

SERVICE MANUAL

AND

PARTS CATALOG

FOR YOUR

SUPER X29D (Ball Trays)



Grain, Seed and Bean Cleaners

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SUPER X29D

REMOVABLE BALL TRAYS

PAGE NUMBER	DESCRIPTION
.....1	Front Air Damper.....
.....2	Back Air Damper.....
.....3	Top Fan Shaft.....
.....4	Top Air Discharge Valve.....
.....5	Damper Assembly.....
.....6	Back Settling Chamber Auger.....
.....7	Does Not Apply to This Manual
.....8	Tilting Rod Assembly.....
.....9 & 10	Does Not Apply to This Manual
.....11 & 12	Bottom Fan Shaft.....
.....13 & 14	Counter Shaft.....
.....15 & 16	Eccentric Shaft.....
.....17	Pitman Assembly.....
.....18	Top Shoe Assembly.....
.....19	Bottom Shoe Assembly.....
.....20	Bridge Plate.....
.....21	Screen Hooks.....
.....22	Telescoping Aprons.....
.....23	Catchall Spouts.....
.....24	Adjustable Belt Take-Ups.....
.....25	Bottom Fan Metal
.....26	Air Trunk Assembly
....27 thru 29	Does Not Apply to This Manual
.....30A	Rocker Assembly View
.....31 & 32	Does Not Apply to This Manual
.....33	Bottom Shoe Assembly

Top Fan Section

ITEM NO.	PAGE NO.	PART NUMBER	QTY.	DESCRIPTION
5	3	F01600200	1	1-15/16" X 63" Top Fanshaft
10	3	F92401150	2	1-15/16" Bore Pillow Block Bearing
11	2	F04303122	1	Adjusting Handle & Crank (22" Long for back air)
12	1	F04303128	1	Adjusting Handle & Crank (28" Long for top air)
**	1	F04001600	1	Hand Crank Handle with wood Knob
4	1	F05313000	2	Adjusting Handle Shaft Bearing
16	2	F05006710	1	Back Air Damper with End Castings
17	1	F05003704	1	Front Air Damper with End Castings
	1	F01013500	2	Valve Control Assembly Complete (Includes 1 Each Below)
1	1	F01005500	1	Universal Joint
9	1	F01805800	1	6" Threaded Screw Shaft with 5/8" Shank
13	1	F04313500	1	Swivel Plate (bolts to wood side)
**	1	F04313100	1	Plain Pivot Nut
14	1	F04314800	1	Swivel Arm Pivot Lever
**	1	F04313200	1	Threaded Pivot Nut
18	3	F05502300	2	High Static Fan Wheel Assembly with 6" Wide Blade
215	26	F05501201	1	Right Side Top Fan Housing Assembly (Includes 2 Sides & Metal)
215	26	F05501204	1	Left Side Top Fan Housing Assembly(Includes 2 Sides & Metal)
15	1	F05003900	2	Top Fan Bleeder Inlet Slide Assembly

****Refers to the previous listing number. May give parts within that assembly, right side-left side numbers, or numbers for parts that are specific to right hand or left hand machines.**

TOP AIR DISCHARGE ASSEMBLY

ITEM NO.	PAGE NO.	PART NUMBER	QTY.	DESCRIPTION
21	4	F04500000	1	Complete Valve Assembly (Includes Below)
22	4	F04800010	1	Hinged Gate Weldment, 25-7/8"
**		F04600510	1	Gate Board 2.5" x 31.25"
**		F92700004	2	Gate Springs
23	4	F04501401	1	#9 Discharge Roll Assembly with Flanges (Wood Is 25-7/8")
25	4	40000038	4	1" Bore Flangette Stampings
186	4	F92460200	2	1" Bearing Insert
20	4	F01616100	1	Top Valve Shaft 1" X 58" (ALL OLDER MACHINES)
				or
20	4	F01630404	1	Top Valve Shaft 1" x 38" (NEWER MACHINES MID 80'S ON)
20	4	F01630401	2	Shaft Extension 1" x 12"
20	4	F01630403	2	Shaft Coupler

BOTTOM/BACK SETTLING CHAMBER & AUGER

ITEM NO.	PAGE NO.	PART NUMBER	QTY.	DESCRIPTION
26	5	F01000900	1	Adjusting Lever with Spring Loaded Knob, About 6" Long
29	5	F01800880	1	Adjusting Plate (Mounts to Wood Side)
32	5	F07000720	1	Wood Damper Assembly with End Castings
31	6	F07000351	1	Complete Auger Assembly / Left Hand Discharge (Parts Below)
28	6	F12900319	1	Shaft with Flighting 64-1/2" for Left Hand Discharge Machine
30	6	F98600005	3	Cleanout Door Latch
37	6	F92460301	2	1-3/16" Bearing Insert
36	6	40000005	4	Bearing Flangette Stamping (For Above Bearing)
31	6	F07000321	1	Complete Auger Assembly / Right Hand Discharge (Parts Below)
28	6	F12900219	1	Shaft with Flighting 64-1/2" for Right Hand Discharge Machine
30	6	F98600005	3	Cleanout Door Latch
37	6	F92460301	2	1-3/16" Bearing Insert
36	6	40000005	4	Bearing Flangette Stamping (For Above Bearing)

**Note: Front of the Machine is Where the Screens are Inserted Into the Machine.
 Discharge Spouts are Determined by Standing at the Front and Facing the Machine.
 Right Hand Discharge Spouts Would Discharge Towards Your Right Hand.**

BOTTOM FAN ASSEMBLY

ITEM NO.	PAGE NO.	PART NUMBER	QTY.	DESCRIPTION
59	12	F01615900	1	Fan Shaft 1-1/2" X 67" (Includes Keys)
71	12	F19803601	2	3/8" X 5" Keys
72	11	F92401080	2	1-1/2" Pillow Block Bearing
62	11	F02707300	2	Bridgetree Mounting Angle for Bearing
68	11	F19701600	1	12" Diameter 1-1/2" Bore Stationary Disc with Set Screws
69	11	F19702901	1	12" Diameter 1-1/2" Bore Spring End Disc
70	11	F92700007	1	10" Heavy Duty Spring
67	11	F19700800	1	Hand Nut for 1-1/2" Shaft
		F91180034	1	ATF 34 Variable Air Regulator Belt(2-7/8" x 108")
61	12	F97700052	2	Tapered Fan Entry Cones
**	12	F06002679	1	Bottom Fan Assembly Complete(includes 60,63 & Bolts)
60	12	F01701100	4	Wooden Fan Blades 43-5/8"
63	12	F06001000	3	Spider Fan Arms 1-1/2" Bore
All	25	F06002001	1	Bottom Fan Drum Assembly Complete (Includes Below)
201	25	F06302701	1	Bottom Drum Iron 45-5/8" x 88"
202	25	F06302730	1	Drum Iron 45-5/8" x 26-3/4"
203	25	F06302106	1	Discharge Chute 4"
204	25	F06302740	1	Breast Iron 45-5/8" x 24-1/2"
205	25	F06302720	1	Drum Iron 45-5/8" x 22-3/8"

COUNTERSHAFT ASSEMBLY

ITEM NO.	PAGE NO.	PART NUMBER	QTY.	DESCRIPTION
73	14	F01615800	1	Countershaft 1-1/2" X 73-3/4" (Includes Keys)
84	14	F19803601	2	3/8" X 5" Keys
83	14	F19803700	1	3/8" X 4-1/2" Keys
76	13	F92401080	1	1-1/2" Pillow Block Bearing
74	14	F92441083	1	7475 Pillow Block Bearing Complete w/Bearing
**	14	F92400026	1	1-1/2" Bearing Insert Only for 7475 Bearing
79	14	F19701600	1	12" Diameter 1-1/2" Bore Stationary Disc with Set Screws
78	14	F19701400	1	12" Diameter 1-1/2" Bore Thrust End Disc
75	14	F92452090	1	B-34 Thrust Bearing
77	14	F19500700	1	1-1/2" Adjusting Nut (Includes Zerk with Plug #24)
24	16	F19806200	1	Zerk with Plug for Adjusting Nut
79	13	F19701600	1	12" Diameter 1-1/2" Bore Stationary Disc with Set Screws
80	13	F19702902	1	12" Diameter 1-1/2" Bore Spring End Disc
82	13	F92700007	1	10" Heavy Duty Spring
81	13	F19700800	1	Hand Nut for 1-1/2" Shaft

ECCENTRIC SHAFT ASSEMBLY

ITEM NO.	PAGE NO.	PART NUMBER	QTY.	DESCRIPTION
85	16	F01617300	1	Eccentric Shaft 1-1/2" X 66" (Includes Keys)
		F19803601	3	3/8" x 5" Keys
		F87300052	4	3/8" x 1-1/4" Woodruff Key
89	15	F92401080	1	1-1/2" Pillow Block Bearing
87	16	F92441083	1	7475 1-1/2" Pillow Block Bearing Complete w/Bearing
**		F92400026	1	1-1/2" Bearing Insert Only for Above
93	16	F19701600	1	12" Diameter 1-1/2" Bore Stationary Disc with Set Screws
92	16	F19701400	1	12" Diameter 1-1/2" Bore Thrust End Disc
94	16	F19500700	1	1-1/2" Adjusting Nut (Includes Zerk with Plug #24)
	16	F19806200	1	Zerk with Plug
88	16	F92452090	1	B-34 Thrust Bearing
		F91180112	1	ATF 112 Variable Shoe Regulator Belt (2-3/4" x 68")
90	17	F19503501	4	Steel Pitman Complete (Includes Below)
95	17	F92431040	1	Needle Bearing for Pitman
98	17	F92431000	1	Inner Race for Pitman
99	17	F19804704	1	Pitman Bushing
97	17	60265242	1	Pitman Stud Bolt
**	17	70010002	1	Nylon Nut for Stud Bolt
96	17	F19804702	2	Angle Iron Pitman Fasteners
91	15	F19503600	4	1-1/2" Throw Eccentric Assembly Complete (Includes Below)
**		F92400053	1	Bearing Insert for Eccentric Assembly
**		F19804004	1	1-1/2" Bore 1/2" Throw Eccentric Hub
**		F19703000	1	Eccentric Housing for Assembly
177	15	F01307500	1	19" Flywheel 1-1/2" Bore

TOP SHOE ASSEMBLY

ITEM NO.	PAGE NO.	PART NUMBER	QTY.	DESCRIPTION
100	18	F03013303	1	Top Shoe Assembly <u>Complete</u> with Rockers
101	18	F03014010	1	Grain Deflector Door complete w/Door Ends & Metal Deflector
188	18	F03322802	2	Grain Door Ends
102	18	F03016400	2	Shoe Front Hanger with Top Block (customer to cut to length)
103	18	F03016400	2	Shoe Back Hanger with Top Block (customer to cut to length)
105	18	F03102600	2	Shoe Front Hanger Support Block
104	18	F03101901	2	Wood Cross Hanger Girt 53"
192	18	F03401600	1	Canvas Apron Assembly
106	18	F03124501	1	Right Shoe Side, Wood Only
**		F03124502	1	Left Shoe Side, Wood Only
107	18	F03124900	1	Wooden Pitman Board
**	18	F03323104	1	Pitman Board Metal Cover
108	20	F03318510	1	Bridge Plate 44-3/16" x 4-3/4"
109	18	F03300704	1	Shoe Bottom Metal 44-1/2" x 46-1/2"
**	18	F03320703	1	Shoe Bottom Metal 44-1/2" x 22"
110	18	F08002405	1	Top Air Discharge Valve Spout (Right Hand Discharge)
**	18	F08002408	1	Top Air Discharge Valve Spout (Left Hand Discharge)
111	18	F03321200	1	Front Grain Deflector Spout with 6" Rubber
130	18	F08302301	1	Right Side Divided Sand Spout
**	18	F08302302	1	Left Side Divided Sand Spout
127		F03803600	1	Grain Stop Apron
44	8	F01200203	4	Pinion Gear with 3/4" Bore
45	8	F01200300	4	4" Long Rack
47	8	F01608320	2	Tilting Rod 3/4" X 48-1/2"
49	8	F01801700	4	Escutcheon Plate
52	8	66276400	2	3/4" Hex Nut

**Note: Front of the Machine is Where the Screens are Inserted Into the Machine.
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TOP SHOE ASSEMBLY CONTINUED

ITEM NO.	PAGE NO.	PART NUMBER	QTY.	DESCRIPTION
115	18	F03502100	1	Top Rocker Assembly Complete (Includes Below)
119		F03601400	1	Right Hand Top Wooden Rocker Arm Only 77" Long
**		F03601402	1	Left Hand Top Wooden Rocker Arm Only 77" Long
122	30	F03800418	2	77" Metal Screenway Liner
125	30	F03801101	2	77" Metal Rubber Holding Strip
128	30	F03900110	2	77" Rubber Seal 2-1/2" Wide
124	18	F03806000	2	Screen Stop
144	30	F03500800	2	Screen Hook Assembly
**	18	F03803300	1	Removeable Blank 42" x 17"
176	30	F03800001	2	Rocker Bottom Cross Brace, 9 wide
177	30	F03505804	1	Rocker Top Pipe Girt, 9 Wide
112	18	F03500600	2	Rocker Cups
		F90005301	1	Rocker Adjusting Girt Assembly Offset
141	18	F03803500	1	Rocker Bottom Balnk Metal (Mounts onto Bottom at the Back)
116	18	F03502200	1	Bottom Rocker Assembly Complete (Includes Below)
120	30	F03601401	1	Right Hand Bottom Wooden Rocker Arm Only 60" Long
**		F03601403	1	Left Hand Bottom Wooden Rocker Arm Only 60" Long
123	30	F03800413	2	60" Metal Screenway Liner
126	30	F03801100	2	60" Metal Rubber Holding Strip
129	30	F03900100	2	60" Rubber Seal 2-1/2" Wide
		F03806000	2	Screen Stop
		F03803600	1	Grain Stop Apron Assembly
144	30	F03500800	2	Screen Hook Assembly
176	30	F03800001	2	Rocker Bottom Cross Brace, 9 wide
177	30	F03505804	1	Rocker Top Pipe Girt, 9 wide
112	18	F03500600	2	Rocker Cups
		F90005301	1	Rocker Adjusting Girt Assembly Offset
		F90005062	4	Ball Tray Weldment for 1 Piece Screens
			or	
		F90005063	4	Ball Tray Weldment for 2 Piece Screens (For Bottom 26" Section)
		F90005069	4	Ball Tray Weldment for 2 Piece Screens (For Top 34" Section)
		F80026101	432	Black 1-3/8" Balls (72 Per Tray)
		F11301707	2	Ball Tray Support Rail 24"
		F11301708	4	Ball Tray Support Rail 31"
		F11301709	2	Ball Tray Support Rail 41"

BOTTOM SHOE ASSEMBLY

ITEM NO.	PAGE NO.	PART NUMBER	QTY.	DESCRIPTION
ALL	33	F03013206	1	Bottom Shoe Complete with Rockers (Right Hand Discharge)
**			1	Bottom Shoe Complete with Rockers (Left Hand Discharge)
424	33	F03123801	1	Right Shoe Side, Wood Only
425	33	F03123802	1	Left Shoe Side, Wood Only
422	33	F03123902	1	Wooden Pitman Board
423	33	F03323104	1	Pitman Board Metal Cover
		F11303842	2	Pitman Support Angle
440	33	F03320440	1	Bottom Shoe Metal 44-1/2" x 42-3/4"
**	33	F03320430	1	Bottom Shoe Metal 44-1/2" x 36"
134	19	--ASK--	1	Front Grain Deflector Door (Need Three Part Numbers for Assembly)
132	19	F03016510	2	Shoe Front Hanger with Block (Customer Cut to Length)
137	19	F03102601	2	Shoe Front Hanger Support Block
133	19	F03016520	3	Shoe Back Hanger with Block (Customer Cut to Length)
136	19	F03101901	1	Cross Girt Wood Hanger 53" Long
433	33	F03101710	2	Wood Sand Spout Track
432	33	F03301001	2	Metal Sand Spout Guide
431	33	F08002600	1	Sand Spout (Left Hand Discharge)
**		F08002603	1	Sand Spout (Right Hand Discharge)
441	33	F08308820	1	Straw Spout (Left Hand Discharge)
**		F08308840	1	Straw Spout (Right Hand Discharge)
145	19	F03501900	1	Top Rocker Assembly Complete (Includes Below)
145	30	F03601500	1	Right Hand Top Wooden Rocker Arm Only 77" Long
**		F03601502	1	Left Hand Top Wooden Rocker Arm Only 77" Long
153	30	F03800418	2	77" Metal Screenway Liner
156	30	F03801101	2	77" Metal Rubber Holding Strip
159	30	F03900110	2	77" Rubber Seal 2-1/2" Wide
155		F03806000	2	Screen Stop
144	30	F03500800	2	Screen Hook Assembly
158		F03803200	1	Top Rocker Front Blank Assembly
141	30	F03310008	1	Grain Stop Assembly with Rubber
176	30	F03800001	2	Rocker Brace
175	30	F03500600	2	Rocker Cup
		F90005301	1	Rocker Adjusting Girt Assembly Offset
147	22	F03502777	1	Top Telescoping Apron Assembly

BOTTOM SHOE ASSEMBLY CONTINUED

ITEM NO.	PAGE NO.	PART NUMBER	QTY.	DESCRIPTION
435	33	F03502000	1	Bottom Rocker Assembly Complete, 76" Arms (Includes Below)
436	33	F03601504	1	Right Hand Bottom Wooden Rocker Arm Only (76")
**		F03601505	1	Left Hand Bottom Wooden Rocker Arm Only (76")
153	30	F03800418	2	76" Metal Screenway Liner
156	30	F03801101	2	76" Metal Rubber Holding Strip
159	30	F03900110	2	76" Rubber Seal
155		F03806000	2	Screen Stop
176	30	F03800001	2	Rocker Bottom Cross Brace #9
177	30	F03505804	1	Rocker Top Pipe Girt #9
175	30	F03500600	2	Rocker Cup
		F90005091	1	Rocker Adjusting Girt Assembly
148	22	F03502780	1	Bottom Telescoping Apron Assembly
		F90005062	4	Ball Tray Weldment for 1 Piece Screens
			or	
		F90005063	4	Ball Tray Weldment for 2 Piece Screens (For Bottom 26" Section)
		F90005069	4	Ball Tray Weldment for 2 Piece Screens (For Top 34" Section)
		F80026101	432	Black 1-3/8" Balls (72 Per Tray)
		F11301708	4	Ball Tray Support Rail 31"
		F11301709	4	Ball Tray Support Rail 41"
44	8	F01200203	4	Pinion Gear with 3/4" Bore
45	8	F01200300	4	4" Long Rack
49	8	F01801700	4	Escutcheon Plate
47	8	F01608303	2	Tilting Rod 3/4" X 60-1/2"
52	8	66276400	2	3/4" Hex Nut

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MISCELLANEOUS PARTS

ITEM NO.	PAGE NO.	PART NUMBER	QTY.	DESCRIPTION
182	18	F08316600	2	Hinged Side Spout Diverter
183	23	F08502200	1	Inside Center Discharge Catchall Spout with Hardware (8" Lip)
184	23	F08502300	1	Outside Center Discharge Catchall Spout with Hardware (12" Lip)
181	23	F01800100	2	Right Side 3 Position Catchall Holder
**	23	F01800200	2	Left Side 3 Position Catchall Holder
193	All 24	F01002803	1	Belt Idler Assembly Complete 5-1/2" (Includes Below)
178	24	F01100100	1	Idler Pivot Lever
191	24	F01806202	1	5-1/2" Belt Take Up Shaft
179	24	F01103300	1	1" CI Pillow Blocks
180	24	F01400700	1	Idler Sheave with Bushing
185	24	F01805010	1	Belt Tightner Axle with Hardware

PULLEYS & BELTS

ITEM NO.	PAGE NO.	PART NUMBER	QTY.	DESCRIPTION
174		Not Available	1	1B 3.0 Countershaft Pulley 1-1/2 Bore" (Drives Hopper)
167		F91162128	1	B-128 Belt (From Countershaft to Hopper)
169		F91912080	1	1B8.0 SDS Valve Shaft Sheave (Drives Back Auger)
**		44010510	1	SDS Bushing for Valve Shaft Sheave
175		43110079	1	1B3.6 Back Auger Sheave
**		44010313	1	SH Bushing for above
168		F91162136	1	B-136 Belt (From Top Air Discharge to Bottom Auger Discharge)
170		F91912184	1	1B18.4 SK Valve Shaft Sheave (Is Driven by Eccentric Shaft)
**		44010910	1	SK Bushing for Valve Shaft Sheave
165		F91162105	1	B-105 Belt (From Eccentric Shaft to Top Air Discharge Valve)
172		F91922154	1	2B15.4 SK Countershaft Sheave (Is Driven By Top Fan Shaft)
**		44010918	1	SK Bushing for above
173		F91922056	1	2B5.6 SDS Top Fan Shaft Pulley (Drives Countershaft)
**		44010525	1	Bushing SDS 1-15/16" for above
166		F91162120	2	B-120 Belt (From Countershaft to Top Fan)

**New Style Permanent Ball Trays with That Stayed in the Machine
When the Screens Were Removed. Started to be Used in 1994**

F92053517		Complete Reto Fit Ball Tray Kit (Includes Parts Below)
F90008272	8	Permanent Ball Tray Weldment
F80026101	640	Black 1-3/8" Balls (80 Per Tray)
F11308889	4	Right Hand Ball Tray Rail w/ End Stop
F11308890	4	Left Hand Ball Tray Rail w/ End Stop
F90008258	4	Right Hand Ball Tray Rail w/ Screen Hook Holder Bracket
F90008259	4	Left Hand Ball Tray Rail w/ Screen Hook Holder Bracket
F03500800	8	Screens Hook Assembly Screws And Other Hardware