



Hopper and Drive Components

Tornado™ Hopper Spreader

#78000-1, 78003-1, 78006-1

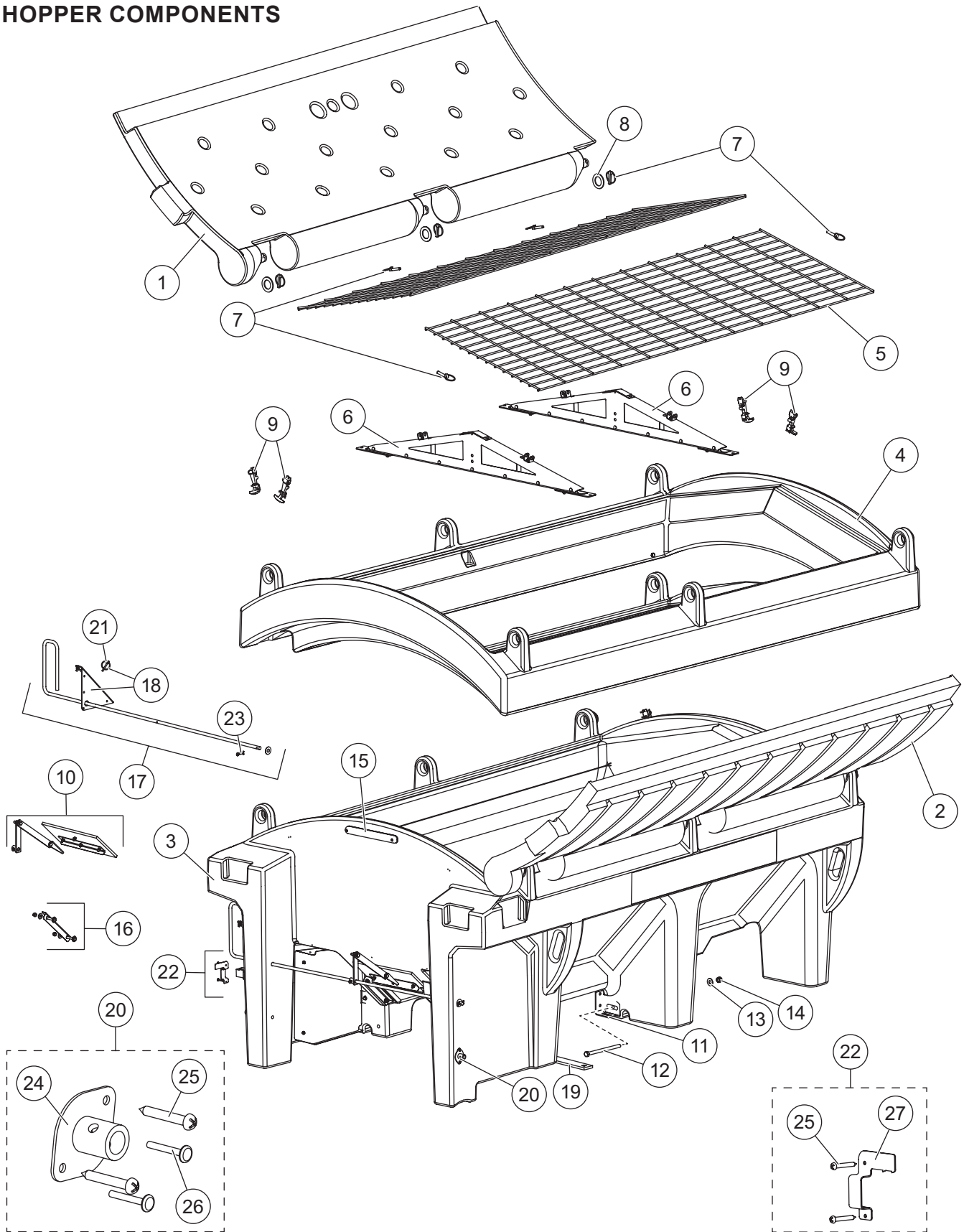
Parts List



This Parts List is for WESTERN® Tornado hopper spreaders
with serial numbers beginning with 201211 and higher.

Tornado™ HOPPER SPREADER

HOPPER COMPONENTS



Tornado™ HOPPER SPREADER

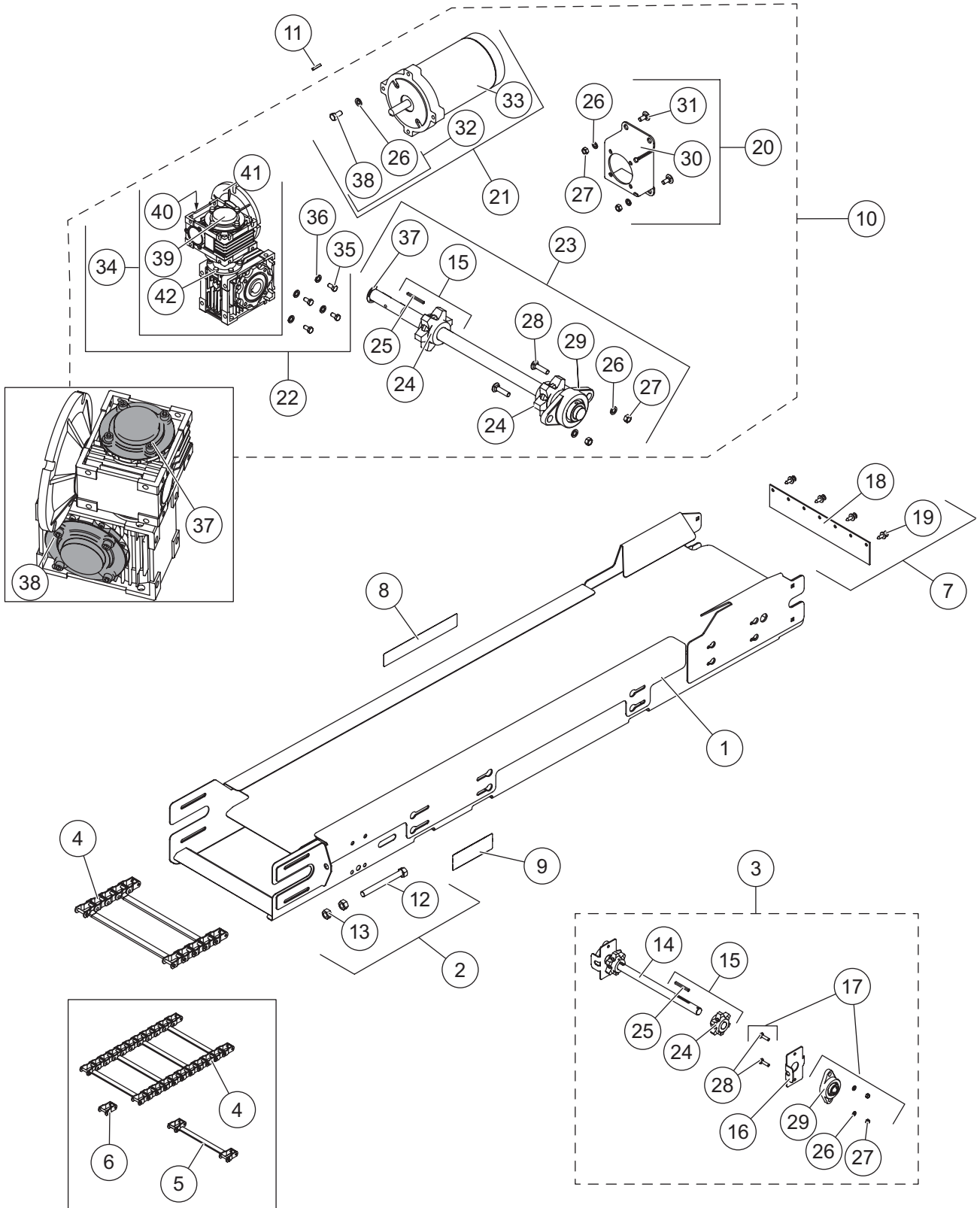
Hopper Components							
Item	Part	Qty	Description	Item	Part	Qty	Description
1	78018*	1	Poly Hopper Lid, 7' (DS)	12		4	1/2-13 x 7-1/2 Hex Cap Screw SS
	78288†	1	Poly Hopper Lid, 7' (DS)	13		4	1/2 Flat Washer SS
	78019	1	Poly Hopper Lid, 8' (DS)	14		4	1/2-13 Hex Locknut SS
2	78020*	1	Poly Hopper Lid, 7' (PS)	ns		8	3/8-16 x 1 Carriage Bolt SS
	78290†	1	Poly Hopper Lid, 7' (PS)	ns		8	3/8 Lock Washer SS
	78021	1	Poly Hopper Lid, 8' (PS)	ns		8	3/8-16 Hex Nut SS
3	78009	1	Poly Hopper Body, 7'	15	78048-1	1	CHMSL Kit (w/fasteners)
	78012	1	Poly Hopper Body, 8'	16	78083	1	Feed Gate Guide w/Fasteners Kit
4	78226	1	Poly Hopper Collar, 8'	17	78094	1	Feed Gate Handle Kit
5	78115	2	Top Screen, 7' (painted)	18	78098	1	Feed Gate Detent Bracket Kit
	78116	2	Top Screen, 8' (painted)	ns		4	3/8-16 x 1-1/2 Hex Cap Screw
6	78117-3	2	Top Screen Brace w/Label	19	78109	2	Mounting Bar w/Hardware
7	93010	10	7/16 Linchpin	ns	78242	1	Poly Hopper Collar Hardware Kit
8	78097	6	2.5 OD x 1.53 ID Washer SS	20	78262	2	Chute Attachment Sleeve Kit
9	65224	4	Rubber Hold-Down Strap	21	93042	1	3/16 Linchpin
ns	99775	1	Cable Boot	22	99748	1	Chute Connector Clip Kit
10	78118	1	Feed Gate Assembly Kit	ns	31594EN	2	Label – Warning/Caution, Spreaders
11	78119	3	Hopper Mounting Bracket (PS)	ns	11100	1	Label – Warning, Rear Camera
ns	78133	3	Hopper Mounting Bracket (DS)	ns	67272		Label – Caution, Do Not Lift
Item 10				78118 Feed Gate Assembly Kit			
	78093	1	Feed Gate Sub Assembly	90601	1	1/4 x 1-1/2 Cotter Pin	
Item 16				78083 Feed Gate Guide w/Fasteners Kit			
	94495	2	5/16-18 x 2-1/4 Hex Cap Screw SS	91350	2	5/16-18 Hex Locknut SS	
	78047	1	Feed Gate Slide				
Item 17				78094 Feed Gate Handle Kit			
	78029	1	Feed Gate Actuator Shaft			1	1/2 Flat Washer Type A Wide SS
23	90601	2	1/4 x 1-1/2 Cotter Pin				
Item 20				78262 Chute Attachment Sleeve Kit			
24		1	Pin Retainer	26		2	3/16 Pop Rivet Aluminum
25		2	#10 x 1-1/2 Pan Head Phillips Screw SS				
Item 22				99748 Chute Connector Clip Kit			
25		2	#10 x 1-1/2 Pan Head Phillips Screw SS	ns	99758	1	Label – Warning, Chute Connector Dump Switch
27		1	Chute Connector Clip				
ns = not shown				SS = Stainless Steel			

* Fits units with serial numbers beginning with 180530 and lower.

† Fits units with serial numbers beginning with 180531 and higher.

Tornado™ HOPPER SPREADER

DRIVE COMPONENTS

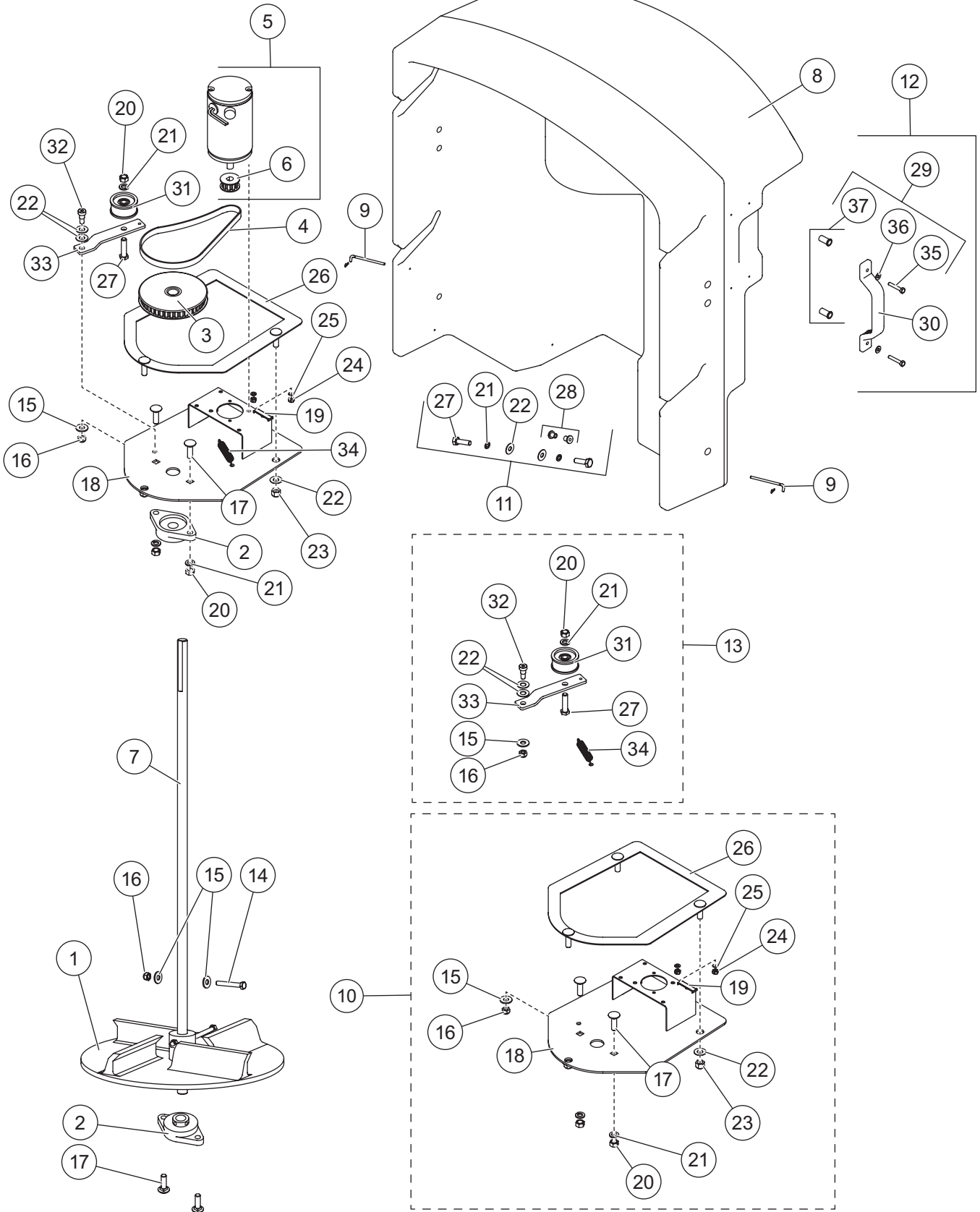


Tornado™ HOPPER SPREADER

Drive Components							
Item	Part	Qty	Description	Item	Part	Qty	Description
1	99752	1	Sill, 7'	6	68475	AR	Conveyor Repair Link w/Pins & Cotters
	99753	1	Sill, 8'				
2	99073	1	Tension Bolt Kit	7	78266	1	Wiper Kit
3	99480	1	Idler Shaft Assembly Kit	8	31594EN	1	Label – Warning/Caution, Spreaders
4	78076	1	Pintle Chain, 7' (99 link)	9	11100	1	Label – Warning, Rear Camera
	94898	1	Pintle Chain, 8' (108 link)	10	89091	1	Electric Conveyor Drive Kit
5	68492	AR	Conveyor Repair Bar w/Pins & Cotters	11	65195	1	3/16 x 1 Machine Key
Item 2				99073 Tension Bolt Kit			
12		1	5/8-11 x 6 Take-Up Bolt SS	13		2	5/8-11 Hex Nut SS
Item 3				99480 Idler Shaft Assembly Kit			
14	94351	1	Idler Shaft	16	99765	2	Bearing Alignment Plate
15	99479	2	6-Tooth Sprocket	17	94953	1	Spreader Bearing Kit
Item 7				78266 Wiper Kit			
18	65642	1	Wiper Belt	19	99079	1	Rivet Kit (qty 4 PN 96014 push-type retainers)
Item 10				89091 Electric Conveyor Drive Kit			
20	99749	1	Gear Box Mounting Plate Kit	22	31509	1	Gear Box Kit
21	99085	1	Conveyor Motor Kit	23	99094	1	Drive Shaft Kit
Item 15				99479 6-Tooth Sprocket			
24		1	Drive Sprocket 6T	25	95076	1	1/4 x 2-3/4 Machine Key
Item 17				94953 Spreader Bearing Kit			
26		2	3/8 Lock Washer SS	28		2	3/8-16 x 1-1/2 Carriage Bolt SS
27		2	3/8-16 Hex Nut SS	29	94536	1	Bearing 1-1/8 ID 2-Bolt Flange
Item 20				99749 Gear Box Mounting Plate Kit			
26		4	3/8 Lock Washer SS	30		1	Gear Box Attachment Plate
27		4	3/8-16 Hex Nut SS	31		4	3/8-16 x 1 Carriage Bolt SS
Item 21				99085 Conveyor Motor Kit			
32	99086	1	Bolt Bag, Conveyor Motor SH	33		1	Motor 1/2 hp NEMA 56C
Item 22				31509 Gear Box Kit			
34	31098	1	Gear Box 10 x 10 2X Worm Gear	36		4	M8 Lock Washer SS
35		4	M8-1.25 x 16 Hex Cap Screw SS				
Item 23				99094 Drive Shaft Kit			
15	99479	2	6-Tooth Sprocket	28		2	3/8-16 x 1-1/2 Carriage Bolt SS
26		2	3/8 Lock Washer SS	29	94536	1	Bearing 1-1/8 ID 2-Bolt Flange
27		2	3/8-16 Hex Nut SS	37	330	1	1" Retaining Ring
Item 32				99086 Bolt Bag, Conveyor Motor			
26		4	3/8 Lock Washer SS	38		4	3/8-16 x 1 Hex Cap Screw SS
Item 34				31098 Gear Box 10 x 10 2X Worm Gear			
		1	Gear Box 10 x 10 2X Worm Gear	41	31101	1	Motor Flange
39	86792	1	Gear Box Cover Kit, Primary	42	31102	1	Connector Flange
40	86799	1	Gear Box Cover Kit, Secondary				
ns = not shown			M = Metric	SS = Stainless Steel		AR = As Required	

Tornado™ HOPPER SPREADER

CHUTE & SPINNER ASSEMBLY

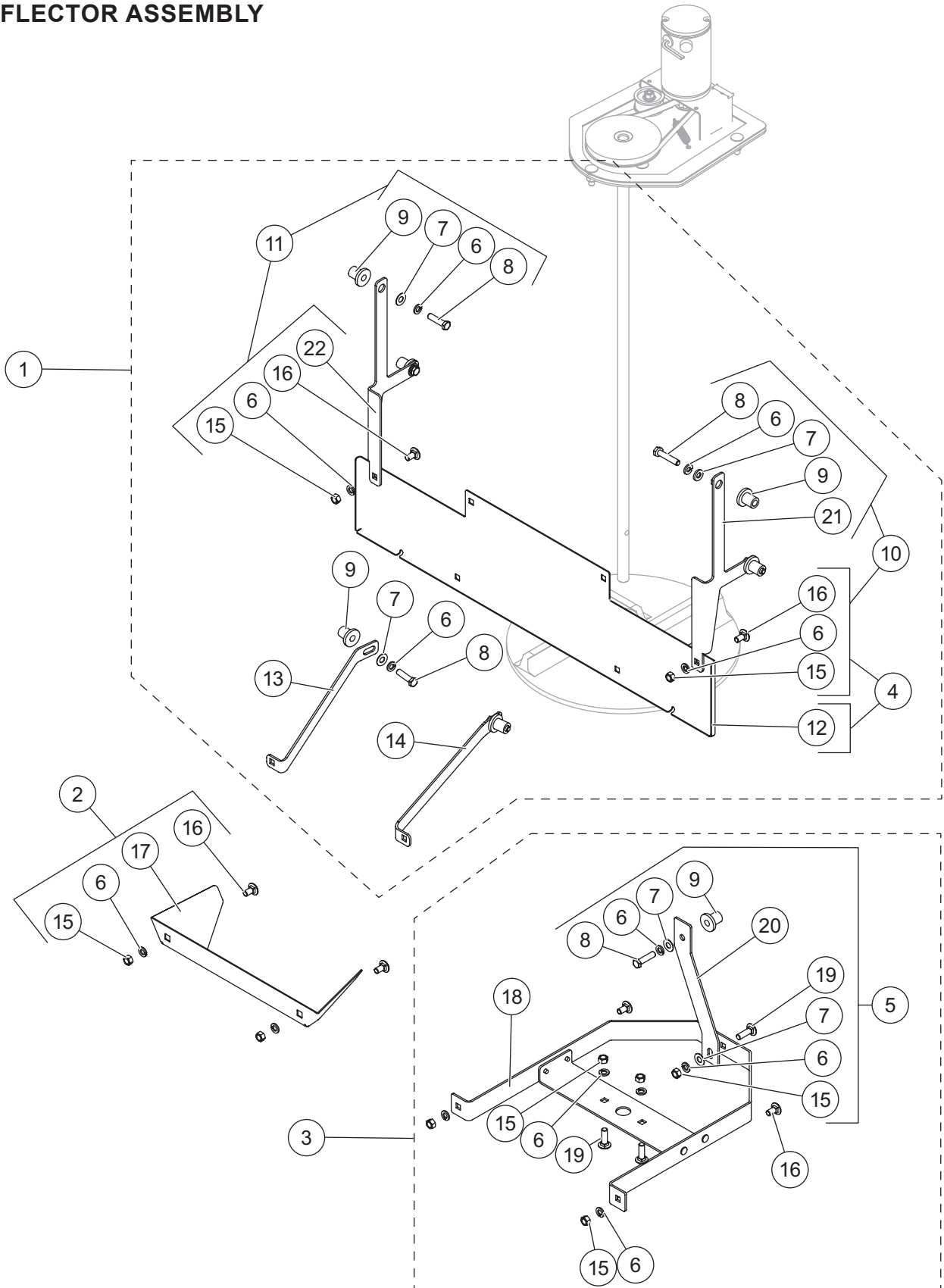


Tornado™ HOPPER SPREADER

89770 Chute Assembly							
Item	Part	Qty	Description	Item	Part	Qty	Description
1	94424	1	Spinner, Poly Two-Stage	10	71236	1	Motor Mount Kit
2	96167	2	2-Bolt Flanged Bearing, 0.750 ID	11	78268	2	3/8 Well Nut Fastener Kit
3	76796	1	Cogged Belt Pulley, 40-Tooth, 0.75 ID	12	78247	2	Chute Handle Kit
4	78285	1	Gear Belt, 3/8 Pitch	13	78298	1	Idler Kit
5	78300	1	Motor 12V DC 1/3 hp (incl. item 6)	14		1	5/16-18 x 2-1/4 Hex Cap Screw SS
6	76795	1	Cogged Belt Pulley, 10-Tooth, 0.5 ID	15		2	5/16 Flat Washer Type A Narrow
7	78283	1	Shaft, 0.75	16		1	5/16-18 Hex Locknut GB SS
8	30372	1	Chute Cover	17		2	3/8-16 x 3/4 Carriage Bolt
9	78031	1	Chute Attachment Pin Bag (pkg of 2)				
Item 10				71236 Motor Mount Kit			
15		1	5/16 Flat Washer Type A Narrow	22		3	3/8 Flat Washer Type A Wide SS
16		1	5/16-18 Hex Locknut GB SS	23		3	3/8-16 Hex Locknut Brass
17		2	3/8-16 x 3/4 Carriage Bolt	24		2	#10-32 Hex Locknut GB SS
18		1	Motor Mount	25		2	#10 Flat Washer Type A SS
19	76059	1	Bundling Clip	26	30377	1	Bolt Plate (incl. items 21 and 22)
20		2	3/8-16 Hex Nut SS	ns		2	Cable Tie
21		2	3/8 Spring Lock Washer SS				
Item 11				78268 3/8 Well Nut Fastener Kit			
21		2	3/8 Lock Washer SS	27		2	3/8-16 x 1-1/2 Hex Cap Screw SS
22		2	3/8 Flat Washer Type A Wide SS	28	78267	1	3/8-16 Well Nut (pkg of 2)
Item 12				78247 Chute Handle Kit			
29	78270	1	1/4 Well Nut Fastener Kit	30		1	Handle
Item 13				78298 Idler Kit			
15		1	5/16 Flat Washer Type A Narrow	27		1	3/8-16 x 1-1/2 Hex Cap Screw SS
16		1	5/16-18 Hex Locknut GB SS	31	65509	1	2" Idler Pulley
20		2	3/8-16 Hex Nut SS	32		1	3/8 x 3/8 x 5/16-18 Shoulder Bolt
21		1	3/8 Spring Lock Washer SS	33		1	Idler Arm
22		2	3/8 Flat Washer Type A Wide SS	34		1	Spring
Item 29				78270 1/4 Well Nut Fastener Kit			
35		2	1/4-20 x 1-1/2 Hex Cap Screw SS	37	78269	1	1/4-20 Well Nut (pkg of 2)
36		2	1/4 Flat Washer Type A Narrow SS				
		ns = not shown				G = Grade	
						SS = Stainless Steel	

Tornado™ HOPPER SPREADER

DEFLECTOR ASSEMBLY

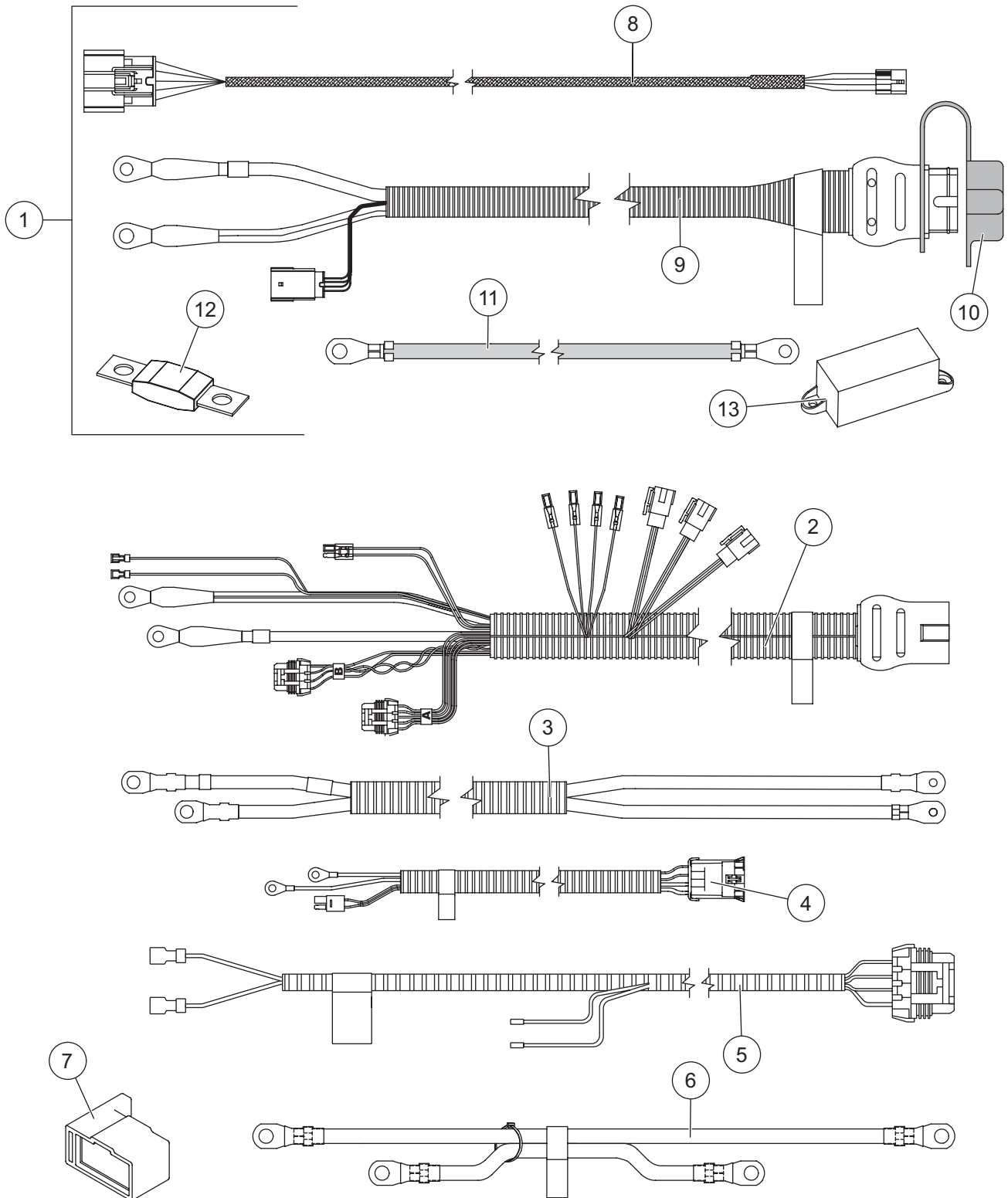


Tornado™ HOPPER SPREADER

Deflector Assembly							
Item	Part	Qty	Description	Item	Part	Qty	Description
1	77538	1	Chute Strut Kit	4	30376	1	Rear Deflector Kit
2	77539	1	Flow Guide Kit	5	30375	1	Front Deflector Support Kit
3	77543	1	Spinner Bump Guard Kit				
Item 1				77538 Chute Strut Kit			
6		12	3/8 Spring Lock Washer SS	11		1	Deflector Support Kit – PS
7		6	3/8 Flat Washer Type A Wide SS	12		1	Rear Deflector, Short
8		6	3/8-16 x 1-1/2 Hex Cap Screw SS	13	78302	1	Brace – PS
9		6	3/8-16 Well Nut	14	78301	1	Brace – DS
10		1	Deflector Support Kit – DS				
Item 2				77539 Flow Guide Kit			
6		2	3/8 Spring Lock Washer SS	16		2	3/8-16 x 3/4 Carriage Bolt
15		2	3/8-16 Hex Nut SS	17		1	Material Flow Guide
Item 3				77543 Spinner Bump Guard Kit			
5		1	Front Deflector Support Kit	16		2	3/8-16 x 3/4 Carriage Bolt
6		4	3/8 Spring Lock Washer SS	18		1	Hoop Assembly
15		4	3/8-16 Hex Nut SS	19		2	3/8-16 x 1-1/4 Carriage Bolt
Item 4				30376 Rear Deflector Kit			
6		6	3/8 Spring Lock Washer SS	15		6	3/8-16 Hex Nut SS
12		1	Rear Deflector, Short	16		6	3/8-16 x 3/4 Carriage Bolt
Item 5				30375 Front Deflector Support Kit			
6		2	3/8 Spring Lock Washer SS	15		1	3/8-16 Hex Nut SS
7		2	3/8 Flat Washer Type A Wide SS	19		1	3/8-16 x 1-1/4 Carriage Bolt
8		1	3/8-16 x 1-1/2 Hex Cap Screw SS	20		1	Front Deflector Support
9		1	3/8-16 Well Nut				
Item 10				30374 Deflector Support Kit – DS			
6		2	3/8 Spring Lock Washer SS	15		1	3/8-16 Hex Nut SS
7		1	3/8 Flat Washer Type A Wide SS	16		1	3/8-16 x 3/4 Carriage Bolt
8		1	3/8-16 x 1-1/2 Hex Cap Screw SS	21		1	Deflector Support – DS
9		1	3/8-16 Well Nut				
Item 11				30373 Deflector Support Kit – PS			
6		2	3/8 Spring Lock Washer SS	15		1	3/8-16 Hex Nut SS
7		1	3/8 Flat Washer Type A Wide SS	16		1	3/8-16 x 3/4 Carriage Bolt
8		1	3/8-16 x 1-1/2 Hex Cap Screw SS	22		1	Deflector Support – PS
9		1	3/8-16 Well Nut				
SS = Stainless Steel				G = Grade			

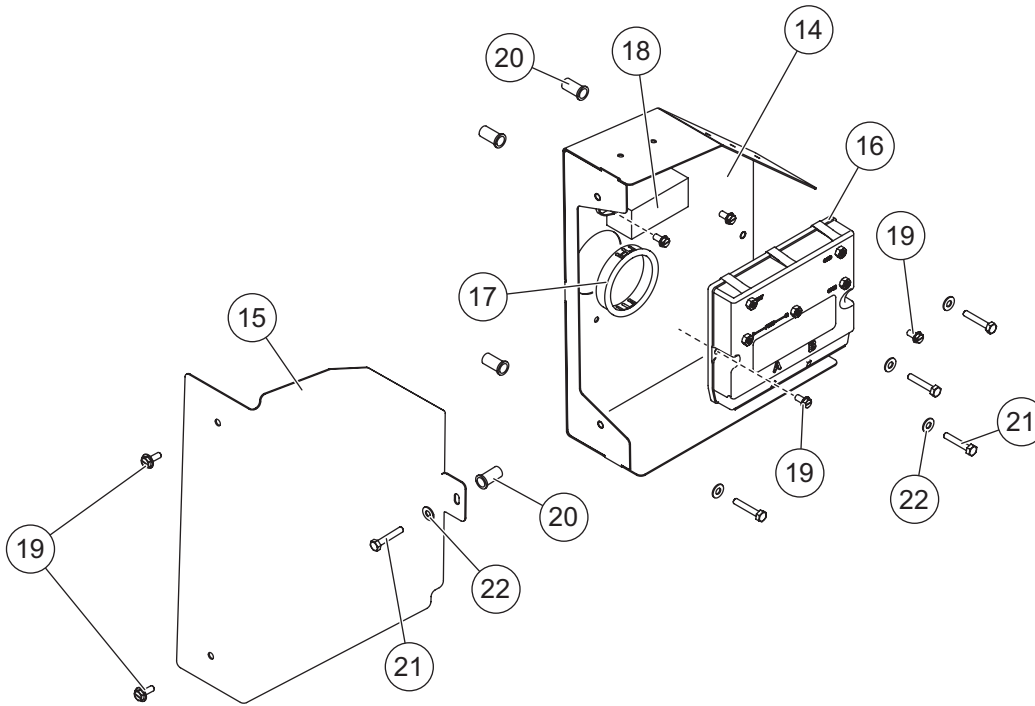
Tornado™ HOPPER SPREADER

CABLES & HARNESSING COMPONENTS



Tornado™ HOPPER SPREADER

ELECTRICAL ENCLOSURE COMPONENTS

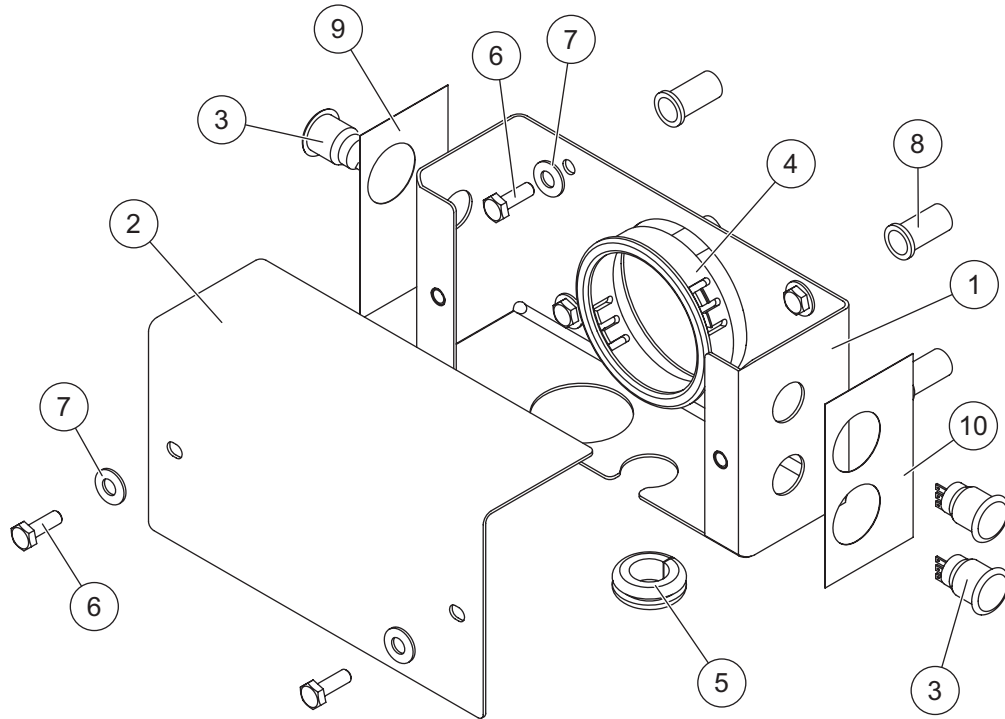


Cables & Harnessing / Electrical Enclosure Assembly							
Item	Part	Qty	Description	Item	Part	Qty	Description
1	78402	1	Vehicle-Side Harness Kit	4	78415	1	Spinner Motor Cable Assy, Hopper
2	78417	1	Hopper Harness Assembly	5	78412	1	Spinner Motor Cable Assembly, Chute
3	78418	1	Harness Assembly, Module to Conveyor Motor	6	78394	1	Cable Assembly, Mod. to Isolated Stud
				7	69916	1	8-Pin Cable Boot
Item 1				78402 Vehicle-Side Harness Kit			
8	69902	1	Vehicle Control Harness	12	95836	1	Fuse, 100A
9	76057	1	Vehicle Harness*	13	95837	1	Fuse Holder
10	99759	1	Plug Cover	ns		6	Cable Tie, HD
11	22511	1	22" Battery Cable – Red	ns		10	Cable Tie, 15.35"
Electrical Enclosure Assembly							
14	95073	1	Electrical Enclosure Body	19		6	1/4-20 x 1/2 Hex Washer-Head Machine Screw SS
15	99745	1	Electrical Enclosure Cover	20	78263	5	Well Nut
16	52385	1	4-Post Spreader Module	21		5	1/4-20 x 1-1/2 Hex Cap Screw SS
17	78434	1	Snap-In Grommet	22		5	1/4 Flat Washer SS
18	95837	1	Isolated Stud Block				
ns = not shown				SS = Stainless Steel			

* Includes plug cover (item 10).

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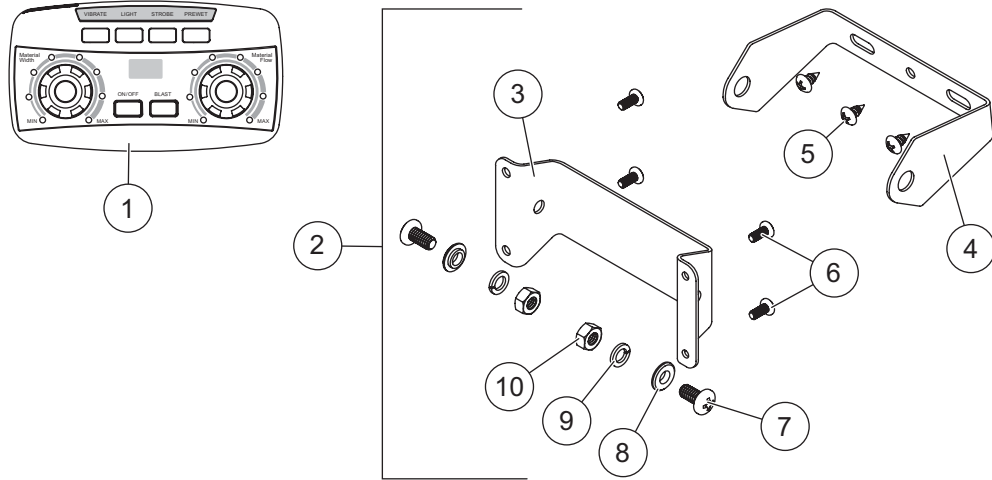
EXTERNAL ENCLOSURE



Switch Box Enclosure Assembly							
Item	Part	Qty	Description	Item	Part	Qty	Description
1	99746	1	External Enclosure, Body	7	6	6	1/4 Flat Washer SS
2	99747	1	External Enclosure, Cover	8	78263	4	Well Nut
3	99254	3	Push Button Switch	ns	95077	1	Dump Switch Label Kit (incl. items 9 & 10)
4	78434	1	Snap-In Grommet	9		1	One-Button Label
5	99195	2	Break-Thru Plug	10		1	Two-Button Label
6		6	1/4-20 x 3/4 Hex Cap Screw SS				
ns = not shown				SS = Stainless Steel			

Tornado™ HOPPER SPREADER

CAB CONTROL



99534 Cab Control Kit							
Item	Part	Qty	Description	Item	Part	Qty	Description
1	99774	1	Cab Control 2-Knob	2	52345	1	Cab Control Bracket Kit
Item 2				52345 Cab Control Bracket Kit			
3		1	Control Bracket, Inner	7		2	1/4-20 x 1/2 Pan Head Machine Screw SS – Black Oxide
4		1	Control Bracket, Outer	8		2	1/4 Shoulder Washer – Black Oxide
5		3	#10 x 3/8 Tapping Screw SS	9		2	1/4 Lock Washer SS
6		4	#8-32 x 3/8 Phillips Pan Head Machine Screw	10		2	1/4-20 Hex Nut G5 – Black Oxide
G = Grade				SS = Stainless Steel			

ACCESSORIES & PRE-WET KITS

Accessories			
Part	Description	Part	Description
78197	License Plate Light Kit	76668	Vibrator Kit
99505-1	Primary Work Light Kit	78120	Inverted V Kit, 8' Model
99732-1	Secondary Work Light Kit	78150	Inverted V Kit, 7' Model
99766	Strobe Light Kit	68790	Ratchet Tie-Down Kit
Pre-Wet Kits			
76400	Standard Pump Kit, ON-OFF System	76425	50-Gallon Tank Kit (2 x 25 gal)
76420	Deluxe Pump Kit, Full-Feature System		

Tornado™ HOPPER SPREADER



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