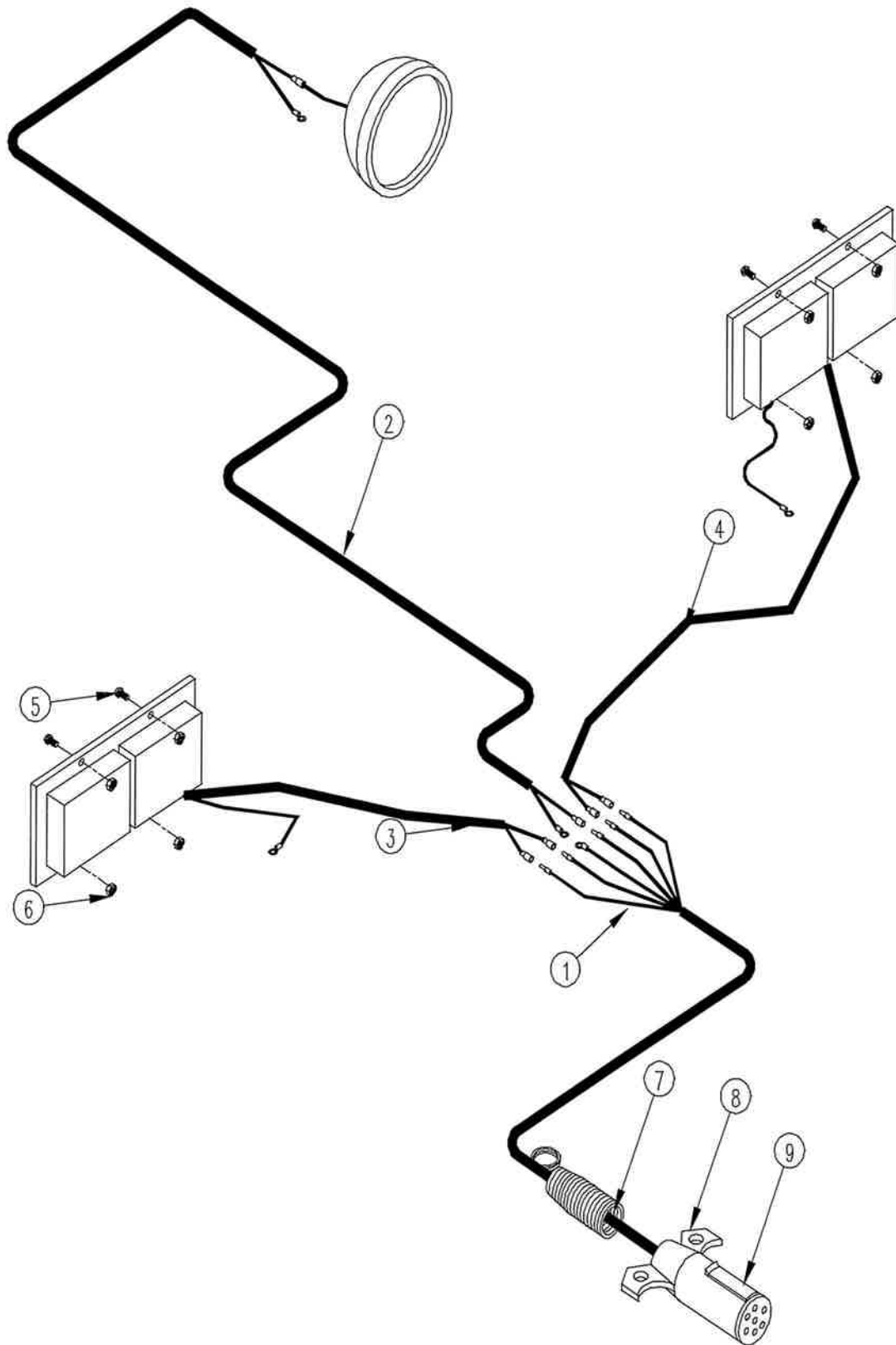
Axle Assembly

Key	Part #	Description	Qty.	Comments
1.	192-018 N/A N/A	Tire	2	680 Model, 24.5 x 32, 12 ply 550 Model, 23.1 x 26, 10 ply 550 Model, 18.4 x 26 x 10 ply
2.	190-021 N/A 190-022	Wheel	2	680 Model, 21 x 32 550 Model, 20 x 26 550 Model, 16 x 26
3.	100-104	Bolt	8	5/16" x 1/2", Grade 5
4.	150-034 150-036	Dust cap	2	680 Model 550 Model
5.	102-088 102-090	Castle nut	2	680 Model, 2"-12UNF, slotted 550 Model, 1 1/4"-12UNF, slotted
6.	104-038 104-050	Cotter pin	2	680 Model, 3/8" x 3" 550 Model, 3/16" x 2 1/4"
7.	134-028 134-029	Washer	2	680 Model, 4"OD x 2 1/16"ID x 1/4" 550 Model, 3"OD x 1 3/8"ID x 7ga.
8.	120-085 120-088	Bearing	2	680 Model, outer, Timken™ # HM212049 550 Model, outer, Timken™ #460
9.	120-086 120-089	Race	2	680 Model, outer, Timken™ #HM212011 550 Model, outer, Timken™ #453A
10.	102-106	Wheel nut	20	3/4"-16UNF, Flanged
11.	170-042 170-043	Hub	2	680 Model, includes items #9, 12 & 13 550 Model, includes items #9, 12 & 13
12.	100-334	Wheel bolt	20	3/4"-16UNF x 2 1/2"
13.	120-087 120-091	Race	2	680 Model, inner, Timken™ #HM218210 550 Model, inner, Timken™ #33462
14.	120-084 120-090	Bearing	2	680 Model, inner, Timken™ #HM218248 550 Model, inner, Timken™ #33275
15.	150-035 150-037	Seal	2	680 Model, Chicago Rawhide™ #CR43771 550 Model, Chicago Rawhide™ #CR33772
16.	188-025	Spindle	2	550 Model, replacement spindle
17.	318-631 318-632 NA	Axle	2	680 Model 144" (axle length 136") replaces axle with welded spindles 680 Model 120" (axle length 112") replaces axle with welded spindles 550 Model

680, 550

Axle Assembly

Key	Part #	Description	Qty.	Comments
18.	102-009	Nut	8	3/4"
19.	108-022	Lock washer	8	3/4"
20.	100-157	Bolt	8	3/4" x 2 1/4", Grade 5
21.	608-003	Tire & wheel assembly	2	680 Model, 24.5 x 32, includes items # 1 & 2

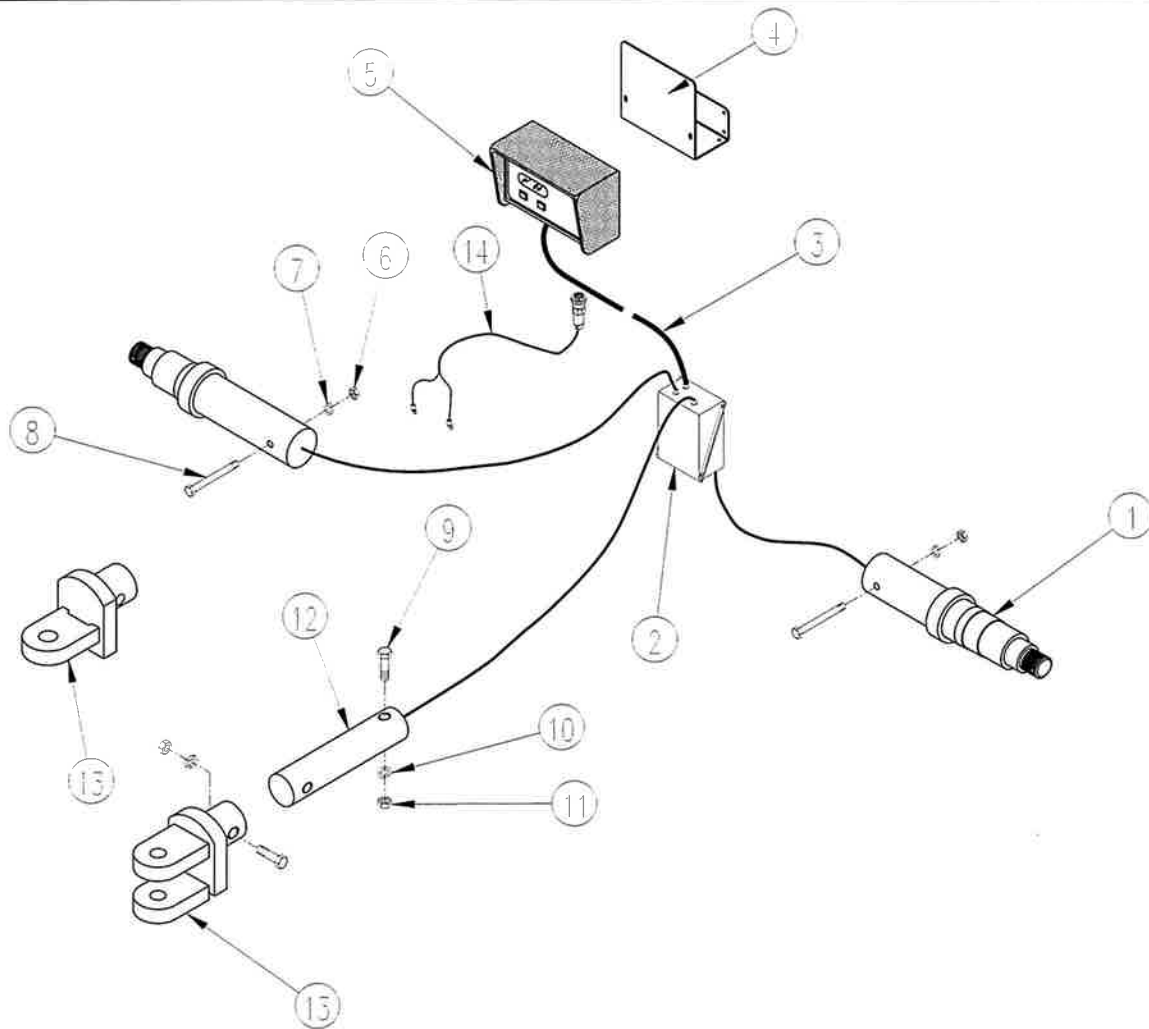


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Cable Layout

(Revision 2)

Key	Part #	Description	Qty.	Comments
1.	318-582	Main light cable	1	6 Wire, 24' with terminal
2.	318-581	Field Light Cable Assembly	1	
3.	318-583	Tail Light Assembly	1	Right Hand
	152-174	Lens		Amber
	152-357			Red
4.	318-584	Tail Light Assembly	1	Left Hand
	152-174	Lens		Amber
	152-357			Red
5.	106-066	Screw	8	10-31 x 3/4"
6.	102-092	Nut, keps	8	10-32
7.	154-238	Strain relief	1	Spring
8.	154-245	Cable clamp	1	
9.	154-237	Plug	1	7 Way



Key	Part #	Description	Qty.	Comments
1.	318-638	Scale spindle	2	Includes bushing
2.	152-223	Junction box	1	
3.	152-224	Console cable	1	
4.	318-665	Mounting bracket	1	
5.	152-225	Scale console	1	EZ 150 Model
6.	102-008	Nut	2	5/8"
7.	108-021	Lock washer	2	5/8"
8.	100-143	Bolt	2	5/8" x 5 1/2", Grade 5
9.	100-187	Bolt	2	1" x 5", Grade 5
10.	108-025	Lock washer	2	1"
11.	102-011	Nut	2	1"
12.	152-226	Scale tongue	1	
13.	318-624	Tongue	1	Scale single tab
	318-628			Scale clevis type
14.	154-598	Power cable	1	10 Ft.