

Table of Contents

Growers Supply Series Index

DESCRIPTION	PAGE
Schematics and Assembly Index	1
Conditions of Sales	2
Shipping Policies	3
Warranty Information	4-5
Series & PAW Part Number References	6
Disc Blades Hole Cutting Reference	7
Series 10 - Standard Concavity Disc Blade	8-11
Series 11 - JD Conical Disc Blades	12
Series 12 - IHC Raised Flat Center (RFC) Disc Blades	13-14
Series 16 - Coulter Blades	15-17
Series 16 - Coulter Hole Cuts	18-19
Series 19 - Rome Dimpled Center Disc Blades	20
Series 10 - Disc Harrow Replacement Parts	21-25
Series 20 - Twisted Chisels	26
Series 21 - Straight Chisels	27
Series 22 - Shovels	28
Series 23 - Spikes	29
Series 24 - Points	30
Series 28 - Welded V-Sweeps	31
Series 29 - Banana/Orsie Knives	32
Series 30 - Crescent Hoes	33
Series 31 - Johnson Style Bed Knives	34
Series 32 - Beet Hoes	35
Series 33 - Beet/Bean Hoes	36
Series 34 - Tender Plant Hoes	37
Series 35 - Cotton Root Cutters	38-39
Series 36 - Frontswept Fertilizer Injection Knives	40-41
Series 37 - Backswept Fertilizer Injection Knives	42-45
Series 38 - Fertilizer Injection Shanks	46-47
Series 39 - Chromium Carbide Products	48-55
Series 40 - Alabama Sweeps	56
Series 42 - Snub Nose Furrowers	57-59
Series 43 - Heavy Duty Furrowers	60-61
Series 44 - Lister Bottom Assemblies and Parts	62-63
Series 44 - Complete Lister with Cast Shanks	64
Series 44 - Lister Bottom Parts	65-66
Series 44 - Lister Points	67
Series 45 - Irrigation Shovels	68
Series 48 - Furrower Points	69
Series 51 - Joyce Cultivator Sweeps	70
Series 28 - Welded V-Sweeps	71
Series 40 - Alabama Sweeps	72
Series 59 - Joyce Sweep & Irrigation Shovel Combinations	73
Series 53 - Field Cultivator Sweeps	74-75

DESCRIPTION	PAGE
Series 54 - Chisel/Wheat Land Sweeps	76-81
Series 55 - Danish Style Cultivation Parts	82-84
Series 59 - Joyce Sweep & Irrigation Shovel Combinations	85
Series 70 - Chisel Standards	86-88
Series 72 - Coil Shanks	89-91
Series 73 - Harrow Teeth	92
Series 74 - Spring Harrow Shanks	93
Series 75 - Tool Bar Clamps	94-97
Series 75 - Spacer Clamps	98-99
Series 76 - Bar & Strap Caps	100-105
Series 77 - Subsoiler Points	106-114
Series 78 - Subsoiler Shanks	115-120
Series 78 - Chisel Shanks	121
Series 79 - Tool Bar and Steel	122-126
Series 80 - A-Frames/Quick Hitches	127-130
Series 81 - Plow Bolts/Hardware	131-133
Series 81 - Linkage Pins	134-137
Series 82 - Flail Mower Knives & Hardware	138-144
Series 82 - Rotary Cutter Blades	145-146
Series 82 - Incorporator Blades	147
Series 84 - Rotary Tiller Blades	148-153
Series 86 - Plow Shares & Parts	154-161
Series 88 - Welded Shovels	162-163
Series 89 - Rolling Cultivator Parts Book	164-195
Series 90 - Straight Cultivator Standards	196
Series 91 - Side Offset Cultivator Standards	196
Series 92 - Rear Offset Cultivator Standards	197
Series 93 - Cultivator Standards&Forged Mounting Foot	197
Series 94 - Adjustable Foot Piece & Standards	198
Series 95 - Assembled Foot Pieces Standards	199
Series 96 - Scraper Blades (Special Order)	200-203
Series 97 - Gauge Wheels	204-210
Series 97 - Guide Cones	211-214
Series 98 - Cast Roller Rings	215
Series 99 - Disc Ridgers 2 & 3 Blade	217 & 218
Series 99 - Rolling Cages & Assemblies	219-220
Series 99 - Box Scrapers	221
PAW Wholes Goods Flyers	222-231
Bearings	232
Series Wi - Wilcox "Style" Various Assems & Parts	233-236

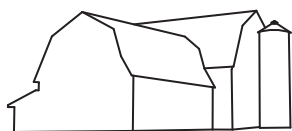
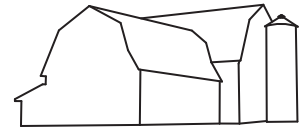


Table of Contents

SERIES 89 - SCHEMATICS INDEX

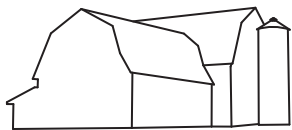
AUXILIARY HITCH SUPPORT BRACKET	p.189	PIPE ASSEMBLIES - DIAMOND BAR	p.170
Auxiliary Hitch Support	Fig. 28	Long Pipe Bar Assembly	Fig. 4
AUXILIARY TOOL BAR ADAPTER	p.173	Short Pipe Bar Assembly	Fig. 4
Auxiliary Tool Bar 7" x 5"	Fig. 9	PIPE ASSEMBLIES - FLAT BAR	p.169
Auxiliary Tool Bar 7" x 7"	Fig. 9	Long Pipe Bar Assembly	Fig. 3
CLOD BUSTER ROLLERS	p.182	Short Pipe Bar Assembly	Fig. 3
Clod Busters	Fig. -	PIVOT CLAMP ASSEMBLY	p.172
CULTIVATOR JACKSTAND	p.189	Pivot Clamp	Fig. 8
Jackstand	Fig. 29	RIGID SHANK ASSEMBLY	p.171
DIAMOND BAR GAUGE WHEEL	p.181	Rigid Shank	Fig. 6
Gauge Wheels For 2-1/4" Diamond Bar	Fig. 21	ROW GANG ASSEMBLY	p.177
DISC ASSEMBLY	p.184	No. 1 Slicer Tine Gang Assembly	Fig. 16
Disc Assembly Complete	Fig. 23	No. 2 Slicer Tine Gang Assembly	Fig. 16
Disc Weeder Clamp	Fig. 23A	Slicer Tine Split Row Gang Assembly	Fig. 16
Hub Assembly	Fig. 23B	ROW GANG SUPPORT	p.176
DISC WEEDER ASSEMBLY	p.185	Complete Over The Row Slicer Tine Gang	Fig. 15
Disc Weeder Complete Assembly	Fig. 24	Row Gang Support Bracket	Fig. 15
Hoe Shank Assembly	Fig. 24A	ROW MARKER ASSEMBLY	p.175
DOUBLE GUIDE CONE ASSEMBLY	p.178	Row Marker	Fig. 13
Double Guide Cone	Fig. 17	SINGLE GUIDE CONE ASSEMBLY	p.178
FIELD PARALLELOGRAM ASSEMBLY	p.187	Single Guide Cone	Fig. 18
Field Parallelogram	Fig. 26	STANDARD SUPPORT ASSEMBLY	p.175
FLAT BAR WITH DUAL WHEELS	p.180	Standard Support Assembly	Fig. 14
Double Gauge Wheel (Flat Bar)	Fig. 20	THREE POINT HITCHES (A-FRAME)	p.167 & 168
FLAT BAR WITH SINGLE WHEELS	p.179	7" x 5" Straight Hitch Assembly	Fig. 1
Single Gauge Wheel (Flat Bar)	Fig. 19	7" x 5" Offset Hitch Assembly	Fig. 2
FOOT PIECE SHANK ASSEMBLY	p.174	7" x 7" Offset Hitch Assembly	Fig. 2
Adjustable Foot Piece Shank 1" x 3"	Fig. 12	TOOL BAR CLAMP	p.174
SPIDER GANG ASSEMBLIES	p.191	7" x 5" Tool Bar, 1" x 3" Clamp	Fig. 11
Spider Cultivator Gang No. 1 & 2	Fig. 30	7" x 7" Tool Bar, 1" x 3" Clamp	Fig. 11
GAUGE WHEEL ASSEMBLY	p.183	TOOL BARS	p.171
Gauge Wheel Assembly (Semi-Pneumatic)	Fig. 22	7" x 5" Tool Bar	Fig. 5
LONG BAR SPACER	p.173	7" x 7" Tool Bar	Fig. 5
Long Bar Spacer for 3-1/2" Tool Bar	Fig. 10	TWIN ROW PRECISION CULTIVATOR ASSEM.	p.186
Long Bar Spacer for 7" x 5" Tool Bar	Fig. 10	Twin Row Precision Cultivator	Fig. 25
Long Bar Spacer for 7" x 7" Tool Bar	Fig. 10	U-BOLT SET FOR PIPE BARS	p.172
PARALLELOGRAM PIPE ASSEMBLY	p.188	U-Bolt Set for 7" x 5" Tool Bar	Fig. 7
Parallelogram Pipe	Fig. 27	U-Bolt Set for 7" x 7" Tool Bar	Fig. 7



Schematics and Assembly Index

Notes:

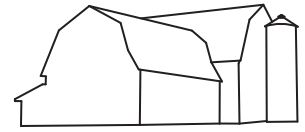
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Schematics and Assembly Index

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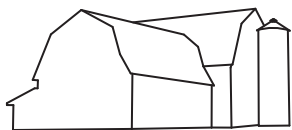
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Schematics and Assembly Index

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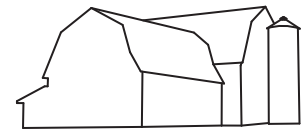
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Schematics and Assembly Index

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DISC BLADES

Series & Part Number References

Series Number Reference

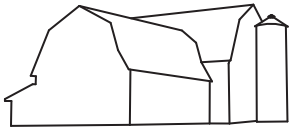
Series #	Series Name	Optional Styles
10	Standard Concavity	Premium, Wear Coated, Hardfaced
11	John Deere Conical	Premium, Wear Coated, Hardfaced
12	IHC Raised Flat Center	Premium, Wear Coated, Hardfaced
16	Coulter Blades	Premium, Hardfaced
19	Rome Dimpled Center	Premium, Wear Coated, Hardfaced

Part Number Reference

Part Number:	10V266S112	Part #	10V	26	6	S	112	
		Chart Ref. #	1	2	3	4	5	6

10V266S112 = Series 10: 26" x 6 mm Smooth 1-9/16" Sq. Center Hole for 1-1/2" Sq. Axle.
 12V328N000W = Series 12: 32" x 8 mm Notched 1-1/4" Rd. Pilot Center Hole, Wear Coated.

Ref. #	Description	Examples in Series
1	Prefix to Series Number. All Part Numbers have a prefix corresponding to their Series Number. Disc Blade examples are listed to the right. For a full list of Series Numbers, please see the Table of Contents.	Series 10 — Standard Concavity Disc Blades Series 11 — JD Conical Disc Blades Series 12 — IHC Raised Flat Center Disc Blades Series 16 — Coulter Disc Blades Series 19 — Rome Style "Dimpled" Disc Blades
2	Reference to Disc Blade Diameter (inches)	Blades Available from 12" to 40" (i.e. 26")
3	Reference to Disc Blade Thickness (mm)	0 — 9.5mm (.375) or 10mm (.393) 2 — 12mm(.472) or 12.5mm (.492) 3 — 3mm (.118) 4 - 3.5mm (.138) or 4mm (.157) 5 — 4.5mm(.177) or 5mm(.197) 6 — 6mm(.236) 8 — 8mm(.315) or 8.5mm (.335)
4	Reference to Smooth Edged (Plain) or Notched Edge (Cut-out)	Both Styles (S/N) Available on All Sizes.
5	Reference for Factory Cut Axle Sizes *Check with salesperson on factory cut axle sizes, limited availability	000 — Pilot (Starter) Center Hole 118 — Cut 1-3/16" Sq. for 1-1/8" Sq. Axle 112 — Cut 1-9/16" Sq. for 1-1/2" Sq. Axle 214 — Cut 2-5/16" Sq. for 2-1/4" Sq. Axle 1018 — Combo Hole (Dual Purpose) 1-1/16" Sq. for 1" Sq. Axle by 1-3/16" Sq. for 1-1/8" Sq. Axle 7810 — Combo Hole (Dual Purpose) 15/16" Sq. for 7/8" Sq. Axle by 1-1/16" Sq. for 1" Sq. Axle
6	Letter Reference for Wear Coating "W" or Hardfacing "H"	Part number without a lettered suffix is referenced as a Premium disc blade. Adding suffix "W" is a Wear Coated blade whereas an "H" represents a Hardfaced blade.



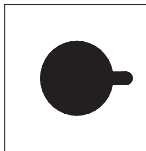
SERIES 10 Hole Cutting Reference

A large percentage of disc blades at Growers Supply are factory punched pilot or starter holes that allow for the cutting of center holes to fit a variety of axle sizes and styles. Pilot or starter holes range in size from 3/4" round hole for 12" to 20" blades, 1" round hole for 22" to 26" blades, and 1-1/4" round hole for 28" and larger disc blades. Most axle sizes can be cut at our facility for a nominal charge provided we have inventory of a particular sized disc blade, with a pilot hole.

HOLE CUT PART NUMBERS FOR SQUARE AND ROUND HOLES			
			
SQUARE		ROUND	
PART NO.	HOLE CUT	AXLE SIZE	
10C100	1-1/16" Sq.	for 1" Sq. Axle	
10C112	1-9/16" Sq.	for 1-1/2" Sq. Axle	
10C114	1-5/16" Sq.	for 1-1/4" Sq. Axle	
10C118	1-3/16" Sq.	for 1-1/8" Sq. Axle	
10C134	1-13/16" Sq.	for 1-3/4" Sq. Axle	
10C138	1-7/16" Sq.	for 1-3/8" Sq. Axle	
10C1516	1" Sq.	for 15/16" Sq. Axle	
10C158	1-11/16" Sq.	for 1-5/8" Sq. Axle	
10C178	1-15/16" Sq.	for 1-7/8" Sq. Axle	
10C200	2-1/16" Sq.	for 2" Sq. Axle	
10C214	2-5/16" Sq.	for 2-1/4" Sq. Axle	
10C218	2-3/16" Sq.	for 2-1/8" Sq. Axle	
10C234	2-13/16" Sq.	for 2-3/4" Sq. Axle	
10C078	15/16" Sq.	for 7/8" Sq. Axle	
PART NO.	HOLE CUT	AXLE SIZE	
10C100R	1-1/16" Rd.	for 1" Rd. Axle	
10C112R	1-9/16" Rd.	for 1-1/2" Rd. Axle	
10C114R	1-5/16" Rd.	for 1-1/4" Rd. Axle	
10C118R	1-3/16" Rd.	for 1-1/8" Rd. Axle	
10C134R	1-13/16" Rd.	for 1-3/4" Rd. Axle	
10C138R	1-7/16" Rd.	for 1-3/8" Rd. Axle	
10C158R	1-11/16" Rd.	for 1-5/8" Rd. Axle	
10C178R	1-15/16" Rd.	for 1-7/8" Rd. Axle	
10C200R	2-1/16" Rd.	for 2" Rd. Axle	
10C214R	2-5/16" Rd.	for 2-1/4" Rd. Axle	
10C218R	2-3/16" Rd.	for 2-1/8" Rd. Axle	
10C234R	2-13/16" Rd.	for 2-3/4" Rd. Axle	

10CSPEC CUSTOM HOLE CUT SPECIFICATIONS

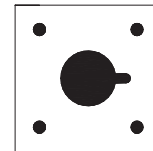
Disc blade axle holes that are cut will be invoiced with the original disc blade part number it is cut from and the corresponding hole cut part number listed directly below it. If you have any further questions, please check with your salesperson at the time of order placement.



ROUND w/ KEYWAY



HEX

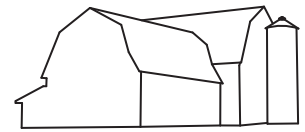


KEYWAY w/ BOLT PATTERN

Special holes cuts are designated by a separate part number.

DISC BLADE THICKNESS CONVERSION TABLE

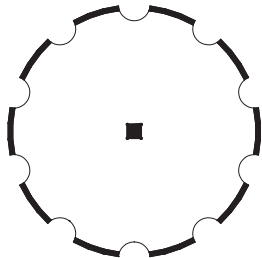
MILLIMETER	INCHES	DECIMAL	GAUGE
3 mm	1/8"	.118	11
3.5 mm	9/64"	.138	10
4 mm	5/32"	.157	9
4.5mm	3/16"	.177	7
5 mm	13/64"	.197	6
6 mm	1/4"	.236	3
8 mm	5/16"	.315	0
9.5 mm	3/8"	.375	--
10 mm	3/8"	.396	--
12 mm	1/2"	.472	--



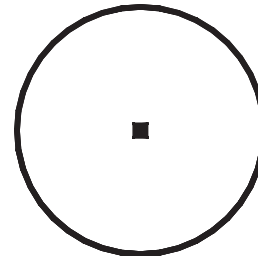
SERIES 10

Standard Concavity Disc Blades

PREMIUM DISC BLADES

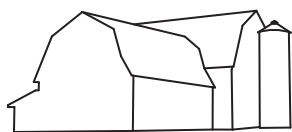


10V266N112



10V266S112

Blade Diameter	Part Number	Thickness x Concavity	Blade Type	Axle Size	Center Hole	Weight Each	Bundle Quantity
12"							
	10V123N000	3 mm (.118) x 0.92	Notched	Pilot	3/4" RD	3.50	100
	10V123S000	3 mm (.118) x 0.92	Smooth	Pilot	3/4" RD	3.84	100
14"							
	10V143N000	3 mm (.118) x 1.25	Notched	Pilot	3/4" RD	4.95	100
	10V143S000	3 mm (.118) x 1.25	Smooth	Pilot	3/4" RD	5.23	100
16"							
	10V163N000	3 mm (.118) x 1.50	Notched	Pilot	3/4" RD	6.19	50
	10V163N1018	3 mm (.118) x 1.50	Notched	1" x 1-1/8" SQ	1-1/16" x 1-3/16" SQ		50
	10V163N7810	3 mm (.118) x 1.50	Notched	7/8" x 1" SQ	15/16" x 1-1/16" SQ		50
	10V163S000	3 mm (.118) x 1.50	Smooth	Pilot	3/4" RD	6.85	50
	10V163S1018	3 mm (.118) x 1.50	Smooth	1" x 1-1/8" SQ	1-1/16" x 1-3/16" SQ		50
	10V163S7810	3 mm (.118) x 1.50	Smooth	7/8" x 1" SQ	15/16" x 1-1/16" SQ		50
	10V164N000	3.5 mm (.138) x 1.50	Notched	Pilot	3/4" RD	6.85	50
	10V164S000	3.5 mm (.138) x 1.50	Smooth	Pilot	3/4" RD	8.08	50
18"							
	10V183N000	3 mm (.118) x 1.75	Notched	Pilot	3/4" RD	8.29	50
	10V183N1018	3 mm (.118) x 1.75	Notched	1" x 1-1/8" SQ	1-1/16" x 1-3/16" SQ		50
	10V183N7810	3 mm (.118) x 1.75	Notched	7/8" x 1" SQ	15/16" x 1-1/16" SQ		50
	10V183S000	3 mm (.118) x 1.75	Smooth	Pilot	3/4" RD	8.66	50
	10V183S1018	3 mm (.118) x 1.75	Smooth	1" x 1-1/8" SQ	1-1/16" x 1-3/16" SQ		50
	10V183S7810	3 mm (.118) x 1.75	Smooth	7/8" x 1" SQ	15/16" x 1-1/16" SQ		50
	10V184N000	4 mm (.157) x 1.75	Notched	Pilot	3/4" RD	10.22	50
	10V184S000	4 mm (.157) x 1.75	Smooth	Pilot	3/4" RD	10.50	50
	10V185N000	5mm (.197) x 1.75	Notched	Pilot	3/4" RD	15.00	50
	10V185S000	5mm (.197) x 1.75	Smooth	Pilot	3/4" RD	15.75	50
20"							
	10V204N000	3.5 mm (.138) x 2.00	Notched	Pilot	3/4" RD	11.33	50
	10V204N1018	3.5 mm (.138) x 2.00	Notched	1" x 1-1/8" SQ	1-1/16" x 1-3/16" SQ		50
	10V204N118	3.5 mm (.138) x 2.00	Notched	1-1/8" SQ	1-3/16" SQ		50
	10V204S000	3.5 mm (.138) x 2.00	Smooth	Pilot	3/4" RD	11.93	50
	10V204S1018	3.5 mm (.138) x 2.00	Smooth	1" x 1-1/8" SQ	1-1/16" x 1-3/16" SQ		50
	10V204S118	3.5 mm (.138) x 2.00	Smooth	1-1/8" SQ	1-3/16" SQ		50
	10V205N000	4.5 mm (.177) x 2.00	Notched	Pilot	3/4" RD	15.22	50

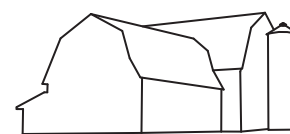


SERIES 10

Standard Concavity Disc Blades

PREMIUM BLADES (continued)

Blade Diameter	Part Number	Thickness x Concavity	Blade Type	Axle Size	Center Hole	Weight Each	Bundle Quantity
20" (cont.)							
	10V205S000	4.5 mm (.177) x 2.00	Smooth	Pilot	3/4" RD	16.02	50
	10V206N000	6mm (.236) x 2.00	Notched	Pilot	3/4" RD	20.25	50
	10V206S000	6mm (.236) x 2.00	Smooth	Pilot	3/4" RD	21.00	50
22"							
	10V224N000	4 mm (.157) x 2.50	Notched	Pilot	3/4" RD	15.96	50
	10V224N112	4 mm (.157) x 2.50	Notched	1-1/2" SQ	1-9/16" SQ		50
	10V224N118	4 mm (.157) x 2.50	Notched	1-1/8" SQ	1-3/16" SQ		50
	10V224S000	4 mm (.157) x 2.50	Smooth	Pilot	3/4" RD	16.36	50
	10V224S112	4 mm (.157) x 2.50	Smooth	1-1/2" SQ	1-9/16" SQ		50
	10V224S118	4 mm (.157) x 2.50	Smooth	1-1/8" SQ	1-3/16" SQ		50
	10V225N000	4.5 mm (.177) x 2.50	Notched	Pilot	3/4" RD	18.33	50
	10V225N118	4.5 mm (.177) x 2.50	Notched	1-1/8" SQ	1-3/16" SQ		50
	10V225S000	4.5 mm (.177) x 2.50	Smooth	Pilot	3/4" RD	19.33	50
	10V225S118	4.5 mm (.177) x 2.50	Smooth	1-1/8" SQ	1-3/16" SQ		50
	10V226N000	6 mm (.236) x 2.50	Notched	Pilot	3/4" RD	24.57	50
	10V226S000	6 mm (.236) x 2.50	Smooth	Pilot	3/4" RD	27.11	50
24"							
	10V245N000	4.5 mm (.177) x 3.00	Notched	Pilot	1" RD	23.30	50
	10V245N112	4.5 mm (.177) x 3.00	Notched	1-1/2" SQ	1-9/16" SQ		50
	10V245N118	4.5 mm (.177) x 3.00	Notched	1-1/8" SQ	1-3/16" SQ		50
	10V245S000	4.5 mm (.177) x 3.00	Smooth	Pilot	1" RD	24.53	50
	10V245S112	4.5 mm (.177) x 3.00	Smooth	1-1/2" SQ	1" RD		50
	10V245S118	4.5 mm (.177) x 3.00	Smooth	1-1/8" SQ	1" RD		50
	10V246N000	6 mm (.236) x 3.00	Notched	Pilot	1" RD	30.60	50
	10V246N112	6 mm (.236) x 3.00	Notched	1-1/2" SQ	1-9/16" SQ		50
	10V246N118	6 mm (.236) x 3.00	Notched	1-1/8" SQ	1-3/16" SQ		50
	10V246S000	6 mm (.236) x 3.00	Smooth	Pilot	1" RD	32.31	50
	10V246S112	6 mm (.236) x 3.00	Smooth	1-1/2" SQ	1-9/16" SQ		50
	10V246S118	6 mm (.236) x 3.00	Smooth	1-1/8" SQ	1-3/16" SQ		50
26"							
	10V265N000	5 mm (.197) x 3.75	Notched	Pilot	1" RD	29.82	50
	10V265N112	5 mm (.197) x 3.75	Notched	1-1/2" SQ	1" RD		50
	10V265N118	5 mm (.197) x 3.75	Notched	1-1/8" SQ	1" RD		50
	10V265S000	5 mm (.197) x 3.75	Smooth	Pilot	1" RD	32.27	50
	10V265S112	5 mm (.197) x 3.75	Smooth	1-1/2" SQ	1" RD		50
	10V265S118	5 mm (.197) x 3.75	Smooth	1-1/8" SQ	1" RD		50
	10V266N000	6 mm (.236) x 3.75	Notched	Pilot	1" RD	35.78	50
	10V266N112	6 mm (.236) x 3.75	Notched	1-1/2" SQ	1-9/16" SQ		50
	10V266N118	6 mm (.236) x 3.75	Notched	1-1/8" SQ	1-3/16" SQ		50
	10V266S000	6 mm (.236) x 3.75	Smooth	Pilot	1" RD	37.54	50
	10V266S112	6 mm (.236) x 3.75	Smooth	1-1/2" SQ	1" RD		50
	10V266S118	6 mm (.236) x 3.75	Smooth	1-1/8" SQ	1" RD		50



SERIES 10

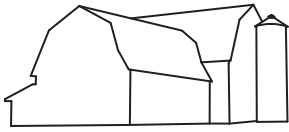
Standard Concavity Disc Blades

PREMIUM BLADES (continued)

Blade Diameter	Part Number	Thickness x Concavity	Blade Type	Axle Size	Center Hole	Weight Each	Bundle Quantity
26" (cont.)							
	10V268N000	8 mm (.315) x 3.50	Notched	Pilot	1" RD	47.19	50
	10V268S000	8 mm (.315) x 3.50	Smooth	Pilot	1" RD	49.67	50
28"							
	10V286N000	6 mm (.236) x 4.25	Notched	Pilot	1" RD	42.28	50
	10V286N112	6 mm (.236) x 4.25	Notched	1-1/2" SQ	1-9/16" SQ		50
	10V286S000	6 mm (.236) x 4.25	Smooth	Pilot	1" RD	44.12	50
	10V286S112	6 mm (.236) x 4.25	Smooth	1-1/2" SQ	1-9/16" SQ		50
	10V288N000	8 mm (.315) x 4.25	Notched	Pilot	1" RD	56.04	50
	10V288N134	8 mm (.315) x 4.25	Notched	1-3/4" SQ	1-13/16" SQ		50
	10V288S000	8 mm (.315) x 4.25	Smooth	Pilot	1" RD	58.89	50
	10V288S134	8 mm (.315) x 4.25	Smooth	1-3/4" SQ	1-13/16" SQ		50
30"							
	10V300N000	9.5 mm (.375) x 4.50	Notched	Pilot	1-1/4" RD		25
	10V300S000	9.5 mm (.375) x 4.50	Smooth	Pilot	1-1/4" RD	78.00	25
	10V308N000	8 mm (.315) x 4.50	Notched	Pilot	1-1/4" RD		25
	10V308S000	8 mm (.315) x 4.50	Smooth	Pilot	1-1/4" RD	65.00	25
32"							
	10V320N000	9.5 mm (.375) x 4.75	Notched	Pilot	1-1/4" RD	87.40	25
	10V320N214	9.5 mm (.375) x 4.75	Notched	2-1/4" SQ	2-5/16" SQ		25
	10V320S000	9.5 mm (.375) x 4.75	Smooth	Pilot	1-1/4" RD	92.00	25
	10V328N000	8 mm (.315) x 4.75	Notched	Pilot	1-1/4" RD	84.15	25
	10V328S000	8 mm (.315) x 4.75	Smooth	Pilot	1-1/4" RD		25
36"							
	10V360N000	9.5 mm (.375) x 5.11	Notched	Pilot	1-1/4" RD		25
	10V360S000	9.5 mm (.375) x 5.11	Smooth	Pilot	1-1/4" RD	113.50	25
	10V362N000	12 mm (.472) x 5.11	Notched	Pilot	1-1/4" RD	143.30	25
	10V362S000	12 mm (.472) x 5.11	Smooth	Pilot	1-1/4" RD	146.30	25
40"							
	10V402N214	12 mm (.472) x 5.77	Notched	2-1/4" SQ	2-5/16" SQ		25

SHALLOW CONCAVITY ROMES (NON-DIMPLED)

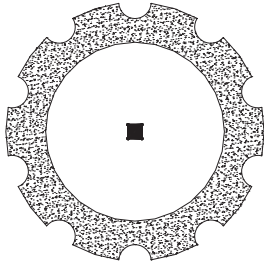
28"							
	10V288NS158R	8 mm (.315) x 2.88	Notched	1-5/8" RD	1-11/16" RD		50
	10V288SS158R	8 mm (.315) x 2.88	Smooth	1-5/8" RD	1-11/16" RD	58.89	50
	10V308NS158R	8 mm (.315) x 2.88	Notched	1-5/8" RD	1-11/16" RD		50
	10V308SS158R	8 mm (.315) x 2.88	Smooth	1-5/8" RD	1-11/16" RD	65.00	50



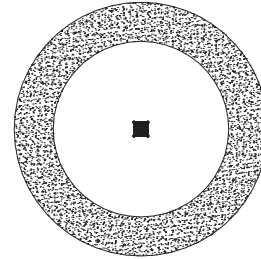
SERIES 10

Standard Concavity Disc Blades

WEAR-COATED



10266N112W

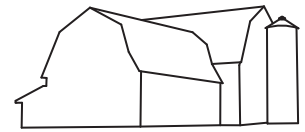


10266S112W

Blade Diameter	Part Number	Thickness x Concavity	Blade Type	Axle Size	Center Hole	Weight Each	Bundle Quantity
24"	10246N000W	6 mm (.236) x 3.00	Notched WC	Pilot	1" RD	30.60	50
	10246S000W	6 mm (.236) x 3.00	Smooth WC	Pilot	1" RD	32.21	50
26"	10266N000W	6 mm (.236) x 3.75	Notched WC	Pilot	1" RD	35.78	50
	10266S000W	6 mm (.236) x 3.75	Smooth WC	Pilot	1" RD	37.54	50
28"	10286N000W	6 mm (.236) x 4.25	Notched WC	Pilot	1" RD	42.28	50
	10286S000W	6 mm (.236) x 4.25	Smooth WC	Pilot	1" RD	44.14	50
	10288N000W	8 mm (.315) x 4.25	Notched WC	Pilot	1" RD	56.04	50
	10288S000W	8 mm (.315) x 4.25	Smooth WC	Pilot	1" RD	58.89	50
30"	10308N000W	8 mm x (.315) x 4.75	Notched WC	Pilot	1" RD		25
	10308S000W	8 mm x (.315) x 4.75	Smooth WC	Pilot	1" RD	65.00	25
32"	10320N000W	9.5 mm (.375) x 4.75	Notched WC	Pilot	1-1/4" RD	87.40	25
	10328N000W	8 mm x (.315) x 4.75	Notched WC	Pilot	1-1/4" RD	84.15	25

SHALLOW CONCAVITY ROMES (NON-DIMPLED) WEAR-COATED

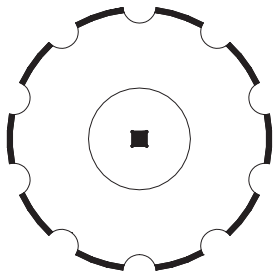
28"	10288NS158RW	8mm (.315) x 2.88	Notched	1-5/8" RD	1-11/16"	56.04	50
	10288SS158RW	8mm (.315) x 2.88	Smooth	1-5/8" RD	1-11/16"	58.89	50
	10308NS158RW	8mm (.315) x 2.88	Notched	1-5/8" RD	1-11/16"		50
	10308SS158RW	8mm (.315) x 2.88	Smooth	1-5/8" RD	1-11/16"	65.00	50



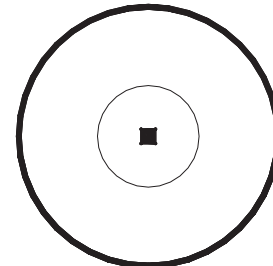
SERIES 11

JD Conical Disc Blades

PREMIUM BLADES



11V266N112

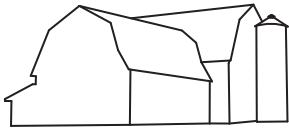


11V266S112

Blade Diameter	Part Number	Thickness x Concavity	Blade	Type	Center Hole	Weight Each	Bundle Quantity
22"							
	11V225N000	4.5 mm (.177) x 3.78	Notched	Conical	1" RD	18.33	50
	11V225S000	4.5 mm (.177) x 3.78	Smooth	Conical	1" RD	19.33	50
24"							
	11V245N000	5 mm (.197) x 4.20	Notched	Conical	1" RD	-	50
	11V245S000	5 mm (.197) x 4.20	Smooth	Conical	1" RD	-	50
	11V246N000	6 mm (.236) x 4.20	Notched	Conical	1" RD	30.60	50
	11V246S000	6 mm (.236) x 4.20	Smooth	Conical	1" RD	32.21	50
26"							
	11V265N000	5 mm (.197) x 4.69	Notched	Conical	1" RD	-	50
	11V265S000	5 mm (.197) x 4.69	Smooth	Conical	1" RD	-	50
	11V266N000	6 mm (.236) x 4.69	Notched	Conical	1" RD	35.65	50
	11V266S000	6 mm (.236) x 4.69	Smooth	Conical	1" RD	37.76	50

WEAR-COATED

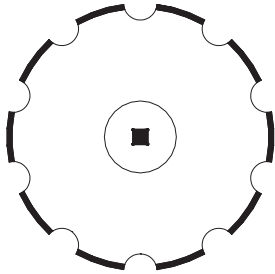
Blade Diameter	PAW Part Number	Thickness x Concavity	Blade	Type	Center Hole	Weight Each	Bundle Quantity
24"							
	11246N000W	6 mm (.236) x 4.20	Notched	Conical	1" RD	30.60	50
	11246S000W	6 mm (.236) x 4.20	Smooth	Conical	1" RD	32.21	50
26"							
	11266N000W	6 mm (.236) x 4.69	Notched	Conical	1" RD	35.65	50
	11266S000W	6 mm (.236) x 4.69	Smooth	Conical	1" RD	37.76	50



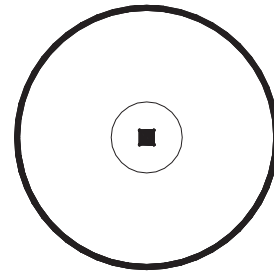
SERIES 12

IHC Raised Flat Center (RFC) Disc Blades

PREMIUM BLADES



12V266N112



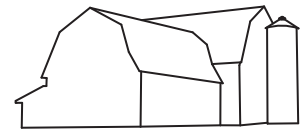
12V266S112

Blade Diameter	Part Number	Thickness x Concavity	Blade Type	Flat Center Diameter	Center Hole	Weight Each	Bundle Quantity
22"							
	12V225N000	4.5 mm (.177) x 2.50	Notched	4.5" RFC	1" RD	18.33	50
	12V225S000	4.5 mm (.177) x 2.50	Smooth	4.5" RFC	1" RD	19.33	50
24"							
	12V245N000	4.5 mm (.177) x 2.75	Notched	4.5" RFC	1" RD		50
	12V245S000	4.5 mm (.177) x 2.75	Smooth	4.5" RFC	1" RD		50
	12V246N000	6 mm (.236) x 2.75	Notched	4.5" RFC	1" RD	30.60	50
	12V246S000	6 mm (.236) x 2.75	Smooth	4.5" RFC	1" RD	32.21	50
26"							
	12V266N000	6 mm (.236) x 3.75	Notched	6" RFC	1" RD	35.65	50
	12V266S000	6 mm (.236) x 3.75	Smooth	6" RFC	1" RD	37.54	50
28"							
	12V286N000	6 mm (.236) x 3.75	Notched	6" RFC	1" RD	42.35	50
	12V286S000	6 mm (.236) x 3.75	Smooth	6" RFC	1" RD	44.51	50
32"							
	12V328N000	8 mm (.315) x 4.25	Notched	8" RFC	1-1/4" RD	72.20	25

IHC Raised Flat Center Disc Blades continued on next page.

WEAR-COATED



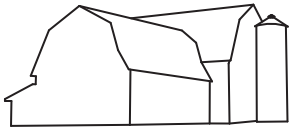


SERIES 12

IHC Raised Flat Center (RFC) Disc Blades

WEAR-COATED

Blade Diameter	Part Number	Thickness x Concavity	Blade Type	Flat Center Diameter	Center Hole	Weight Each	Bundle Quantity
24"	12246N000W	6 mm (.236) x 2.75	Notched	4.5" RFC	1" RD	30.60	50
	12246S000W	6 mm (.236) x 2.75	Smooth	4.5" RFC	1" RD	32.21	50
26"	12266N000W	6 mm (.236) x 3.75	Notched	6" RFC	1" RD	35.65	50
	12266S000W	6 mm (.236) x 3.75	Smooth	6" RFC	1" RD	37.54	50
28"	12286N000W	6 mm (.236) x 3.75	Notched	6" RFC	1" RD	42.35	50
	12286S000W	6 mm (.236) x 3.75	Smooth	6" RFC	1" RD	44.51	50
32"	12328N000W	8 mm (.315) x 4.25	Notched	8" RFC	1-1/4" RD	72.20	25
	12328S000W	8 mm (.315) x 4.25	Smooth	8" RFC	1-1/4" RD	73.75	25

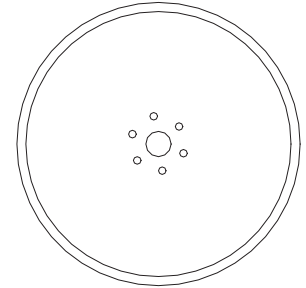


SERIES 16 Coulter Blades

FLAT COULTER BLADES STANDARD

Other custom hole cuts are available upon request

Blade Diameter	Part Number	Thickness	Style	Hole Cut*	Bundle Quantity	WT Each
12"						
	16V1245F000	4.5 mm (.177)	Flat	Pilot	50	4.5
14"						
	16V1445F000	4.5 mm (.177)	Flat	Pilot	50	5.2
16"						
	16V1645F000	4.5 mm (.177)	Flat	Pilot	50	5.9
17"						
	16V1745F000	4.5 mm (.177)	Flat	Pilot	50	9.9
18"						
	16V1845F000	4.5 mm (.177)	Flat	Pilot	50	12.0
	16V186F000	6.0 mm (.236)	Flat	Pilot		18.0
20"						
	16V2045F000	4.5 mm (.177)	Flat	Pilot	50	15.0
	16V206F000	6.0 mm (.236)	Flat	Pilot		19.0
22"						
	16V2245F000	4.5 mm (.177)	Flat	Pilot	50	19.0
	16V226F000	6.0 mm (.236)	Flat	Pilot		21.0
24"						
	16V2445F000	4.5 mm (.177)	Flat	Pilot	50	23.0
	16V246F000	6.0 mm (.236)	Flat	Pilot		30.0



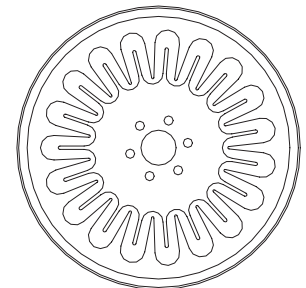
Flat Coulter Blade

*See Series 16 - Coulter Hole Cuts for reference

BUBBLE COULTERS

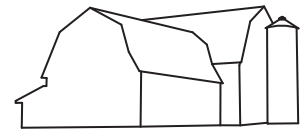
Other custom hole cuts are available upon request

Blade Diameter	Part Number	Thickness	Style	Hole Cut*	Bundle Quantity	WT Each
16"						
	16VB16157JD	4.0 mm (.157)	Bubble	JD	50	9.0
	16VB16157K	4.0 mm (.157)	Bubble	K		9.0
17"						
	16VB17157JD	4.0 mm (.157)	Bubble	JD	50	9.9
	16VB17157JDM	4.0 mm (.157)	Bubble	JDM		9.9
	16VB17157K	4.0 mm (.157)	Bubble	K		9.9
	16VB17157MLWR	4.0 mm (.157)	Bubble	MLWR		9.9
	16VB17157OL	4.0 mm (.157)	Bubble	OL		9.9



Bubble Coulter Blade

*See Series 16 - Coulter Hole Cuts for reference

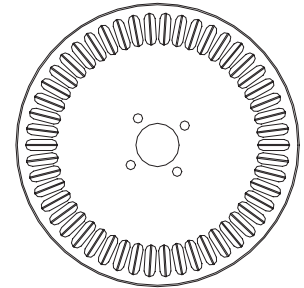


SERIES 16 Coulter Blades

FLUTED COULTERS

Other custom hole cuts are available upon request

Blade Diameter	Part Number	Thickness	Style	Hole Cut*	Bundle Quantity	WT Each
17"						
	16F17157AC	4.0 mm (.157)	Fluted	AC	50	9.9
	16F17157FD-4	4.0 mm (.157)	Fluted	FD-4		9.9
	16F17157FD-6	4.0 mm (.157)	Fluted	FD-6		9.9
	16F17157IH	4.0 mm (.157)	Fluted	IH		9.9
	16F17157JD	4.0 mm (.157)	Fluted	JD		9.9
	16F17157MF	4.0 mm (.157)	Fluted	MF		9.9
	16F17157MLWR	4.0 mm (.157)	Fluted	MLWR		9.9
	16F17157OL	4.0 mm (.157)	Fluted	OL		9.9
20"						
	16F20157MLWR	4.0 mm (.157)	Fluted	MLWR	50	13.9
	16F20177AC	4.5 mm (.177)	Fluted	AC		15.9
	16F20177CA	4.5 mm (.177)	Fluted	CA		15.9
	16F20177FD-6	4.5 mm (.177)	Fluted	FD-6		15.9
	16F20177H	4.5 mm (.177)	Fluted	H		15.9
	16F20177IH	4.5 mm (.177)	Fluted	IH		15.9
	16F20177IHN	4.5 mm (.177)	Fluted	IHN		15.9
	16F20177JD	4.5 mm (.177)	Fluted	JD		15.9
	16F20177JDM	4.5 mm (.177)	Fluted	JDM		15.9
	16F20177MF	4.5 mm (.177)	Fluted	MF		15.9
	16F20177MLWR	4.5 mm (.177)	Fluted	MLWR		15.9
	16F20177OL	4.5 mm (.177)	Fluted	OL		15.9
	16F20177W	4.5 mm (.177)	Fluted	W		15.9
	16F22197IHN	5.0 mm (.197)	Fluted	IHN		18.0
	16F22197JDM	5.0 mm (.197)	Fluted	JDM		18.0



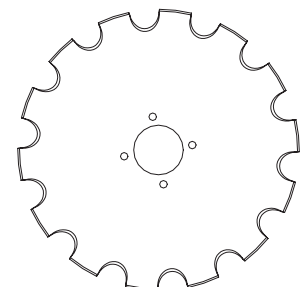
Fluted Coulter Blade

*See Series 16 - Coulter Hole Cuts for reference

NOTCHED COULTERS

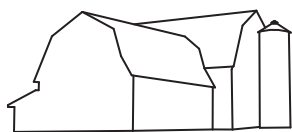
Other custom hole cuts are available upon request

Blade Diameter	Part Number	Thickness	Style	Hole Cut*	Bundle Quantity	WT Each
16"						
	16N16138MLWR	3.5 mm (.138)	Notched	MLWR	50	9.8
17"						
	16N17157MLWR	4.0 mm (.157)	Notched	MLWR	50	10.3
20"						
	16N20177MLWR	4.5 mm (.177)	Notched	MLWR	50	14.6
22"						
	16N22197G	5.0 mm (.197)	Notched	G	50	19.0
24"						
	16N24236G	6.0 mm (.236)	Notched	G	50	29.0



Notched Coulter

*See Series 16 - Coulter Hole Cuts for reference

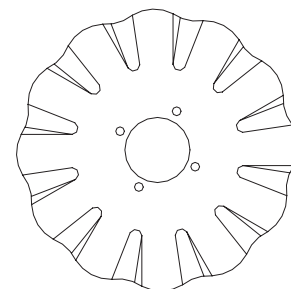


SERIES 16 Coulter Blades

WAVY COULTERS

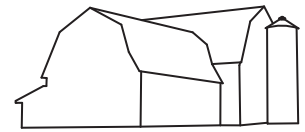
Other custom hole cuts are available upon request

Blade Diameter	Part Number	Thickness	Style	Hole Cut*	Bundle Quantity	WT Each
15"						
	16WT15157OL	4.0 mm (.157)	12 Wave, 3/4"	OL	50	7.3
16"						
	16WS16157JD	4.0 mm (.157)	8 Wave, 1"	JD	50	9.0
	16WS16157JDM	4.0 mm (.157)	8 Wave, 1"	JDM		9.0
	16WS16157K	4.0 mm (.157)	8 Wave, 1"	K		9.0
	16WT16157JD	4.0 mm (.157)	12 Wave, 3/4"	JD		9.0
	16WT16157JDM	4.0 mm (.157)	12 Wave, 3/4"	JDM		9.0
	16WT16157K	4.0 mm (.157)	12 Wave, 3/4"	K		9.0
17"						
	16W17157AC	4.0 mm (.157)	8 Wave, 2"	AC	50	10.3
	16W17157MLWR	4.0 mm (.157)	8 Wave, 2"	MLWR		10.3
	16W17157OL	4.0 mm (.157)	8 Wave, 2"	OL		10.3
	16W17197R	5.0 mm (.197)	8 Wave, 2"	R		10.3
	16WS17157AC	4.0 mm (.157)	8 Wave, 1"	AC		10.3
	16WS17157JD	4.0 mm (.157)	8 Wave, 1"	JD		10.3
	16WS17157JDM	4.0 mm (.157)	8 Wave, 1"	JDM		10.3
	16WS17157K	4.0 mm (.157)	8 Wave, 1"	K		10.3
	16WS17157MLWR	4.0 mm (.157)	8 Wave, 1"	MLWR		10.3
	16WS17157OL	4.0 mm (.157)	8 Wave, 1"	OL		10.3
	16WS17177AC	4.5 mm (.177)	8 Wave, 1"	AC		11.0
	16WS17197AC	5.0 mm (.197)	8 Wave, 1"	AC		12.1
	16WS17197R	5.0 mm (.197)	8 Wave, 1"	R		12.1
	16WT17157AC	4.0 mm (.157)	12 Wave, 3/4"	AC		10.3
	16WT17157JD	4.0 mm (.157)	12 Wave, 3/4"	JD		10.3
	16WT17157MLWR	4.0 mm (.157)	12 Wave, 3/4"	MLWR		10.3
	16WT17157OL	4.0 mm (.157)	12 Wave, 3/4"	OL		10.3
18"						
	16WT18157OL	4.0 mm (.157)	12 Wave, 3/4"	OL	50	11.0



Wavy Coulter Blade

*See Series 16 - Coulter Hole Cuts for reference



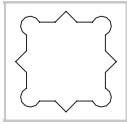
SERIES 16

Coulter Hole Cuts

ALLIS CHALMERS

PART REFERENCE: AI

Allis Chalmers and IHC coulters, Calkins and Glencoe/Farmland

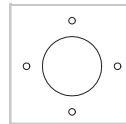


Center Hole	Bolt Circle	Bolt Holes
1-1/8" x 1-1/4" DS	N/A	N/A

FORD

Ford and other OEMs

PART REFERENCE: FD-4

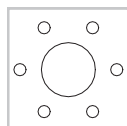


Center Hole	Bolt Circle	Bolt Holes
2-7/32"	3-13/32"	4-1/4"

ALLIS CHALMERS

Allis Chalmers and other OEMs

AC

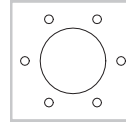


Center Hole	Bolt Circle	Bolt Holes
1-13/16"	3-1/4"	6-13/32"

FORD

Ford and other OEMs

FD-6

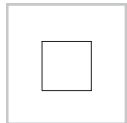


Center Hole	Bolt Circle	Bolt Holes
2-13/16"	4-1/8"	6-3/8"

BRILLION

Brillion Soiler Builder and other OEMs

B

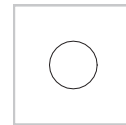


Center Hole	Bolt Circle	Bolt Holes
1-1/2" SQ	N/A	N/A

GLENCOE/FARMLAND

G

Glencoe/Farmland Soil Saver, Allis Chalmers Mini Till, Bush Hog Soil Hog, Case, DMI, Ford, Hiniker, IHC, Kent, Landoll, Noble and Orthman

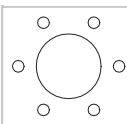


Center Hole	Bolt Circle	Bolt Holes
1-1/2" RD	N/A	N/A

CASE EX

Case EX series bottoms and other OEMs

CA

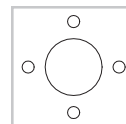


Center Hole	Bolt Circle	Bolt Holes
2-1/4"	3-1/2"	6-13/32"

HINIKER

H

Hiniker and other OEMs including Black Machine, Brillion, DMI, Gelncoe/Farmland, Haybuster, Landoll, Sukup, United Farm Tools, and Wil Rich/Noble

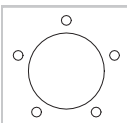


Center Hole	Bolt Circle	Bolt Holes
2-1/2"	4"	4-17/32"

JOHN DEERE

John Deere 712 Mulcher and other OEMs

D

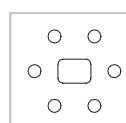


Center Hole	Bolt Circle	Bolt Holes
1-1/8" SQ	N/A	N/A

IHC

IH older style and other OEMs

IH

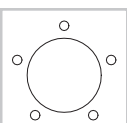


Center Hole	Bolt Circle	Bolt Holes
31/32" x 1-11/32"	3-1/4"	6-11/32"

FLEX KING

Flex King and other OEMs including Miller Weeder, Noble/Versatile, Roll-a-Cone and Sunflower

F

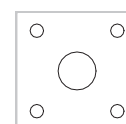


Center Hole	Bolt Circle	Bolt Holes
4-1/8"	5-1/2"	5-17/32"

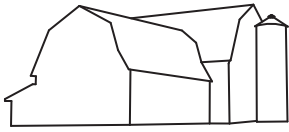
IHC

IH newer style including models 720 & 800.

IHN



Center Hole	Bolt Circle	Bolt Holes
1-1/2"	4-1/2"	4-17/32"

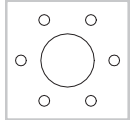


SERIES 16 Coulter Hole Cuts

JOHN DEERE

PART REFERENCE: JD

John Deere HS and NU bottoms (non-metric) and other OEMs including Yetter

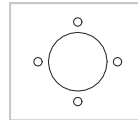


Center Hole	Bolt Circle	Bolt Holes
2"	3-1/2"	6-13/32"

MELROE/WIL RICH

PART REFERENCE: MLWR

This is a very common agricultural hub used by Acra Plant, Ag Systems, Bigham Bros., Caldwell-Hamby, DMI, Flexi Coil, Harrell, Landoll, Marliss, Monroe Tufline, Noble, Sunflower, Thurston/Blu Jet Tye, United Farm Tools, Wiese, Wetherell, York Agri Prod., and other OEMs

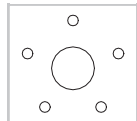


Center Hole	Bolt Circle	Bolt Holes
3-11/16"	5"	4-17/32"

JOHN DEERE

JDM

John Deere NU 450 Metric bottoms and other OEMs including Yetter

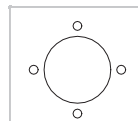


Center Hole	Bolt Circle	Bolt Holes
2-1/8"	4-3/4"	5-17/32"

OLIVER/WHITE

OL

Oliver/White including Great Plains, KBH, Unverferth, Yetter, and others.

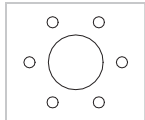


Center Hole	Bolt Circle	Bolt Holes
4"	5-1/4"	4-17/32"

KINZE

K

Kinze and other OEMs including Black Machine

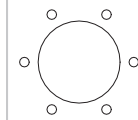


Center Hole	Bolt Circle	Bolt Holes
2"	3-3/8"	6-13/32"

RAWSON

R

Rawson and other OEMs.

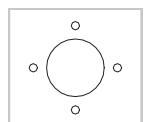


Center Hole	Bolt Circle	Bolt Holes
3-3/4"	5"	6-7/16"

MASSEY-FERGUSON

MF

Massey Ferguson and other OEMs

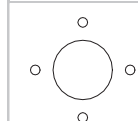


Center Hole	Bolt Circle	Bolt Holes
3-1/4"	4-3/4"	4-15/32"

WETHERELL

W

Wetherell and other OEMs including Alloway, Kongskilde, Lorenz, Noble, P&H, and Tebben

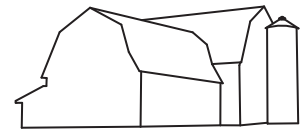


Center Hole	Bolt Circle	Bolt Holes
2-1/2"	4"	4-13/32"

COULTER BLADE STYLES

Coulter tillage is the loosening of soil compounds for the purpose of residue management; including no-till, ridge-till, and minimum tillage methods. Coulter blades are used in a variety of tillage techniques including trash cutting, narrow band seedbed preparation, implement stabilization, and in combination with deep banding fertilization equipment.

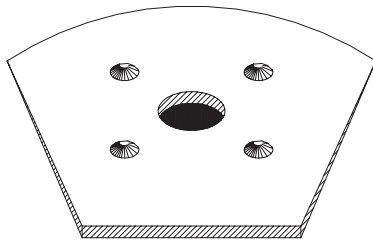
Pacific Ag offers an assortment of coulters including plain, fluted, notched, bubble, 1" wavy, and 2" wavy blades. In addition, we have a wide variety of diameters, thicknesses, and center hole patterns to fit most hubs and axles.



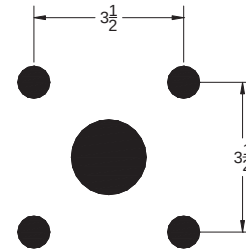
SERIES 19

Rome Dimpled Center Disc Blades

PREMIUM BLADES



Rome Blade Dimple View



Dimple Pattern 4 on 3-1/2" SQ

Blade Diameter	Part Number	Thickness x Concavity	Blade Type	Style	Center Hole	Weight Each	Bundle Quantity
28"							
	19280N000	10 mm (.396) x 4.25	Notched	Dimpled	Pilot	88.05	25
	19288N000	8 mm (.315) x 4.25	Notched	Dimpled	Pilot	74.05	25
30"							
	19302N000	12 mm (.472) x 4.75	Notched	Dimpled	Pilot	100.53	25
32"							
	19320N000	10 mm (.396) x 4.75	Notched	Dimpled	Pilot	93.00	25
	19322N000	12 mm (.472) x 4.75	Notched	Dimpled	Pilot	111.60	25
36"							
	19362N000	12 mm (.472) x 5.12	Notched	Dimpled	Pilot	139.36	25

SHALLOW CONCAVITY ROME DIMPLED

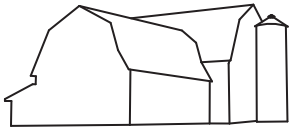
28"	19320NS218R	10 mm (.396) x 3.62	Notched	Dimpled	2-1/8" RD	93.00	25
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WEAR-COATED

30"	19302N000W	12 mm (.472) x 4.75	Notched	Dimpled	Pilot	100.52	25
32"	19320N000W	10 mm (.396) x 4.75	Notched	Dimpled	Pilot	93.22	25
	19322N000W	12 mm (.472) x 4.75	Notched	Dimpled	Pilot	111.69	25

SHALLOW CONCAVITY ROME DIMPLED (WEAR-COATED)

32"	19320NS218RW	10 mm (.396) x 3.62	Notched	Dimpled	2-1/8" RD	93.22	25
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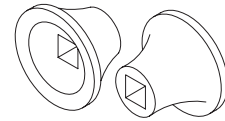
SERIES 10

Disc Harrow Replacement Parts

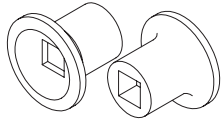
DISC HARROW SPOOLS

1-1/2" SQ 9" Space

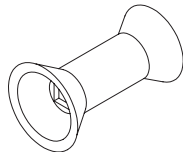
PAW Part Number	Description	WT
10SP11235CVSQ	Disc Spool 3-1/2" Convex 1-1/2" SQ	
10SP1124CCSQ	Disc Spool 4" Concave 1-1/2" SQ	
10SP1129FLSQ	Disc Spool 9" x 1-1/2" SQ	
10SP112ECCCSQ	Disc Spool End Cap Concave 1-1/2" SQ	
10SP112ECCVSQ	Disc Spool End Cap Convex 1-1/2" SQ	



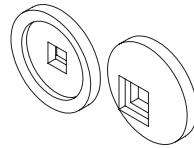
10SP11235CVSQ



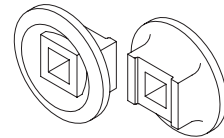
10SP1124CCSQ



10SP1129FLSQ



10SP112ECCCSQ



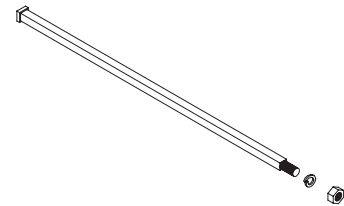
10SP112ECCVSQ

DISC HARROW AXLES

1-1/2" SQ Axles

**Parts are measured below the axle head.*

PAW Part Number	Description	WT
10AX11248SQ	Square Axle 1-1/2" x 48" SQ	35.11
10AX11258SQ	Square Axle 1-1/2" x 58" SQ	42.42
10AX11268SQ	Square Axle 1-1/2" x 68" SQ	49.64
10AX11278SQ	Square Axle 1-1/2" x 78" SQ	57.05
10AX11286SQ	Square Axle 1-1/2" x 86" SQ	62.90

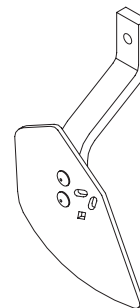


Other axle sizes/lengths are available. Please call for pricing.

DISC HARROW SCRAPERS

PAW Part Number	Description	WT
10DHSAC00	AC Disc Harrow Complete Assembly	
10DHSAC0A	Arm	
10DHSAC0P	Plate	

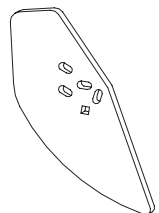
Other axle sizes/lengths are available. Please call for pricing.



10DHSAC00



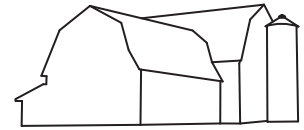
10DHSAC0A



10DHSAC0P

SERIES DP

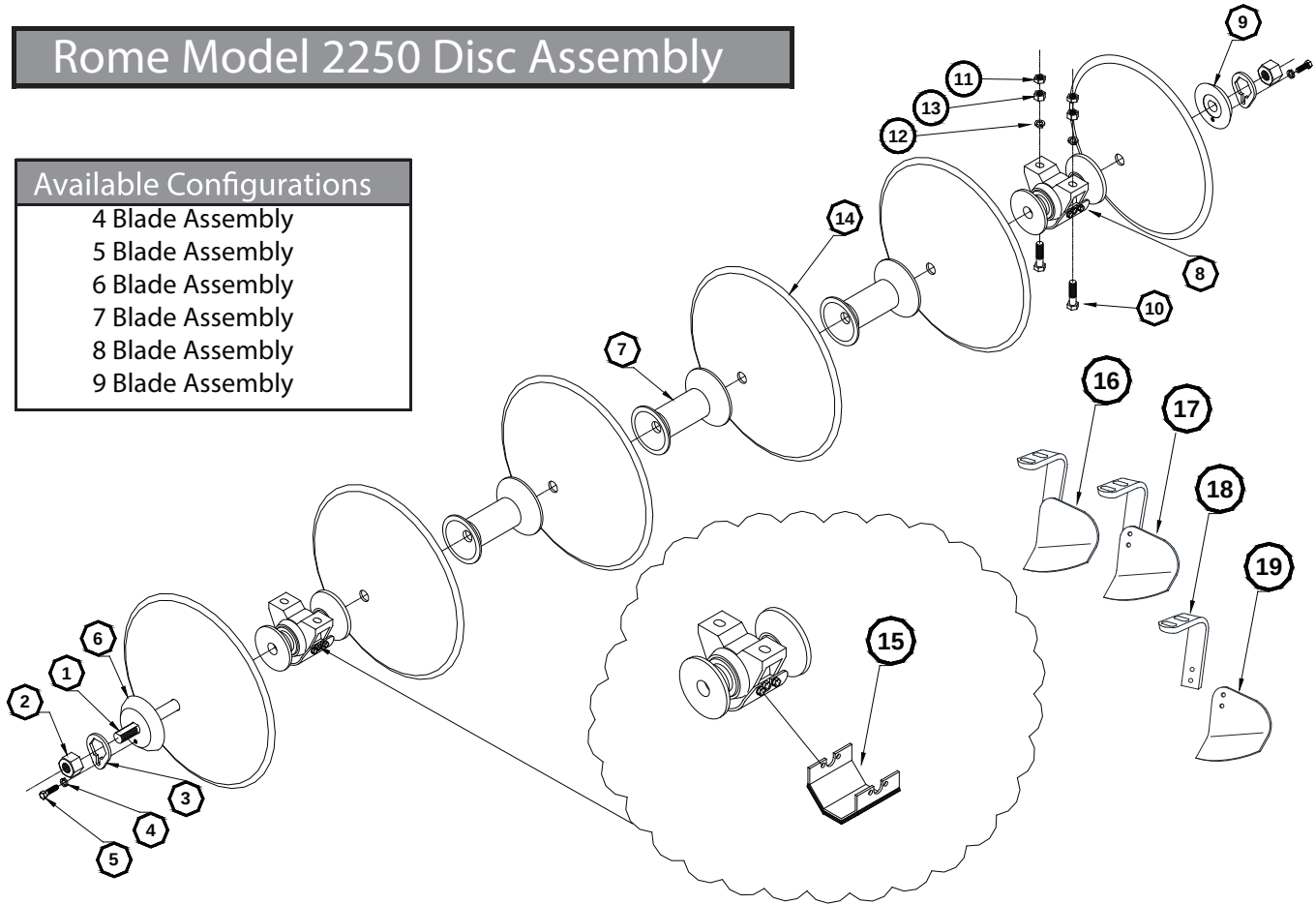
Disc Harrow Replacement Parts



Rome Model 2250 Disc Assembly

Available Configurations

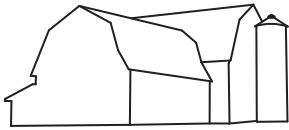
- 4 Blade Assembly
- 5 Blade Assembly
- 6 Blade Assembly
- 7 Blade Assembly
- 8 Blade Assembly
- 9 Blade Assembly



COMPONENT PARTS

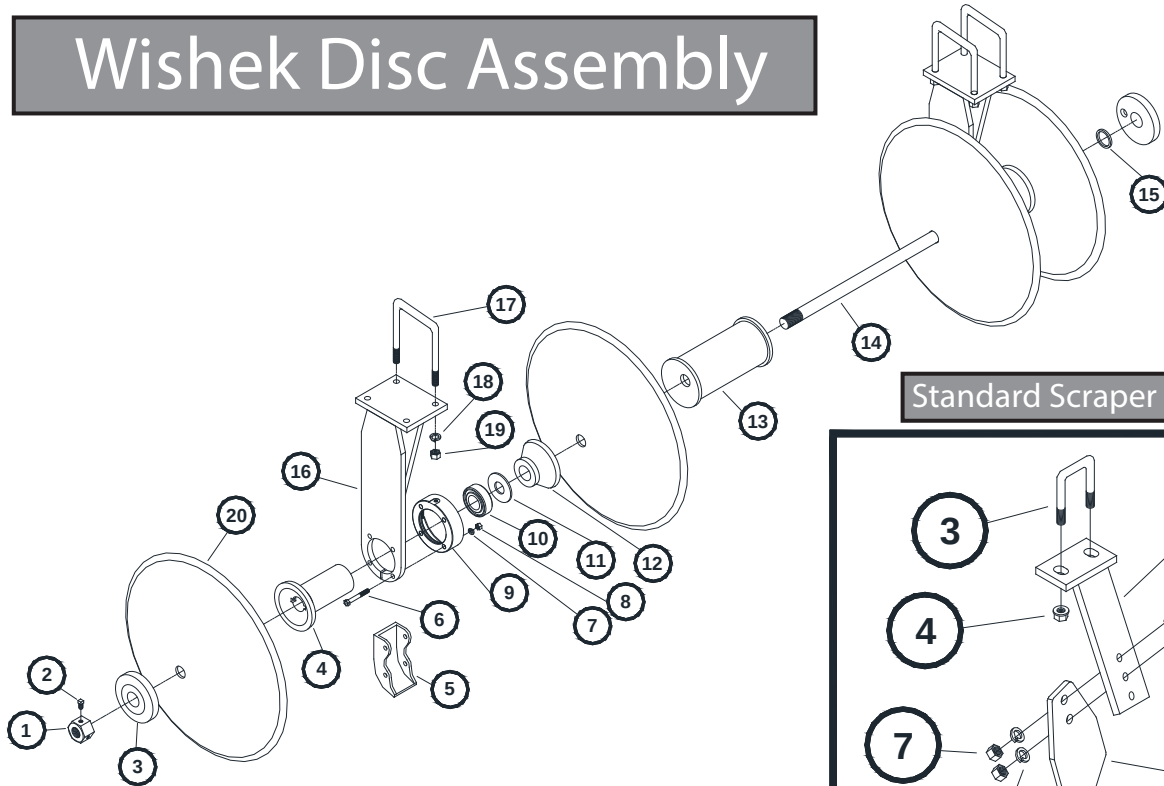
Ref.	PAW Part No.	Description	Req.
1	DPR4B1AX0	4 Blade Axle 39-1/8"	1
	DPR4B2AX0	5 Blade Axle 50-1/8"	
	DPR4B3AX0	6 Blade Axle 61-1/8"	
	DPR4B4AX0	7 Blade Axle 72-1/8"	
	DPR4B5AX0	8 Blade Axle 83-1/8"	
	DPR4B6AX0	9 Blade Axle 94-1/8"	
2	DP4N15000	Axle Hex Nut 1-1/2"	2
	DP4N15800	Axle Hex Nut 1-5/8"	2
3	DPNL163A0	Axle Nut Lock	2
4	81LW58000	Lockwasher, 5/8"	2
5	81CS58112	Hex Bolt, 5/8"x1-1/2" Gr.5	2
6	DP4C60B00	Concave Bumper Washer	1
7	DP3028755	Disc Spacer	

Ref.	PAW Part No.	Description	Req.
8	DP501048322	Oil Bath Bearing 11" Spacing	2
9	DP4C64A00	Convex Axle Washer	1
10	81CS78312G8	Hex Bolt, 7/8"x3-1/4" Gr.8	4
11	81JN78000	Hex Jam Nut, 7/8"	4
12	81FW7800H	Flat Washer, 7/8" Hardened	8
13	81HN78000	Hex Nut, 7/8"	4
14	10V288N158R	Disc 28"x5/16", Notched	
	10V288NS158R	Disc 28"x5/16", Notched Shallow	
15	DP521012933	Replacement Wear Pad	
	DP521012933C	Replacement Wear Pad W/Chrome	
16	DPBW5200F	Replacement Welded Scraper Front	
	DPBW5200B	Replacement Welded Scraper Back	
17	DPBW520HF	Replacement Arm&Pad w/Holes Front	
	DPBW520HB	Replacement Arm&Pad w/Holes Back	
18	DPBW520ARMH	Replacement Arm Only w/Holes	
19	DPBW520HFPL	Replacement Pad Only w/Holes Front	
	DPBW520HBPL	Replacement Pad Only w/Holes Back	

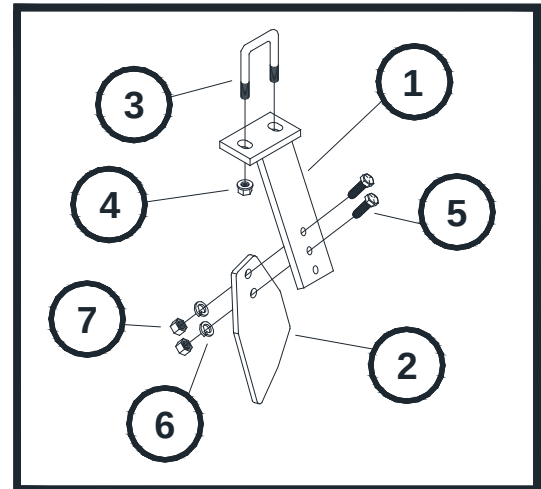


SERIES 10 Disc Harrow Replacement Parts

Wishek Disc Assembly



Standard Scraper Assembly



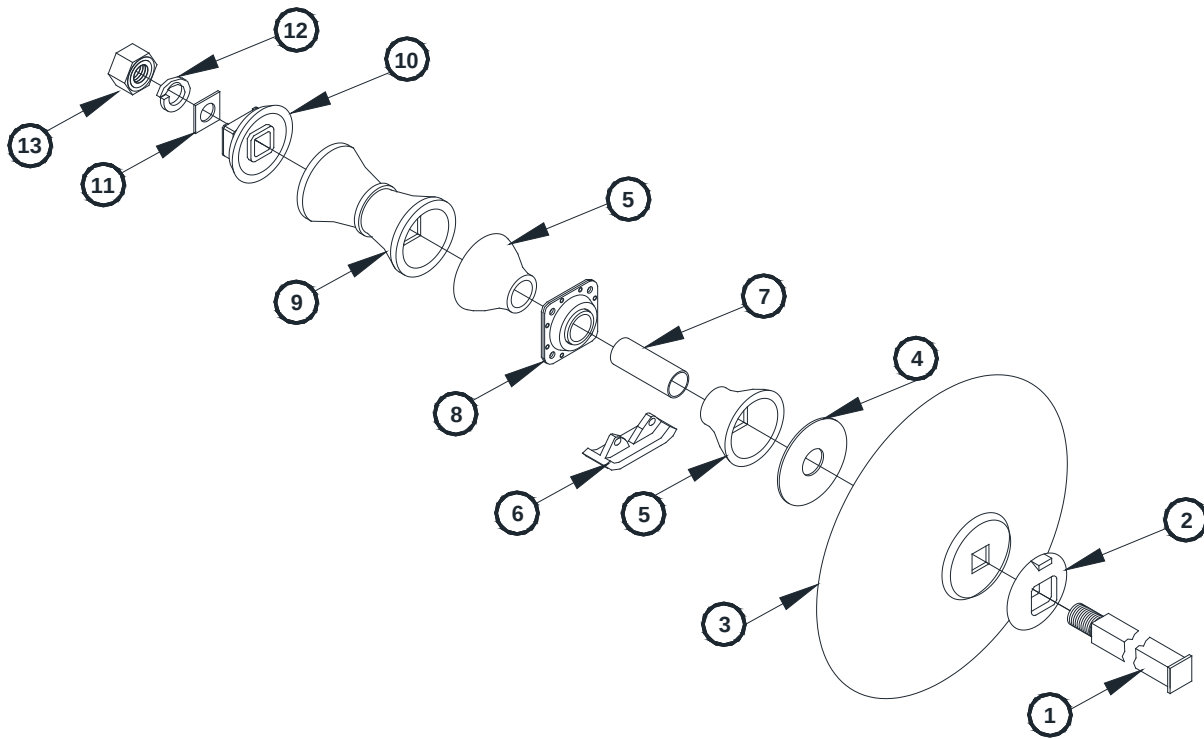
COMPONENT PARTS

Ref.	PAW Part#	Description	Ref.	PAW Part#	Description
1	DPW1506NUT	2" Drilled Gang Nut	11	DPW104884	Bearing Guard Washer
2	81CS91610GR8	Gang Nut Set Screw	12	DPW105283	Cast 1/2 Spool 2-3/4"
3	DPW106923	End Washer/Cap	13	DPW107670	Full Spool 13"(12-1/2")
4	DPW107933	1/2 Spool 8-3/8"(13")		DPW120200	Full Spool 11"(10-1/2")
	DPW105740	1/2 Spool 6-3/8"(11")		DPW120300	Full Spool 10"(9-1/2")
	DPW106804	1/2 Spool 5-3/8"(10")		DPW120100	Full Spool 9"(8-1/2")
	DPW001207	1/2 Spool 4-3/8"(9")	14		Gang Shaft/Axle
5	DPW108336	Bearing Guard Fabricated			(specify axle length)
	DPW109820	Bearing Guard Cast	15	DPW104274	End Washer (1/4"mat.)
6	81CS123120	1/2"x3-1/2" Bolt NC	16	DPW103504	Bearing Hanger(28"-30")
	81CS124120	1/2"x4-1/2" Bolt NC		DPW103500	Bearing Hanger(24"-26")
		(for use with bearing guard only)	17	DPW001702	U-Bolt 3/4" for 6"x6" Bar
7	81LW12000	1/2" Lock Washer	18	81LW34000	3/4" Lock Washer
8	81HN12000	1/2" Hex Nut NC	19	81HN34000	3/4" Hex Nut NC
9	DPW1103214	Bearing Housing	20		Disc Blade(specify blade size)
10	BDS214TTR3	Bearing			
	BGW214PPB3	Bearing			

STANDARD SCRAPER ASSEMBLY

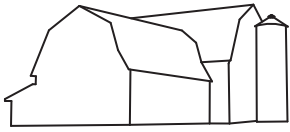
Ref.	PAW Part#	Description
	DPW105440	Complete Assembly
1	DPW105304	Scraper Arm Support
2	10DPWISPAD	Scraper Pad 3/8"
	10DPWISPAD12	Scraper Pad 1/2"
3	DPW106084	U-Bolt 5/8"x2"x3-7/8"
4	81FN58000	58" Flange Nut
5	81CS121120	1/2"x1-1/2" Bolt NC
6	81LW12000	1/2" Lock Washer
7	81HN12000	1/2" Hex Nut

Case IH 770 Disc Assembly



Ref.	PAW Part No.	Description	Req.
1		Axles	
2	10SPIH7700E	End Cap	
3		Disc Blade	
4		Spacer	
5	10SPIH7700H	Half Spool	
6	10BGIH770HD	Bearing Guard Cast Hvy Dty	
7	DP549971RI	Tubes	
8	BFD211-23/16RD	Bearing	
9	10SPIH7700F	Full Spool	
10	10SPIH7700ES	Half End Cap	
11		Square Washer	
12	81LW11200	1-1/2" Lock Washer	
13	81HN11200	1-1/2" Hex Nut Grade 5	

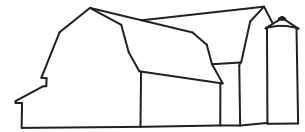
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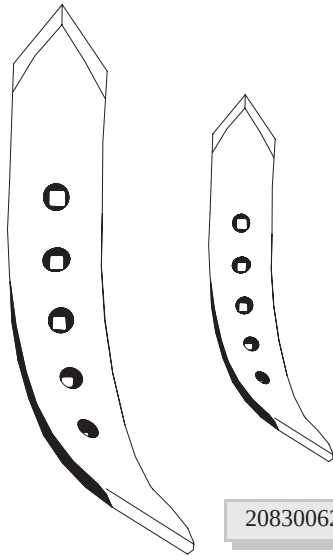
SERIES 10 Disc Harrow Replacement Parts

NOTES:

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SERIES 20 Twisted Chisels



CHARACTERISTICS

The twisted chisel is designed for deep tillage applications and is tough and dependable. It exhibits an aggressive ground action and is especially suited to conservation tillage practices. It is designed reversible with a sharpened point on either end for extended life in cultivation. The formed radius for mounting is 11".

OPTIONAL WEAR-EXTENDING STYLES

Hardfaced

- Add "H" to end of part number

Chromium Carbide

- Add "C" to end of part number

*39TWT3000 Chromium Carbide Insert applied to one end only due to extensive wear capabilities. It will usually outwear the body of the part.

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

HOLE PUNCH - Reference Below

05 — 5 CSK holes for 7/16" Plow bolts on 2-1/4" centers.

06 — 5 CSK holes for 1/2" Plow Bolts with holes 2 and 4 slotted 2-1/4" to 2-1/2" centers.

All above hardware available - Series 81

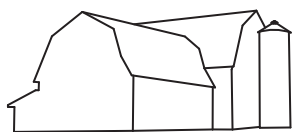
Part Number	L&R Key	Optional Styles	Thickness	Width	Length	Radius	Hole Punch	Weight Each
208300623	LH	H,C*	1/2"	3"	22"	11"	06	8.3
208300622	RH	H,C*	1/2"	3"	22"	11"	06	8.3
208300523	LH	H,C*	1/2"	3"	22"	11"	05	8.3
208300522	RH	H,C*	1/2"	3"	22"	11"	05	8.3

*39TWT3000 Chromium Carbide Insert applied to one end only due to extensive wear capabilities. It will usually outwear the body of the part.

FOLLOWING 4" WIDTHS SUBJECT TO AVAILABILITY

208400623	LH	H	1/2"	4"	22"	11"	06	11.1
208400622	RH	H	1/2"	4"	22"	11"	06	11.1
208400523	LH	H	1/2"	4"	22"	11"	05	11.1
208400522	RH	H	1/2"	4"	22"	11"	05	11.1

*39TWT3000 Chromium Carbide Insert applied to one end only due to extensive wear capabilities. It will usually outwear the body of the part.



SERIES 21 Straight Chisels

CHARACTERISTICS

The straight chisel is reversible and sharpened on both ends for extended life and has a good, aggressive ground action. It is suitable for most deep tillage applications and conservation tillage. 2-hole punches are available for mounting to most chisel shanks. The formed radius for mounting is 11".

OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number

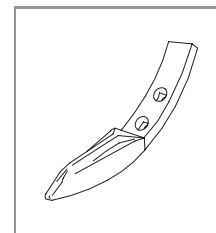
Chromium Carbide - Add "C" to end of part number

*39CT30000 Chromium Carbide Insert applied to one end only due to extensive wear capabilities. It will usually outwear the body of the part.

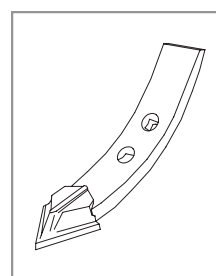
Chrome, Heavy - Add "HC"

*39CSSS300 Chromium Carbide Insert

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.



210200916HC2



210200916C2



210200916

HOLE PUNCH - Reference Below

08 — 2 CSK holes for 7/16" Plow Bolts on 2-1/4" centers.

09 — 1 CSK hole and 1 slot for 1/2" Plow Bolts on 2-1/4" to 2-1/2" centers.

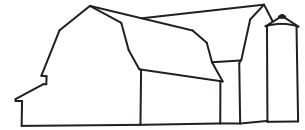
32 — 2 CSK holes for 5/8" Plow Bolts on 2-1/4" centers.

88 — 1 CSK hole and 1 slot for 1/2" Cap Screw 2-1/4" to 2-1/2" centers.

All above hardware available - Series 81

Part Number	Optional Styles	Thickness	Width	Length	Radius	Hole Punch	Weight Each
210203216	H, C*	3/4"	2"	16"	11"	32	6.1
219200816	H, C*	5/8"	2"	16"	11"	08	5.3
219200913	H, C*	5/8"	2"	13"	7-1/2"	09	5.1
219200916	H, C*	5/8"	2"	16"	11"	09	5.1
219HD8800	H, C*	1"	2"	17-1/2"	11"	88	8.5
Half Points with Chromium Carbide							
210200916C2		3/4"	2"	10"	11"	08	6.9
210200916C2		3/4"	2"	10"	11"	09	6.5
210200916HC2		3/4"	2"	10"	11"	08	6.0
39HD8800	Full Chrome	3/4"	2"	10"	11"	09	7.0
39HD8800S	Full Chrome	3/4"	2"	10"	11"	09	7.0

*39CT30000 Chromium Carbide Insert applied to one end only due to extensive wear capabilities. It will usually outwear the body of the part.



SERIES 22

Shovels



228200111

CHARACTERISTICS

The reversible shovel is defined as any reversible tool with a sharpened point. The point on the reversible shovel is broader than on a spike or reversible point. This series is set up to give a wide selection of tough, durable tillage tools. The formed radius is 7" on all tools. Exception: 224176010. These parts have a radius mounting surface (curved cross section) which makes the part stable when bolted to the shank.

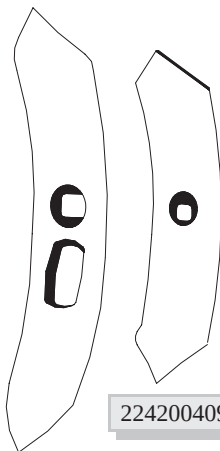
OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number

Chromium Carbide - Add "C" to end of part number

*39CT30000S Chromium Carbide Insert applied to one end only due to extensive wear capabilities. It will usually outwear the body of the part.

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.



224200409

HOLE PUNCH - Reference Below

04 — 1 CSK hole centered for a 3/8" Plow Bolt.

01 — 1 CSK hole and 1 slot for 7/16" Plow Bolts on 1-1/4" to 2-1/4"

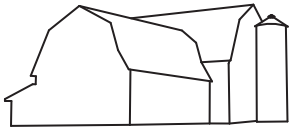
60 — 1 CSK hole for 3/8" Plow Bolt with 2 dimples on 3" center Flat Back with 10" radius.

226200111

All above hardware available - Series 81

Part Number	Optional Styles	Thickness	Width	Length	Radius	Hole Punch	Weight Each
224170409	H	1/4"	1-3/4"	9"	7"	04	1.0
224176010	H	1/4"	1-3/4"	10"	10"	60	1.1
224200409	H	1/4"	2"	9"	7"	04	1.1
225200111	H,C*	5/16"	2"	11"	7"	01	1.6
226200111	H,C*	3/8"	2"	11"	7"	01	2.2
228200111	H,C*	1/2"	2"	11"	7"	01	2.6

*39CT30000S Chromium Carbide Insert applied to one end only due to extensive wear capabilities. It will usually outwear the body of the part.



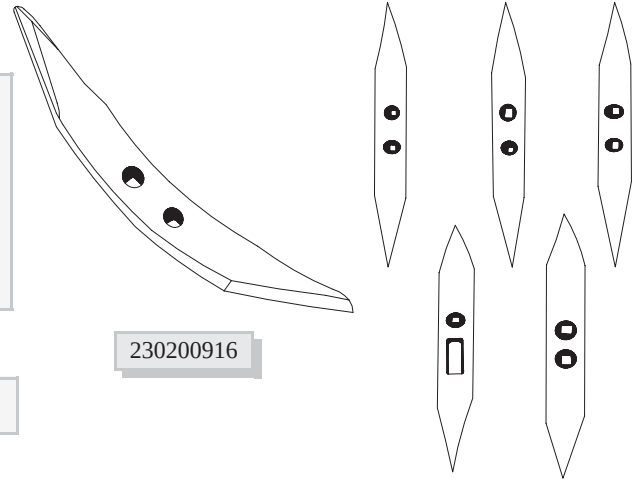
SERIES 23 Spikes

CHARACTERISTICS

This reversible tillage tool has an alfalfa-type point and will withstand severe usage in hard soils. The point on this spike is a sheared-type point and the tool has a formed mounting radius of 7" or 11". The ground action is obtained from the shape of the spike itself and is suited to conservation tillage practices.

APPLICATION

Fits most row crop and field cultivators.



OPTIONAL WEAR-EXTENDING STYLES

- Hardfaced** - Add "H" to end of part number
- Chromium Carbide** - Add "C" to end of part number

*39AT30000 Chromium Carbide Insert applied to one end only due to extensive wear capabilities. It will usually outwear the body of the part.
Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

HOLE PUNCH - Reference Below

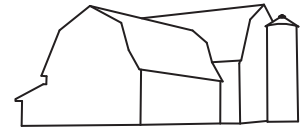
- 01** — 1 CSK hole and 1 slot for 7/16" Plow Bolts on 1-1/4" to 2-1/4" centers.
- 09** — 1 CSK hole and 1 slot for 1/2" Plow Bolts on 2-1/4" to 2-1/2" centers.
- 16** — 2 CSK holes for 7/16" Plow Bolts on 1-1/4" centers.
- 32** — 2 CSK holes for 5/8" Plow Bolts on 2-1/4" centers.

All above hardware available - Series 81

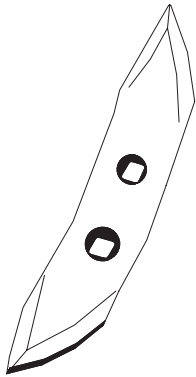
Part Number	Optional Styles	Thickness	Width	Length	Radius	Hole Punch	Weight Each
238200612	H, C*	1/2"	2"	12"	7"	16	2.0
238200112	H, C*	1/2"	2"	12"	7"	01	2.0
239200112	H, C*	5/8"	2"	12"	7"	01	2.3
239200612	H, C*	5/8"	2"	12"	7"	16	2.4
230203216	H, C*	3/4"	2"	16"	11"	32	5.4
230200916	H, C*	3/4"	2"	16"	11"	09	5.4

*39AT30000 Chromium Carbide Insert applied to one end only due to extensive wear capabilities. It will usually outwear the body of the part.

See Chrome Inserts in Series 39



SERIES 24 Points



245173509



245170310

CHARACTERISTICS

This reversible point can have two types of edges; either a forged beveled point or a sheared, square edged point. This tool has a longer point than the shovel and is formed on a 7", 9" or 10" radius. These parts have a flat cross section (mounting surface) for mounting to a flat shank.

APPLICATION

Fits most row crop and field cultivators.

OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number

Chromium Carbide - Add "C" to end of part number (**39AT3000**)

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

HOLE PUNCH - Reference Below

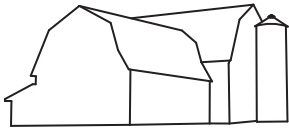
02 — 1 CSK hole and 1 slot for **7/16"** Plow Bolts on **1-5/8" to 1-3/4"** centers.

03 — 1 CSK hole and 1 slot for **3/8"** Plow Bolts on **1-5/8" to 1-3/4"** centers.

35 — 2 CSK holes for **7/16"** Plow Bolts on **2"** centers.

All above hardware available - Series 81

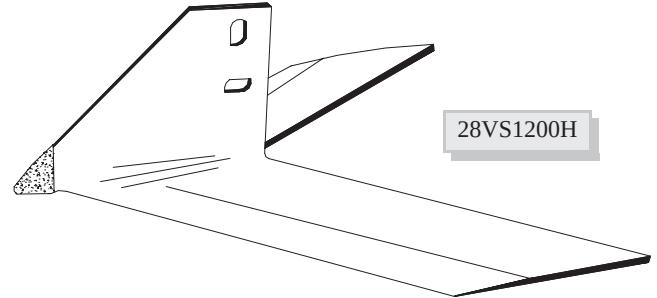
Part Number	Optional Styles	Thickness	Width	Length	Radius	Hole Punch	Weight Each
SHEARED-EDGE POINTS							
245170210	H,C	5/16"	1-3/4"	10"	10"	02	1.3
245170310	H,C	5/16"	1-3/4"	10"	10"	03	1.3
SWEDGED-EDGE POINTS							
245173509	H,C	5/16"	1-3/4"	9"	7"	35	1.0



SERIES 28 Welded V-Sweeps

CHARACTERISTICS

The welded V-sweep is a heavy-duty two piece design constructed from 3/8" beveled plow steel and is designed for use on a universal straight shank with 2 slots adjustable for pitch on a 6" stem of 3/8" material. This rugged design, available plain or hardfaced, is used primarily in row crop cultivation in heavy, problem soils.



OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number

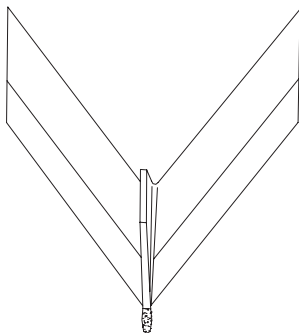
Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

HOLE PUNCH - Reference Below

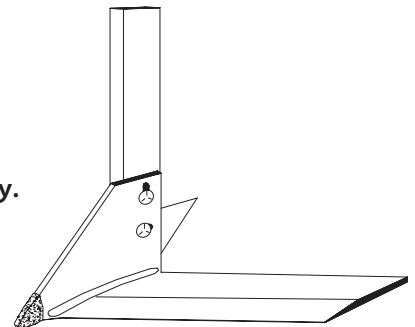
50 — 2 slots (1 horizontal and 1 vertical) for 1/2" carriage bolts on 1-5/8" to 2" centers.

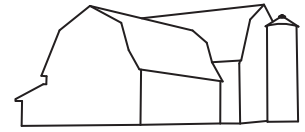
All above hardware available - Series 81

Part Number	Optional Styles	Thickness	Cutting Width	Hole Punch	Weight Each
28VS12000	H	3/8"	12"	50	9.6
28VS16000	H	3/8"	16"	50	12.8
28VS24000	H	3/8"	24"	50	16.1
28VS30000	H	3/8"	30"	50	24.0
28VS36000	H	3/8"	36"	50	28.8



Half Sweeps available on a special order basis.
Please check with your salesperson for availability.

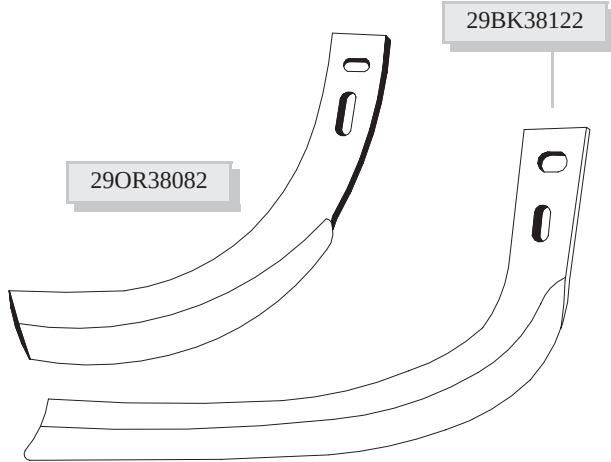




SERIES 29

Banana/Orsie Knives

CHARACTERISTICS



Both styles of weeding knives below are designed for use on a universal straight shank with 2 slots adjustable for pitch angle. Both knives are similar in application to a crescent hoe. However these styles provide deeper penetration and a greater cutting surface.

OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number

WearCoat - Add "W" to end of part number

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

HOLE PUNCH - Reference Below

13 — 2 slots for 7/16" Carriage Bolts with bolt centers **1-1/4" to 2"**.

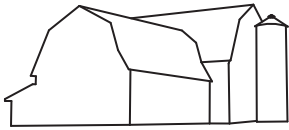
All above hardware available - Series 81

ORSIE KNIFE

Part Number	L&R Key	Optional Styles	Thickness	Cutting Width	Hole Punch	Weight Each
29OR38083	LH	H	3/8"	8"	13	3.5
29OR38082	RH	H	3/8"	8"	13	3.5

BANANA KNIFE

Part Number	L&R Key	Optional Styles	Thickness	Cutting Width	Hole Punch	Weight Each
29BK381223	LH	H, W	3/8"	12"	13	4.0
29BK381233	RH	H, W	3/8"	12"	13	4.0



SERIES 30 Crescent Hoes

CHARACTERISTICS

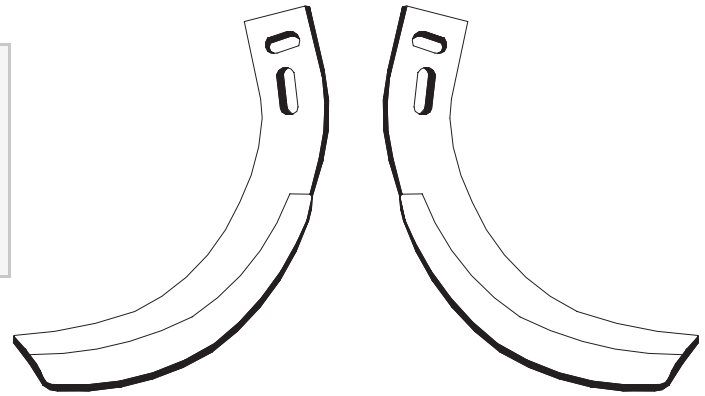
These crescent hoes are designed for use on a universal straight shank with 2 slots adjustable for pitch. These weeding knives feature a round turn shape which enables fast, accurate, close cultivation in young crops and are designed for shallow soil penetration.

OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number

Wear Coated - Add "W" to end of part number

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.



304061302

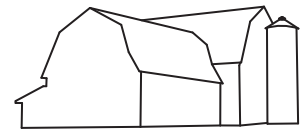
304061303

HOLE PUNCH - Reference Below

13 – 2 slots for **3/8"** Carriage Bolts with bolt centers **1-1/4" to 2"**.

All above hardware available - Series 81

Part Number	L&R Key	Optional Styles	Thickness	Cutting Width	Hole Punch	Weight Each
304061302	RH	H, W	1/4"	6"	13	1.7
304061303	LH	H, W	1/4"	6"	13	1.7
306061302	RH	H, W	3/8"	6"	13	2.6
306061303	LH	H, W	3/8"	6"	13	2.6

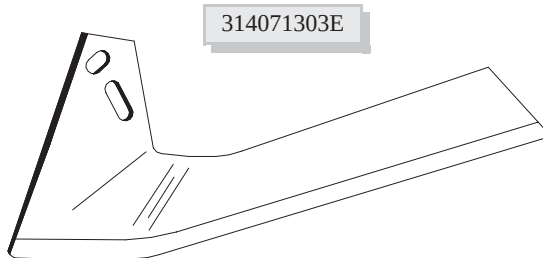


SERIES 31

Johnson Style Bed Knives

CHARACTERISTICS

These Johnson style bed knives are designed for use on a universal straight shank with 2 slots adjustable for pitch. These weeding knives are of a rugged design and feature a round turn shape which enables fast, accurate, close cultivation in young crops and allows for shallow soil penetration. The Johnson bed knife is also available in a two piece welded construction.



OPTIONAL WEAR-EXTENDING STYLES

Wear Coat - Add "W" to end of part number

Hardfaced - Add "H" to end of part number

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

HOLE PUNCH - Reference Below

13 – 2 slots for 3/8" Carriage Bolts with bolt centers **1" to 1-3/4"**.

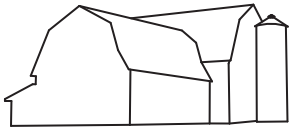
All above hardware available - Series 81

Part Number	L&R Key	Optional Styles	Thickness	Cutting Width	Hole Punch	Weight Each
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PLAIN

SUBJECT TO AVAILABILITY

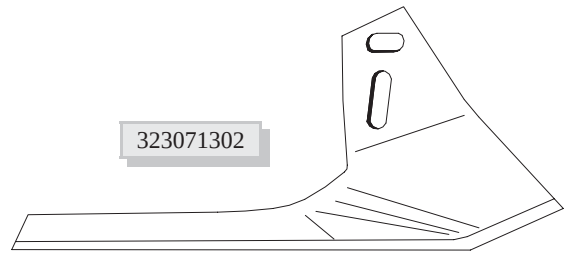
314071302E	RH	W,H	1/4"	7"	13	3.4
314071303E	LH	W,H	1/4"	7"	13	3.4



SERIES 32 Beet Hoes

CHARACTERISTICS

These beet hoes are designed for use on a universal straight shank with 2 slots adjustable for pitch. These weeding knives are designed with an offset stem and feature a round turn shape which enables fast, accurate, close cultivation in young crops and allows for shallow soil penetration.

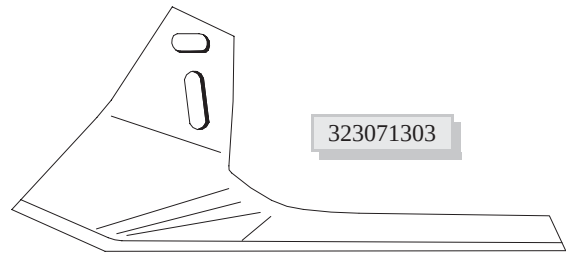


OPTIONAL WEAR-EXTENDING STYLES

Wear Coat - Add "W" to end of part number

Hardfaced - Add "H" to end of part number

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

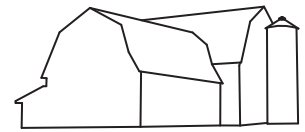


HOLE PUNCH - Reference Below

13 – 2 slots for 3/8" Carriage Bolts with bolt centers **1-1/4" to 2"**.

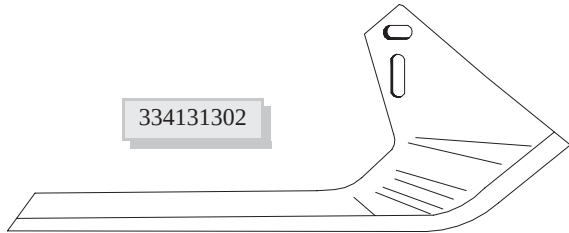
All above hardware available - Series 81

Part Number	L&R Key	Optional Styles	Thickness	Cutting Width	Hole Punch	Weight Each
323071302	RH	W,H	3/16"	3/16"	13	2.1
323071303	LH	W,H	3/16"	3/16"	13	2.1
323091302	RH	W,H	3/16"	3/16"	13	2.4
323091303	LH	W,H	3/16"	3/16"	13	2.4



SERIES 33

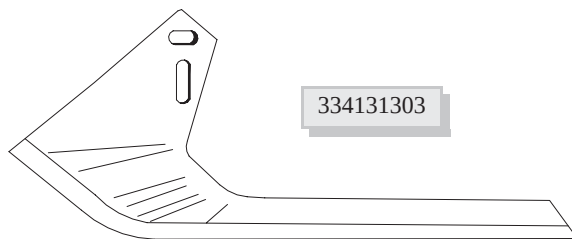
Beet/Bean Hoes



334131302

CHARACTERISTICS

These beet/bean hoes are designed for use on a universal straight shank with 2 slots adjustable for pitch. These weeding knives are constructed of 1/4" steel and feature a round turn shape which enables fast accurate, close cultivation in young crops and allows for shallow soil penetration.



334131303

OPTIONAL WEAR-EXTENDING STYLES

Wear Coat - Add "W" to end of part number

Hardfaced - Add "H" to end of part number

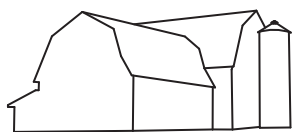
Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

HOLE PUNCH - Reference Below

13 – 2 slots for 3/8" Carriage Bolts with bolt centers 1-1/4" to 2".

All above hardware available - Series 81

Part Number	L&R Key	Optional Styles	Thickness	Cutting Width	Hole Punch	Weight Each
334091302	RH	W,H	1/4"	9"	13	5.0
334091303	LH	W,H	1/4"	9"	13	5.0
334131302	RH	W,H	1/4"	13"	13	6.2
334131303	LH	W,H	1/4"	13"	13	6.2



SERIES 34 Tender Plant Hoes

CHARACTERISTICS

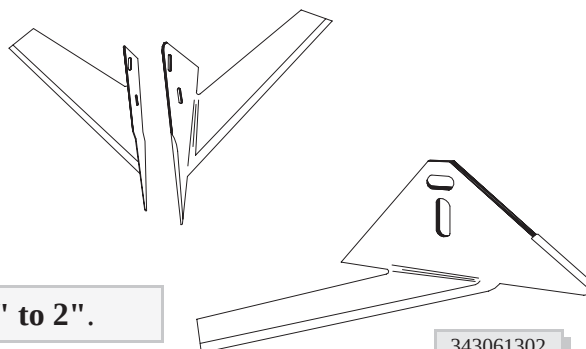
These tender plant hoes are designed for use on a universal straight shank with 2 slots adjustable for pitch. These weeding knives have a square turn shape which enables fast, accurate and close cultivation in young crops and allows for shallow soil penetration.

OPTIONAL WEAR-EXTENDING STYLES

Wear Coat - Add "W" to end of part number

Hardfaced - Add "H" to end of part number

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.



HOLE PUNCH - Reference Below

13 – 2 slots for 3/8" Carriage Bolts with bolt centers **1-1/4" to 2"**.

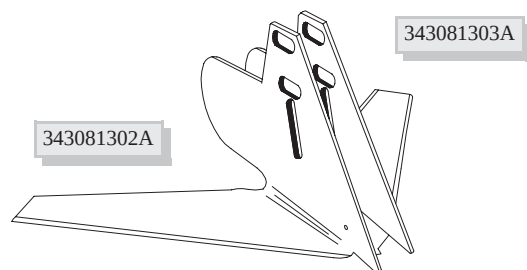
All above hardware available - Series 81

Part Number	L&R Key	Optional Styles	Thickness	Cutting Width	Hole Punch	Weight Each
343061302	RH	W,H	3/16"	6"	13	2.4
343061303	LH	W,H	3/16"	6"	13	2.4
343091302	RH	W,H	3/16"	9"	13	3.0
343091303	LH	W,H	3/16"	9"	13	3.0
344061302	RH	W,H	1/4"	6"	13	3.3
344061303	LH	W,H	1/4"	6"	13	3.3
344111302	RH	W,H	1/4"	11"	13	4.5
344111303	LH	W,H	1/4"	11"	13	4.5

ALLOWAY STYLE

CHARACTERISTICS

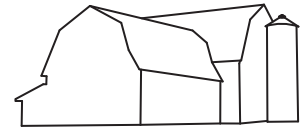
This style of tender plant hoe is similar in design to a style offered by Alloway Mfg. It is designed for use on a universal straight shank with the standard 2 slot hole pattern for adjusting pitch and an additional attachment slot for 3/8" carriage bolt just above the horizontal slot. Also incorporated into the design is a plant guard flange at the rear of the attachment stem to allow close cultivation.



HOLE PUNCH - Reference Below

13A – 2 slots for 3/8" carriage bolts with bolt centers **5/8" to 2"** with additional slot for 3/8" carriage bolt

Part Number	L&R Key	Optional Styles	Thickness	Cutting Width	Hole Punch	Weight Each
343051302A	RH	W,H	3/16"	5"	13A	2.0
343051303A	LH	W,H	3/16"	5"	13A	2.0
343081302A	RH	W,H	3/16"	8"	13A	2.5
343081303A	LH	W,H	3/16"	8"	13A	2.5

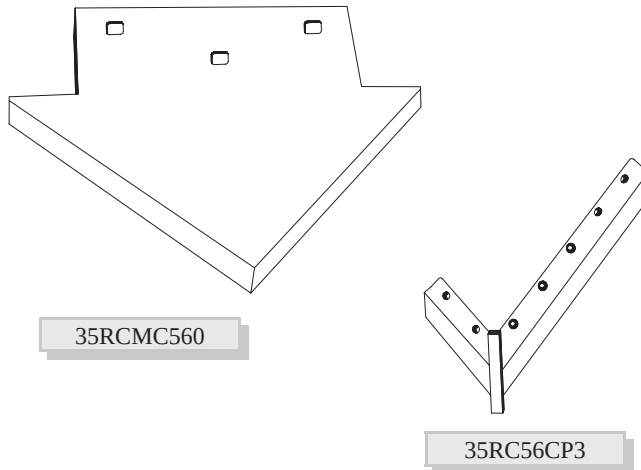


SERIES 35

Cotton Root Cutters

CHARACTERISTICS

Replacement cotton root cutter blades are available in two OEM styles designed specifically for subsurface cutting of cotton roots in areas where pink boll-worms are a problem. By cutting and dislodging the cotton root, they prevent regrowth of the plant and till the soil in one operation, which, in turn, helps aid the control of the pink boll-worm. Both also give outstanding performance where there is a need for deep soil penetration for aeration of the soil. The Hamby style root cutter is a two piece welded V-sweep with a 22" cutting width and comes either right hand or left hand, while the McIlroy style root cutter is a solid, one piece design with a cutting width of 21". Both blades are made from high carbon plow steel and are designed to bolt-on to special OEM shanks and are available either plain, chrome or hardfaced.



OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number
Full Chrome - Add "FC" to end of part number

HOLE PUNCH - Reference Below

65 – 3 CSK holes on OEM specifications for 3/4" Plow Bolts.
66 – 7 CSK holes for 3/8" Plow Bolts on 4-1/2" centers.

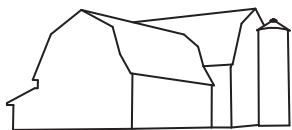
All above hardware available - Series 81

HAMBY STYLE

Part Number	L&R Key	Optional Styles	Thickness	Width	Cut Width	Hole Punch	Weight Each
35RC56CP2	RH	H, C	3/8"	4"	22"	66	12.0
35RC56CP3	LH	H, C	3/8"	4"	22"	66	12.0

McILROY STYLE

Part Number	Optional Styles	Thickness	Cutting Width	Hole Punch	Weight Each
35RCMC560	H, FC	3/8"	21"	65	18.25



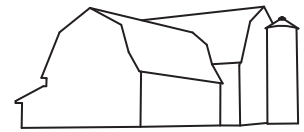
SERIES 35 Cotton Root Cutters

NOTES:

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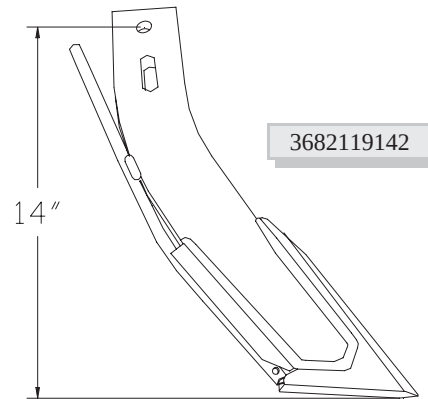
SERIES 36

Frontswept Fertilizer Injection Knives



CHARACTERISTICS

The frontswept fertilizer injection knife is of a universal design and available in two thicknesses (1/2" & 5/8") featuring a hole and slot for side mounting on standard cultivation shanks or coil shanks. It is available in a variety of wear extending styles with Schedule 40 1/8" Black Pipe (1/4" I.D.) for ammonia application. Also available is a dry fertilizer knife with a 2" O.D. tubing crimped at the bottom to a slotted 1/2" hole.



3682119142

OPTIONAL WEAR-EXTENDING STYLES

Chromium Carbide - See complete explanations with each part number.

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

Stainless Tubes - Add "S" to Part Number

Sealers - Add "SE" to Part Number

1/2 Stainless Tubes - Add "S2" to Part Number

Open Ended Tubes - Add "O" to Part Number

HOLE PUNCH - Reference Below

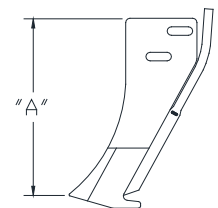
19 – 1 hole and 1 slot for 1/2" Bolts on 1-3/4" to 3" centers.

All above hardware available - Series 81

1/4" LIQUID FERTILIZER

1/4" Stainless Pipe

Part No.	Description	Tube Size	"A"
3652119117	1/4" Thick x 17" Long Liquid Knife w/Chrome Insert	(38LTS14125Y)	10-1/2"
3652119120	1/4" Thick x 20" Long Liquid Knife w/Chrome Insert	(38LTS14125Y)	11-1/2"

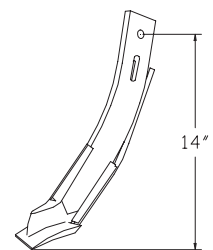


3652119120

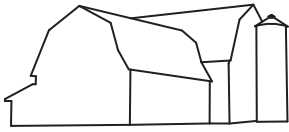
1/2" x 2-1/2" x 16" LIQUID FERTILIZER

w/ Schedule 40 (1/4" I.D.) 1/8" Black Pipe

Part No.	Description	Hole Punch	Tube Size	WT
3682119140	PLAIN With Pipe (Special Order)	19	(38LT18180)	5.2
3682119140H	HARDFACED Both Sides with Pipe (Special Order)	19	(38LT18180)	5.3
3682119141	With 39C110000 Chromium Carbide Edge Insert	19	(38LT18180)	7.0
3682119142	With 39C110000* Chromium Carbide Edge Insert & 39STP4340 Chromium Carbide Tube Protector	19	(38LT18180)	7.2
3682119142MN	With 39C1100MN Super Sealer Chromium Insert & 39STP4340 Chromium Carbide Tube Protector	19	(38LT18180)	7.4
3682119142W	WACO STYLE	19	(38LT18180)	7.2
3682119143	Fitted With 39C110000 Chromium Carbide Edge Insert, 39STP4340 Chromium Carbide Tube Protector & 36AS75W00 - sealer	19	(38LT18180)	7.4



3682119142MN



SERIES 36

Frontswept Fertilizer Injection knives

5/8" x 2" x 16" DRY FERTILIZER

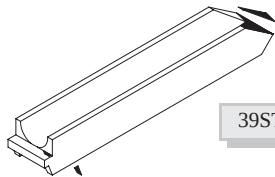
w/ 38DFB1200 Boot

Part No.	Description	Hole Punch	Boot Size	WT
36DK58216	PLAIN With Pipe	19	38DFB1200	9.0
36DK58216C	With 39C11000 chromium Carbide Edge Insert	19	38DFB1201	9.4
36DK58216H	HARDFACED Both Sides	19	38DFB1202	9.2

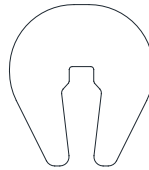
FRONTSWEPT COMPONENT PARTS

Individual Component Parts used to fabricate Series 36 Knives

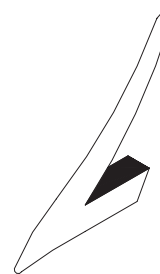
Part No.	Description	Application	WT
36AS75W00	Underground Sealer for Fertilizer Knives	Weld 3" to 4" above tube outlet at slight downward angle	0.4
38DFB1200	Dry Fertilizer Boot 2" I.D. Tube w/ 1/2" I.D. Opening at Bottom	Weld-on boot for Dry Fertilizer application	2.9
39C110000	Front Chromium Carbide Edge Insert 8" High with 5" Foot.	Wear-extending insert for frontswept fertilizer knives	1.6
39STP4340	4" Chromium Carbide Tube Protector (Straight) for Front Swept Fertilizer Knives	Wear-extending insert for frontswept fertilizer knives	0.3



39STP4340



36AS75W00

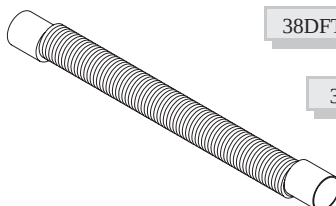


39C110000

PIPES AVAILABLE

Part No.	Description	Add to Part No.
38LT18180	1/8" x 18" Black Pipe	Standard
38LT18182	1/2" x 18" Black Pipe	2
38LT18182S	1/2" x 18" Stainless Steel	2S
38LT18185	1/8" x 18" Stainless Steel	S

RUBBER FERTILIZER TUBE

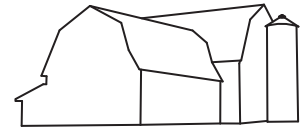


38DFTR2018

18"

38DFTR200

20"

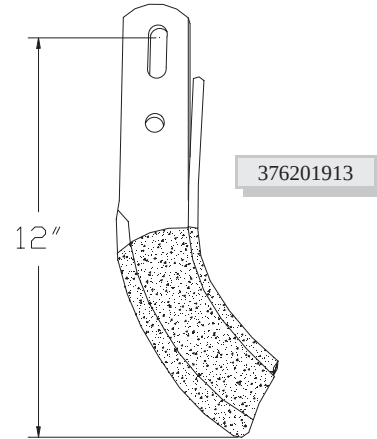


SERIES 37

Backswept Fertilizer Injection Knives

CHARACTERISTICS

Backswept fertilizer knives come in two lengths (13" & 17") and two thicknesses (3/8" & 1/2") featuring a hole and slot for universal side mounting on standard cultivation shanks. Available in a variety of wear-extending styles with either Schedule 40 1/8" Black Pipe (1/4" I.D.) for liquid fertilizer application of 1-1/4" and 2" O.D. tubing for dry fertilizer application.



OPTIONAL WEAR-EXTENDING STYLES

Chromium Carbide - Hardfaced - Wear Coated - See complete explanations with each part number.

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

Stainless Tubes - Add "S" to Part Number

Sealers - Add "SE" to Part Number

1/2 Stainless Tubes - Add "S2" to Part Number

Open Ended Tubes - Add "O" to Part Number

HOLE PUNCH - Reference Below

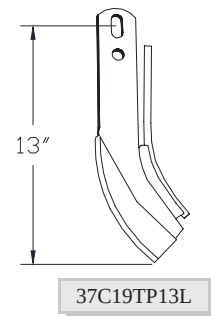
19 – 1 hole and 1 slot for 1/2" Bolts on 1-3/4" to 3" centers.

All above hardware available - Series 81

3/8" x 2-1/2" x 13" LIQUID FERTILIZER

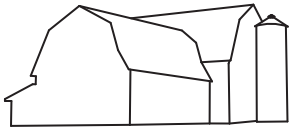
W/ SCHEDULE 40 (1/4" I.D.) 1/8" BLACK PIPE

Part Number	Description	Tube Size	Hole Punch	WT
376201909	HARDFACED One Side Only	(38LT18100)	19	2.6
376201910	HARDFACED Two Sides	(38LT18100)	19	2.7
376201912	PLAIN With pipe	(38LT18100)	19	2.4
376201913	WEAR-COATED Two Sides	(38LT18100)	19	3.3
376201914	PLAIN Without pipe	Without Pipe	19	2.2
37C190013	With 39C190000S Chromium Carbide Edge Insert	(38LT18100)	19	3.0
37C19TP13L	With 39C190000S Chromium Carbide Edge Insert and 39CTP4000 Tube Protector	(38LT18100)	19	3.2



2" STYLE

37C19TP13	With 39C190000S Chromium Carbide Edge Insert and 39CTP4000 Tube Protector	(38LT18100)	19	3.2
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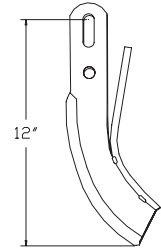
SERIES 37

Backswept Fertilizer Injection Knives

1/2" x 2-1/2" x 13" LIQUID FERTILIZER

W/ SCHEDULE 40 (1/4" I.D.) 1/8" BLACK PIPE

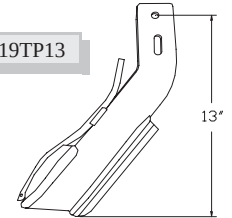
Part Number	Description	Tube Size	Hole Punch	WT
378201909	HARDFACED One Side Only (special order)	(38LT18100)	19	5.0
378201910	HARDFACED Both Side (Special Order)	(38LT18100)	19	5.2
378201912	PLAIN With Pipe (Special Order)	(38LT18100)	19	4.9
378C190013	With 39C190000S Chromium Carbide Edge Insert	(38LT18100)	19	3.0
378C19TP13	With 39C190000S Chromium Carbide Edge Insert and 39CTP4000 Tube Protector	(38LT18100)	19	3.2



378201912

3/8" x 1/2" x 13" LIQUID FERTILIZER

Part Number	Description	Tube Size	Hole Punch	WT
37N19TP13	With 39C13000 Chromium Carbide Edge Insert and Straight Tube	38LT18180	19	



37N19TP13

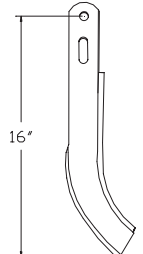
3/8" x 2-1/2" x 17" LIQUID FERTILIZER

W/ SCHEDULE 40 (1/4" I.D.) 1/8" BLACK PIPE

Part Number	Description	Tube Size	Hole Punch	WT
37C190017	With 39C190000S Chromium Carbide Edge Insert	(38LT18100)	19	4.0
37C19TP17	With 39C190000S Chromium Carbide Edge Insert and 39CTP4000 Tube Protector	(38LT18100)	19	4.1



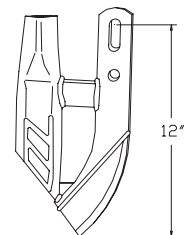
37C19TP17



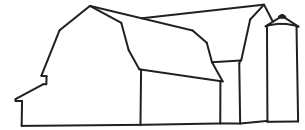
376201919

3/8" x 2-1/2" x 13" DRY FERTILIZER 2" O.D. TUBE

Part Number	Description	Tube Size	Hole Punch	WT
376201915H	HARDFACED Both sides	38DFT2000	19	4.7
376201915HO	HARDFACED One Side Only	38DFT2000	19	4.6
37C190015	With 39C190000S Chromium Carbide Edge Insert	38DFT2000	19	4.6



37C190015

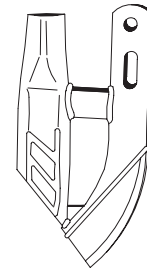


SERIES 37

Backswept Fertilizer Injection Knives

3/8" & 1/2" DRY FERTILIZER 1-1/4" O.D. TUBE & 1" O.D. TUBES

Part Number	Description	Tube Size	Hole Punch	WT
376201920H	HARDFACED Both Sides	(38DFT1140)	19	4.1
376201920HO	HARDFACED One Side Only	(38DFT1140)	19	4.0
378C190015	With 39C190000S Chromium Carbide Edge Insert	(38DFT2000)	19	4.0
378C190020	With 39C190000S Chromium Carbide Edge Insert	(38DFT1140)	19	4.0
37C190010	With 39C190000S Chromium Carbide Edge Insert, 1" O.D. Tube	(38DFT1100)	19	4.0
37C190020	With 39C190000S Chromium Carbide Edge Insert	(38DFT1140)	19	4.0



378C190020

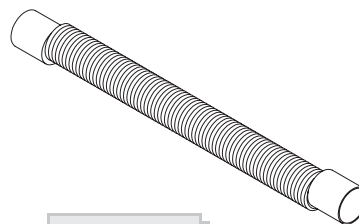
BACKSWEPT COMPONENT PARTS

Individual Component Parts used to fabricate Series 37 Backswept Knives.

Part #	Description	WT
38DFT1000	Dry Fertilizer Tube 1" O.D. x 12"	-
38DFT1140	Weld-on Tubing for backswept Dry Fertilizer Application. Dry Fertilizer Tube 1-1/4" O.D. x 12"	2.9
38DFT2000	Weld-on Tubing for backswept Dry Fertilizer Application. Dry Fertilizer Tube 2" O.D. x 12"	2.9
38DFTR2018	Dry Fertilizer Tube Rubber Flex 18"	-
38DFTR200	Dry Fertilizer Tube Rubber Flex 20"	-
38LT18100	Weld-on Pipe for all Backswept Liquid Fertilizer Knives. 1/8" B/P 11" LG	0.2
39C190000	Wear-extending insert for Backswept Fertilizer Knives. Backswept Chromium Carbide Edge Insert 8" High with Beveled Edge	1.6
39C190005	Wear-extending insert for Backswept Fertilizer Knives.	0.6
39CTP4000	Wear-extending insert for Backswept Fertilizer Knives. 4" Chromium Carbide Tube Protector (Curved) for Backswept Fertilizer Knives	0.3



38DF2000

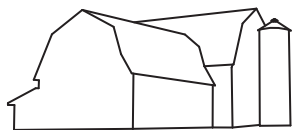


38DFTR2018 18"

38DFTR200 20"



39CTP4000



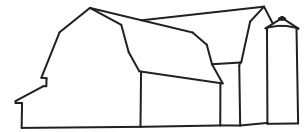
SERIES 37

Backswept Fertilizer Injection Knives

Contact us at our website <http://www.pawline.com>

NOTES:

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SERIES 38

Fertilizer Injection Shanks

CHARACTERISTICS

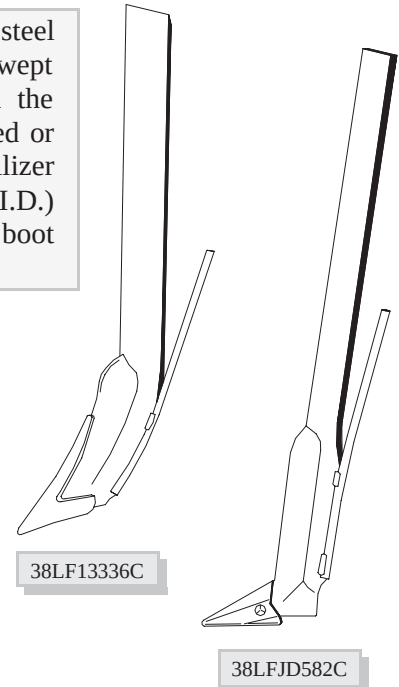
Liquid and dry fertilizer injection shanks are made from heat-treated plow steel with two basic styles of shanks available. A one-piece shank with a frontswept forged beveled point in three different sizes or a JD chisel standard with the replaceable bolt-on wear point in two sizes, as well as two styles itself, (curved or straight) are offered. Both above basic shanks may be fitted as liquid fertilizer shanks that come standard with Schedule 40 1/8" Black Pipe (1/4" I.D.) (38LT18100) or both styles as dry fertilizer shanks standard with a 2" O.D. boot crimped at the bottom to a 1/2" slotted opening (38DFB1200).

FOR SHANKS ONLY
(No Tubing or Boots)

SEE SERIES 70 - CHISEL STANDARDS
Chisel Standards, Forged Point Chisel Standards, JD Chisel Standards with Replaceable Point

OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number
Chromium Carbide - Add "C" to end of part number
Further explanation listed with each part where applicable.



SPECIAL FERTILIZER DELIVERY SYSTEM

Other special fertilizer application tubes or boots, as well as dry bean planter boots, as listed at end of parts section. All of these are available as individual parts or as complete injection/planter shanks fabricated in our shop. They, however, are not regularly inventoried items and are treated as Special Orders. Growers will be very happy to quote you on all your specific injection applicator needs. Please check with your salesperson on availability.

LIQUID FERTILIZER SHANKS

FRONTSWEPT CHISEL STANDARDS

w/ Schedule 40 (1/4" I.D.) 1/8" Black Pipe

Part Number	Optional Styles	Thickness	Width	Length	Pipe	WT
38LF13336	H,C*	1"	3"	36"	38LT18180	29.4
38LF34230	H,C*	3/4"	2-1/2"	30"	38LT18180	16.3
38LF58230	H,C*	5/8"	2"	30"	38LT18180	10.5

*Chrome style comes with 39C110000 chrome insert welded directly onto standard point.

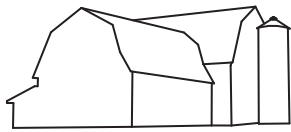
JD CHISEL STANDARDS

w/ Schedule 40 (1/4" I.D.) 1/8" Black Pipe

Part Number	Style	Optional Styles	Thickness	Width	Length	Pipe	WT
38LFJD582	Curved	H,C*	5/8"	2"	30"	38LT18180	11.3
38LFJD582S	Straight	H,C*	5/8"	2"	30"	38LT18180	11.5

Standard shank comes with 70WPJD100 cast steel replaceable point.

*Chrome style comes with 39CCP1000 replaceable point.



SERIES 38 Fertilizer Injection Shanks

DRY FERTILIZER SHANKS

FRONTSWEPT CHISEL STANDARDS - DRY

Dry Fertilizer Boot

Part Number	Optional Styles	Thickness	Width	Length	Pipe	WT
38DF13336	H,C*	1"	3"	30"	38DFB1200	31
38DF34230	H,C*	3/4"	2-1/2"	30"	38DFB1200	18
38DF58230	H,C*	5/8"	2"	30"	38DFB1200	12

*Chrome style comes with 39C110000 chrome insert welded directly onto standard point.

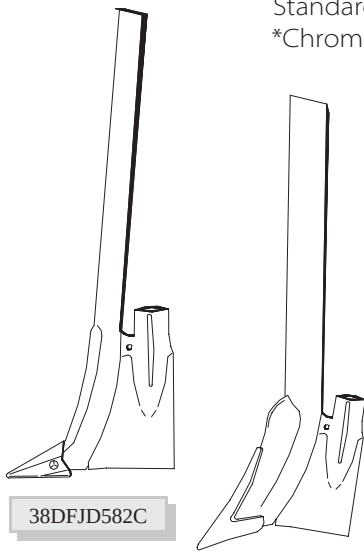
JD CHISEL STANDARDS - DRY

Dry Fertilizer Boot

Part Number	Style	Optional Styles	Thickness	Width	Length	Pipe	WT
38DFJD582	Curved	H,C*	5/8"	2"	30"	38DFB1200	13
38DFJD582S	Straight	H,C*	5/8"	2"	30"	38DFB1200	13

Standard shank comes with 70WPJD100 cast steel replaceable point.

*Chrome style comes with 39CCP1000 replaceable point.



DRY FERTILIZER BOOTS/BEAN PLANTER BOOTS

Following parts are all special order items and may require some lead time for production. Please check with salesperson for availability and pricing. All may be fitted to some existing types of shanks currently available.

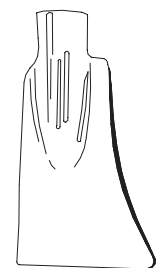
38DBP341	Fabricated bean planter boot with 2" O.D. hose fitting with bottom opening of 3/4" or 1" for planting beans.	38DFB1200	Dry fertilizer boot with 2" O.D. hose fitting with specially designed fabricated one piece boot with 1/2" slotted opening for dry applications.
38DFT1140	1-1/4" O.D. X 12" tube flattened on one end to a 1/2" slotted opening for dry applications	38DFT2000	2" O.D. X 12" tube flattened at one end to form 1/2" slotted opening for dry application

LIQUID FERTILIZER PIPE ONLY

Schedule 40 (1/4" I.D.) 1/8" Black Pipe

Part Number	Description	Dimensions	WT
38LT18100	Series 37 Backswept knives	3/8" O.D. x 1/4" I.D. x 10"	0.6
38LT18180	Series 36 & 38 Injection knives	3/8" O.D. x 1/4" I.D. x 18"	0.9
38LTS1810*	Stainless Steel Pipe	3/8" O.D. x 1/4" I.D. x 10"	0.6
38LTS1818*	Stainless Steel Pipe	3/8" O.D. x 1/4" I.D. x 18"	0.9

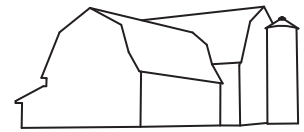
*Special order only - For complete knife with stainless steel tubing, please check with salesperson for availability and pricing.



38DFB1200

SERIES 39

Chromium Carbide Products



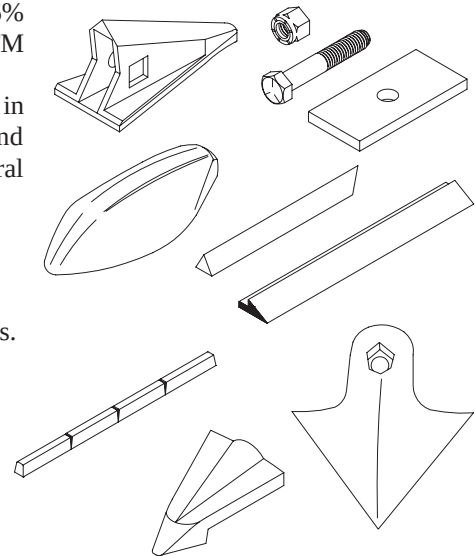
**** The following Series 39 parts are chromium carbide castings ONLY ****

All parts sold individually ready for you to assemble yourself, with recommendations on welding procedures listed below. Some chrome castings are component parts to other items listed throughout the catalog. (i.e. chrome ripper/sub-soiler points, injection knives, chrome tipped lister shares, etc.) and are available from Pacific Ag. These chrome fitted completed tools are available at our warehouse. Please check with salesperson for availability of these parts, not all parts are regularly stocked items.

Chromium Carbide martensitic white iron is commonly referred to as 26% chrome iron, or chromium carbide. It is of the same alloy made to ASTM A532 Class III Type A. Chrome is used in applications of extreme siding or gouging abrasions with moderate impact. It is used extensively in most process industries including mining, sand and gravel, asphalt, and cement. It has also found wide acceptance and success in the agricultural industry when used to protect ground engaging tools and equipment.

CHARACTERISTICS OF CHROME

- 1.) The wear life of Chrome is up to 15 times greater than conventional tillage steels and is up to 5 times more wear resistant than hardfaced tools.
- 2.) Chrome castings can be welded in place using standard welding equipment (i.e. welding rods, wire, etc.)
- 3.) Our tillage tools have proved to be the most economical tools a farmer can use today. The proper application of our superior products can greatly increase the wear life of engaging tools and help reduce the farmer's operating costs.



WELDING RECOMMENDATIONS

We have found the following procedure to be the most successful when welding Chrome (ASTM A532 Class III Type A) material to a base material of T1 or Plow Steel for ripper points.

Directions:

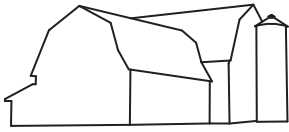
Place chrome casting on flat non-worn base boot slab. If surface is not flat and smooth, take appropriate actions to grind/finish surfaced properly.

Wire Feed (MIG)	Lincoln Ready Reel .035 to .045 diameter rod 70S series	Lincoln part number for .045 is C045L50. Other equivalents are also applicable.
Amperage:	Use as low amperage as possible (90-120 amps)	
Cooling:	Avoid thermal shocks (i.e. cold floors, drafts, water) It is recommended that welded parts be placed for slow cooling in a dry sand bed or ashes with at least 6 inch base.	

Note: Minor cracks may appear along the edges of the casting after welding. These are not detrimental to the weld or the effectiveness of the casting wearability. This is not a structural weld but merely a bonding process.

PRE-HEAT AND AFTER-WELD HEAT TREATMENT

Contrary to most procedures we have found it not necessary to do any preheating or heat treatment. Should you encounter conditions which may require heating, please consult your representative for recommendations.



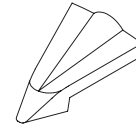
SERIES 39 Chromium Carbide Products

CHROMIUM CARBIDE PRODUCTS

WELD-ON TIPS & POINTS

ALFALFA SPIKE TIPS

Part No.	Description	WT.
39AT30000	Fits 1-1/2" - 2" Spikes	0.36



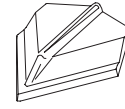
39AT30000

CHISEL TIP

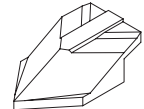
Part No.	Description	WT.
390SSS300	Fits 2" Chisels	2.23
39CT30000S	Fits 2" Chisels	0.71
39TWT3000	Fits 3" Chisels	1.10



390SSS300



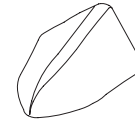
39TWT3000



39CT30000S

LISTER SHARE TIPS

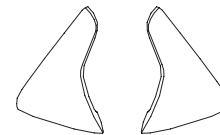
Part No.	Description	WT.
39LP87000	Fits all 14" Lister Shares	1.80



39LP87000

PLOW SHARE TIPS

Part No.	Description	WT.
39PST400L	Fits all shares, except IHC deep suck style	0.51
39PST400R	Fits all shares, except IHC deep suck style	0.51



39PST400L/R

SHANK TIPS

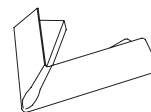
Part No.	Description	WT.
39CCP5000	Series 70 Diamond Point Shank Tip	0.44



39CCP5000

SWEEP TIPS

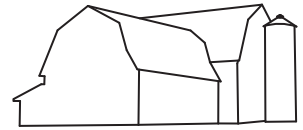
Part No.	Description	WT.
39ST00000	Sweep Tip to Cap Over Sweep	0.38
39STU000	Sweep Tip to Fit Under Sweep	0.21



39STU000



39ST00000



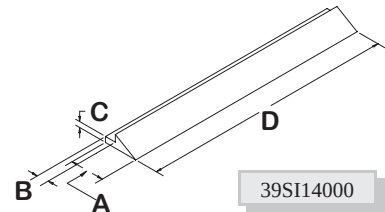
SERIES 39

Chromium Carbide Products

WELD-ON TIPS & POINTS (CONT.)

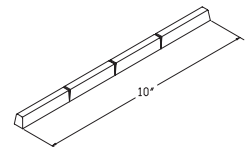
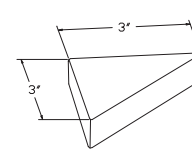
EDGE PROTECTORS

Part No.	Description	WT.
39SI14000	A: 1-1/8" B: 1/2" C: 1/4" D: 14"	0.81
39SI14000H	A: 1-7/8" B: 11/16" C: 3/8" D: 14"	2.95
39SI60000	A: 1-1/8" B: 1/2" C: 1/4" D: 6"	0.41



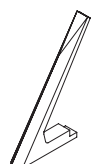
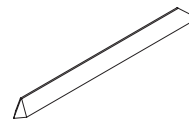
EDGING FOR MULCHER BLADES

Part No.	Description	WT.
39MBS1100	Fits most blades	0.45
39MBS3300	Large Hammer Flail (Chrome)	0.79



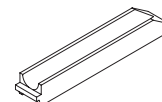
FERTILIZER KNIFE INSERTS

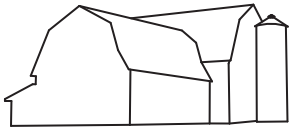
Part No.	Description	WT.
39C110000	8" High with 5" Long Wrap	1.61
39C110000K	K2 Check Mark	1.31
39C110000W	WAKO Check Mark	1.93
39C130000	N19 Knife Chrome	0.50
39C190000	Small Backswept Chrome	0.64
39C190005	Large Backswept Chrome	0.92



FERTILIZER KNIFE TUBE PROTECTORS

Part No.	Description	WT.
39CTP4000	Curved Tube Protector	0.23
39CTP4340	Curved Tube Protector	0.29
39STP4340	Straight Tube Protector	0.44





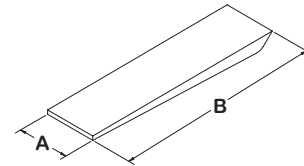
SERIES 39 Chromium Carbide Products

CHROMIUM CARBIDE PRODUCTS

WELD-ON RIPPER POINT BOTTOMS

"B" STYLE

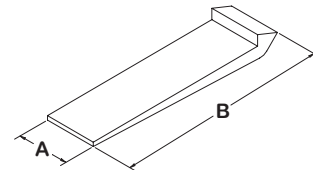
Part Number	Dimension A	x	Dimension B	WT
39B538160	5-3/8"		16"	12.5
39B538180	5-3/8"		18"	13.3
39B538200	5-3/8"		20"	13.9



39B STYLE

"BE" STYLE WRAP AROUND

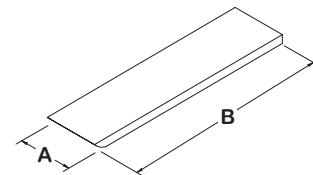
Part Number	Dimension A	x	Dimension B	WT
39BE21470	2-1/4"		7"	2.5
39BE23812	2-3/8"		12"	4.3
39BE27810	2-7/8"		10"	4.3
39BE27812	2-7/8"		12"	5.3
39BE31814R	3-1/8"		14"	7.4
39BE33812	3-3/8"		12"	6.0
39BE43812	4-3/8"		12"	7.9



39BE STYLE

"F" STYLE BEVEL

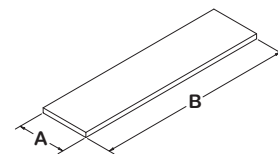
Part Number	Dimension A	x	Dimension B	WT
39F238300	2-3/8"		3"	0.6
39F238712	2-3/8"		7-1/2"	1.3
39F238120	2-3/8"		12"	2.8
39F278300	2-7/8"		3"	0.8
39F278120	2-7/8"		12"	3.4
39F314120	3-1/4"		12"	3.5
39F438120	4-3/8"		12"	5.3
39F126240	6"		24"	



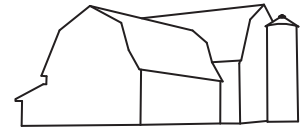
39F BEVEL
STYLE

"F" STYLE BLUNT

Part Number	Dimension A	x	Dimension B	WT
39F200120B	2"		12"	1.6
39F234120B	2-3/4"		12"	2.9
39F300120B	3"		12"	3.1
39F400120B	4"		12"	3.8
39F9163520	3-1/2"		20"	



39F STYLE
BLUNT

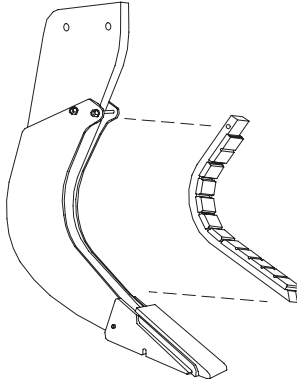


SERIES 39

Chromium Carbide Products

CHROMIUM CARBIDE PRODUCTS

RIPPER SHANK SHIN GUARDS

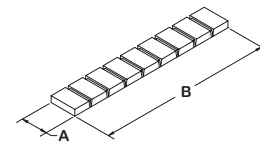


BENEFITS OF SHIN GUARDS:

- Shin guards make great wear patches for quick repair to many implements with wear problems.
- Shin guards are slightly wider than the shank to allow the weld to be "hidden".
- Shin guards will wear longer than hardfacing and will extend the life of a conventional steel part by up to 10 times longer.
- Shin guards can be broken on 1" increments to permit being welded to virtually any shape.

"FLAT" STYLE SHIN GUARD

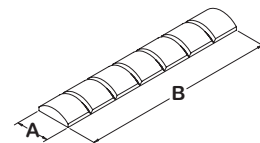
Part Number	A x B	Shank Width To Be Fitted	WT
39SG11290	1-1/2" x 9"	1-1/8" or 1-1/4"	0.81
39SG11490	1-1/4" x 9"	1"	0.75



Flat Style

"HALF ROUND" STYLE SHIN GUARD

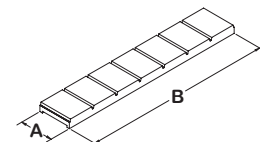
Part Number	A x B	Shank Width To Be Fitted	WT
39SGR11214	1-1/2" x 14"	1-1/4"	3.21
39SGR11214	1-1/2" x 14"	1-3/8"	3.21
39SGR11414	1-1/4" x 14"	1"	2.44
39SGR13414	1-3/4" x 14"	1-1/2"	3.43
39SGR23812	2-5/8" x 12"	2-1/4"	1.00
39SGR23812H	2-5/8" x 12"	2"	9.00
39SGR23814	2-3/8" x 14"	2"	6.46
39SGR27812	2-7/8" x 12"	2-1/2"	8.54



Half Round Style

"SIDE WRAPPED" STYLE SHIN GUARD

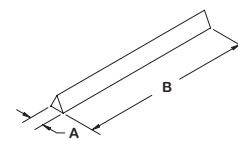
Part Number	A x B	Shank Width To Be Fitted	WT
39SGF12514	1-1/4" x 14"	1-1/4"	3.75
39SGF15014	2" x 14"	1-1/2"	4.55
39SGF20014	2-1/2" x 14"	2"	4.90
39SGF30014	3" x 14"	2-1/2"	5.45



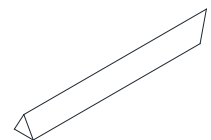
Side Wrapped Style

"TRIANGLE" STYLE SHIN GUARD

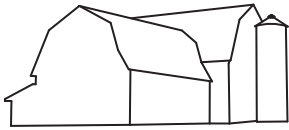
Part Number	A x B		WT
39SGB11414	1-1/4" x 14"	Bevel/Triangle Style	3.80
39TC10000	1" x 12"	Triangle Style	1.70
39TC3400	3/4" x 12"	Triangle Style	1.00



Triangle Style



Bevel/Triangle Style



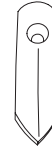
SERIES 39 Chromium Carbide Products

CHROMIUM CARBIDE PRODUCTS

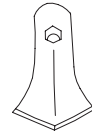
BOLT-ON DANISH S-TINE SWEEPS

CHROMIUM DANISH "S" TINE SWEEPS

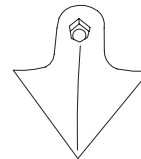
Part Number	Description	Cross Reference	WT
39AG860101	1" Spike	Acra-Plant #8601-01	0.82
39AG860201	2-1/2" Goosefoot	Acra-Plant #8602-01	1.09
39AG860300	4" Sweep	Acra-Plant #8604-02	1.16
39AG860702	7" Sweep	Acra-Plant #8607-02	1.68



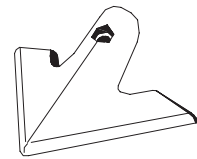
39AG860101



39AG860201



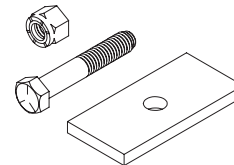
39AG860300



39AG860702

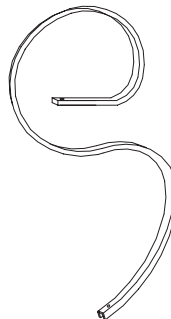
SPECIAL HARDWARE SETS

Part Number	Description	Package Quantity
39A68HDWR	3/8" x 1-3/4" Cap Screw (N.C. Thread, GR 5, Plated). 3/8" NY-Lock Nut, Neoprene Shim	PKG. QTY: 25



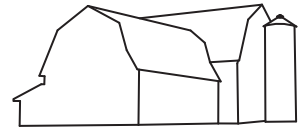
39A68HDWR

FOR DANISH "S"-TINES



See Series 55 for more information on Danish "S"-Tines

556125942



SERIES 39

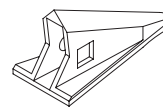
Chromium Carbide Products

CHROMIUM CARBIDE PRODUCTS

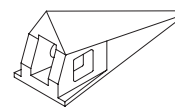
BOLT-ON DRILL POINTS

DRILL POINTS

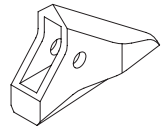
Part Number	Description	WT
39CCP1000	John Deere #300170-01	0.90
39CCP1000Y	John Deere #3001170-01	0.90
39CCPWJD2	John Deere HZ Series, Acra-Plant #71	3.60



39CCP1000Y



39CCP1000

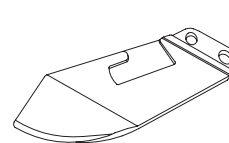


39CCPWJD2

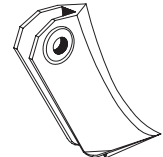
BOLT-ON PLANTER OPENERS

PLANTER OPENERS

Part Number	Description	WT
397004100	Acra Plant Shoe #700041	2.70
39AGA24371	John Deere #A24371	3.08
39PS17850	V Slice Insert replacement for JD/Kinze 2000	2.80



39PS17850



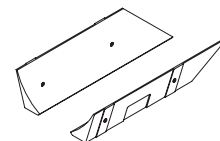
397004100



39AGA24371

BOLT-ON CORN CHOPPER PARTS

Part Number	Description	WT
39CB594DL	Ledge for Claas Corn Chopper (LH)	14.00
39CB594DR	Ledge for Claas Corn Chopper (RH)	14.00

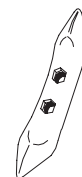


39CB594DL&R

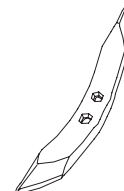
BOLT-ON SPIKES

SPIKES

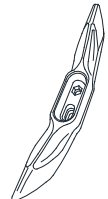
Part Number	Description	WT
39AGA56P0	DNC-0261 1-1/2 x 2"	
39HD88000	Chrome HD88	



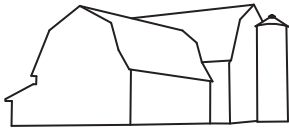
39AGA56P0



39HD88000



39HD88000S



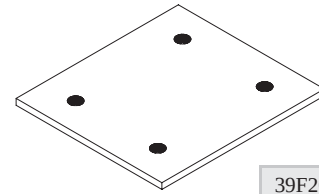
SERIES 39 Chromium Carbide Products

CHROMIUM CARBIDE PRODUCTS

SKID PLATES

"REYNOLDS" STYLE SKID PLATES

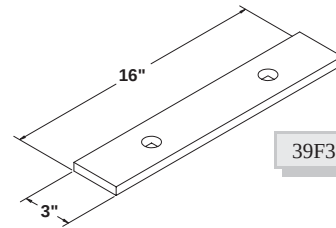
Part Number	Width	x	Length	WT
39F101800M	10"		18"	35.00
39F201800R	20"		18"	64.00



39F201800R

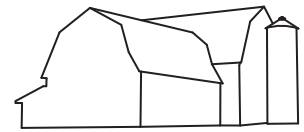
"B.W." STYLE SKID PLATES

Part Number	Width	x	Length	WT
39F316RNO	3"		16"	7.10



39F316RNO

*Most configurations of chromium carbide can be casted. Send us a sample or detailed drawing and our staff will advise a price and delivery time.

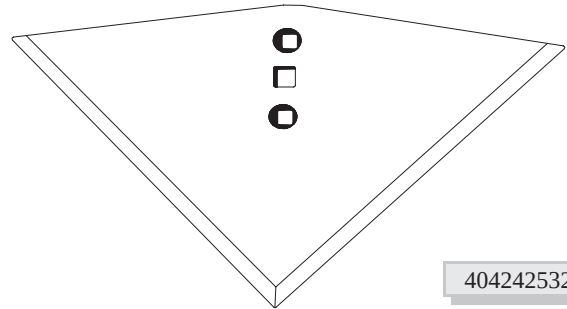


SERIES 40

Alabama Sweeps

CHARACTERISTICS

The Alabama sweep has a medium crown and stem angle and is suited for irrigation systems currently in use in California, Arizona and Texas. This sweep is also used for bedding and throws less dirt than the furrower or middle buster-type tillage tool. Sweep width is measured at widest point at tips of wings.



OPTIONAL WEAR-EXTENDING STYLES

- Wear Coat** - Add "W" to end of part number
- Hardfaced** - Add "H" to end of part number
- Chromium Carbide** Two styles available, Add suffix to end of part number:
 - "C" - Sweep fitted with 39AT40000 chrome tip and hardfaced edges.
 - "FC" - Sweep fitted with 39AT40000 chrome tip and chromium carbide edge inserts.

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

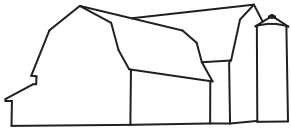
STEM ANGLE: 32°

HOLE PUNCH - Reference Below

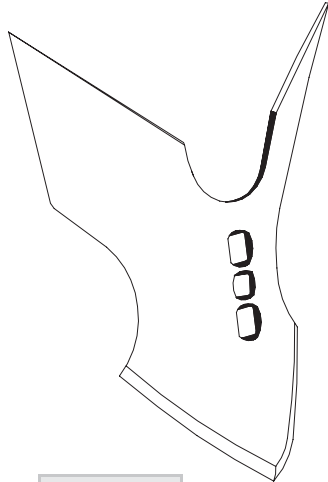
25 – 2 CSK holes on 2-1/4" centers 7/16" Plow Bolts with a center hole for 5/8" Carriage Bolt.

All above hardware available - Series 81

Part Number	Optional Styles	Thickness	Width	Hole Punch	Stem Angle	Weight Each
404082532	W,H,C,FC	1/4"	8"	25	32°	2.1
404102532	W,H,C,FC	1/4"	10"	25	32°	2.6
404122532	W,H,C,FC	1/4"	12"	25	32°	3.1
404142532	W,H,C,FC	1/4"	14"	25	32°	4.9
404162532	W,H,C,FC	1/4"	16"	25	32°	5.5
404182532	W,H,C,FC	1/4"	18"	25	32°	6.8
404202532	W,H,C,FC	1/4"	20"	25	32°	7.9
404222532	W,H,C,FC	1/4"	22"	25	32°	9.5
404242532	W,H,C,FC	1/4"	24"	25	32°	12.0
404282532	W,H,C,FC	1/4"	28"	25	32°	15.0



SERIES 42 Snub Nose Furrowers



424152540

"PIPER" STYLE FURROWER

The snub nose furrower is primarily for bedding and irrigation applications. The furrower has a high wing design in order to move the soil out of the furrow being plowed. It has a snub nose and a universal hole punching which enables it to be used with most mounting systems. Two measurements, furrow cut width and wing tip width, are referenced below to determine proper sizing.

OPTIONAL WEAR-EXTENDING STYLES

- Wear Coat** - Add "W" to end of part number
- Hardfaced** - Add "H" to end of part number
- Chromium Carbide** Two styles available, Add suffix to end of part number
 - "C" - Sweep fitted with 39FT10000 chrome tip and hardfaced
 - "FC" - Sweep fitted with 39FT10000 chrome tip and chromium carbide edge inserts.

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

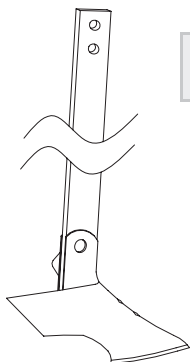
STEM ANGLE: 40°

HOLE PUNCH - Reference Below

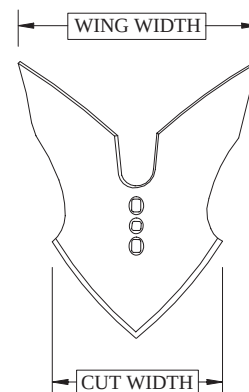
25 – 2 CSK holes on 2-1/4" centers 7/8" Plow Bolts with a center hole for 5/8" Carriage Bolt.

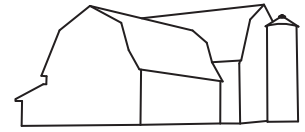
All above hardware available - Series 81

Part Number	Optional Styles	Thickness	Cut Width	Wing Width	Hole Punch	Stem Angle	Weight Each
424062540	W,H,C,FC	1/4"	6-1/2"	9"	25	40°	4.4
424082540	W,H,C,FC	1/4"	6-1/2"	10-3/4"	25	40°	5.4
424102540	W,H,C,FC	1/4"	8"	13"	25	40°	6.8
424122540	W,H,C,FC	1/4"	9-1/2"	15-1/2"	25	40°	9.3
424152540	W,H,C,FC	1/4"	11"	19"	25	40°	12.4
424182540	W,H,C,FC	1/4"	12-1/2"	21"	25	40°	14.8
424202540	W,H,C,FC	1/4"	13"	23-1/2"	25	40°	18.0



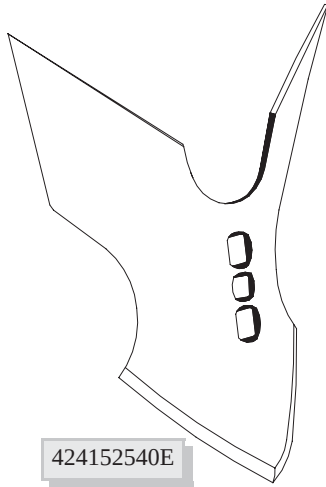
SERIES 42 FURROWER
ON SERIES 95 ADJUSTABLE SHANK ASSEMBLY





SERIES 42

Snub Nose Furrowers



FURROWER "E" STYLE

OPTIONAL WEAR-EXTENDING STYLES

Wear Coat - Add "W" to end of part number
Hardfaced - Add "H" to end of part number
Chromium Carbide Two styles available, Add suffix to end of part number
"C" - Sweep fitted with 39FT10000 chrome tip and hardfaced
"FC" - Sweep fitted with 39FT10000 chrome tip and chromium carbide edge inserts.

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

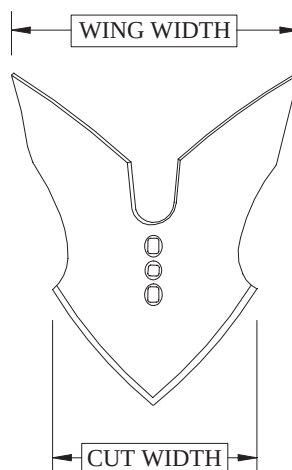
STEM ANGLE: 40°

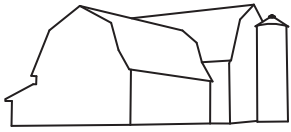
HOLE PUNCH - Reference Below

25 – 2 CSK holes on 2-1/4" centers 7/8" Plow Bolts with a center hole for 5/8" Carriage Bolt.

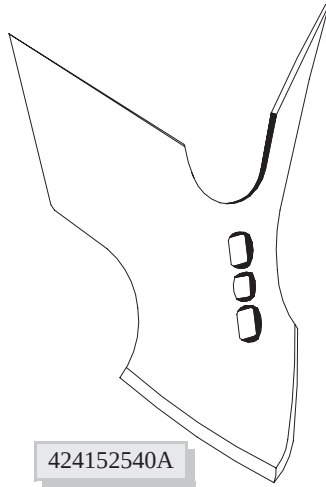
All above hardware available - Series 81

Part Number	Optional Styles	Thickness	Cut Width	Wing Width	Hole Punch	Stem Angle	Weight Each
424082540E	W,H,C,FC	1/4"	8"	10"	25	40°	8.3
424102540E	W,H,C,FC	1/4"	9-1/4"	11-1/2"	25	40°	8.6
424122540E	W,H,C,FC	1/4"	9-1/4"	13-3/4"	25	40°	10.9
424152540E	W,H,C,FC	1/4"	11-1/2"	15"	25	40°	13.3
424182540E	W,H,C,FC	1/4"	13"	20"	25	40°	15.9





SERIES 42 Snub Nose Furrowers



424152540A

FURROWER "A" STYLE

OPTIONAL WEAR-EXTENDING STYLES

- Wear Coat** - Add "W" to end of part number
Hardfaced - Add "H" to end of part number
Chromium Carbide Two styles available, Add suffix to end of part number
"C" - Sweep fitted with 39FT10000 chrome tip and hardfaced
"FC" - Sweep fitted with 39FT10000 chrome tip and chromium carbide edge inserts.

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

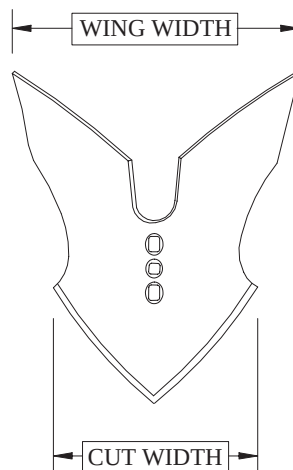
STEM ANGLE: 40°

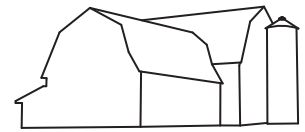
HOLE PUNCH - Reference Below

25 – 2 CSK holes on 2-1/4" centers 7/8" Plow Bolts with a center hole for 5/8" Carriage Bolt.

All above hardware available - Series 81

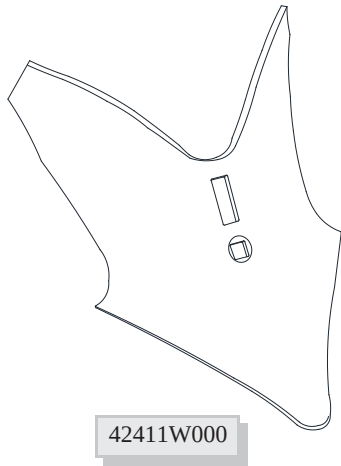
Part Number	Optional Styles	Thickness	Cut Width	Wing Width	Hole Punch	Stem Angle	Weight Each
424082540A	W,H,C,FC	1/4"	6-1/2"	9-3/4"	25	40°	8.3
424102540A	W,H,C,FC	1/4"	8"	9-3/4"	25	40°	8.6
424122540A	W,H,C,FC	1/4"	10"	14"	25	40°	10.9
424152540A	W,H,C,FC	1/4"	11-3/4"	15-1/2"	25	40°	13.3
424182540A	W,H,C,FC	1/4"	15"	20"	25	40°	15.9





SERIES 42

Snub Nose Furrowers



FURROWER "N" & "W" STYLES

OPTIONAL WEAR-EXTENDING STYLES

Wear Coat - Add "W" to end of part number
Hardfaced - Add "H" to end of part number
Chromium Carbide Two styles available, Add suffix to end of part number
"C" - Sweep fitted with 39FT10000 chrome tip and hardfaced
"FC" - Sweep fitted with 39FT10000 chrome tip and chromium carbide edge inserts.
Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

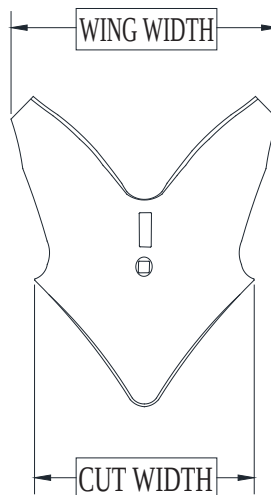
STEM ANGLE:

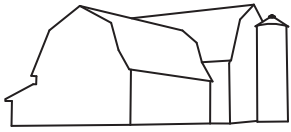
HOLE PUNCH - Reference Below

01 – 1 CSK hole and 1 slot for **7/16"** Plow Bolts on **1-1/4" to 2-1/4"** centers.

All above hardware available - Series 81

Part Number	Optional Styles	Thickness	Cut Width	Wing Width	Hole Punch	Stem Angle	Weight Each
42411N000	W,H,C,FC	1/4"	8"	11"	01		7.3
42411W000	W,H,C,FC	1/4"	9"	11"	01		7.3





SERIES 43 Heavy Duty Furrowers

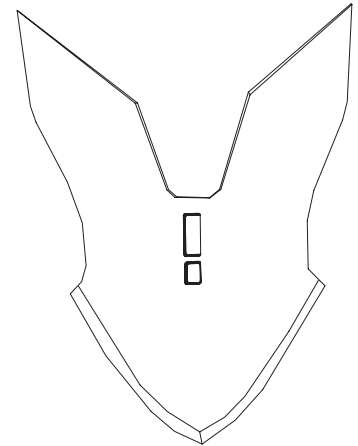
CHARACTERISTICS

The heavy-duty furrower has a snub nose design but has a wider and higher wing. The cut outs along the side are not as deep as the standard snub nose pattern. This causes more of the soil to be thrown outward. It is available with a universal hole punching which allows for adaptation to many mounting systems. Two measurements, the furrow cut width and wing tip width, are referenced below to help determine proper sizing.

OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number
Chromium Carbide Two styles available, Add suffix to end of part number
 "C" - Sweep fitted with 39FT20000 chrome tip and hardfaced
 "FC" - Sweep fitted with 39FT20000 chrome tip and chromium carbide edge inserts.

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.



434150140

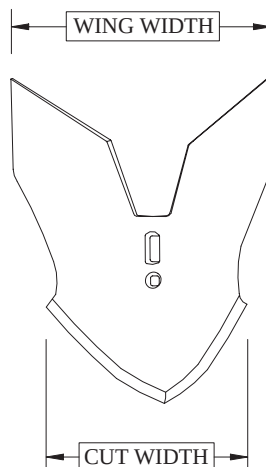
STEM ANGLE: 40°

HOLE PUNCH - Reference Below

01 – 1 CSK hole and 1 slot for 7/16" Plow Bolts on 1-1/4" to 2-1/4" centers.

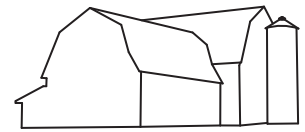
All above hardware available - Series 81

Part Number	Optional Styles	Thickness	Cut Width	Wing Width	Hole Punch	Stem Angle	Weight Each
434100140	H,C,FC, W	1/4"	8"	10"	01	40°	10.4
434120140	H,C,FC, W	1/4"	9-1/2"	12"	01	40°	11.3
434150140	H,C,FC, W	1/4"	10-3/4"	14-1/2"	01	40°	13.2
434180140	H,C,FC, W	1/4"	14"	17-1/2"	01	40°	15.9



SERIES 44

Lister Bottom Assemblies and Parts



CHARACTERISTICS

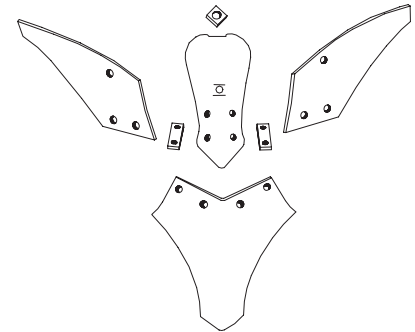
14" lister bottom assemblies and parts are available in two OEM styles – John Deere and IHC. Lister bottom assemblies are available without shanks or with 1-1/4" shanks for a variety of different sized tool bars. All parts on each of the two lister assemblies, less shanks and clamps, are interchangeable with OEM related parts. Lister share points of other OEM bottoms are also available and in a wide variety of wear extending styles.

OPTIONAL WEAR-EXTENDING STYLES

Wear Coat - Add "W" to end of part number
Hardfaced - Add "H" to end of part number
Chromium Carbide - Add "C" to end of part number

*39LP87000 Chromium Carbide insert welded on share point and underside of share wings hardfaced.

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.



IHC Lister Bottom

JD LISTER BOTTOM FABRICATED SHANKS

COMPLETE/ASSEMBLED

Part Number	Optional Share Styles	Lister Share	Tool Bar Size	Shank Size	Weight Each
443JD1424	W,H,C*, FC	445140314	2-1/4" Diamond style	1-1/4" X 3"	97.0
443JD1444	W,H,C*, FC	445140314	4" x 4" Flat	1-1/4" X 3"	
443JD1447	W,H,C*, FC	445140314	4" x 7" Flat	1-1/4" X 3"	
443JD1450	W,H,C*, FC	445140314	Bottom w/o Shank	N/A	54.0
443JD1457	W,H,C*, FC	445140314	5" x 7" Flat	1-1/4" X 3"	
443JD1475	W,H,C*, FC	445140314	7" x 5" Flat	1-1/4" X 3"	
443JD1477	W,H,C*, FC	445140314	7" x 7" Flat	1-1/4" X 3"	

*39LP87000 Chromium Carbide insert welded on share point and underside of share wings hardfaced.

IHC LISTER BOTTOM

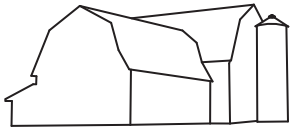
COMPLETE/ASSEMBLED

Part Number	Optional Share Styles	Lister Share	Tool Bar Size	Shank Size	Weight Each
443IH1424	W,H,C*, FC	445140714	2-1/4" Diamond Style	1-1/4" x 3	98.0
443IH1444	W,H,C*, FC	445140714	4" x 4" FLAT	1-1/4" x 3	
443IH1447	W,H,C*, FC	445140714	4" x 7" FLAT	1-1/4" x 3	
443IH1450	W,H,C*, FC	445140714	Bottom w/o Shank	N/A	56.0
443IH1457	W,H,C*, FC	445140714	5" x 7" Flat	1-1/4" x 3	
443IH1475	W,H,C*, FC	445140714	7" x 5" Flat	1-1/4" x 3	
443IH1477	W,H,C*, FC	445140714	7" x 7" Flat	1-1/4" x 3	

*39LP87000 Chromium Carbide insert welded on share point and underside of share wings hardfaced.

All Above Flat Tool Bar Sizes Listed by Height x Width

All above IHC/JD Lister Bottoms available with 3 styles of wings: Standard Wing, Highwing Style and Ultra High Wing - Please specify wing type when placing order.



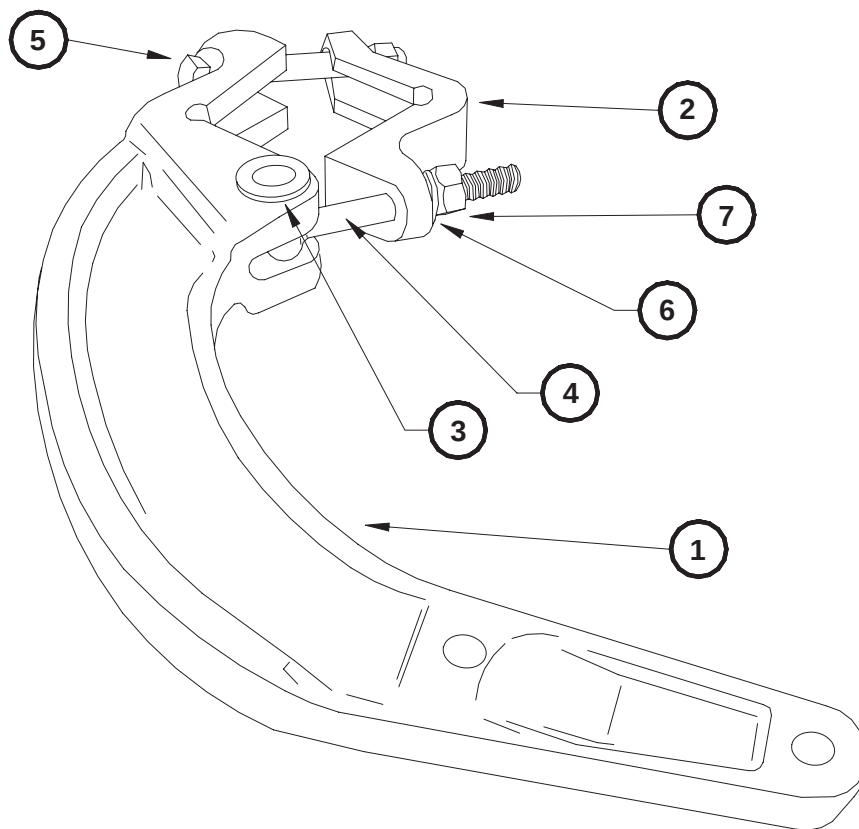
SERIES 44 Lister Bottom Assemblies and Parts

CAST LISTER SHANK

COMPLETE ASSEMBLY

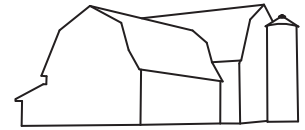
Cast Lister Shank

443LSFB00



COMPONENT PARTS

Ref.	Part No.	Description	Req'd.
1	443LSFB00B	Shank Body	1
2	443LSLCFB	Cap	1
3	443LSCPIN	Pivot Pin	1
4	443FB1134	Lister Eye Bolt	1
5	81CS78800	Cap Screw 7/8" x 8"	1
6	81LW7800	Lockwasher 7/8"	2
7	81HN78000	Hex Nuts 7/8"	2



SERIES 44

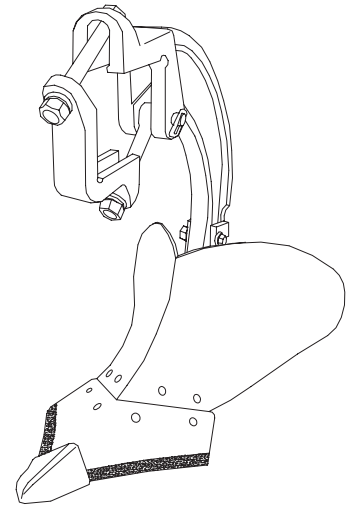
Complete Lister with Cast Shanks

JD STYLE

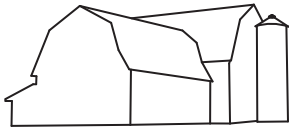
Part Number	Wings	Lister Share	Tool Bar Size
443JD1C57HHH	443IH00HHL+R	445140314H	5" x 7" Flat
443JD1C57HHFC	443IH00HHL+R	445140314FC	5" x 7" Flat
443JD1C57HHC	443IH00HHL+R	445140314C	5" x 7" Flat
443JD1C57HC	443IH00HL+R	445140314C	5" x 7" Flat
443JD1C57H	443IH00WL+R	445140314H	5" x 7" Flat
443JD1C57FC	443IH00WL+R	445140314FC	5" x 7" Flat
443JD1C57C	443IH00WL+R	445140314C	5" x 7" Flat

IHC STYLE

Part Number	Wings	Lister Share	Tool Bar Size
443IH1C57HHH	443IH00HHL+R	445140714H	5" x 7" Flat
443IH1C57HHFC	443IH00HHL+R	445140714FC	5" x 7" Flat
443IH1C57HHC	443IH00HHL+R	445140714C	5" x 7" Flat
443IH1C57HC	443IH00HL+R	445140714C	5" x 7" Flat
443IH1C57H	443IH00WL+R	445140714H	5" x 7" Flat
443IH1C57FC	443IH00WL+R	445140714FC	5" x 7" Flat
443IH1C57C	443IH00WL+R	445140714C	5" x 7" Flat



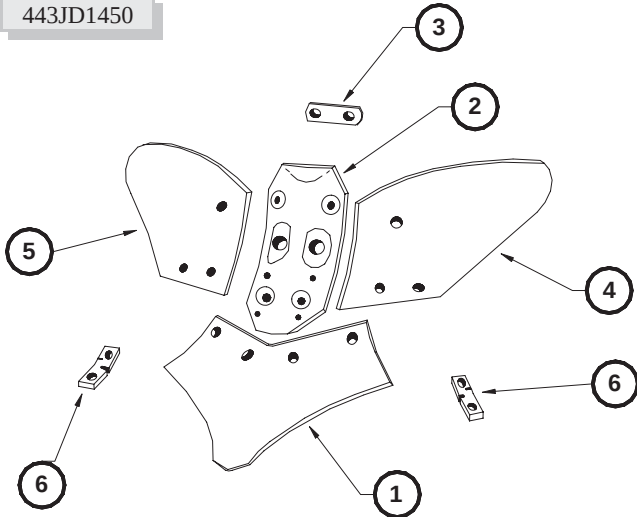
443JD1C57C



SERIES 44 Lister Bottom Parts

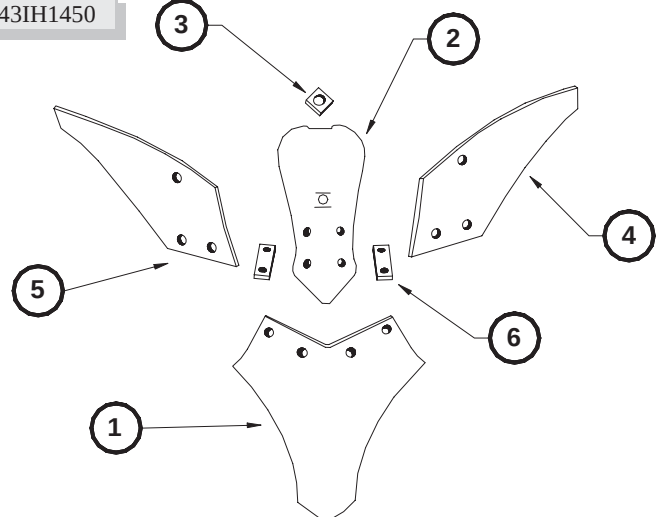
JD Lister Bottom

443JD1450



IHC Lister Bottom

443IH1450



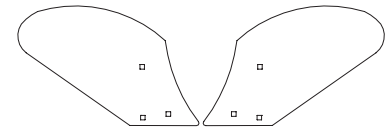
JD LISTER BOTTOM

Ref. #	Part No.	Description	WT Each
1	445140314	5/16" X 14" Share Point (#287)	9.5
2	443JD000F	Attachment Frog - Cast Steel	8.3
3	443JDFTWA	Footpiece Strap Washer	0.5
4	443JD00HL	Left Hand Wing - Highwing Style	12.5
4	443JD00WL	Left Hand Wing - Standard Style	10.3
5	443JD00WR	Right Hand Wing - Standard Style	10.3
5	443JD00HR	Right Hand Wing - Highwing Style	12.5
6	443LB00WS	Lister Wing Strap Washer (2 Ea.)	0.5

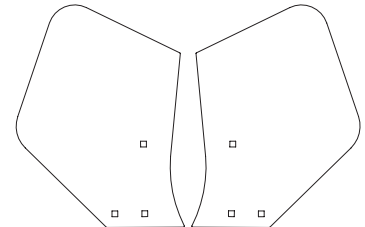
IHC LISTER BOTTOM

Ref. #	Part No.	Description	WT Each
1	445140714	5/16" X 14" Share Point (#0757)	9.5
2	443IH000F	Attachment Frog - Cast Steel	7.3
3	443IHFTWA	Footpiece Strap Washer	0.5
4	443IH00WL	Left Hand Wing - Standard Style	9.6
4	443IH00HL	Left Hand Wing - Highwing Style	11.3
4	443IH00HHL	Left Hand Wing - Ultra High Wing Style	9.6
5	443IH00WR	Right Hand Wing - Standard Style	9.6
5	443IH00HR	Right Hand Wing - Highwing Style	11.3
5	443IH00HHR	Right Hand Wing - Ultra High Wing Style	9.6
6	443LB00WS	Lister Wing Strap Washer (2 Ea.)	0.5

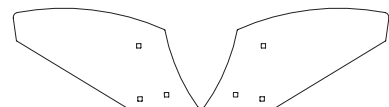
Additional Lister Parts : Share Points, Footpieces, Shanks, and Clamp Assemblies



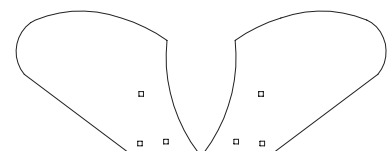
443JD00WL & R



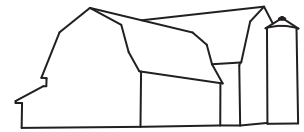
443IH00HHL & R



443IH00WL & R



443JD00HL & R



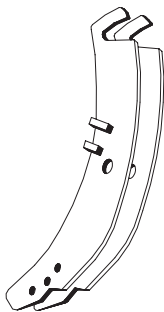
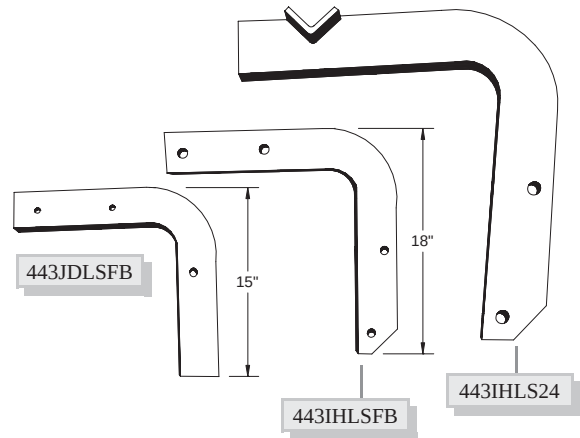
SERIES 44

Lister Bottom Parts

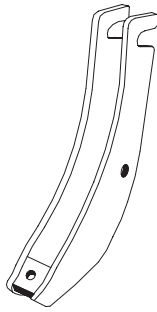
LISTER BOTTOM SHANKS 1-1/4" x 3" JD/IHC

Part Number	Application	Tool Bar	Weight Each
443IHLS24	IHC	2-1/4" Diamond	31.0
443IHLSFB	IHC	Flat Bar*	30.3
443JDLS24	JD	2-1/4" Diamond	25.6
443JDLSFB	JD	Flat Bar*	25.9
443LSFB00	IH (CAST)	7 x 7 7 x 5	56.2

*Flat Bar Shanks adaptable for 4x4, 4x7, 5x7, 7x5, or 7x7 Tool Bar



443JDFT14



443IHFT14

LISTER BOTTOM FOOTPIECE ASSEMBLY - JD/IHC

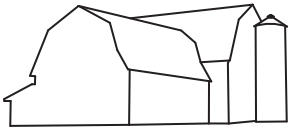
Part Number	Application	Description	Weight Each
443IHFT14	IHC	Fabricated Footpiece for 1-1/4" Shank	12.3
443JDFT14	JD	Fabricated Footpiece for 1-1/4" Shank	10.4

LISTER BOTTOM CLAMP ASSEMBLIES

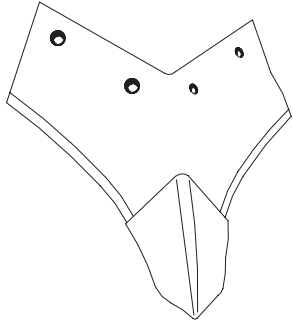
JD/IHC

Part Number	Tool Bar Size	Hardware	Weight Each
443LBLC24	2-1/4" Diamond Style	(4) 3/4" X 7-1/2" Cap Screw/ (4) Nuts	14.0
Above Clamp Assembly consists of one flat / one formed 1" x 4" x 7" Strap Cap drilled for applicable hardware			
443LBLC44	4" X 4" Flat	(4) 3/4" X 7" Cap Screw/ (4) Nuts	10.0
443LBLC47	4" X 7" Flat	(4) 3/4" X 7" Cap Screw/ (4) Nuts	11.0
443LBLC57	5" X 7"	(4) 3/4" X 8" Cap Screw/ (4) Nuts	12.0
443LBLC75	7" X 5"	(4) 3/4" X 9-1/2" Cap Screw/ (4) Nuts	13.0
443LBLC77	7" X 7"	(4) 3/4" X 9-1/2" Cap Screw/ (4) Nuts	14.0

Above Flat Tool Bar Clamp Assemblies consists of two 3/8" x 2-1/2" x 2-1/2" Angle Steel Straps & two 5/8"x2" Flat Steel Straps drilled for applicable hardware.



SERIES 44 Lister Points



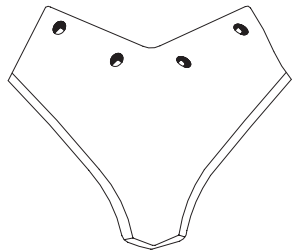
445140314C

LISTER SHARE POINTS

Deere

Part Number*	Optional Styles	OEM	OEM #	Width	Bolts	Weight Each
445140314	H,W,C, F	JD	287	14"	(4) 3/8"	9.5
445200060	H,W,C, F	JD	60W	20"	(4) 3/8"	15.0
445220393	H,W,C, F	JD	BC393W	22"	(4) 3/8"	13.0
445240394	H,W,C, F	JD	BC394W	24"	(4) 3/8"	13.7

*All above Lister Shares are 5/16" Thickness



445140714

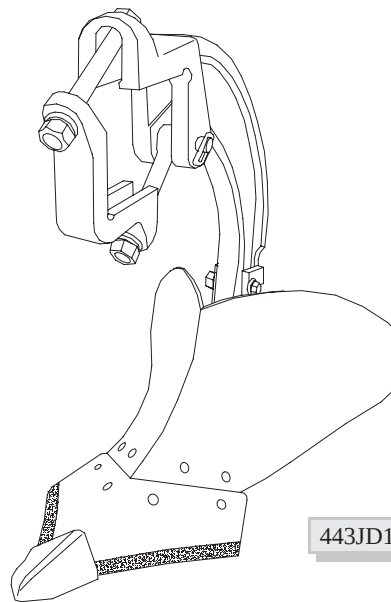
LISTER SHARE POINTS

IHC

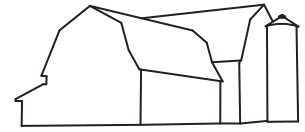
Part Number*	Optional Styles	OEM	OEM #	Width	Bolts	Weight Each
445140714	H,W,C, F	IHC	757	14"	(4) 7/16"	9.5
445200776	H,W,C, F	IHC	OA776W	20"	(4) 7/16"	15.0
445220777	H,W,C, F	IHC	OA777W	22"	(4) 7/16"	15.2
445220631	H,W,C, F	IHC	0631	22"	(4) 7/16"	14.0

*All above Lister Shares are 3/8" Thickness

Complete Lister with Cast Shank



443JD1C57C



SERIES 45

Irrigation Shovels

CHARACTERISTICS

This 3/16" thick furrower is used in preparing, cleaning, and maintaining irrigation ditching. It will do the necessary job of keeping water flowing to the crop.

OPTIONAL WEAR-EXTENDING STYLES

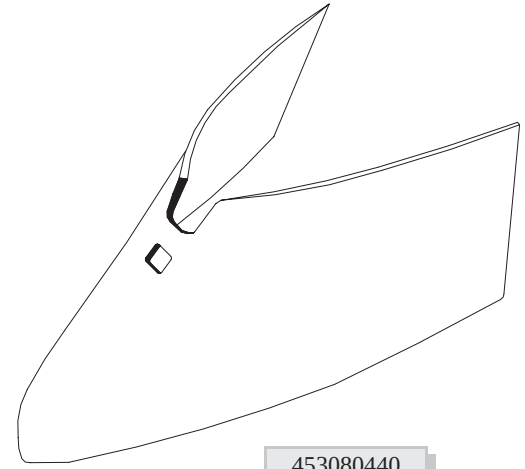
Hardfaced - Add "H" to end of part number

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

STEM ANGLE: 40°

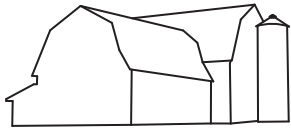
HOLE PUNCH - Reference Below

04 – 1 CSK hole centered for 3/8" Plow Bolts.



All above hardware available - Series 81

Part Number	Optional Styles	Thickness	Width	Hole Punch	Stem Angle	Weight Each
453060440	H	3/16"	6"	04	40°	3.0
453070440	H	3/16"	7"	04	40°	4.8
453080440	H	3/16"	8"	04	40°	5.2



SERIES 84 Furrower Points

CHARACTERISTICS

This furrower point is designed with a universal mounting system with 7/16" Plow Bolt for 1-1/4" to 2-1/4" centers to extend the wearing properties of furrowers.

OPTIONAL WEAR-EXTENDING STYLES

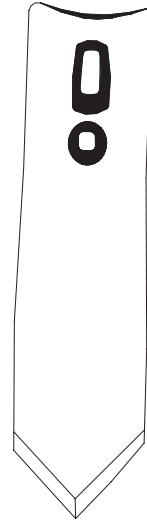
Hardfaced - Add "H" to end of part number

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

STEM ANGLE: 40°

HOLE PUNCH - Reference Below

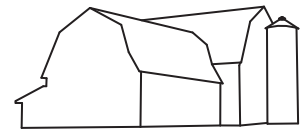
01 – 1 CSK hole centered for 3/8" Plow Bolts.



484040140

All above hardware available - Series 81

Part Number	Optional Styles	Thickness	Width	Hole Punch	Stem Angle	Weight Each
484030140	H	1/4"	3"	01	40°	2.5
484040140	H	1/4"	4"	01	40°	3.2



SERIES 51

Joyce Cultivator Sweeps

CHARACTERISTICS

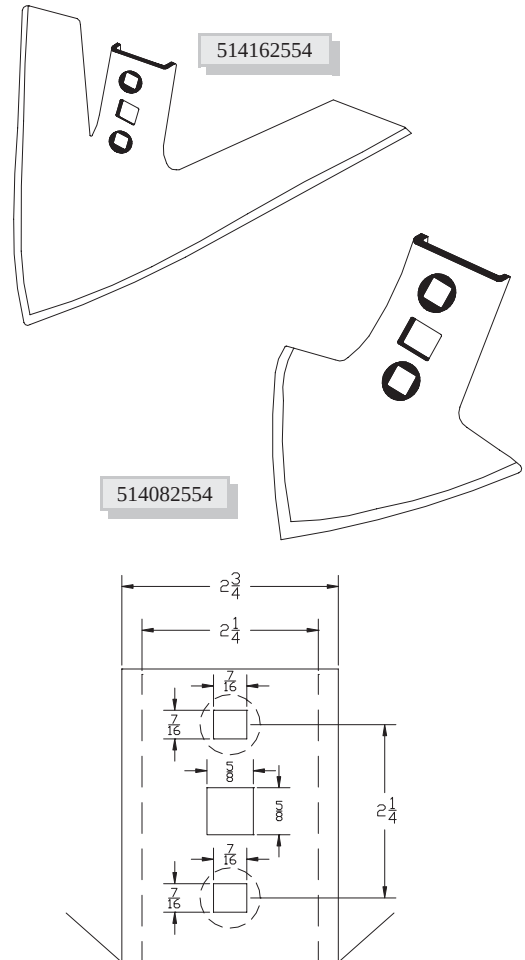
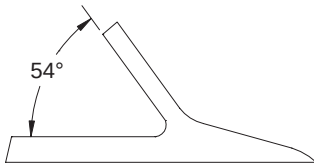
The Joyce sweep is designed for row crop cultivation, particularly in the West Coast market with the primary use being in cotton. It is a heavier, wider sweep and features the wrap-around stem for extra strength.

OPTIONAL WEAR-EXTENDING STYLES

- Wear Coat** - Add "W" to end of part number
Hardfaced - Add "H" to end of part number
Chromium Carbide Two styles available
 Add suffix to end of part number:
"C" - Sweep fitted with 39ST00000 chrome tip and hardfaced edges.
"FC" - Sweep fitted with 39ST00000 chrome tip and chromium carbide edge inserts (39SI14000).

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

STEM ANGLE: 54°

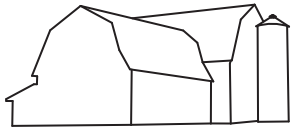


HOLE PUNCH - Reference Below

25 – 2 CSK holes on 2-1/4" centers 7/16" Plow Bolts with a center hole for 5/8" Carriage Bolt.

All above hardware available - Series 81

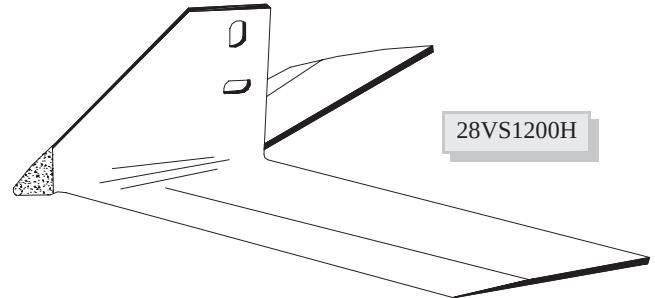
Part Number	Optional Styles	Thickness	Width	Stem Angle	Hole Punch	Weight Each
514062554	W,H,C,FC	1/4"	6"	54°	25	2.0
514082554	W,H,C,FC	1/4"	8"	54°	25	2.3
514102554	W,H,C,FC	1/4"	10"	54°	25	3.0
514122554	W,H,C,FC	1/4"	12"	54°	25	3.5
514142554	W,H,C,FC	1/4"	14"	54°	25	4.9
514162554	W,H,C,FC	1/4"	16"	54°	25	6.2
514182554	W,H,C,FC	1/4"	18"	54°	25	6.7
514202554	W,H,C,FC	1/4"	20"	54°	25	8.3
514222554	W,H,C,FC	1/4"	22"	54°	25	9.2
514242554	W,H,C,FC	1/4"	24"	54°	25	9.8



SERIES 28 Welded V-Sweeps

CHARACTERISTICS

The welded V-sweep is a heavy-duty two piece design constructed from 3/8" beveled plow steel and is designed for use on a universal straight shank with 2 slots adjustable for pitch on a 6" stem of 3/8" material. This rugged design, available plain or hardfaced, is used primarily in row crop cultivation in heavy, problem soils.



OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number

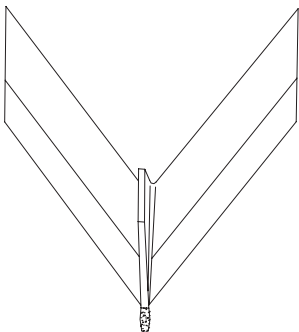
Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

HOLE PUNCH - Reference Below

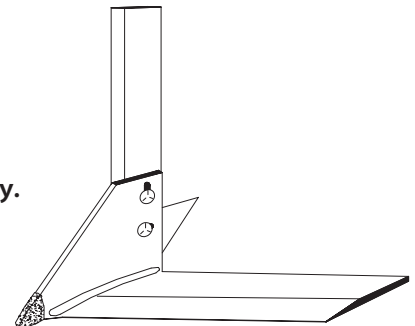
50 — 2 slots (1 horizontal and 1 vertical) for 1/2" carriage bolts on 1-5/8" to 2" centers.

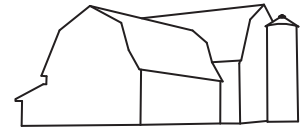
All above hardware available - Series 81

Part Number	Optional Styles	Thickness	Cutting Width	Hole Punch	Weight Each
28VS12000	H	3/8"	12"	50	9.6
28VS16000	H	3/8"	16"	50	12.8
28VS24000	H	3/8"	24"	50	16.1
28VS30000	H	3/8"	30"	50	24.0
28VS36000	H	3/8"	36"	50	28.8



Half Sweeps available on a special order basis.
Please check with your salesperson for availability.



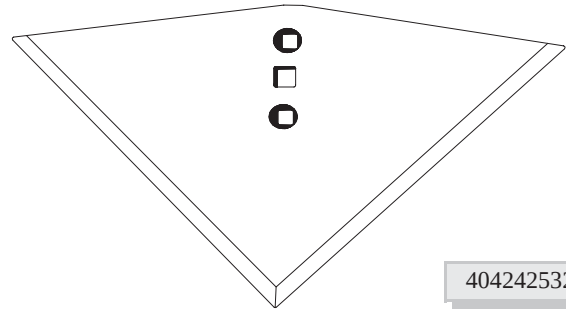


SERIES 40

Alabama Sweeps

CHARACTERISTICS

The Alabama sweep has a medium crown and stem angle and is suited for irrigation systems currently in use in California, Arizona and Texas. This sweep is also used for bedding and throws less dirt than the furrower or middle buster-type tillage tool. Sweep width is measured at widest point at tips of wings.



404242532

OPTIONAL WEAR-EXTENDING STYLES

- Wear Coat** - Add "W" to end of part number
Hardfaced - Add "H" to end of part number
Chromium Carbide Two styles available, Add suffix to end of part number:
 "C" - Sweep fitted with 39AT40000 chrome tip and hardfaced edges.
 "FC" - Sweep fitted with 39AT40000 chrome tip and chromium carbide edge inserts.

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

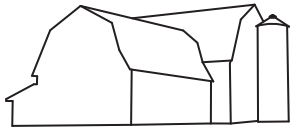
STEM ANGLE: 32°

HOLE PUNCH - Reference Below

25 – 2 CSK holes on 2-1/4" centers 7/8" Plow Bolts with a center hole for 5/8" Carriage Bolt.

All above hardware available - Series 81

Part Number	Optional Styles	Tip Size	Wing Length	Hole Punch	Stem Angle	Weight Each
404082532	W,H,C,FC	1/4"	8"	25	32°	2.1
404102532	W,H,C,FC	1/4"	10"	25	32°	2.6
404122532	W,H,C,FC	1/4"	12"	25	32°	3.1
404142532	W,H,C,FC	1/4"	14"	25	32°	4.9
404162532	W,H,C,FC	1/4"	16"	25	32°	5.5
404182532	W,H,C,FC	1/4"	18"	25	32°	6.8
404202532	W,H,C,FC	1/4"	20"	25	32°	7.9
404222532	W,H,C,FC	1/4"	22"	25	32°	9.5
404242532	W,H,C,FC	1/4"	24"	25	32°	12.0
404282532	W,H,C,FC	1/4"	28"	25	32°	15.0

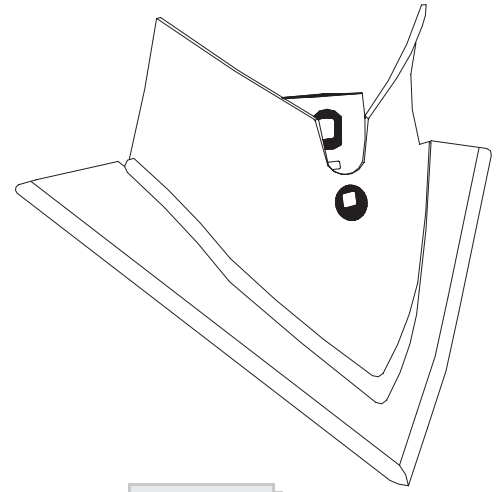


SERIES 59

Joyce Sweep & Irrigation Shovel

CHARACTERISTICS

A specially designed combination sweep/furrower used primarily in row crop cultivation when deep tillage application is necessary. By combining shovel and sweep, cultivation and furrow maintenance is accomplished in one pass. Excellent for problem soil conditions, such as sandy or sandy loam soils. These parts consist of Series 45 Irrigation Shovels welded on top of Series 51 Joyce Sweeps and attach to standards by using the sweeps' rugged attachment stem.



59JS412S0

OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Nose & Wing of Sweep

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

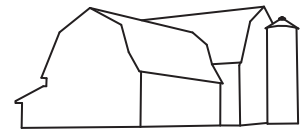
STEM ANGLE: 54°

HOLE PUNCH - Reference Below

25 – 2 CSK holes 2-1/4" centers for 7/16" Plow Bolts with a center for a 5/8" Carriage Bolt.

All above hardware available - Series 81

Part Number	Optional Styles	Thickness	Width	Hole Punch	Stem Angle	Weight Each
59JS412S0	Plain	1/4"	12"	25	54°	7.5
59JS412SH	Hardfaced	1/4"	12"	25	54°	8.0
59JS414S0	Plain	1/4"	14"	25	54°	9.5
59JS414SH	Hardfaced	1/4"	14"	25	54°	10.0
59JS416S0	Plain	1/4"	16"	25	54°	10.0
59JS416SH	Hardfaced	1/4"	16"	25	54°	10.5
59JS418S0	Plain	1/4"	18"	25	54°	13.0
59JS418SH	Hardfaced	1/4"	18"	25	54°	13.5
59JS420S0	Plain	1/4"	20"	25	54°	14.5
59JS420SH	Hardfaced	1/4"	20"	25	54°	15.0
59JS424S0	Plain	1/4"	24"	25	54°	16.0
59JS424SH	Hardfaced	1/4"	24"	25	54°	16.5



SERIES 53

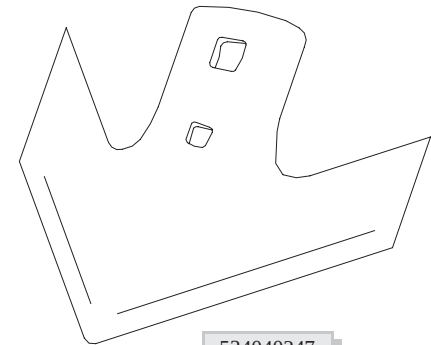
Field Cultivator Sweeps

CHARACTERISTICS

The field cultivator pattern has the wrap-around stem and features a flat mounting surface so it can be used on most field cultivating equipment being utilized today. Sweeps listed below come available in two thicknesses (3/16" & 1/4") and two hole punch sizes (3/8" & 7/16").

APPLICATION

Bougault - Crust Buster -Brontler - Hesston - Hiniker - IHC45 - Kent - Landoll - Rhino (Athens) - Will Rich - Winpower 1500 - Massey Ferguson 259 - IHC Vibra Shank - D.M.I. - Ingham - Kewanee



534040247

OPTIONAL WEAR-EXTENDING STYLES

Wear Coat - Add "W" to end of part number

Hardfaced - Add "H" to end of part number

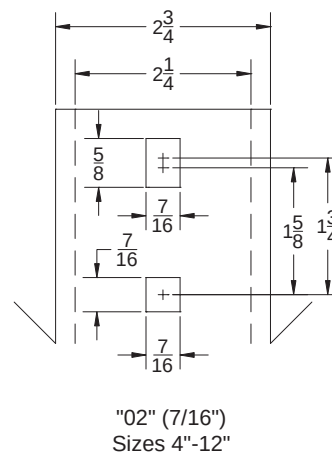
Chromium Carbide Two styles available

Add suffix to end of part number:

"C" - Sweep fitted with 39ST00000 chrome tip and hardfaced edges.

"FC" - Sweep fitted with 39ST00000 chrome tip and chromium carbide edge inserts.

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.



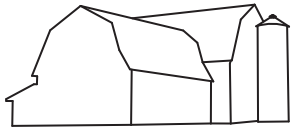
"02" (7/16")
Sizes 4"-12"

STEM ANGLE: 47°

HOLE PUNCH - Reference Below

02 – 1 CSK hole and 1 slot for 7/16" Plow Bolts on 1-5/8" to 1-3/4" centers.

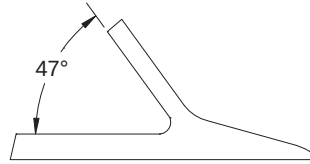
Part Number	Optional Styles	Thickness	Width	Hole Punch	Stem Angle	Weight Each
533040247	W,H,C,FC	3/16"	4"	02	47°	1.5
533060247	W,H,C,FC	3/16"	6"	02	47°	1.6
533070247	W,H,C,FC	3/16"	7"	02	47°	1.8
533080247	W,H,C,FC	3/16"	8"	02	47°	2.0
533090247	W,H,C,FC	3/16"	9"	02	47°	2.1
533100247	W,H,C,FC	3/16"	10"	02	47°	2.3
533120247	W,H,C,FC	3/16"	12"	02	47°	2.6
534040247	W,H,C,FC	1/4"	4"	02	47°	1.9
534060247	W,H,C,FC	1/4"	6"	02	47°	2.3
534070247	W,H,C,FC	1/4"	7"	02	47°	2.4
534080247	W,H,C,FC	1/4"	8"	02	47°	2.5
534090247	W,H,C,FC	1/4"	9"	02	47°	2.8
534100247	W,H,C,FC	1/4"	10"	02	47°	3.0
534120247	W,H,C,FC	1/4"	12"	02	47°	3.5



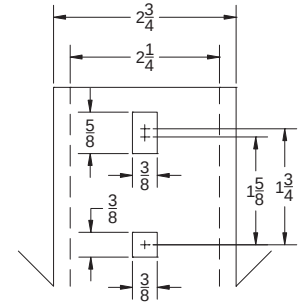
SERIES 53 Field Cultivator Sweeps

APPLICATION

Anderson - Calkins - Case FC - FCW - FCM -
Cockshutt 285, 485 - Ford 208 - Glencoe FC, MFC,
FCSW - Kewanee - Krause 600, 900 - Massey Ferguson
160 - Minn, Moline FT 200 - Morris L240, L320 - Oliver
285, 385, 485 - Taylor - W.F.E.



Available in "02" & "03"



"03" (3/8")
Sizes 4"-10"

HOLE PUNCH - Reference Below

STEM ANGLE: 47°

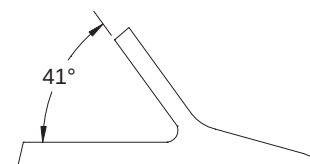
03 – 1 CSK hole centered for 3/8" Plow Bolts on 1-5/8" to 1-3/4" centers.

Part Number	Optional Styles	Thickness	Width	Hole Punch	Stem Angle	Weight Each
533040347	W,H,C,FC	3/16"	4"	03	47°	1.5
533060347	W,H,C,FC	3/16"	6"	03	47°	1.6
533070347	W,H,C,FC	3/16"	7"	03	47°	1.8
533080347	W,H,C,FC	3/16"	8"	03	47°	2.0
533090347	W,H,C,FC	3/16"	9"	03	47°	2.1
533100347	W,H,C,FC	3/16"	10"	03	47°	2.3
533120347	W,H,C,FC	3/16"	12"	03	47°	2.6
534040347	W,H,C,FC	1/4"	4"	03	47°	1.9
534060347	W,H,C,FC	1/4"	6"	03	47°	2.3
534070347	W,H,C,FC	1/4"	7"	03	47°	2.4
534080347	W,H,C,FC	1/4"	8"	03	47°	2.5
534090347	W,H,C,FC	1/4"	9"	03	47°	2.8
534100347	W,H,C,FC	1/4"	10"	03	47°	3.0
534120347	W,H,C,FC	1/4"	12"	03	47°	3.5

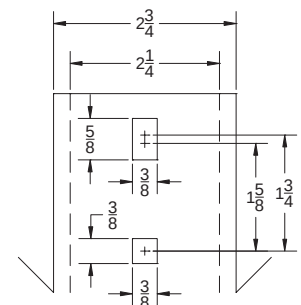
APPLICATION

Allis - Chalmers (early models) - Brandy - Cockshutt -
John Deere 100 Series Cult. - John Deere CCA, C10,
C20, 1000 - Oliver 245, 345

SPECIAL ORDER ONLY.



John Deere 1000 Series Cultivators



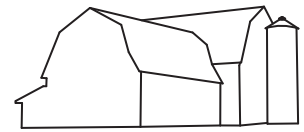
"03" (3/8")
Sizes 4"-10"

HOLE PUNCH - Reference Below

STEM ANGLE: 41°

03 – 1 CSK hole centered for 3/8" Plow Bolts on 1-5/8" to 1-3/4" centers.

Part Number	Optional Styles	Thickness	Width	Hole Punch	Stem Angle	Weight Each
533060341	W,H,C,FC	3/16"	6"	03	41°	1.5
533070341	W,H,C,FC	3/16"	7"	03	41°	1.8
533090341	W,H,C,FC	3/16"	9"	03	41°	2.1
533100341	W,H,C,FC	3/16"	10-1/2"	03	41°	2.3



SERIES 54

Chisel/Wheat Land Sweeps

CHARACTERISTICS

This pattern is available in 1/4" material to provide the extra strength needed for deep tillage applications. It features the wrap-around stem to give extra strength in thick areas and has a special wear edge under the point.

APPLICATION

Case - Geisler - Glencoe - Krause - L/C-Morris - Massey Harris
- Melore Gysler - John Deere - Hesston - Friggstad

OPTIONAL WEAR-EXTENDING STYLES

Wear Coat - Add "W" to end of part number

Hardfaced - Add "H" to end of part number

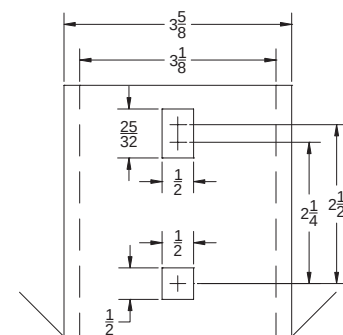
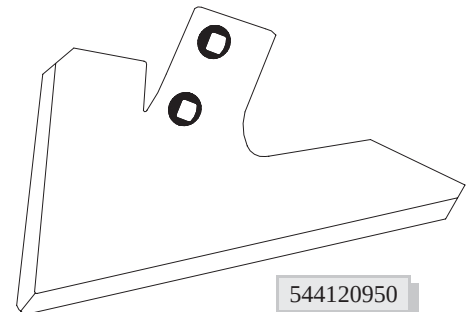
Chromium Carbide Two styles available

Add suffix to end of part number:

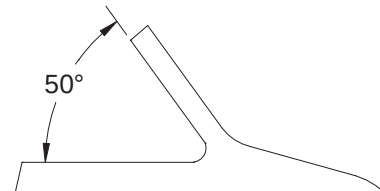
"C" - Sweep fitted with 39ST00000 chrome tip and hardfaced edges.

"FC" - Sweep fitted with 39ST00000 chrome tip and chromium carbide edge inserts.

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.



"09" (1/2")
Sizes 12"-24"
1/4" thick



STEM ANGLE: 50°

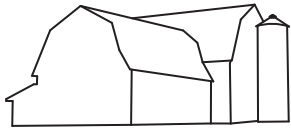
HOLE PUNCH - Reference Below

09 – 1 CSK hole and 1 slot for 1/2" Plow Bolts on 2-1/4" to 2-1/2"

All above hardware available - Series 81. Add "L" to Part Number for Low Crown style

Part Number	Optional Styles	Thickness*	Width	Hole Punch	Stem Angle	Weight Each
544120950	W,H,C,FC	1/4"	12"	09	50°	4.6
544140950	W,H,C,FC	1/4"	14"	09	50°	5.3
544160950	W,H,C,FC	1/4"	16"	09	50°	5.8
544180950	W,H,C,FC	1/4"	18"	09	50°	6.5
544200950	W,H,C,FC	1/4"	20"	09	50°	
544220950	W,H,C,FC	1/4"	22"	09	50°	
544240950	W,H,C,FC	1/4"	24"	09	50°	

*5/16" Available, "545" Series



SERIES 54

Chisel/Wheat Land Sweeps

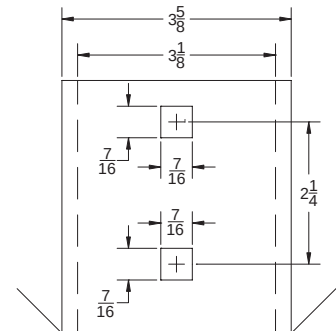
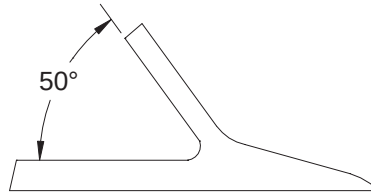
APPLICATION

Case - Geisler - Glencoe - Krause
- L/C-Morris - Massey Harris -
Melore Gysler - John Deere -
Hesston - Friggstad

STEM ANGLE: 50°

HOLE PUNCH - Reference Below

08 – 1 CSK hole and 1 slot for 7/16" Plow Bolts on 2-1/4" centers.



"08" (7/16")
Sizes 12"-18"
1/4" thick

All above hardware available - Series 81. Add "L" to Part Number for Low Crown style

Part Number	Optional Styles	Thickness	Width	Hole Punch	Stem Angle	Weight Each
544120850	W,H,C,FC	1/4"	12"	08	50°	4.6
544140850	W,H,C,FC	1/4"	14"	08	50°	5.3
544160850	W,H,C,FC	1/4"	16"	08	50°	5.8
544180850	W,H,C,FC	1/4"	18"	08	50°	6.5

*5/16" Available, "545" Series

SPECIAL ORDER ONLY

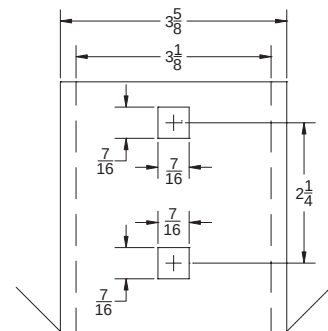
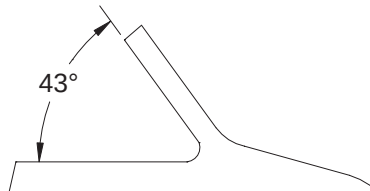
APPLICATION

International 10, 50, 55, 75, CCIL
203, 204, 205, Wil-Rich

STEM ANGLE: 43°

HOLE PUNCH - Reference Below

09 – 1 CSK hole and 1 slot for 1/2" Plow Bolts on 2-1/4" to 2-1/2"



"08" (7/16")
Sizes 12"-18"
1/4" thick

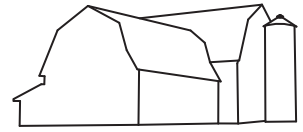
All above hardware available - Series 81. Add "L" to Part Number for Low Crown style

Part Number	Optional Styles	Thickness	Width	Hole Punch	Stem Angle	Weight Each
544120943	W,H,C,FC	1/4"	12"	09	43°	4.6
544140943	W,H,C,FC	1/4"	14"	09	43°	5.3
544160943	W,H,C,FC	1/4"	16"	09	43°	5.8
544180943	W,H,C,FC	1/4"	18"	09	43°	6.5

*5/16" Available, "545" Series

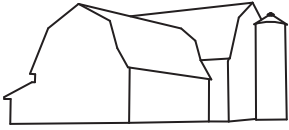
SERIES 54

Chisel/Wheat Land Sweeps



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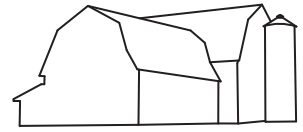
SERIES 54 Chisel/Wheat Land Sweeps

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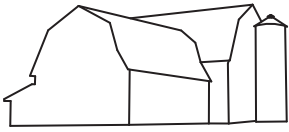
SERIES 54

Chisel/Wheat Land Sweeps



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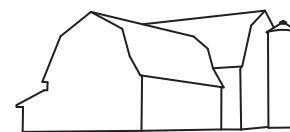
SERIES 54 Chisel/Wheat Land Sweeps

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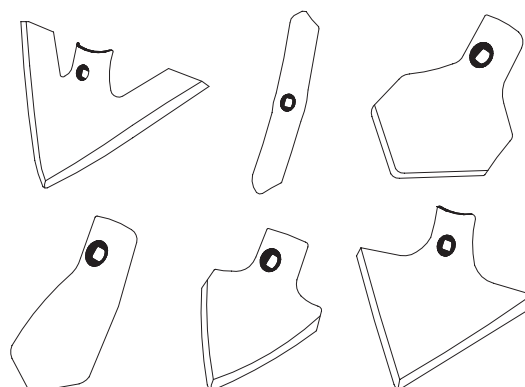
SERIES 55

Danish Style Cultivation Parts



CHARACTERISTICS

This pattern is available in both the sweep and spike. It is designed to fit the Danish-type cultivator tines. These products feature the specially designed curved contour and well-defined countersunk hole to prevent excessive wear of the bolt head during use.



STEM ANGLE: 40°

OPTIONAL WEAR-EXTENDING STYLES

Wear Coat - Add "W" to end of part number
Hardfaced - Add "H" to end of part number
Chromium Carbide Two styles available Add suffix to end of part number:
 "C" - Sweep fitted with 39ST00000 chrome tip and hardfaced wings.
 "FC" - Sweep fitted with 39ST00000 chrome tip and chromium carbide edge inserts.
 Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

HOLE PUNCH - Reference Below

04 – 1 CSK hole centered for 3/8" Danish Bolt.

All above hardware available - Series 81

DANISH "S" TINE SWEEPS

Part Number	Optional Styles	Thickness	Width	Stem Angle	Hole Punch	Weight Each
554020440	D,H,C,FC	1/4"	2"	40°	04	0.8
554040440	D,H,C,FC	1/4"	4"	40°	04	1.1
554070440	D,H,C,FC	1/4"	7"	40°	04	1.9
554090440	D,H,C,FC	1/4"	9"	40°	04	2.9

DANISH "S" TINE SPIKES

IMPORTED SPIKES

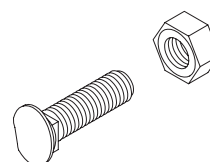
Part Number	Optional Styles	Thickness	Width	Length	Hole Punch	Weight Each
554120405	H (Alloway)	1/4"	1-1/2"	5"	04	0.5
554120409	H	1/4"	1-1/2"	8"	04	0.8

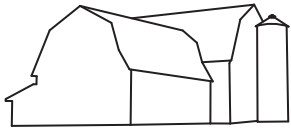
DANISH BOLT & NUT

PKG/50 Per Box

Specially designed bolt with elliptical head to be used specifically to attach Danish S-Tine Series Sweeps. Packaging includes nuts.

Part No.	Description	WT/Box
55BD38000	10mm x 38mm Elliptical Head Danish Bolts with Nuts	3.5
55BD38045	10mm x 45mm Elliptical Head Danish Bolts with Nuts	3.5





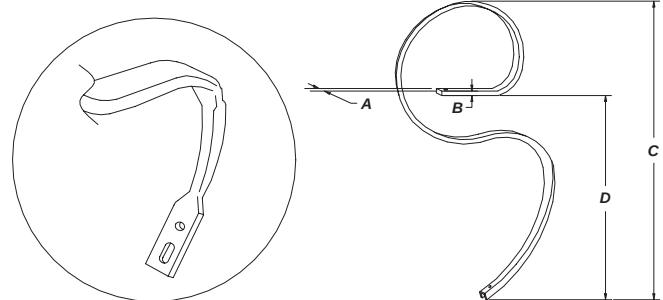
SERIES 55

Danish Style Cultivation Parts

DANISH "S" TINE SHANKS

CHARACTERISTICS

The Danish tine is designed with an "S" configuration with a single hole to mount Series 55 Danish points and sweeps. This shank provides an aggressive vibrating action to bring the weeds to the soil surface for good eradication. S-tines come with or without the spike attached.



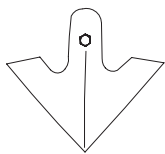
HOLE PUNCH - Reference Below

59 – 1 hole centered for 3/8" (10mm) Danish Bolt.

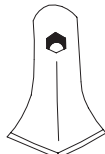
556125943HF

All above hardware available - See previous page.

Part Number	Description	A x B x C	Hole Punch	Weight Each
556125942	Standard Duty Shank w/o Point	1-1/4" (32mm) x 3/8" (10mm) x 22" (560mm)	59	5.6
556125943	Heavy Duty Shank w/o Point	1-1/4" (32mm) x 1/2" (12mm) x 22" (560mm)	59	7.5
556125943H	Standard Duty High Clearance w/o Point	1-1/4" (32mm) x 1/2" (12mm) x 26" (660mm)	59	8.1
556125943HF	Smashed End Heavy Duty High Clearance w/o Point	1-3/4" (45mm) x 19/32" (15 mm) x 26" (660mm)	59	
556125943HW	Heavy Duty High Clearance w/o Point	1-3/4" (45mm) x 1/2" (12mm) x 26" (660mm)	59	11.6



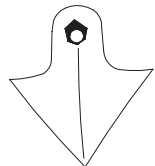
39AG860702



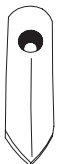
39AG860201

CHARACTERISTICS

The following specially designed solid chromium carbide sweeps and spikes are also available for the Danish S-tine series. These products feature the specially designed curved contour with the countersunk hole typical of this series. A special hardware set with neoprene shim is needed for correct installation.



39AG860300



39AG860101

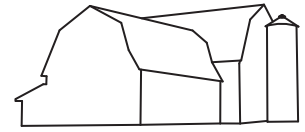
SERIES 39

Chromium Carbide "S" Tine Sweeps

Part Number	Description	Width	Hole Punch	Stem Angle	WT Each
39AG860101	Chromium Carbide Spike	1"	04	40	0.82
39AG860201	Chromium Carbide Goosefoot Spike	2-1/2"	04	40	1.09
39AG860300	Chromium Carbide Sweep	4"	04	40	1.16
39AG860702	Chromium Carbide Sweep	7"	04	40	1.68

Hardware Set for Chromium Carbide Sweeps

39AG8HDWR	3/8" x 1-3/4" N.C. cap screw GR 5, 3/8" Ny-lock Nut 3/8", Neoprene shim	Pkg./25 pcs
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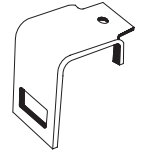
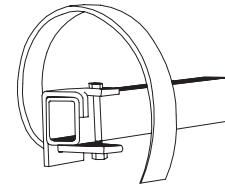
SERIES 55

Danish Style Cultivation Parts

DANISH "S" TINE CLAMP BRACKETS

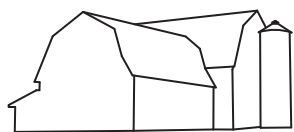
Clamp bracket for S-tines to fit either a 5/8" x 2" or 2" x 2" flat tool bar. Brackets come without attachment hardware. Carriage bolts available - see Series 81.

Part No.	Tool Bar Size	Carriage Bolt	WT Each
7500D2200	2" x 2"	3/8" x 2-1/2"	0.64
7500D2300	2" x 3"	3/8" x 2-1/2"	1.70
7500D2400	2" x 4"	3/8" x 2-1/2"	1.80
7500D5820	5/8" x 2"	3/8" x 1-1/2"	0.55



7500D2200

Other clamps are available by special order.

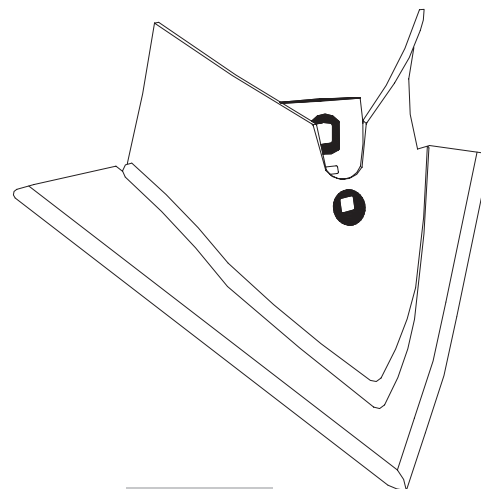


SERIES 59

Joyce Sweep & Irrigation Shovel

CHARACTERISTICS

A specially designed combination sweep/furrower used primarily in row crop cultivation when deep tillage application is necessary. By combining shovel and sweep, cultivation and furrow maintenance is accomplished in one pass. Excellent for problem soil conditions, such as sandy or sandy loam soils. These parts consist of Series 45 Irrigation Shovels welded on top of Series 51 Joyce Sweeps and attach to standards by using the sweeps' rugged attachment stem.



59JS412S0

OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Nose & Wing of Sweep

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

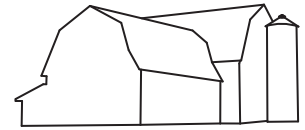
STEM ANGLE: 54°

HOLE PUNCH - Reference Below

25 – 2 CSK holes 2-1/4" centers for 7/16" Plow Bolts with a center for a 5/8" Carriage Bolt.

All above hardware available - Series 81

Part Number	Optional Styles	Thickness	Width	Hole Punch	Stem Angle	Weight Each
59JS412S0	Plain	1/4"	12"	25	54°	7.5
59JS412SH	Hardfaced	1/4"	12"	25	54°	8.0
59JS414S0	Plain	1/4"	14"	25	54°	9.5
59JS414SH	Hardfaced	1/4"	14"	25	54°	10.0
59JS416S0	Plain	1/4"	16"	25	54°	10.0
59JS416SH	Hardfaced	1/4"	16"	25	54°	10.5
59JS418S0	Plain	1/4"	18"	25	54°	13.0
59JS418SH	Hardfaced	1/4"	18"	25	54°	13.5
59JS420S0	Plain	1/4"	20"	25	54°	14.5
59JS420SH	Hardfaced	1/4"	20"	25	54°	15.0
59JS424S0	Plain	1/4"	24"	25	54°	16.0
59JS424SH	Hardfaced	1/4"	24"	25	54°	16.5



SERIES 70 Chisel Standards

CHARACTERISTICS

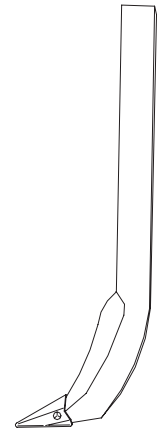
These standards are intended for deeper penetration in hard soils in order to do a job where the heavy duty scarifier is not required. There are four different standard types available and each has wear-extending options also available. All are manufactured from heat-treated steel and attach to tool bar with standard Series 75 clamps.

JD CHISEL STANDARDS w/ REPLACEABLE POINTS

Heat-treated steel with forged beveled edge on lower third of standard and features four types of replaceable bolt-on wear points. Available in two sizes (5/8" or 3/4") and two styles (curved or straight). Standards come with or without points, which are also available separately.

CURVED STYLE STANDARD

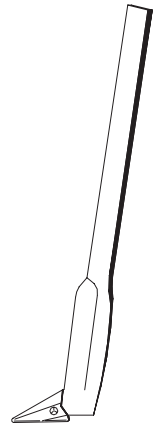
Part Number	Replacement Part	Thickness	Width	Length	Point Part #	Weight Each
70CSJD582	Steel	5/8"	2"	30"	70WPJD100	11.0
70CSJD582C	Chrome	5/8"	2"	30"	39CCP1000	11.0
70CSJD582L	Less Point	5/8"	2"	30"	N/A	10.5
70CSJD342	Steel	3/4"	2-1/2"	30"	70WPJD100	16.0
70CSJD342C	Chrome	3/4"	2-1/2"	30"	39CCP1000	16.5
70CSJD342L	Less Point	3/4"	2-1/2"	30"	N/A	15.5



70CSJD582C

STRAIGHT STYLE STANDARD

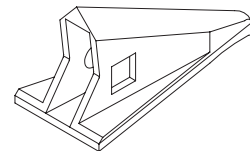
Part Number	Replacement Part	Thickness	Width	Length	Point Part #	Weight Each
70CSJD582S	Steel	5/8"	2"	30"	70WPJD100	11.0
70CSJD582SC	Chrome	5/8"	2"	30"	39CCP1000	11.0
70CSJD582SL	Less Point	5/8"	2"	30"	N/A	10.5
70CSJD342S	Steel	3/4"	2-1/2"	30"	70WPJD100	19.0
70CSJD342SC	Chrome	3/4"	2-1/2"	30"	39CCP1000	19.3
70CSJD342SL	Less Point	3/4"	2-1/2"	30"	N/A	18.4



70CSJD582SC

REPLACEMENT POINTS & HARDWARE

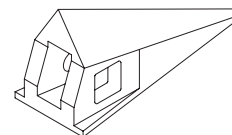
Part Number	Description	Weight Each
39CCP1000	Chromium Carbide Replacement Point Less Hardware	0.9
39CCP1000Y	JD #3001170-01 Drill Point	0.9
39CCPWJD2	Chrome Replacement Point for JD #WJD20	0.9
70WPJD100	Cast Steel Replacement Point Less Hardware	0.9



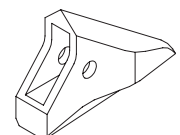
39CCP1000Y

HARDWARE FOR ABOVE REPLACEMENT POINTS

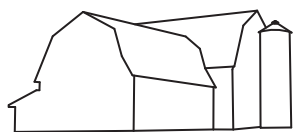
81MS516114	5/16" x 1-1/4 Flat Head Machine Screw (Stove Bolt)	Pkg./50 each
81MSN5160	5/16" N.F. Thread Square Nut.	Pkg./50 each



39CCP1000



39CCPWJD2



SERIES 70

Chisel Standards

DIAMOND POINT CHISEL STANDARD

Heat-treated steel with forged beveled edge on lower third of standard and features a replaceable welded chrome wear point. Available in two sizes (5/8" or 3/4") and two styles (curved or straight). A replacement point of chromium carbide is available, but is not offered as part of the complete standard, and can be ordered separately.

Part Number	Style	Thickness	Width	Length	Point	Weight Each
700202732	Curved	3/4"	2-1/2"	30"	39CCP5000	16.0
700203732S	Straight	3/4"	2-1/2"	30"	39CCP5000	18.5
709202726	Curved	5/8"	2"	26"	39CCP5000	11.0
709203726S	Straight	5/8"	2"	26"	39CCP5000	13.4



700203732S

WELD-ON REPLACEMENT POINTS

Part Number	Description	Weight Each
39CCP5000	Chromium Carbide Diamond Point Tip	0.4

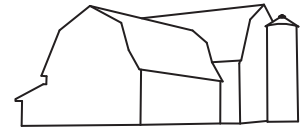


39CCP5000

DUCK FOOT CHISEL STANDARD

Heat-treated steel with forged beveled edge on lower third of standard and features a replaceable welded flat forged beveled point. This straight shank design comes available in two sizes (5/8" or 3/4") with two sizes (3" and 5") of points for each. Standards also available in plain or hardfaced, or without point.

Part Number	Style	Point	Thickness	Width	Length	Weight Each
70DFS5823H	Hardfaced	3"	5/8"	2"	30"	12.3
70DFS5823	Plain	3"	5/8"	2"	30"	11.5
70DFS3423H	Hardfaced	3"	3/4"	2-1/2"	30"	16.5
70DFS3423	Plain	3"	3/4"	2-1/2"	30"	16.0
70DFS5825H	Hardfaced	5"	5/8"	2"	30"	12.7
70DFS5825	Plain	5"	5/8"	2"	30"	12.4
70DFS3425H	Hardfaced	5"	3/4"	2-1/2"	30"	17.5
70DFS3425	Plain	5"	3/4"	2-1/2"	30"	17.3
70DFS5800H	Shank Only	N/A	3/4"	2"	30"	12.6
70DFS5800	Shank Only	N/A	5/8"	2"	30"	10.4



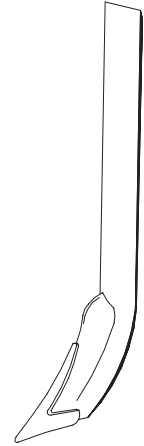
SERIES 70

Chisel Standards

FORGED POINT CHISEL STANDARDS

Heat-treated steel with a frontswept forged beveled point available in three sizes with or without hardfacing or a chromium carbide nose insert. Shank is used primarily with fertilizer applications (See Series 38) by attaching tubing, but also works excellent as a chisel standard only. Replacement steel weld-on points, plain or hardfaced, are also available.

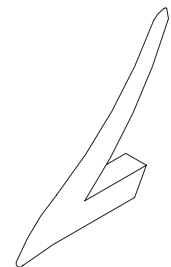
Part Number	Point Type	Thickness	Width	Length	Weight Each
70CS13336	Plain	1"	3"	36"	29.0
70CS13336C	Chromium Carbide Insert	1"	3"	36"	30.0
70CS13336H	Hardfaced	1"	3"	36"	29.0
70CS34230	Plain	3/4"	2-1/2"	30"	16.0
70CS34230C	Chromium Carbide Insert	3/4"	2-1/2"	30"	17.0
70CS34230H	Hardfaced	3/4"	2-1/2"	30"	16.5
70CS58230	Plain	5/8"	2"	30"	10.0
70CS58230C	Chromium Carbide Insert	5/8"	2"	30"	11.0
70CS58230H	Hardfaced	5/8"	2"	30"	10.5



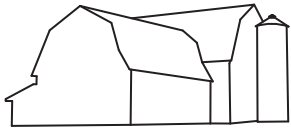
70CS13336C

REPLACEMENT POINTS

Part Number	Description	Application	Weight Each
39C110000	Chromium Carbide edge insert. 8" high with 5" long wrap.	Weld-on / Fits all sizes	1.60
70WP10000	Forged Beveled Steel Points Plain	Weld-on / Fits 5/8" Standards Only	0.70
70WP10000H	Forged Beveled Steel Points Hardfaced	Weld-on / Fits 5/8" Standards Only	0.75
70WP58000	Forged Steel Point Plain	Weld-on / Fits both 3/4" and 1" Standards	0.50
70WP58000H	Forged Steel Point Hardfaced	Weld-on / Fits both 3/4" and 1" Standards	0.55



39C110000



SERIES 72 Coil Shanks

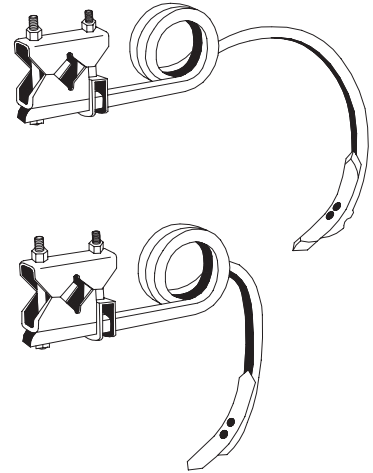
CHARACTERISTICS

Coil shanks are available in 1" and 1-1/4" size bar. The 1-1/4" coil shank features the double offset design which stops side drift from the tillage tool to the tool bar. This allows for uniform following of the tool and prevents excessive wear. The 1" coil shank is not offset. All of our coil shanks are heat-treated and made from high-strength material.

COIL SHANK CLAMPS - See Series 75



"DOUBLE OFFSET" Style
STOPS SIDE DRAFT



HOLE PUNCH - Reference Below

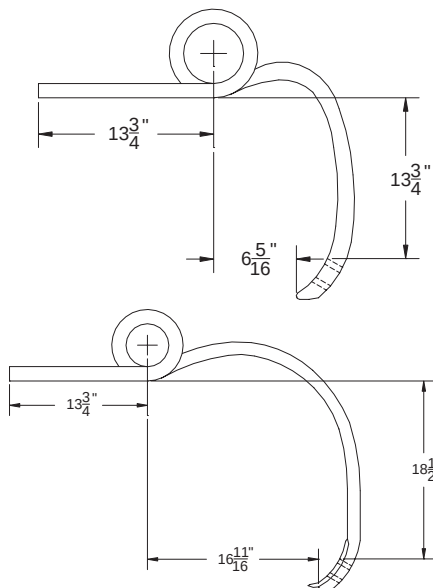
30 – 9/16" diameter hole and 1 slot for 1/2" Bolt on 1-1/4" to 2"

1-1/4" DOUBLE OFFSET COIL SHANK

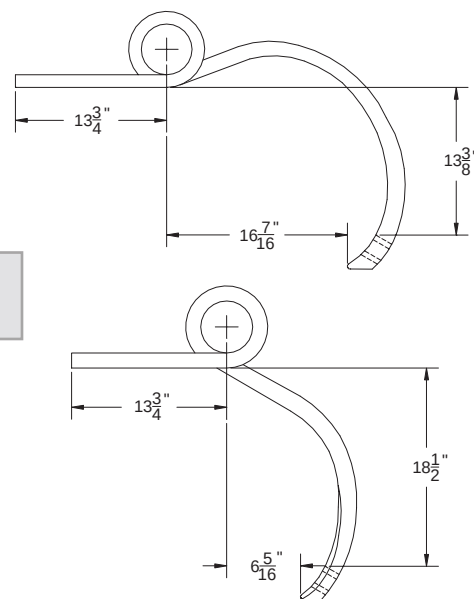
Part Number	Size	Description	Hole Punch	Weight Each
720300393	1-1/4" Sq.	Short Style Right Hand Coil	30	32.5
720300393S	1-1/4" Sq.	Smashed End for Fertilizer Knife	30	38
720300394	1-1/4" Sq.	Long Style Right Hand Coil	30	38
720300394S	1-1/4" Sq.	Smashed End for Fertilizer Knife	30	33

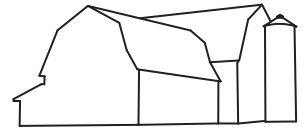
1" COIL SHANKS

Part Number	Size	Description	Hole Punch	Weight Each
720300293	1" Sq.	Short Style Right Hand Coil	30	22
720300293S	1" Sq.	Smashed End for Fertilizer Knife	30	24
720300294	1" Sq.	Long Style Right Hand Coil	30	24



**Non-Stock
Special Order Only**



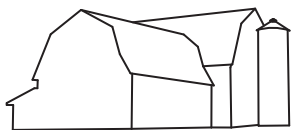


SERIES 72

Coil Shanks

NOTES:

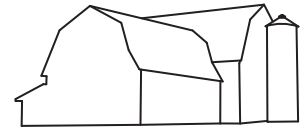
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SERIES 72 Coil Shanks

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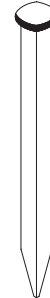


SERIES 73

Harrow Teeth

CHARACTERISTICS

Replacement spikes for spiketooth harrow rakes are available in a square tooth design (5/8" & 3/4") and a threaded diamond tooth (5/8" x 7/8") in two bolt diameters (7/16" & 1/2"). The square type comes with or without a flat forged head and in a variety of lengths. All are made of heat-treated high-carbon steel.



738PHT512



738PHT514N

SQUARE TEETH 5/8" & 3/4"

Part Number	Size	Length	Type	Weight Each
738PHT512	5/8"	12"	With Forged Head	1.3
738PHT514	5/8"	14"	With Forged Head	1.6
738PHT514N	5/8"	14"	Without Head	1.6
738PHT516	5/8"	16"	With Forged Head	1.9
738PHT516N	5/8"	16"	Without Head	1.8
738PHT612	3/4"	12"	With Forged Head	1.8
738PHT614	3/4"	14"	With Forged Head	2.1
738PHT614N	3/4"	14"	Without Head	2.0
738PHT616	3/4"	16"	With Forged Head	2.5
738PHT616N	3/4"	16"	Without Head	2.5

DIAMOND TEETH - THREADED 7/16" & 1/2"

Part Number	Thread Diameter	Thread Length	Usable Tooth Length	Weight Each
738PHT512T	7/16"	2-1/8"	6"	0.6
738PHT512T2	1/2"	2-1/8"	6-1/4"	0.7



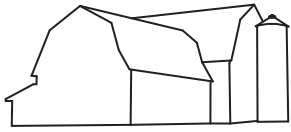
738PHT512T

HARROW TEETH CLAMPS

Part Number	Harrow Tooth Size	Weight Each
738PHT5CL	5/8"	0.3
738PHT3CL	3/4"	0.3



738PHT3CL

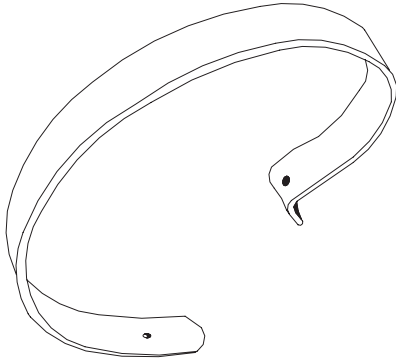


SERIES 74

Spring Harrow Shanks

CHARACTERISTICS

The spring harrow shanks are designed from high-strength material to give good action in the field and prevent breakage against obstacles. The footpieces of the different shanks are designed for direct mounting of the sweep or reversible tillage tool.



HOLE PUNCH - Reference Below

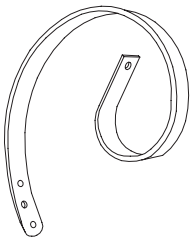
04 – 1 CSK hole for 3/8" Plow Bolt.

60 – 1 CSK hole for 3/8" Plow Bolt with 2 dimples on 3" centers.

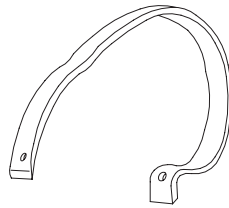
All above hardware available - Series 81

SPRING HARROW SHANKS

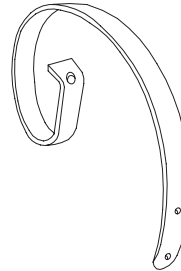
Part Number	O.E.M.	O.E.M. #	Size	Hole Punch	Applicable Point	Weight Each
746170438	Towner Rd Bar	266-38	3/8" x 1-3/4"	04	224200409	7.7
746176015	Towner	T530-15	3/8" x 1-3/4"	60	224176010	6.8
746176030	G & M	7330	3/8" x 1-3/4"	60	224176010	7.3
746176038	Strathmore	285-38	3/8" x 1-3/4"	60	224176010	6.3



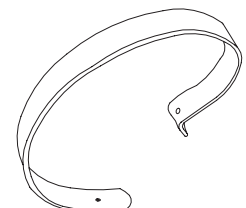
746176015



746170438



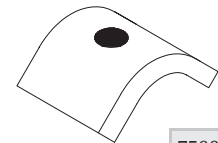
746176030



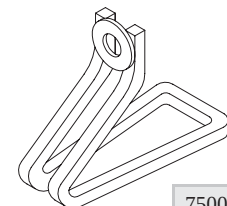
746176038

SPRING HARROW CLAMP BRACKETS/SHIMS

Part No.	Description	Style	WT
7500SHR0T	3/8" Thick TOP Shim w/ centered Bolt Hole for Round Tool Bar Springtooth Harrow.	Both Shims together fit 746170438 (Towner Rd. Bar) and 746176038	0.5
7500SHR0B	3/8" Thick Bottom Shim w/ centered Bolt Hole for Round Tool Bar Springtooth Harrow	Both Shims together fit 746170438 (Towner Rd. Bar) and 746176038	0.8
7500ST383	3/8" Thick Bracket for 3 x 3 Angle Springtooth Harrow Frame	Fits 746176015 (Towner)	2.0



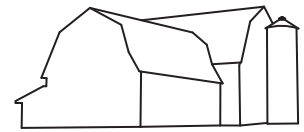
7500SHR0T



7500ST383

SERIES 75

Tool Bar Clamps



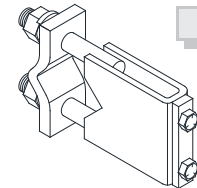
Growers Supply has one of the largest inventories of tool bar clamps offered in the agricultural distributing business today. A wide variety of clamp styles and sizes are currently offered and all are available domestically manufactured, with a few also available in an import variety. All are manufactured from only high-quality materials and use only Grade 5 plated hardware.

HEAVY DUTY CLAMPS

2-1/4" DIAMOND TOOL BAR

Double set screws with drilled and tapped back plate. For clamp body only (no hardware or strap cap) - Add "B" to end of part number.

Part No.	Type	Shank Size	Cap Reference	WT Each
7502A5820	Tapped	5/8" x 2"	76CCA5845	7.6
7502A3420	Tapped	3/4" x 2-1/2"	76CCA1345	10.9
7502A1320	Tapped	1" x 3"	76CCA1353	18.9



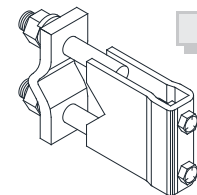
7502A3420

MEDIUM DUTY CLAMPS

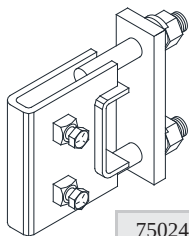
2-1/4" DIAMOND TOOL BAR

Fabricated steel clamp body with double set screws and loose nut set screws adjustment on inside of clamp body.

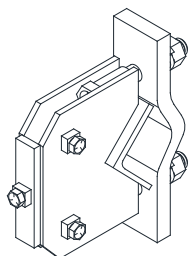
Part No.	Type	Shank Size	Cap Reference	WT Each
7502B5820	Loose Nut	5/8" x 2"	76CCA5840	6.2
7502B3420	Loose Nut	3/4" x 2-1/2"	76CCA3445	9.5
7502B1220	Loose Nut	1" x 3"	76CCHB545	13.9



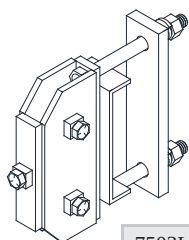
7502B3420



750244400



7503L3535



7503L0770

FABRICATED HEAVY DUTY CLAMPS

HAMBY STYLE

Fabricated steel clamps designed after clamps offered by popular O.E.M. Heavy duty design with double set screws on side of clamp body and adjustment nuts welded on exterior of clamp body.

Part No.	Tool Bar*	Shank Size	Cap Reference	WT Each
750244400	4" x 4"	1" x 3"	76CCHC400	16.5
750244404	4" x 4"	3/4" x 2-1/2"	76CCHC400	15.0
750244700	4" x 7"	1" x 3"	76CCHC400	17.5
750255700	5" x 7"	1" x 3"	76CCHC500	18.5

*Tool Bar measurements above listed height x width

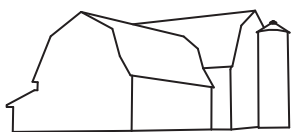
FABRICATED HEAVY DUTY CLAMPS

LILLISTON STYLE

Fabricated steel clamps designed after clamps offered by popular O.E.M. Heavy duty design with three set screws - two on side of clamp body and one on rear back plate - with adjustment nuts welded on exterior of clamp body. Special formed cap designed specifically for these clamps.

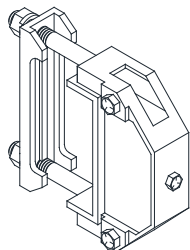
Part No.	Tool Bar*	Shank Size	Cap Reference	WT Each
7503L3535	3-1/2" x 3-1/2"	1" x 3"	76CCL3535	18.0
7503L4040	4" x 4"	1" x 3"	76CCL4040	19.0
7503L0750	7" x 5"	1" x 3"	76CCL0075	20.5
7503L0770	7" x 7"	1" x 3"	76CCL0075	20.5

*Tool Bar measurements above listed height x width



SERIES 75

Tool Bar Clamps



750255700C

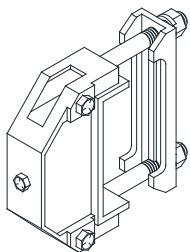
CAST HEAVY DUTY CLAMPS

HAMBY STYLE

Cast steel clamps designed after clamps offered by popular O.E.M. Heavy duty design with double set screws on side of clamp body and adjustment nuts on exterior of clamp body. Special cast cap designed specifically for these clamps.

Part No.	Tool Bar*	Shank Size	Cap Reference	WT Each
750244400C	4" x 4"	1" x 3"	76CCHC400C	16.4
750244404C	4" x 4"	3/4" x 2-1/2"	76CCHC400C	16.5
750244414C	4" x 4"	1-1/4" x 3"	76CCHC400C	16.6
750244700C	4" x 7"	1" x 3"	76CCHC400C	16.4
750255700C	5" x 7"	1" x 3"	76CCHC500C	18.2

*Tool Bar measurements above listed height x width



7503L0750C

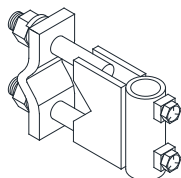
CAST HEAVY DUTY CLAMPS

LILLISTON STYLE

Cast steel clamps designed after clamps offered by popular O.E.M. Heavy duty design with three set screws - two on side of clamp body and one on rear back plate - with adjustment nuts on exterior of clamp body. Special cast cap designed specifically for these clamps.

Part No.	Tool Bar*	Shank Size	Cap Reference	WT Each
7503L0750C	7" x 5"	1" x 3"	76CCL0075C	20.6
7503L0770C	7" x 7"	1" x 3"	76CCL0075C	21.3

*Tool Bar measurements above listed height x width



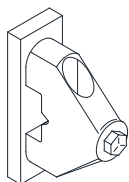
7502B2140

ROUND SHANK CLAMPS

1-1/4" to 1-3/8" Shanks

Fabricated steel clamps for 1-1/4" - 1-3/8" Round Shanks in two tool bar sizes - 2-1/4" diamond style tool bar or 1-1/4" diamond style tool bar. Both come with double set screws and loose nut set screw adjustments on inside of clamp bodies.

Part No.	Type	Shank Size	Cap Reference	WT Each
2-1/4" DIAMOND TOOL BAR				
7502B2140	Fab	1-1/4" to 1-3/8"	76CCA5840	7.4
1-1/4" DIAMOND TOOL BAR				
7502B1140	Fab	1-1/4" to 1-3/8"	76CCA5840	7.8



7501C100R

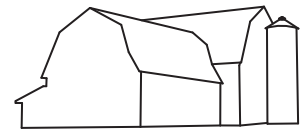
2" SQ. TOOL BAR

1" ROUND SHANKS

Specially designed cast ductile steel clamp for a 1" round shank and designed to fit a flat 2" square tool bar. Single set screw design with special flat strap cap. For body only (no hardware or strap cap) - Add 'B' to end of Part Number.

Part No.	Type	Shank Size	Cap Reference	WT Each
7501C100R	Cast	1" Round	76CCA5845S	3.9

Note: We can fabricate or design cast clamps for most applications



SERIES 75

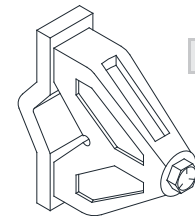
Tool Bar Clamps

CAST STEEL CLAMPS

2-1/4" DIAMOND TOOL BAR

Cast ductile steel clamps in a solid one piece body design with a single set screw. For body only (no hardware or strap cap) - add "B" to the end of the part number.

Part No.	Type	Shank Size	Cap Reference	WT Each
7501C5820	Cast	5/8" x 2"	76CCA5845	6.2
7501C3420	Cast	3/4" x 2-1/2"	76CCA3445	10.5
7501C1320	Cast	1" x 3"	76CCA1350	14.5



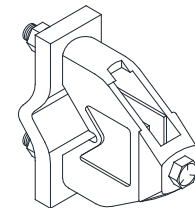
7501C5820

CAST STEEL CLAMPS w/drop in bolts

2-1/4" DIAMOND TOOL BAR

Cast ductile steel clamps in a solid one piece body design with a single set screw and 2 drop in bolts. For body only (no hardware or strap cap) - add "B" to the end of the part number.

Part No.	Type	Shank Size	Cap Reference	WT Each
7501C5820L	Cast	5/8" x 2"	76CCA5845	6.2
7501C3420L	Cast	3/4" x 2-1/2"	76CCA3445	10.5
7501C1320L	Cast	1" x 3"	76CCA1350	14.5

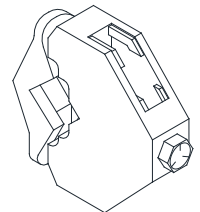


7501C1320L

JD CAST CLAMP

To Fit Deere

Part No.	Type	Shank Size	Cap Reference	WT Each
75JDC5820	Cast	5/8" x 2"	76JDC5820	6.6



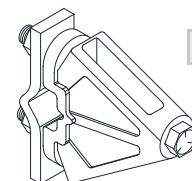
75JDC5820

MINI CAST STEEL

1-1/4" DIAMOND TOOL BAR

Smaller version of cast steel clamp for either a 1-1/4" diamond style or 1-1/4" square flat tool bar. Setting of tool bar opening along with two different strap caps allows for this. Single set screw along with same high quality hardware as all of our clamps.

Part No.	Type	Shank Size	Cap Reference	WT Each
7501B1140	Cast	5/8" x 2"	76CCA1240 or 76CCA12405	3.9
7501B1140F	Cast	5/8" x 2"		5.9



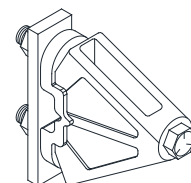
7501B1140

2" SQ. TOOL BAR

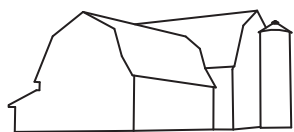
5/8" X 2" SHANKS

Same basic design as above cast steel clamps for 2-1/4" diamond tool bar, except for a 2" SQ flat tool bar. For body only (no hardware or strap cap) - Add 'B' to end of Part Number.

Part No.	Type	Shank Size	Cap Reference	WT Each
7501C5825	Cast	5/8" x 2"	76CCA5845S	6.0



7501C5825



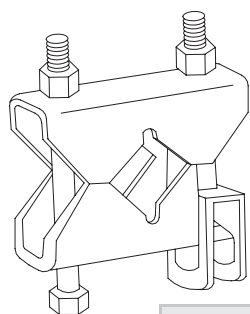
SERIES 75 Tool Bar Clamps

COIL SHANK CLAMPS

2-1/4" DIAMOND TOOL BAR

Specially designed 3-piece clamps designed for Series 72 Coil Shank Clamps. Each size shank, 1-1/4" and 1" shank, has its own clamp to fit a 2-1/4" diamond style tool bar, and are not interchangeable. Clamp replacement component parts are listed below, as well.

Part No.	Type	To Fit Coil Shank	WT Each
7501C1100	Domestic	1" Sq. Coil Shank	7.0
7501C1140	Domestic	1-1/4" Sq. Coil Shank	11.0



7501C1100

COMPONENT PARTS

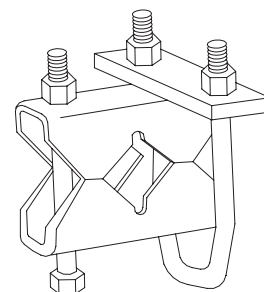
7501C1100

Part No.	Description	Series Ref.	WT Each
7501C11SBD	1 Shank Bracket for 1" Shank	75	1.0
766PC1458	1 Pressed Steel Caps - Top	76	3.5
766PC1458C	1 Pressed Steel Cap - Clipped	76	2.0
81CS58512	1 5/8" x 5-1/2" Cap Screw Gr. 5 Plated	81	0.6
81CS58800	1 5/8" x 8" Cap Screw Gr. 5 Plated	81	0.8
81HN58000	2 5/8" Nut	81	0.1
81LW58000	2 5/8" Lockwasher	81	0.2

COMPONENT PARTS

7501C1140

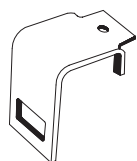
Part No.	Description	Series Ref.	WT Each
768PC3458	2 Pressed Steel Caps - Top & Bottom	76	4.4
76CCF3420	1 Flat Strap Cap w/ Centered Dimple	76	2.0
81CS34712	1 3/4" x 7-1/2" Cap Screw Gr. 5 Plated	81	1.0
81HN34000	3 3/4" Nut	81	0.2
81LW34000	3 3/4" Lockwasher	81	0.3
81UBCS340	1 3/4" Formed U-Bolt	81	2.4



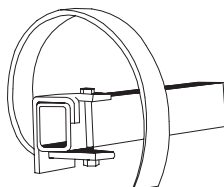
7501C1140

DANISH "S" TINE CLAMP BRACKETS

Clamp bracket for S-tines to fit either a 5/8" x 2" or 2" x 2" flat tool bar. Brackets come without attachment hardware. Carriage bolts available - see Series 81.



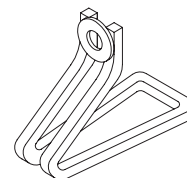
7500D2200



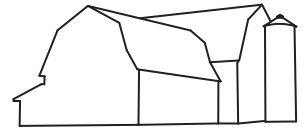
Part No.	Tool Bar Size	Carriage Bolt	WT Each
7500D2200	2" x 2"	3/8" x 2-1/2"	0.64
7500D2300	2" x 3"	3/8" x 2-1/2"	1.70
7500D2400	2" x 4"	3/8" x 1-1/2"	1.80
7500D5820	5/8" x 2"	3/8" x 1-1/2"	0.55

SPRING HARROW CLAMP BRACKETS/SHIMS

Part No.	Description	Style	WT Each
7500SHR0B	3/8" Thick BOTTOM Shim w/ centered Bolt Hole for Round Tool Bar Springtooth Harrow	Both Shims together fit 746170438 (Towner Rd. Bar) and 746176038	0.8
7500SHR0T	3/8" Thick TOP Shim w/ centered Bolt Hole for Round Tool Bar Springtooth Harrow.		0.5
7500ST383	3/8" Thick Bracket for 3 x 3 Angle Springtooth Harrow Frame	Fits 746176015 (Towner)	2.0



7500ST383



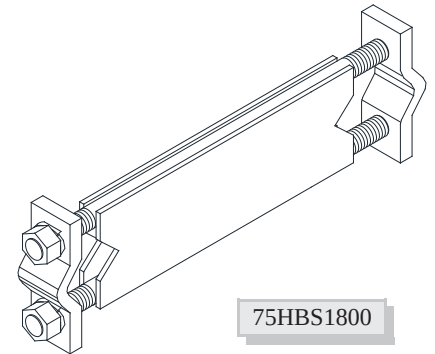
SERIES 75

Tool Bar Clamps

HEAVY DUTY 2-1/4" DIAMOND TO 2-1/4" DIAMOND

Heavy duty design consists of two 5/16" steel plates welded to two 1" steel posts threaded at each end. Notches to accept 2-1/4" diamond tool bars are cut at both ends of plates and two 1" x 2" strap caps along with nuts completes the unit.

Part No.	Spacing	Strap Cap	WT Each
75HBS0800	8" Spacer	76CCHB545	22
75HBS0900	9" Spacer	76CCHB545	25
75HBS1200	12" Spacer	76CCHB545	30
75HBS1400	14" Spacer	76CCHB545	34
75HBS1600	16" Spacer	76CCHB545	37
75HBS1800	18" Spacer	76CCHB545	40
75HBS2000	20" Spacer	76CCHB545	44
75HBS2200	22" Spacer	76CCHB545	49
75HBS2400	24" Spacer	76CCHB545	54



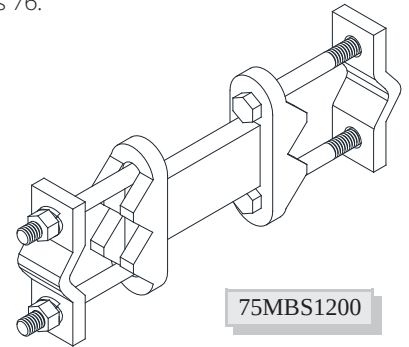
75HBS1800

For body only (no hardware or strap cap) - Add 'B' to end of Part Number. Strap Cap - See Series 76.
 For hardware - See Series 81 - 4 ea. - 1" Nuts & Lock Washers

MEDIUM DUTY 2-1/4" DIAMOND TO 2-1/4" DIAMOND

Medium duty design consists of 1" x 3" plow steel with two cast steel end caps welded at each end to form the body of the clamp. Two 1" x 2" strap caps and four 7/8" plated cap screws and nut complete the unit.

Part No.	Spacing	Strap Cap	WT Each
75MBS2000	20" Spacer	76CCA1345	26
75MBS1800	18" Spacer	76CCA1345	22
75MBS1400	14" Spacer	76CCA1345	20
75MBS1200	12" Spacer	76CCA1345	16
75MBS0900	9" Spacer	76CCA1345	13



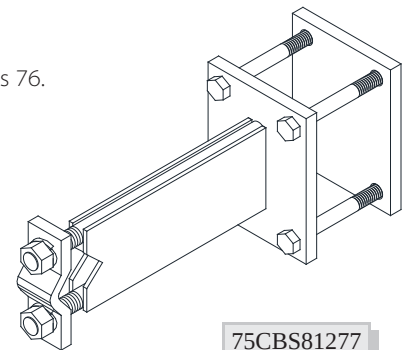
75MBS1200

For body only (no hardware or strap cap) - Add 'B' to end of Part Number. Strap Cap - See Series 76.
 For hardware - See Series 81 - 4 ea. - 7/8" x 5-1/2" Cap Screws & 1" Nuts

COMBINATION SPACERS

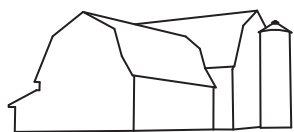
Combination spacers with 12" spacing between the one 2-1/4" diamond style tool bar and five sizes of flat tool bar. Design of body is same as that of the heavy duty spacer, but one end has welded 1" flat plate with four 1-1/16" holes for the flat tool bar. Opposite cap matches 1" plate welded to body with cap screws and hardware.

Other sized combination spacers are available on a special order basis. Please check with your salesperson for availability and quotes.



75CBS81277

Part No.	Spacing	Tool Bar Sizes	Hardware
75CBS81244	12" Spacer	2-1/4" to 4" x 4"	(4) 1" x 6-1/2" Cap Screw / (4) 1" N.C. Plated Nut
75CBS81247	12" Spacer	2-1/4" to 4" x 7"	(4) 1" x 9-1/2" Cap Screw / (4) 1" N.C. Plated Nut
75CBS81257	12" Spacer	2-1/4" to 5" x 7"	(4) 1" x 9-1/2" Cap Screw / (4) 1" N.C. Plated Nut
75CBS81275	12" Spacer	2-1/4" to 7" x 5"	(4) 1" x 7-1/2" Cap Screw / (4) 1" N.C. Plated Nut
75CBS81277	12" Spacer	2-1/4" to 7" x 7"	(4) 1" x 9-1/2" Cap Screw / (4) 1" N.C. Plated Nut



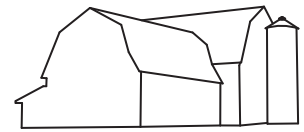
SERIES 75 Spacer Clamps

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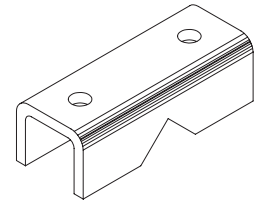
SERIES 76

Bar & Strap Caps



PRESSED STEEL CAPS

Part Number	Material Thick. x Width	Hole Diameter @ Centers	Rec. Bolt Size	Toolbar	WT Each
TYPE 1					
766PC1458	3/8" x 2-1/2"	11/16" @ 4-1/2"	5/8"	2-1/4" ♦	3.3
766PC1458C *	3/8" x 2-1/2"	11/16" @ N/A	5/8"	2-1/4" ♦	2.7
766PC2458	1/2" x 2-1/2"	13/16" @ 4-1/2"	3/4"	2-1/4" ♦	5.3
768PC3458	1/2" x 2-1/2"	13/16" @ 4-1/2"	3/4"	2-1/4" ♦	5.3
768PC4458	1/2" x 3"	1-1/16" @ 4-1/2"	1"	2-1/4" ♦	5.8
768PC5458	1/2" x 4-1/16"	1-1/16" @ 4-1/2"	1"	2-1/4" ♦	2.7

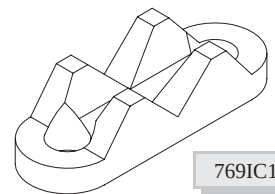


TYPE 1

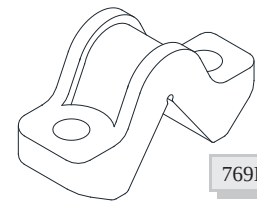
*Cap above used for part number 7501C1100 Coil shank clamp.

CAST STEEL CAPS (WELDABLE DUCTILE STEEL)

Part Number	Material Thick. x Width	Hole Diameter @ Centers	Rec. Bolt Size	Toolbar	WT Each
TYPE 1					
769IC1412	3/4" x 2-1/2"	1-1/16" @ 4-1/2"	1"	2-1/4" ♦	4.0
769IC1412H	1" x 2-1/2"	1" @ 4-3/4"	7/8"	2-1/4" ♦	5.34
769J244000	3/8" x 2"	11/16" @ 4"	5/8"	2-1/4" ♦	2.3
769J344000	3/8" x 3"	11/16" @ 4"	5/8"	2-1/4" ♦	2.9



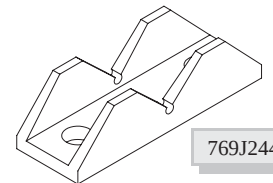
769IC1412



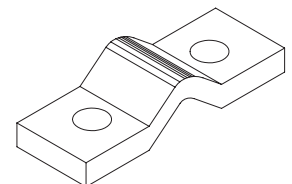
769IC1412H

STEEL CLAMP STRAP CAPS

Part Number	Material Thick. x Width	Hole Diameter @ Centers	Rec. Bolt Size	Toolbar	WT Each
TYPE 2					
76CCA1240	1/2" x 1-1/2"	3/4" @ 3"	5/8"	2-1/4" ♦	1.0
76CCA1345	3/4" x 2"	1" @ 4-1/2"	7/8"	2-1/4" ♦	4.0
76CCA1350	3/4" x 2-1/2"	1" @ 4-1/2"	7/8"	2-1/4" ♦	5.3
76CCA1353	1" x 2-1/2"	1-3/16" @ 5-1/2"	1-1/8"	2-1/4" ♦	5.0
76CCA3445	3/4" x 2"	7/8" @ 4-1/2"	3/4"	2-1/4" ♦	3.5
76CCA5840	5/8" x 1-1/2"	3/4" @ 4-1/2"	5/8"	2-1/4" ♦	1.6
76CCA5845	5/8" x 2"	3/4" @ 4-1/2"	5/8"	2-1/4" ♦	2.2
76CCA5850	5/8" x 2"	7/8" @ 4-1/2"	3/4"	2-1/4" ♦	2.1
76CCHB545	3/4" x 2"	1-1/16" @ 4-1/2"	1"	2-1/4" ♦	3.6
76CCL3535	3/4" x 3"	7/8" @ 5-3/4"	3/4"	3-1/2" x 3-1/2" ♦	5.3
76CCL4040	3/8" x 3"	7/8" @ 6-1/4"	3/4"	4" x 4" ♦	5.3



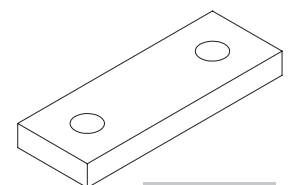
769J244000



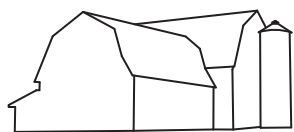
TYPE 2

FLAT STRAP CAPS - TYPE 3

76CCHC400	3/4" x 2-1/2"	7/8" @ 5-3/4"	3/4"	4" Flat	
76CCHC500	3/4" x 2-1/2"	7/8" @ 6-3/4"	3/4"	5" Flat	
76CCL0075	3/4" x 2-1/4"	7/8" @ 8-3/4"	3/4"	7" Flat	5.1



TYPE 3

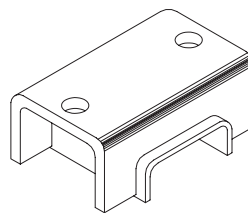


SERIES 76

Bar & Strap Caps

WELDED STEEL CLAMP CAPS

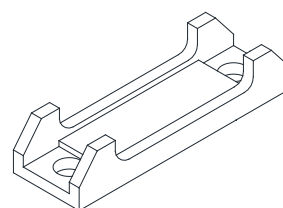
Part Number	Material Thick. x Width	Hole Diameter @ Centers	Rec. Bolt Size	Toolbar	WT Each
TYPE 4					
76CCH44HD	3/8" x 2-1/2"	1-1/16" @ 5-3/4"	1"	4" Flat	4.7
76CCH55HD	3/8" x 2-1/2"	1-1/16" @ 6-5/8"	1"	5" Flat	5.8



TYPE 4

CAST WRAP AROUND CAPS

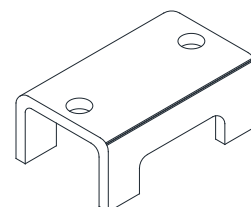
Part Number	Material Thick. x Width	Hole Diameter @ Centers	Rec. Bolt Size	Toolbar	WT Each
TYPE 5					
76CCHC400C	3/4" x 2-1/2"	7/8" @ 5-1/4"	3/4"	4" Flat	3.1
76CCHC500C	3/4" x 2-1/2"	7/8" @ 6-1/4"	3/4"	5" Flat	3.7
76CCL0070C	3/4" x 2-1/2"	7/8" @ 8-1/4"	3/4"	7" Flat	3.7



TYPE 5

FABRICATED WRAP AROUND CAPS

Part Number	Material Thick. x Width	Hole Diameter @ Centers	Rec. Bolt Size	Toolbar	WT Each
760244400HD	3/8" x 3-1/2"	1-1/8" @ 5-3/8"	1"	4" Flat	0.0
760244404HD	3/8" x 3-1/2"	7/8" @ 5-3/8"	3/4"	4" Flat	0.0
76CCL0070W	3/8" x 2-1/4"	13/16" @ 8-1/4"	3/4"	7" Flat	0.0



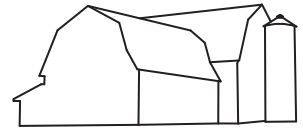
760244404HD

SPECIAL ORDERS

PAW has the capability to manufacture many different types of Bar and Strap Caps. If you have a special request, call us with your specifications and our staff will quote you accordingly.

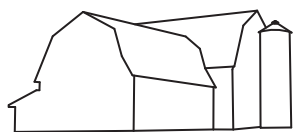
SERIES 76

Bar & Strap Caps



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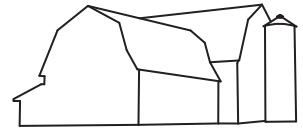


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Bar & Strap Caps

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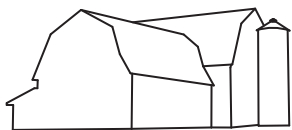


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Bar & Strap Caps

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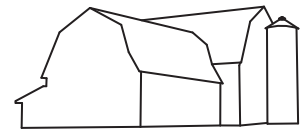


SERIES 76

Bar & Strap Caps

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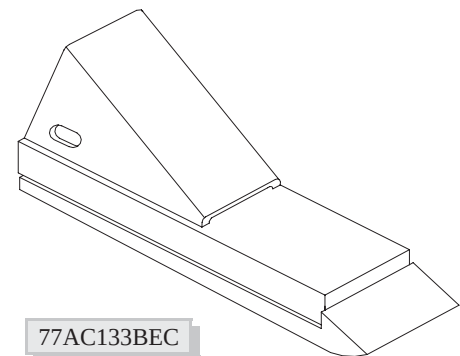
Subsoiler Points

CHARACTERISTICS

Growers offers a wide variety of subsoiler or V-chisel replacement points (ripper points), all made from heat-treated plow steel and fabricated to O.E.M. specifications. Three types of shank attachments are available per O.E.M. specifications - booted, slip on, or bolt-on - each type is listed in the parts description. Most are available with wear-extending chromium carbide inserts welded on (two styles available on most points) or hardfaced, with each part listed below the plain style.

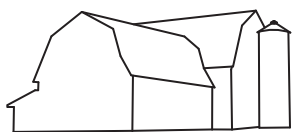
OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number
Chromium Carbide Two styles available on most points:
B-Style Chrome - "C" added to end of part number.
BE-Style Chrome - "BEC" added to end of part number.
 See **Series 39** for further descriptions and welding recommendations of chromium carbide products.



ALLIS CHALMERS

Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shan k Width	Chrome Insert	Weight Each
77AC12500	Booted	412279	1" x 2-1/2" x 12"	1-1/2"	N/A	11
77AC12500H			Hardfaced			12
77AC12500C			F-Style Chrome		39F278120	16
77AC125BEC			BE-Style Chrome		39BE27812	17
77AC13300	Booted	403702	1" x 3" x 12"	1-1/2"	N/A	12
77AC13300H			Hardfaced			13
77AC13300C			F-Style Chrome		39F338120	17
77AC133BEC			BE-Style Chrome		39BE33812	18
77AC14400	Booted	404289	1" x 4" x 12"	2"	N/A	18
77AC14400H			Hardfaced			19
77AC14400C			F-Style Chrome		39F438120	25
77AC144BEC			BE-Style Chrome		39BE43812	26
77AC34200	Booted	412050	1" x 2" x 12"	1"	N/A	7
77AC34200H			Hardfaced			8
77AC34200C			F-Style Chrome		39F238120	11
77AC342BEC			BE-Style Chrome		39BE23812	12
77AC34300	Booted	402584	1" x 3" x 12"	1"	N/A	9
77AC34300H			Hardfaced			10
77AC34300C			F-Style Chrome		39F338120	14
77AC343BEC			BE-Style Chrome		39BE33812	15

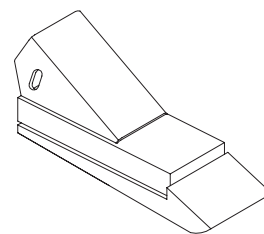


SERIES 77

Subsoiler Points

BIG ED

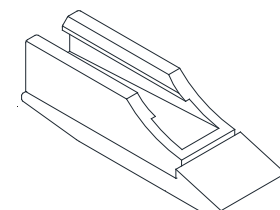
Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77BE12100	Booted	582E	1" x 2" x 7"	1"	N/A	5.0
77BE12100H			Hardfaced			5.5
77BE12100C			F-Style Chrome		39F238712	6.5
77BE1210BEC			BE-Style Chrome		39BE21470	7.8
77BE12140	Booted	424E	1" x 2" x 7"	1-1/4"	N/A	5.0
77BE12140H			Hardfaced			5.5
77BE12140C			F-Style Chrome		39F238712	6.5
77BE1214BEC			BE-Style Chrome		39BE21470	7.8
77BE1L000	Slip-On	ILO	5/8" x 1-5/8" x 6"	1"	N/A	2.0
77BE1L000H			Hardfaced			2.5
77BE1L000C			F-Style Chrome			3.5
77BE3420BEC	Booted		3/4" x 2" x 7"	1"	39BE21470	5.3



77BE1210BEC

BIG OX

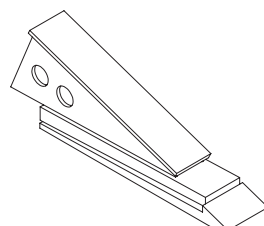
Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77B02D500	Slip-On	2D5	1-3/4" x 7"	1"	N/A	2.4
77B02D500H			Hardfaced			3.0
77B02D500C			F-Style Chrome			4.8
77B02D5BEC			BE-Style Chrome		39BE21470	5.1



77B02D5BEC

BOYDOG

Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77BD1312BEC	Booted		BE-Style Chrome			-



BRILLION

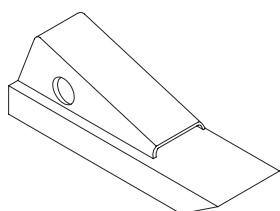
Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77BR34200	Booted		3/4" x 2" x 12"	1"	N/A	6.0
77BR34200H			Hardfaced			6.5
77BR34200C			F-Style Chrome		39F238120	10.5



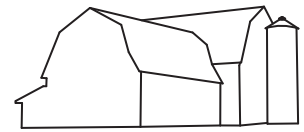
77BD1312BEC

BUSH HOG

Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77BH34250	Booted	17-1-201	3/4" x 2-1/2" x 8"	1-1/4"	N/A	6.0
77BH34250H			Hardfaced			6.5
77BH34250C			F-Style Chrome			9.8
77BH3425BEC			BE-Style Chrome		39BE27808	10.2



77BH34250



SERIES 77

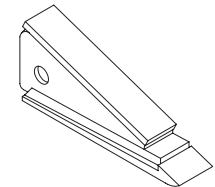
Subsoiler Points

EARTHBUSTER

Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77EB13220	Booted		1" x 3" x 22"	1-3/4"	N/A	38.0
77EB13220C			F-Style Chrome		39F338120	43.5

FARMAID

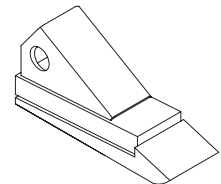
Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77FA31200	Booted	TSS8490	1" x 3" x 12"	1-1/2"	N/A	11.4
77FA31200H			Hardfaced			11.8
77FA312BEC			BE-Style Chrome		39BE33812	18.0



77FA312BEC

GEARMORE

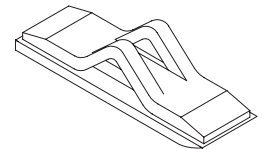
Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77GM342BEC	Booted		3/4" x 2" x 7"	1"	39BE21470	10.2



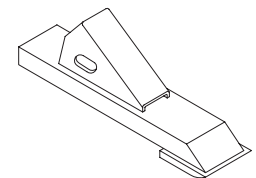
77GM342BEC

INTERNATIONAL (IHC)

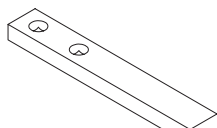
Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77IH10122	Dog-Eared	#10 Ripper	1/2" x 2" x 8"	1"	N/A	2.0
77IH10122H		954530RI	Hardfaced			2.3
77IH10122C			F-Style Chrome		39F2388DE	4.0
77IH10122S	Booted	#10 Ripper	1" x 2" x 12"	1"		9.5
77IH10122SC		954530RI	F-Style Chrome		39F238120	13.7
77IH14122S	Booted	#14 Ripper	1" x 2-1/2" x 12"	1-1/4"	N/A	10.7
77IH14122SC						16.0
77IH34200	Booted	#14 Ripper	1" x 2-1/2" x 9-1/2"	1-1/4"	N/A	7.0
77IH34200H			Hardfaced			7.3
77IH342SC					37F278300	11.5
77IH34200C			F-Style Chrome		39F278120	11.8
77IH342BEC			BE-Style Chrome		39BE27812	12.5



77IH10122C



77IH34200SC

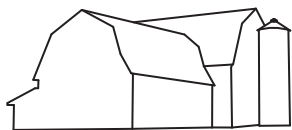


77JD12000

JOHN DEERE

Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Bolt Size	Hole Spacing	Chrome Insert	Weight
77JD12000	2-Hole	A17994	1" x 2" x 12"		1/2" @ 3"	N/A	4.0
77JD12000H	Bolt-On		Hardfaced				4.3
77JD12000C			¹ B-Style Chrome			39F238612	5.8
77JD120BEC			¹ BE-Style Chrome			39BE21470	6.8
77JD30681	2-Hole	Q30681	1" x 2-1/2" x 12"		5/8" @ 3"	N/A	7.0
77JD30681H	Bolt-On		Hardfaced				7.8
77JD30681C			¹ B-Style Chrome			39F278060	10.4
77JD30681BEC			¹ BE-Style Chrome			39BE27806	11.2

¹ Chrome Insert welded up to first bolt-hole.



SERIES 77 Subsoiler Points

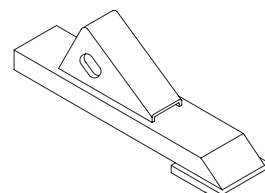
JOHN DEERE

Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Bolt Size	Hole Spacing	Chrome Insert	Weight
77JD39096	3-Hole	K-39096	1" x 2-1/2" x 14"	5/8"	@ 3"	N/A	8.5
77JD39096H	Bolt-On		Hardfaced				8.8
77JD39096C	Reversible		1F-Style Chrome			39F278030	11.8

1 Chrome Insert welded up to first bolt-hole.

JOHN DEERE BOOTED FOR SHANK

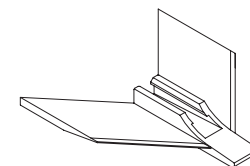
Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77JD342000	Booted	AA21507	1" x 2-1/2" x 12"	1-1/4"	N/A	7.0
77JD34200H			Hardfaced			7.3
77JD34200SC			1" x 2-1/2" x 12"	1-1/4"	39F278300	7.3
77JD34200C			F-Style Chrome		39F278120	11.8
77JD342BEC			BE-Style Chrome		39BE27812	12.5



77JD34200SC

LEHMAN COTTON POINTS

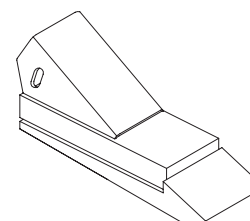
Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77B02D5BECW	Slip-On		1-3/4" x 7" with Wings		39BE21470	6.5



77B02D5BECW

MURRAY

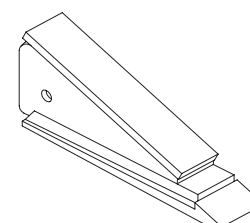
Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77MU12100	Booted	VC-2050	1" x 2" x 7-1/2"	1"	N/A	5.0
77MU12100H			Hardfaced			5.3
77MU12100C			F-Style Chrome		39F238712	6.8
77MU1210BEC			BE-Style Chrome		39BE21470	7.7
77MU12140	Booted	VC-2250	1" x 2" x 7-1/2"	1-1/4"	N/A	5.0
77MU12140H			Hardfaced			5.3
77MU12140C			F-Style Chrome		39F238712	6.8
77MU1214BEC			BE-Style Chrome		39BE21470	7.7
77MU1L000	Slip-On	1L0	5/8" x 1-5/8" x 6"	1"	N/A	2.0
77MU1L000H			Hardfaced			2.3
77MU1L000C			F-Style Chrome			5.4
77MU2000L						0.0
77MU2500C						0.0



77MU1210BEC

R & R

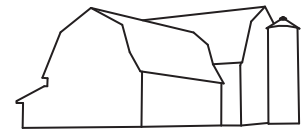
Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77RR15000	Booted		3/4" x 3" x 12"	1-1/2"	N/A	14.2
77RR15000H			Hardfaced			14.5



77RR150BEC

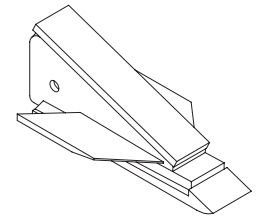
SERIES 77

Subsoiler Points



R & R (cont.)

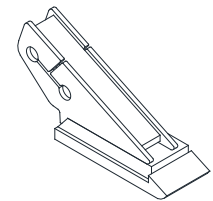
Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77RR150BEC	Booted		BE-Style Chrome		39BE31814R	19.8
77RR150BECW			with Wings		39BE31814R	19.8
77RR20000			1" x 3" x 12"	2"	N/A	14.8
77RR20000H			Hardfaced			15.2
77RR200BEC			BE-Style Chrome		39BE31814R	20.2
77RR200BECW			with Wings		39BE31814R	22.9



77RR150BECW

T.G. SCHMEISER

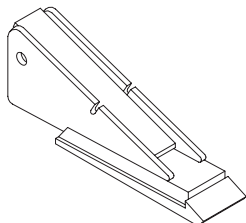
Part Number	Style	OEM Part Number	Dimesnsions* Tx W x L	Shank Width	Chrome Insert	Weight Each
77SM12500	Booted		3/4" x 2-1/2" x 8"	1-1/4"	N/A	9.4
77SM12500H			Hardfaced			9.7
77SM125BEC			BE-Style Chrome		39BE27812	13.8



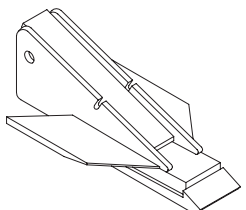
77SM125BEC

WILCOX

Part Number	Style	Description	Shank Width	Chrome Insert
77WI12500	Booted (3pc.)	1"x2-1/2"x12" Plain	1-1/4"	N/A
77WI12500H		HardFaced		N/A
77WI125BEC		BE-Style Chrome		39BE27812
77WI15000	Booted (3pc.)	1"x2-1/2"x12" Plain	1-1/2"	N/A
77WI15000H		HardFaced		N/A
77WI150BEC		BE-Style Chrome		39BE27812
77WI150BECW		with Wings		39BE27812
77WI2000	Booted (3pc.)	1"x3"x12" Plain	2"	N/A
77WI2000H		HardFaced		N/A
77WI200BEC		BE-Style Chrome		39BE33812
77WI200BECW		with Wings		39BE33812
77WI2030HH	Booted (3pc.)	1"x3"x16" Plain	2"	N/A
77WI20400H	Booted (3pc.)	1"x4"x12" Plain	2"	N/A
77WI20400HH	Booted (3pc.)	1"x4"x16" Plain	2"	N/A
77WI204BEC		BE-Style Chrome	2"	39BE43812
77WI204BECW		with Wings	2"	39BE43812
77WI204BECH		Heavy Duty BE-Style Chrome	2"	39BE43812
77WI212BEC	Booted (3pc.)	BE-Style Chrome	2-1/2"	39BE43812

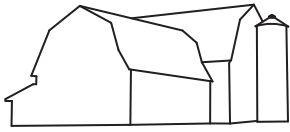


77WI50BEC



77WI50BECW

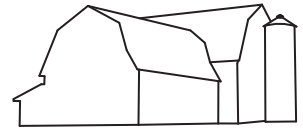
*** SEE PAGES 115 & 116 FOR MORE DETAIL OF WILCOX "STYLE" SHANK ASSEMBLIES.**



SERIES 77 Subsoiler Points

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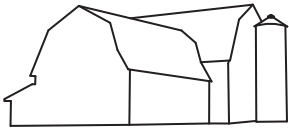


SERIES 77

Subsoiler Points

NOTES:

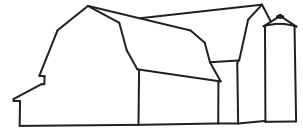
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SERIES 77 Subsoiler Points

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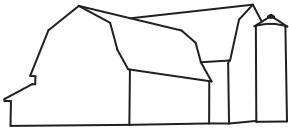


SERIES 77

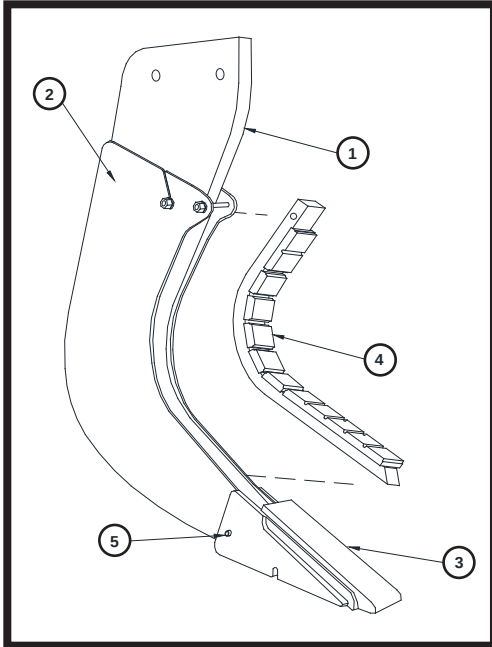
Subsoiler Points

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SERIES 78 Subsoiler Shanks

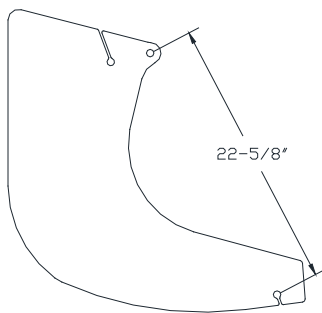


WILCOX RIPPER SHANKS

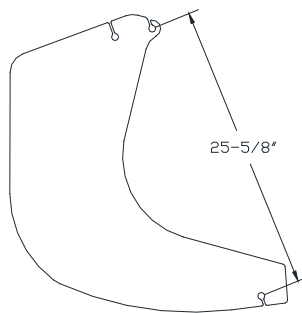
Part Number	Description	Shank Width
78WI15000	Plain Standard Shank	1-1/2"
78WI1505S	Complete w/Side Plates, Shin and Point	1-1/2"
78WI1500L	Plain Long Shank	1-1/2"
78WI1505SL	Complete w/Side Plates, Shin and Point	1-1/2"

WILCOX RIPPER SHANK SIDE PLATES AND SHINS

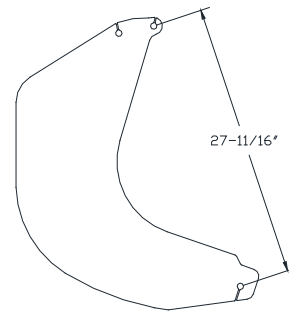
Part Number	Description	Shank Width
78WI000WP2	Fits 78WI15000 Shank	1-1/2"
78WI10145	Fits 78WI1500L Shank	1-1/2"
78WI60034		
78WI10083	Fits 78WI15000 Shank	1-1/2"
78WI10141	Fits 78WI1500L Shank	1-1/2"
78WI60046		



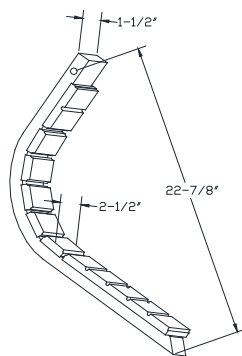
78WI000WP2 (1 Pair)



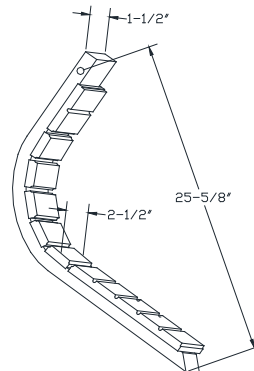
78WI10145 (1 Pair)



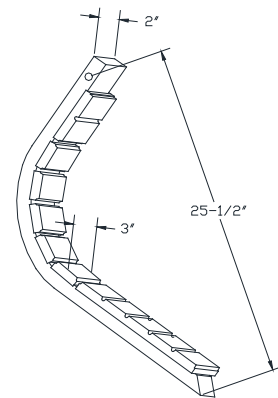
78WI60034 (1 Pair)



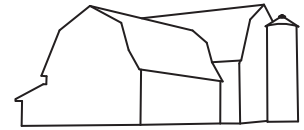
78WI10083



78WI10141

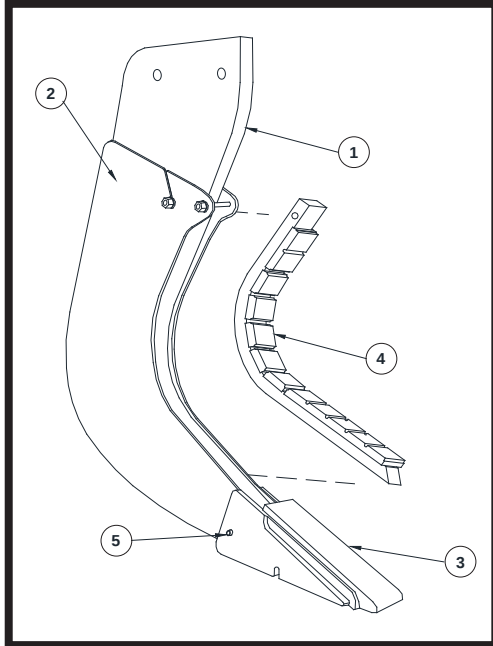


78WI60046

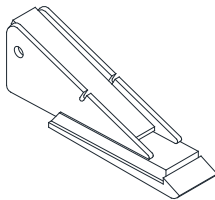


SERIES 78 Subsoiler Shanks

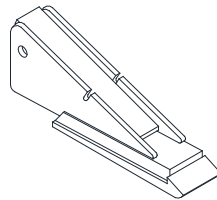
WILCOX RIPPER POINTS



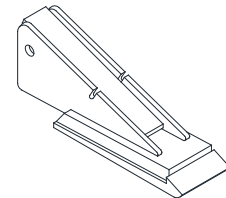
Part Number	Style	Description	Shank Width	Chrome Insert
77WI12500	Booted (3pc.)	1"x2-1/2"x12" Plain	1-1/4"	N/A
77WI12500H		HardFaced		N/A
77WI125BEC		BE-Style Chrome		39BE27812
77WI15000	Booted (3pc.)	1"x2-1/2"x12" Plain	1-1/2"	N/A
77WI15000H		HardFaced		N/A
77WI150BEC		BE-Style Chrome		39BE27812
77WI150BECW		with Wings		39BE27812
77WI2000	Booted (3pc.)	1"x3"x12" Plain	2"	N/A
77WI2000H		HardFaced		N/A
77WI200BEC		BE-Style Chrome		39BE33812
77WI200BECW		with Wings		39BE33812
77WI2030HH	Booted (3pc.)	1"x3"x16" Plain	2"	N/A
77WI20400H	Booted (3pc.)	1"x4"x12" Plain	2"	N/A
77WI20400HH	Booted (3pc.)	1"x4"x16" Plain	2"	N/A
77WI204BEC		BE-Style Chrome	2"	39BE43812
77WI204BECW		with Wings	2"	39BE43812
77WI204BECH		Heavy Duty BE-Style Chrome	2"	39BE43812
77WI212BEC	Booted (3pc.)	BE-Style Chrome	2-1/2"	39BE43812



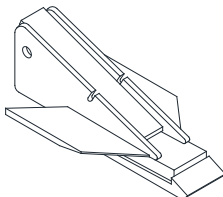
77WI150BEC



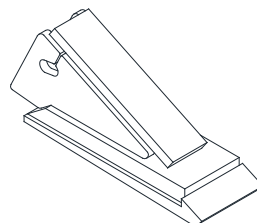
77WI200BEC



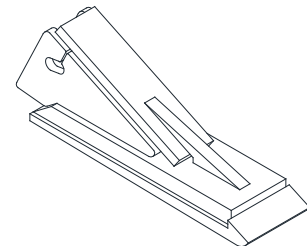
77WI204BEC



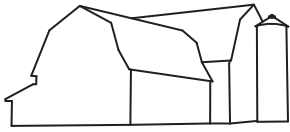
77WI150BECW



77WI212BEC



77WI204BECH



SERIES 78 Subsoiler Shanks

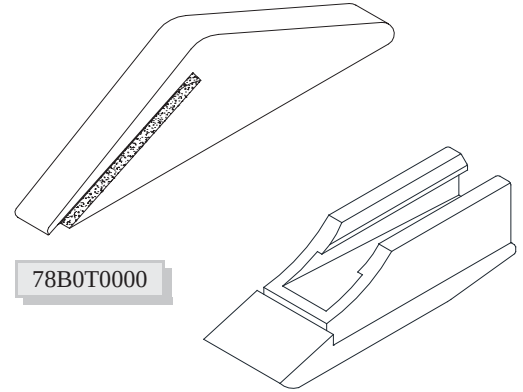
CHARACTERISTICS

Three styles of subsoiler shanks are available for the most popular West Coast O.E.M.'s. Two parabolic styles, cut and machined from 1" plow plate steel to O.E.M. specifications, and the other style formed from 1" x 3" plow steel, with all three available with wear extending hardfacing and/or chromium carbide shin guards.

REPLACEMENT POINTS

Replaceable subsoiler points sold separately are also available, each with many wear-extending options.

Please refer to Series 77 for further information on each point and style.



78B0T0000

77B02D5BEC

BIG OX

Part Number	Description
78B0S0000	1" parabolic shank ONLY with machined slot for slip-on replaceable subsoiler point
78B0S0000C	With chromium carbide shin guards (39SGR11414)
78B0S0000CH	With chromium carbide shin guards (39SGR11414) and hardfaced shank sides (criss-cross weld pattern)
78B0T0000	Weld-on replacement shank tip with machined slot for subsoiler point

Replacement Point 77B02D500 sold separately and available in many styles; please see Series 77.

SUNDANCE

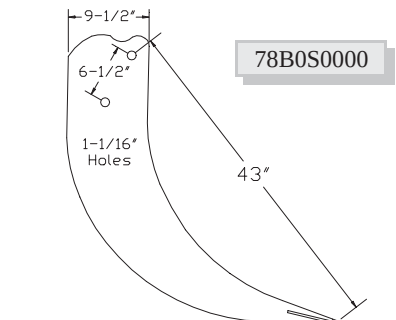
Part Number	Description
78SDS100	1" parabolic shank ONLY with drilled roll-pin hole for replaceable subsoiler point.
78SDS100C	With chromium carbide shin guards (39SGR11414)
78SDS100CH	With chromium carbide shin guards (39SGR11414) and hardfaced shank sides (criss-cross weld pattern)
78SDS1TIP	Weld-on replacement shank tip with drilled roll-pin hole for subsoiler point

Replacement Point 77BE342BEC sold separately and available in many styles; please see Series 77.

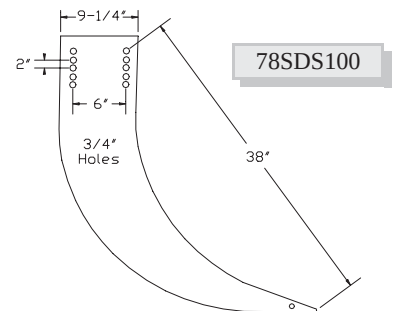
SUNDANCE - SHANK/GUARD ONLY

Part Number	Description
78SDS200	1" x 3" formed Shank Only (No Chrome or Point)
78SDS200C	With chromium carbide shin guards (39SGB11414) and point

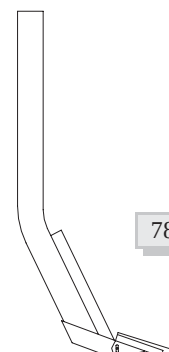
Replacement Point 77BE342BEC sold separately and available in many styles; please see Series 77.



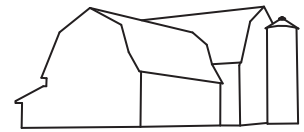
78B0S0000



78SDS100



78SDS200C



SERIES 78

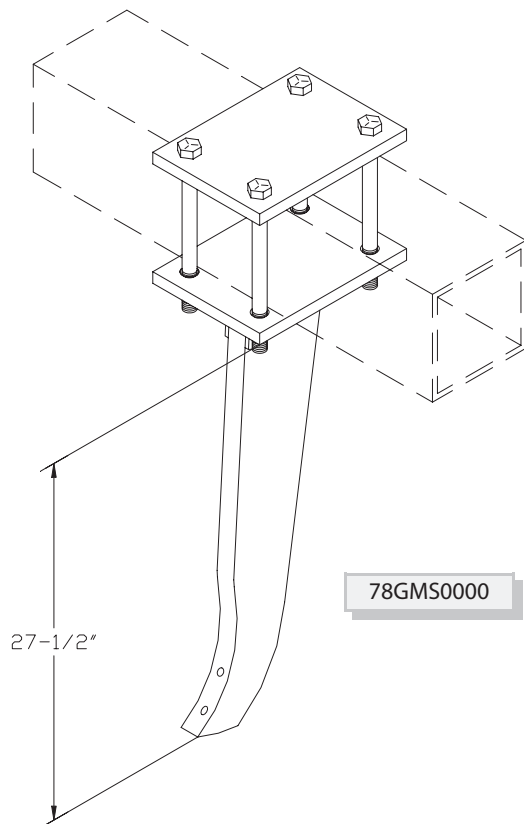
Subsoiler Shanks

CHARACTERISTICS

G&M heavy duty style chisel shanks come standard for a 5" x 7" Flat Bar. The shanks are made from 1-1/4" plow steel for heavy duty chiseling. There are more available bar sizes, so please check with your salesperson before ordering.

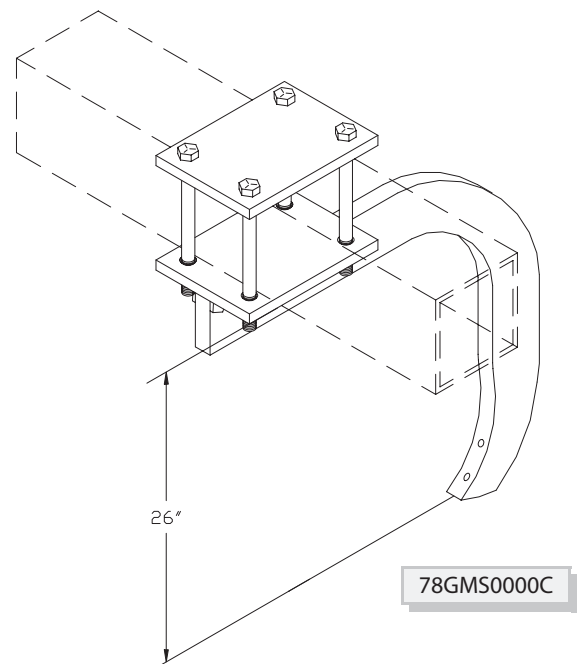
G&M Chisel Shank

(Straight)

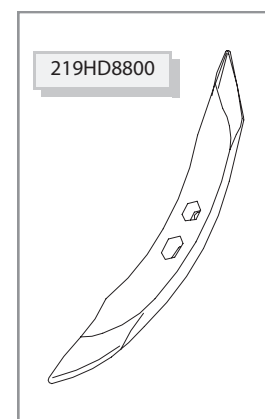


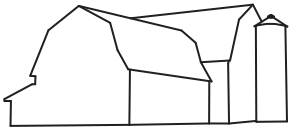
G&M Chisel Shank

(Curved)



Note Chisel point for both shanks is PAW Part No. 219HD8800 (pictured to the side)

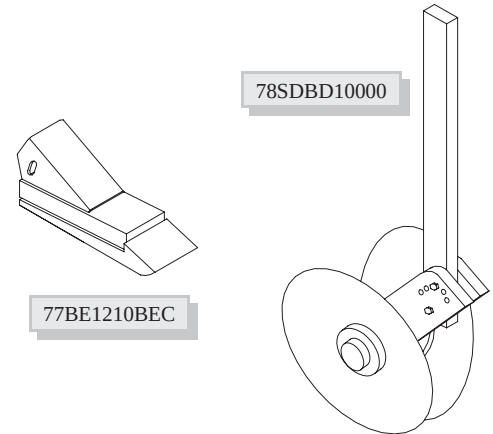




SERIES 78 Subsoiler Shanks

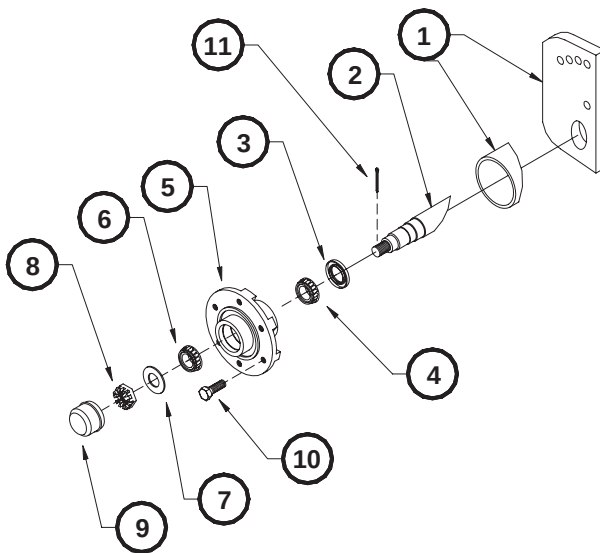
SUNDANCE BED DISC REPLACEMENT PARTS

Part Number	Description
10V246SUND	Blade Only
78SDBD100S	Shank Only
9728880AL	Hub Assembly (Left)
9728880AR	Hub Assembly (Right)

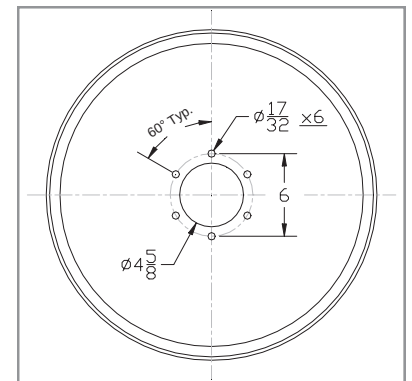


SUNDANCE BED DISC REPLACEMENT ASSEMBLY

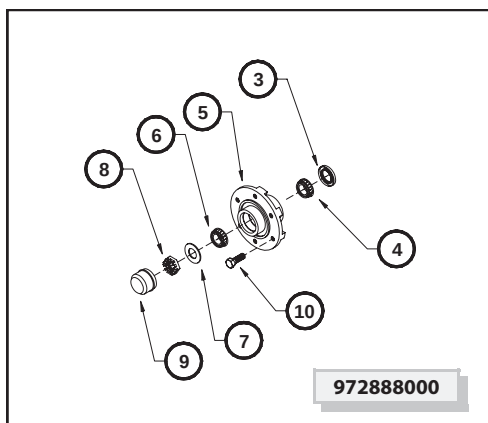
Hub with Bracket Assembly



COMPLETE ASSEMBLY	
972880AL/R	Left/Right Hand Assembly



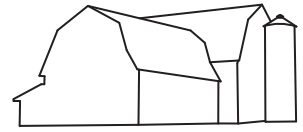
Hub Assembly Only



COMPONENT PARTS			
Ref.	Part No.	Description	Req.
1	9728880SD01R	Bracket/Backing Plate (RH)	
1	9728880SD01L	Bracket/Backing Plate (LH)	
2	9728880SD02	Axle	
3	9728880SD03	Seal	
4	9728880SD04	Inner Bearing	
5	9728880SD05	Hub without Inner Parts	
6	9728880SD06	Outer Bearing	
7	9728880SD07	Flat Washer	
8	9728880SD08	Castled Nut	
9	9728880SD09	Hub Cap	
10	9728880SD10	Lug Stud	
11	9728880SD11	Cotton Pin	

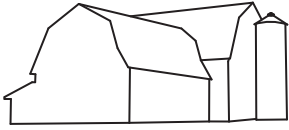
SERIES 78

Subsoiler Shanks



NOTES:

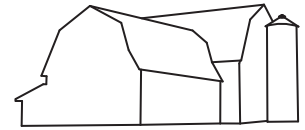
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SERIES 78 Subsoiler Shanks

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SERIES 79

Tool Bar and Steel

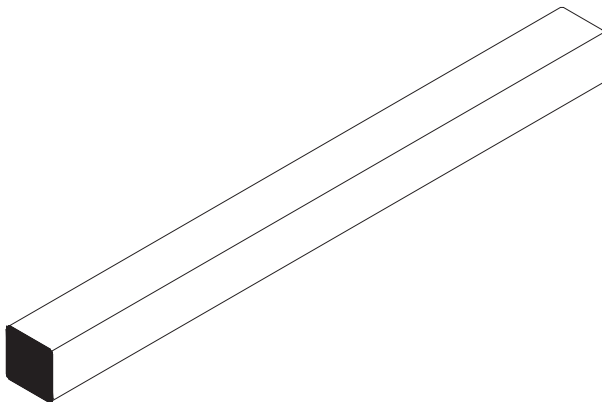
CHARACTERISTICS

2-1/4" x 2-1/4" square, round cornered C-1070 solid steel tool bar or 2-1/4" x 2-1/4" square, round cornered high quality 70/25 allow hollow steel with 1/4" wall tool bar. Tool bar is usually turned 45° on a diamond pattern for maximum strength. When ordering either solid or hollow tool bar, please specify length and quantity at time of order.

SOLID – 2-1/4" x 2-1/4" O.D.

17.21# p/ft.

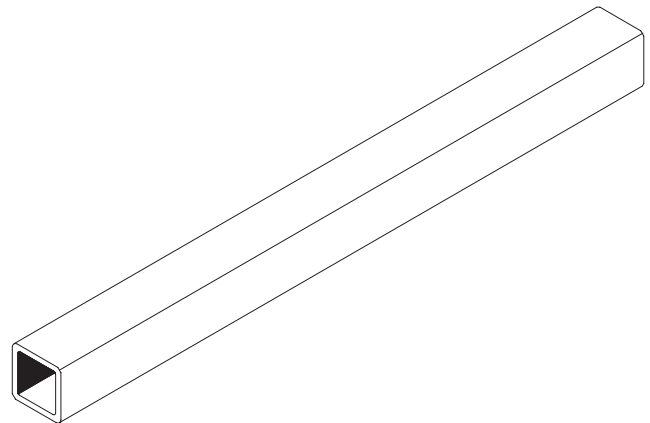
PAW Part Number	Length	Weight (lbs.)
79S214004	4'	69
79S214005	5'	86
79S214006	6'	104
79S214007	7'	121
79S214008	8'	138
79S214009	9'	155
79S214010	10'	173
79S214012	12'	207
79S214014	14'	241
79S214016	16'	276
79S214018	18'	310
79S214020	20'	345
79S214022	22'	379
79S214024	24'	414
79S214028	28'	482
79S214032	32'	551

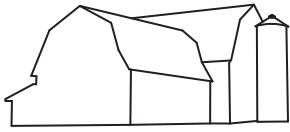


HOLLOW – 2-1/4" x 2-1/4" O.D.

7.01# p/ft.

PAW Part Number	Length	Weight (lbs.)
79H214004	4'	29
79H214005	5'	36
79H214006	6'	43
79H214007	7'	50
79H214008	8'	57
79H214009	9'	64
79H214010	10'	71
79H214012	12'	85
79H214014	14'	99
79H214016	16'	113
79H214018	18'	127
79H214020	20'	141
79H214022	22'	155
79H214024	24'	169
79H214028	28'	197
79H214032	32'	225

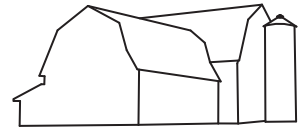




SERIES 79 Tool Bar and Steel

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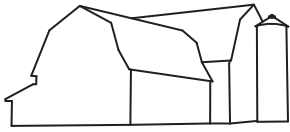


SERIES 79

Tool Bar and Steel

NOTES:

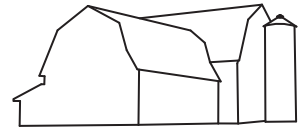
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SERIES 79 Tool Bar and Steel

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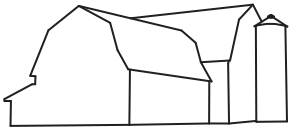


SERIES 79

Tool Bar and Steel

NOTES:

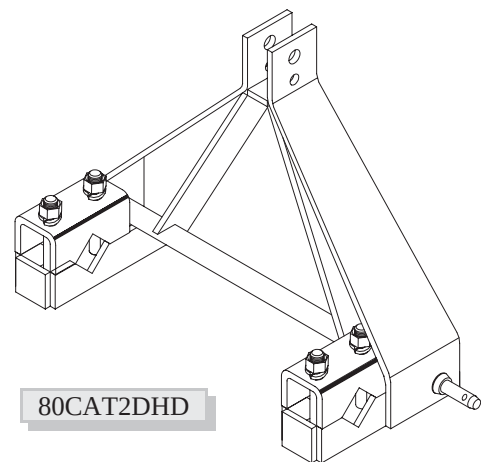
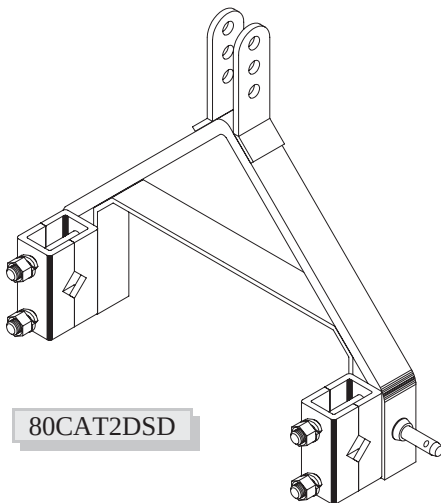
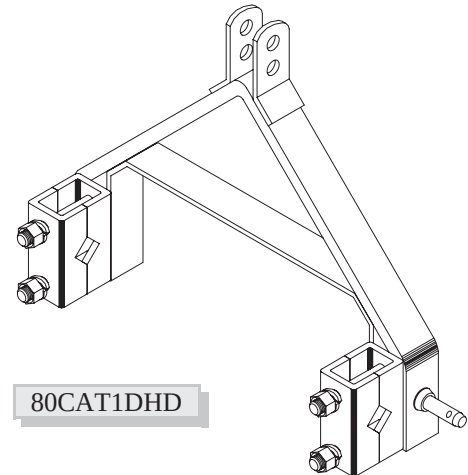
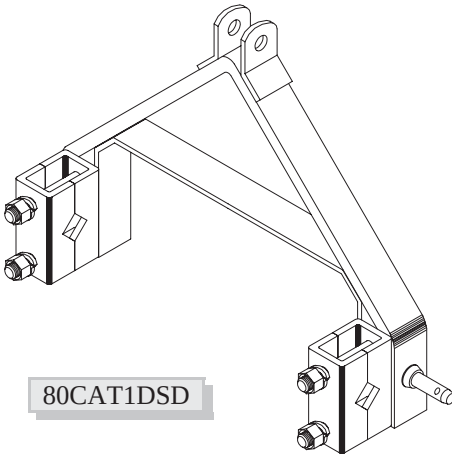
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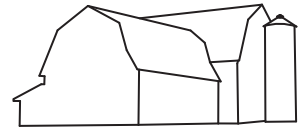
SERIES 80 A-Frames

CHARACTERISTICS

All A-frames are made from high quality steel with a heavy duty reinforced welded construction. All meet ASAE specifications. All lift pins and bolts are zinc plated. Additional lift pins and hardware are available - See Series 81.

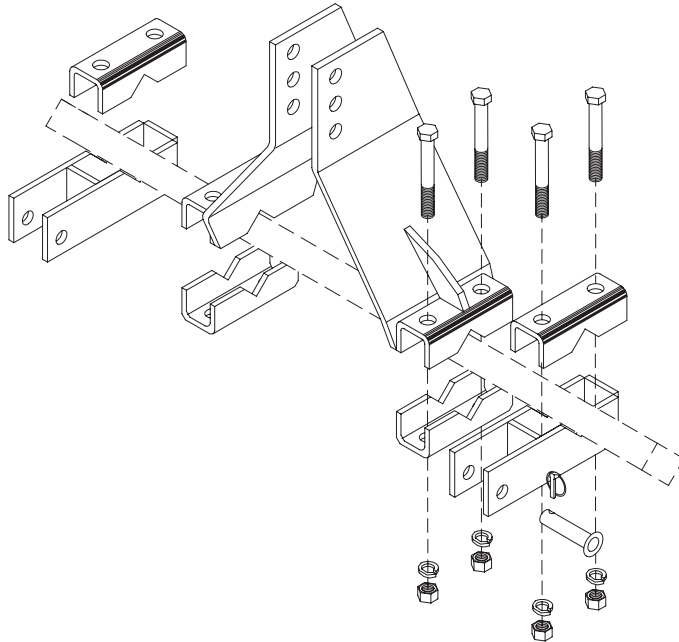


Part Number	Category	Frame	Lift pins	Clamp/Caps	Clamp Bolts	Lift Arm Spacing	Weight Each	Max HP
80CAT0DSD	0	5/8" x 2-1/2"	7/8"	766PC2458	3/4" x 6"	21-1/2"	48#	30hp
80CAT1DHD	I	1" x 3"	7/8"	768PC5458	1" x 7"	26"	92#	100hp
80CAT1DSD	I	3/4" x 3"	7/8"	766PC2458	3/4" x 7"	26"	64#	45hp
80CAT2DHD	II	1/2" x 3-5"	1-1/8"	768PC5458	1" x 7"	32"	136#	145hp
80CAT2DSD	II	1" x 3"	1-1/8"	768PC5458	1" x 7"	32"	104#	100hp
80CAT3DHD	III	5/8" x 3-8"	1-7/16"	768PC5458	1-1/4" x 7"	32"	240#	145+hp



SERIES 80 A-Frames

3-PIECE 2-1/4" DIAMOND BAR



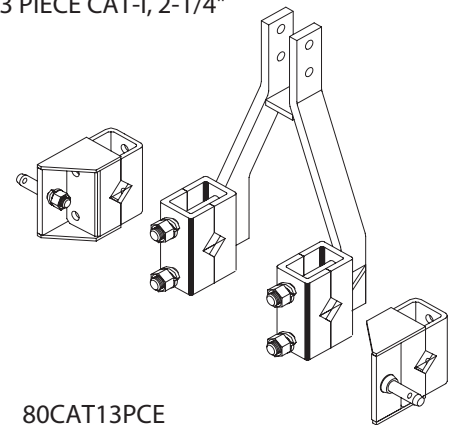
COMPLETE ASSEMBLY

3 PIECE CAT-II or CAT-III,
for 2-1/4" DIAMOND BAR

80CAT23PCE CATEGORY II, FOR 2-1/4" DIAMOND BAR

80CAT33PCE CATEGORY III, FOR 2-1/4" DIAMOND BAR

3 PIECE CAT-I, 2-1/4"



80CAT13PCE

COMPLETE ASSEMBLY

3 PIECE CAT-II or CAT-III,
for SQUARE BAR

80CAT23440 CATEGORY II, FOR 4"x4" FLAT BAR

80CAT23570 CATEGORY II, FOR 5"x7" FLAT BAR

80CAT23750 CATEGORY II, FOR 7"x5" FLAT BAR

80CAT23770 CATEGORY II, FOR 7"x7" FLAT BAR

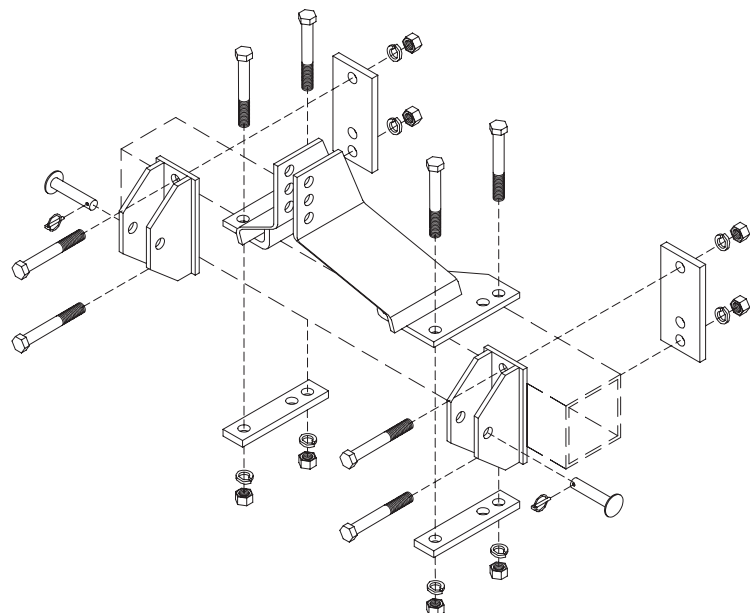
80CAT33440 CATEGORY III, FOR 4"x4" FLAT BAR

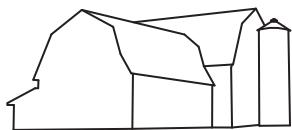
80CAT33570 CATEGORY III, FOR 5"x7" FLAT BAR

80CAT33750 CATEGORY III, FOR 7"x5" FLAT BAR

80CAT33770 CATEGORY III, FOR 7"x7" FLAT BAR

3-PIECE SQUARE (FLAT) BAR





SERIES 80 A-Frames & Quick Hitches



80CAT3QHH



80CAT2QHH



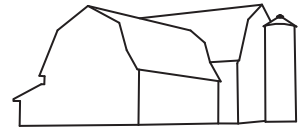
Quick Hitches

Part Number	Category	Maximum Recommended Horsepower	Weight Each
80CAT1QHO	Cat 1 Standard Duty	50	76
80CAT2QHO	Cat 2 Standard Duty	100	134
80CAT2QHH	Cat 2 Heavy Duty	225	160
80CAT3QHH	Cat 3 Heavy Duty	225	196

Note: Other sizes of quick hitches availability upon request.

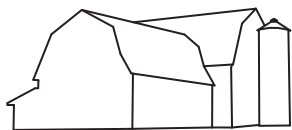
SERIES 80

A-Frames



NOTES:

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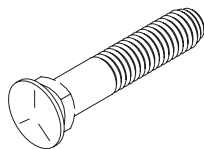
SERIES 76

Plow Bolts/Hardware

PLOW BOLTS

Flat Head

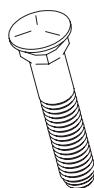
Grade 5, #3 Head, National
Coarse Thread



Part No.	Size	PKG. QTY.
811211200	1/2" x 1-1/2"	50
811220000	1/2" x 2"	50
811221200	1/2" x 2-1/2"	50
811221400	1/2" x 2-1/4"	50
811230000	1/2" x 3"	50
811231200	1/2" x 3-1/2"	25
813810000	3/8" x 1"	100
813811200	3/8" x 1-1/2"	100
813811400	3/8" x 1-1/4"	100
813813400	3/8" x 1-3/4"	100
813820000	3/8" x 2"	100
813821200	3/8" x 2-1/2"	100
813821400	3/8" x 2-1/4"	100
817161120	7/16" x 1-1/2"	50
817161140	7/16" x 1-1/4"	50
817161340	7/16" x 1-3/4"	50
817162000	7/16" x 2"	50
817162120	7/16" x 2-1/2"	50
817162140	7/16" x 2-1/4"	50
817163000	7/16" x 3"	50
817163120	7/16" x 3-1/2"	50

SPECIAL HEAD PLOW BOLTS

This plow bolt has a #3-7/16" head with a 3/8" threaded body. 1-1/2" or 1-3/4" long. To use with sweeps that have a 7/16" hole punching and to fit 3/8" shank holes.

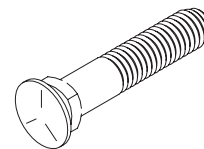


Part No.	Size	PKG. QTY.
817163812	7/16" x 3/8" x 1-1/2"	50
817163834	7/16" x 3/8" x 1-3/4"	50

PLOW BOLTS

Dome Head

Grade 5, #3 Head, National
Coarse Thread

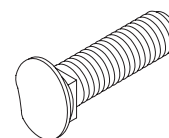


Part No.	Size	PKG. QTY.
813420000	3/4" x 2"	25
813421200	3/4" x 2-1/2"	25
813421400	3/4" x 2-1/4"	25
813423400	3/4" x 2-3/4"	25
813430000	3/4" x 3"	25
813431200	3/4" x 3-1/2"	25
813440000	3/4" x 4"	25
813441200	3/4" x 4-1/2"	25
813450000	3/4" x 5"	25
815813400	5/8" x 1-3/4"	50
815820000	5/8" x 2"	50
815821200	5/8" x 2-1/2"	25
815821400	5/8" x 2-1/4"	50
815823400	5/8" x 2-3/4"	25
815830000	5/8" x 3"	25
815831200	5/8" x 3-1/2"	25
815840000	5/8" x 4"	25
815841200	5/8" x 4-1/2"	25

CLIPPED HEAD

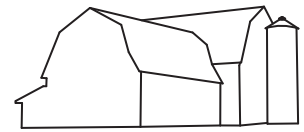
Plow Bolts

Grade 5, #3 Head, National
Coarse Thread



Part No.	Size	PKG. QTY.
811213800C	1/2" x 1-3/8"	50
813811400C	3/8" x 1-1/4"	50
817161120C	7/16" x 1-1/2"	50
817161140C	7/16" x 1-1/4"	50

Bolts, Hardware, and Special Sets are continued on following pages.



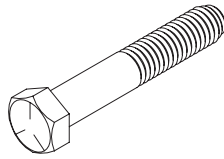
SERIES 81

Plow Bolts/Hardware

CAP SCREWS

Zinc Plated

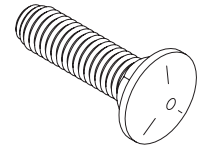
Grade 5, #3 Head, National
Coarse Thread



Part No.	Size	PKG. QTY.
81CS38112	3/8" x 1-1/2"	100
81CS38200	3/8" x 2"	100
81CS51610	5/16" x 1"	100
81CS716112	7/16" x 1-1/2"	50
81CS716114	7/16" x 1-1/4"	50
81CS716214	7/16" x 2-1/4"	50
81CS716300	7/16" x 3"	50
81CS12212	1/2" x 2-1/2"	50
81CS12300	1/2" x 3"	50
81CS58112	5/8" x 1-1/2"	50
81CS58134	5/8" x 1-3/4"	50
81CS58200	5/8" x 2"	50
81CS58234	5/8" x 2-3/4"	25
81CS58300	5/8" x 3"	25
81CS58314	5/8" x 3-1/4"	25
81CS58318	5/8" x 3-1/8"	25
81CS58600	5/8" x 6"	25
81CS58712	5/8" x 7-1/2"	25
81CS58912	5/8" x 9-1/2"	25
81CS34200	3/4" x 2"	25
81CS34234	3/4" x 2-3/4"	25
81CS34312	3/4" x 3-1/2"	25
81CS34600	3/4" x 6"	25
81CS34612	3/4" x 6-1/2"	25
81CS34700	3/4" x 7"	25
81CS34712	3/4" x 7-1/2"	25
81CS34800	3/4" x 8"	25
81CS34900	3/4" x 9"	25
81CS78200	7/8" x 2"	25
81CS78300	7/8" x 3"	25
81CS78312	7/8" x 3-1/2"	25
81CS78512	7/8" x 5-1/2"	25
81CS78700	7/8" x 7"	25
81CS78800	7/8" x 8"	25
81CS16000	1" x 6"	20
81CS17000	1" x 7"	20
81CS18000	1" x 8"	20

CARRIAGE BOLTS

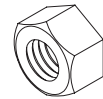
Zinc Plated



Part No.	Size	PKG. QTY.
81CB38100	3/8" x 1"	100
81CB516114	5/16" x 1-1/4"	100
81CB716112	7/16" x 1-1/2"	100

HEX NUTS

Zinc Plated



National Coarse Thread

Part No.	Size	PKG. QTY.
81HN51600	5/16" - 18	50
81HN38000	3/8" - 16	25
81HN71600	7/16" - 14	25
81HN12000	1/2" - 13	25
81HN58000	5/8" - 11	25
81HN34000	3/4" - 10	20
81HN78000	7/8" - 9	15
81HN10000	1" - 8	10
81HN11400	1-1/4" - 7	10

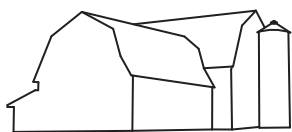
LOCK WASHERS

Medium Plated



Part No.	Size	PKG. QTY.
81LW51600	5/16" - 18	100
81LW3800	3/8" - 16	100
81LW71600	7/16" - 14	100
81LW12000	1/2" - 13	100
81LW58000	5/8" - 11	100
81LW34000	3/4" - 10	100
81LW78000	7/8" - 9	100
81LW10000	1" - 8	100
81LW11400	1-1/4" - 7	100

Continued on next page.



SERIES 81

Plow Bolts/Hardware

FLAT WASHERS

Plated

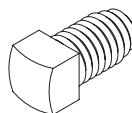


Available in 1# Bulk Only

Part No.	Size	PKG. QTY.	Part No.	Size	PKG. QTY.
81FW10000	1"	100	81FW11400	1-1/4"	100
81FW12000	1/2"	100	81FW34000	3/4"	100
81FW38000	3/8"	100	81FW51600	5/16"	100
81FW58000	5/8"	100	81FW71600	7/16"	100
81FW78000	7/8"	100			

SET SCREW

Steel Sq. Head



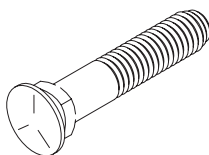
Cup Point

Part No.	Size	PKG. QTY.	Part No.	Size	PKG. QTY.
81SS38112	3/8" x 1-1/2"	100	81SS38200	3/8" x 2"	100
81SS38300	3/8" x 3"	100	81SS51620	5/16" x 2"	100
81SS58112	5/8" x 1-1/2"	50	81SS58212	5/8" x 2-1/2"	50

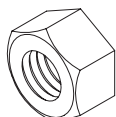
SPECIAL HARDWARE SETS

See below for specific description and application with various PAW parts. All hardware sets include nuts or washers.

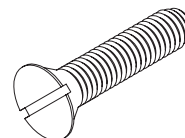
Part #	Description	Application	PKG. QTY.
39A68HDWR	3/8" x 1-3/4" Cap Screw (N.C. Thread, GR 5, Plated) 3/8" NY-Lock Nut, Neoprene Shim	Series 39 - Chromium Carbide Sweeps	25
55BD38000	10mm x 38mm Concave Head Danish Bolt with Nut	Series 55 - Sweeps/Spikes	50
55BD38045	10mm x 45mm Concave Head Danish Bolt with Nut	Series 55 - Sweeps/Spikes	50
81MS516114	5/16" x 1-1/4" Flat Head Machine Screen (Stove Bolt)	39CCP1000	50
81MSN5160	5/16" N.F. Thread Square Nut	70WPJD100	50



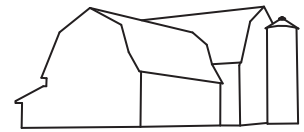
55BD38000



81MSN5160



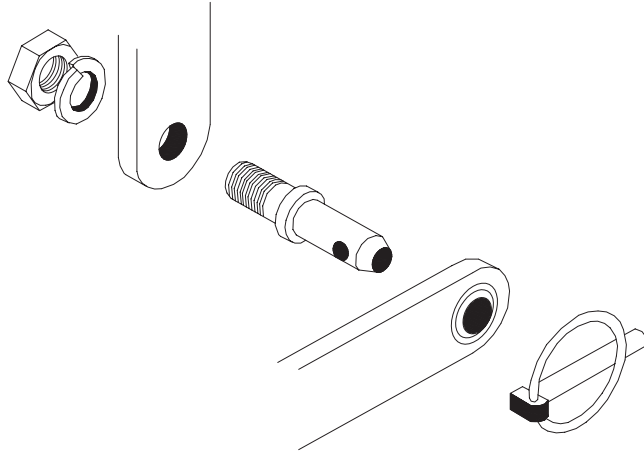
81MS516114



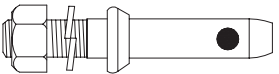
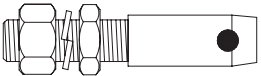
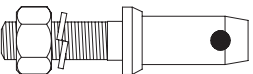
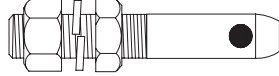
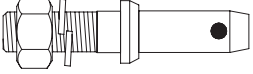
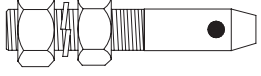
SERIES 81 Linkage Pins

LIFT ARM PINS

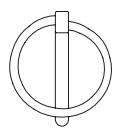
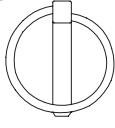
Includes Nut & Lockwasher



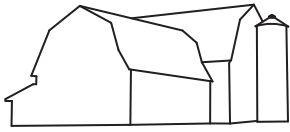
CATEGORY	DIAMETER
0	5/8"
1	7/8"
2	1-1/8"
3	1-7/16"

	Part No.	Description	WT. Each
	81PF72800	Category 1 Forged 7/8" dia. Pin x 7/8" NF thread x 5-1/2" overall length	1.0
	81PA72400	Category 1 to 2 Adjustable 1-1/8" dia. Pin x 7/8" NF thread x 5-3/16" overall length	1.3
	81PF72400	Category 1 to 2 Forged 1-1/8" dia. Pin x 7/8" NF thread x 5-1/4" overall length	1.5
	81PA72200	Category 1 Adjustable 7/8" dia. Pin x 7/8" NF thread x 5-5/16" overall length	2.0
	81PF72120	Category 2 Forged 1-1/8" dia. Pin x 1-1/8" NF thread x 6-1/4" overall length	2.0
	81PA72100	Category 2 Adjustable 1-1/8" dia. Pin x 1-1/8" NF thread 6-1/4" overall length	2.0

FORGED LINCH PINS

	Part No.	Description	WT. Each
	81P790000	1/4" Standard Fits Category 1 & 2	0.1
	81P791000	7/16" Standard Fits Category 1 & 2. Most popular linch pin 1746(H) 2704(F)	0.2

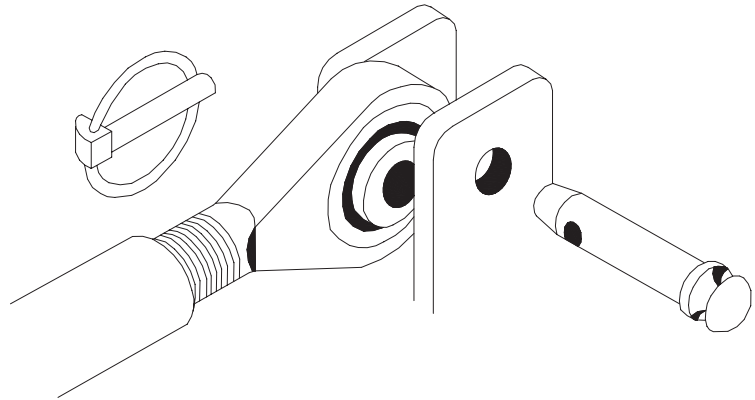
Part Reference - Similar in (H) Highland or (F) Farmex



SERIES 81 Linkage Pins

TOP LINK PINS

CATEGORY	DIAMETER
0	5/8"
1	3/4"
2	1"
3	1-1/4"



	Part No.	Description	WT. Each
	81P772000	Category 1 3/4" dia. Pin x 5-5/8" overall x 4-1/8" usable length	0.8
	81P774000	Category 2 1" dia. Pin x 6" overall - 4-9/16" usable length	1.3
	81P771000	Category 1 Adjustable 7/8" dia. Pin x 7/8" NF thread x 5-5/16" usable length	2.0

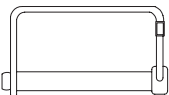
HEAVY DUTY CLEVIS MOUNT LIFT PIN

	Part No.	Description	WT. Each
	81P303100	Category 2 1-1/8" dia. Pin x 5-3/16" overall - 3-3/8" usable length. 2029 (H)	1.4

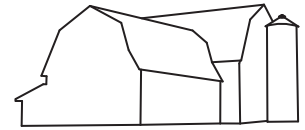
HYDRAULIC CYLINDER PINS

	Part No.	Description	WT. Each
	81P181106	Category 1 1-1/8" dia. Pin x 3-7/16" overall - 2-3/4" usable length	0.8

PTO ADAPTORS

	Part No.	Description	WT. Each
	81P38214S	PTO Lock Pin 5/16" dia. Pin x 2-1/4" usable	0.2

Part Reference - Similar in (H) Highland or (F) Farmex

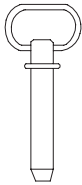


SERIES 81

Linkage Pins

FORGED HITCH PINS

Premium quality, one-piece hot FORGED steel

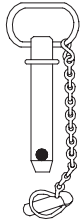


Part No.	Description	WT. Each
81P148900	6-1/4" usable length 3/4" Diameter x 9" Overall length	1.4
81P178900	6-1/4" usable length 1" Diameter x 9" Overall Length	1.8
81P178800	6-1/4" usable length 7/8" Diameter x 9" Overall Length	

Above Hitch Pins do not include Linch Pins.

FORGED HITCH PINS # 2

Premium quality, one-piece hot FORGED steel



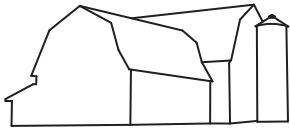
Part No.	Description	WT. Each
81P148910	6-1/4" usable length 3/4" Diameter x 9" Overall length	1.4
81P178910	6-1/4" usable length 1" Diameter x 9" Overall Length	1.8
81P178810	6-1/4" usable length 7/8" Diameter x 9" Overall Length	

Above Hitch Pins do not include Linch Pins.

FORGED TOP LINKS



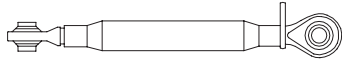
Part No.	Description	WT. Each
81TL16500	Category 1 - 16" Body 3/4" pin holes, 1-1/8" dia. thread adjusts from 10-1/2" - 29"	
81TL16600	Category 1 - 20" Body 3/4" pin holes, 1-1/8" dia. thread adjusts from 24-1/2" - 33"	



SERIES 81

Linkage Pins

FORGED TOP LINKS (Cont.)



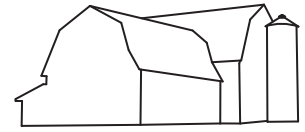
Part No.	Description	WT. Each
81TL17400	Category 2 - 16" Body 1" pin holes, 1-1/8" dia. thread adjusts from 21" - 33"	
81TL17600	Category 2 - 20" Body 1" pin holes, 1-1/8" dia. thread adjusts from 25" - 37"	
Part Reference - Similar in (H) Highland or (F) Farmex.		

STABILIZER ARMS

Part No.	Description	WT. Each
81SA15800	Category 1 Heavy Duty Adjustable (RH/LH) One piece FORGED ends - No welds to break adjusts from 27-1/2" - 35" 7/8" pin holes, 7/8" treads 1783(H), SA624(S), SA6260(S), AK57(W)	

ONE-PIECE HIGH TENSILE DRAWBARS

Part No.	Description						
	Category	Lift Arm Spacing	No Of Holes	Hole Diameter	Pin Diameter	Thickness	Width
81DB41100	Cat 1	26"	11	3/4"	7/8"	1"	2-1/2"
81DB41900	Cat 1	20"	7	3/4"	7/8"	1"	2-1/2"
81DB42100	Cat 2	26"	11	3/4"	1-1/8"	1-1/4"	3"



SERIES 82

Flail Mower Knives & Hardware

CHARACTERISTICS

A wide variety of flail mower knives and hangers of the most popular West Coast O.E.M. models are available. All parts are made from special heat-treated alloys and are interchangeable with specific O.E.M. machines. All parts are domestically manufactured, except where imported varieties are listed as alternatives.

OPTIONAL WEAR-EXTENDING STYLES

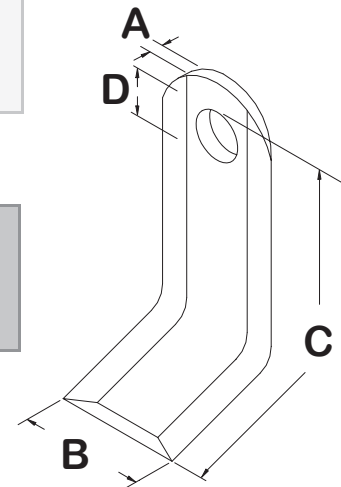
FLAIL KNIVES ONLY

Wear Coat - Add "W" to end of part number

It is not recommended to mix durafaced style flail mower knives with plain style, due to critical balance aspects of mower drums.

Refer to Product Info pages in catalog preface section for further explanations and descriptions of available options.

A: Thickness
B: Width
C: Length
D: Hole Diameter



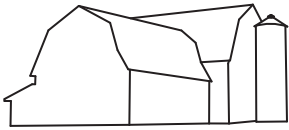
FLAIL MOWER KNIVES

82A636300					
Cross:	<i>Clean Cutter s</i> (CL505300011) <i>Good Eart h</i> (GE503-P) <i>Rau</i> (505-3-0001) <i>Wasco</i> (6021-636) <i>Woods - Allowa y</i> (505-3-0001)				
Uses:	D-Ring (82A705300) Hangers (82A743300)				
A	B	C	D		
1/4"	2"	7-5/8"	5/8"	WT: 0.95	

82D202700					
Cross:	<i>Clean Cutter s</i> (6021-901) <i>Dandl</i> (SA2027) <i>Good Eart h</i> (GE901) <i>Rears</i> (FL960) <i>Vrisimo</i> (CD2100) <i>Wasco</i> (6021-901P)				
Uses:	D-Ring (82D2026HD) Oval Ring (82V48309) D-Ring (82D202600) Hangers (82R48311)				
A	B	C	D		
3/16"	2"	3-15/16"	5/8" SLOT	WT: 0.40	

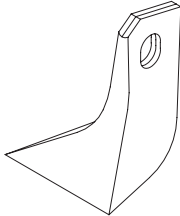
82B604000					
Cross:	<i>Balzer</i> (12357) <i>Buffalo</i> (11040039) <i>Clean Cutter s</i> (6021-604) <i>Fox Brady</i> (65143) <i>Old Case, Hiniker</i> (000-65143) <i>Schultz-Masse y</i> (180)				
Uses:	D-Ring (82A705300)				
A	B	C	D		
1/4"	1-15/16"	5-7/8"	5/8"	WT: 0.75	

82D203900					
Cross:	<i>Clean Cutter s</i> (6021-914) <i>Dandl</i> (SA2039) <i>Good Eart h</i> (GE914) <i>Vrisimo</i> (CD2200) <i>Wasco</i> (6021-914P)				
Uses:	D-Ring (82D2026HD) Hangers (82D48311)				
A	B	C	D		
3/16"	2"	6-3/4"	5/8"	WT: 0.55	



SERIES 82

Flail Mower Knives & Hardware

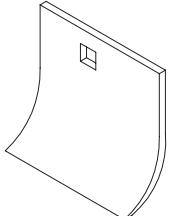
82D204200		SCOOP KNIVES	
Cross:	Clean Cutter s(6022-709) Dandl(2042) Deere(E31900) Mighty Max Vrisimo(CD2135) Wasco (6021-709)		
Uses:	D-Ring (82D2026HD) Oval Ring (82V48309) Oval Ring (82V48309L)		
A	B	C	D
1/8"	2-3/4"	4-3/4"	3/4" SLOT
WT: 0.40			

82I899000	
Cross:	IHC (491096R1)
Uses:	
A	B
1/4"	1-15/16"
C	D
9-3/4"	1"
WT: 1.30	

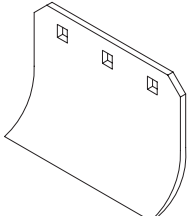
82D606300	
Cross:	Clean Cutter s(6021-606) Dandl(R2560) Good Earth(GE606) Wasco (6021-606P)
Uses:	D-Ring (82D2026HD) Hangers (82D48311)
A	B
3/16"	2-1/2"
C	D
6-5/8"	7/8"
WT: 0.80	

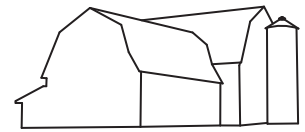
82J875000	
Cross:	Balzer(24153) Clean Cutter s(6021-875) Deere(E48308) Loftness(S330050V) UFT(50800037) Wasco (6021-875)
Uses:	Hangers (82JD73700) Hangers (82L704000)
A	B
5/16"	2-1/2"
C	D
5-3/4"	3/4"
WT: 1.15	

82FL30800	
Cross:	BHC Clean Cutter s(430083) Falc Short(430083) Nobili
Uses:	Bushing (82FL30800B)
A	B
3/8"	2-1/4"
C	D
7"	1"
WT: 1.37	

82L702000		SCOOP KNIVES
Cross:	Clean Cutters (6022-702) Loftness (8022)	
Uses:	Hangers (82L704000) Square Ring (82L50300) Hangers (82JD73700)	
A	B	C
1/4"	4-1/2"	4-3/4"
D	1/2" SQ	
WT: 1.35		

82FL30800L	
Cross:	Clean Cutter s(430151) Falc Long(430151) Maschio(CD2500) Nobili
Uses:	Bushing (82FL30800B)
A	B
3/8"	2-1/4"
C	D
8-3/16"	1"
WT: 1.37	

82M735000		SCOOP KNIVES
Cross:	Clean Cutter s(MATTH) Good Earth(MATTH) Mathews(15208) Servis-Rhino Wasco (6022-735P)	
Uses:	Special Carriage bolt & nut	
A	B	C
3/16"	6-1/4"	4-1/8"
D	3/8" SQ	
WT: 1.45		



SERIES 82

Flail Mower Knives & Hardware

82M996300

Cross: *Befco* (40 Series)
Clean Cutter s (CL100759)
Maschio (404-00-416)
Mott
Wasco (6021-996P)

Uses:

A	B	C	D	WT:
3/16"	1-3/4"	3-7/8"	1-1/16" SLOT	0.25

82S309000

Cross: *Balzer* (X31440)
Clean Cutter s (CCJ8253)
Sukup (SC15B)

Uses: **Bushing (82S30900B)**

A	B	C	D	WT:
5/16"	2-1/2"	7"	1"	1.28

82R309000L

Cross: *Clean Cutter s* (FL940)
Good Eart h (GE940-P)
Rears (FL946)
Wasco (6021-946P)

Uses: **Hangers (82R994750)**

A	B	C	D	WT:
5/16"	2-1/2"	5-3/4"	3/4"	1.03

82V309000

Cross: *Good Eart h* (GE601-P)
Visimo (CD2185)
Wasco (6021-601P)

Uses: **Hangers (82V602000)**
Bushing (82VCD2175)

A	B	C	D	WT:
5/16"	2-1/2"	7"	15/16"	1.28

82R309000S

Cross: *Clean Cutter s* (FL930)

Uses: **Hangers (82R994750)**

A	B	C	D	WT:
5/16"	2-1/2"	4-3/4"	3/4"	0.95

82RFL8041T

Cross: *Rears*

Uses: **82RFL8041B Bushing**
82RFL8041HK Hardware Kit

A	B	C	D	WT:
5/8"	3-3/4"	6-5/8"	1-1/4"	3.27

82RHF3400 **FLAIL HAMMERS**

Cross: *Clean Cutter s* (RM-01)
Cosmag
Humus
Maletti
Rears

Uses: **20 mm (nut & bolt)**

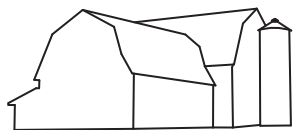
A	B	C	D	WT:
6"	2-3/8"	3-1/2"	3/4"	3.00

82LF58397C **FLAIL HAMMERS**

Cross: *Loftness*

Uses: **82LF58397B**

A	B	C	D	WT:
5/8"	3"	10"	1-1/4"	4.93



SERIES 82 Flail Mower Knives & Hardware

BUSHINGS

82D606300B

Cross: No Cross

Uses: Flail (82D606300)

A	B	C
.88"	.63"	.49"

82RFL8041B

Cross: No Cross

Uses: Flail (82RFL8041T)

A	B	C
1.25"	.65"	.72"

82FL30800B

Cross: 61137

Uses:

A	B	C
.98"	.65"	.90"

82S30900B

Cross: 31453

Uses: Flail (82S309000)

A	B	C
1"	.65"	.75"

82FL30800B0

Cross: 31454

Uses:

A	B	C
1.25"	.65"	.87"

82VCD2175

Cross: Clean Cutter s(CD2175)
Good Earth (GE8037)
Vrisimo (CD2175)

Uses: Flail (82V309000)

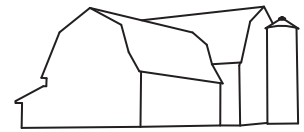
A	B	C
.86"	.63"	.63"

82LF58397B

Cross: No Cross

Uses:

A	B	C
1.25"	.65"	.72"



SERIES 82

Flail Mower Knives & Hardware

HANGERS BOLT-ON

82A743300

Cross: (6023-743)
Alloway (505-3-0014)
Clean Cutter s(6024-743)
Good Eart h(GE505-3-0014)

Uses: **Flail (82A636300)**

82R48311

Cross: Clean Cutter s(6024-742)
Good Eart h(GE921)
Rears (FL921)

Uses: **Side Knife (82D202700)**
Scoop Knife (82D204200)

82D48311

Cross: Clean Cutter s(6024-722)
Dandl (SA2016-1HD)
Good Eart h(GE722)
Vrisimo
Wasco (6024-722)

Uses: **Side Knife (82D606300)**
Side Knife (82D203900)

82R994750

Cross: Clean Cutter s(FL944)
Good Eart h(GE944)
Rears (FL944)

Uses: **Flail (82R309000S)**
Flail (82R309000L)

82JD73700

Cross: Clean Cutter s(6024-737)
Deere (E48305)

Uses: **Scoop Knife (82L702000)**
Flail (82J875000)

82V602000

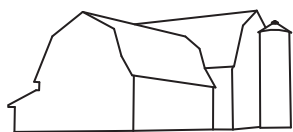
Cross: Clean Cutter s(6024-602)
Good Eart h(GE8034)
Vrisimo (CD2165)
Wasco (6021-602)

Uses: **Flail (82V309000)**

82L704000

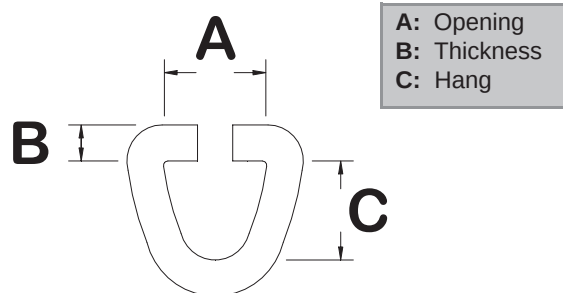
Cross: Brent (9001191)
Clean Cutter s(6023-704)
Deere (E48307)
Loftnes s(S330070V)

Uses: **Scoop Knife (82L702000)**
Flail (82J875000)

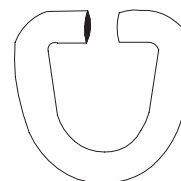


SERIES 82 Flail Mower Knives & Hardware

RINGS

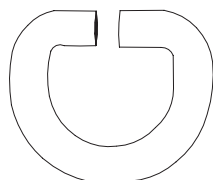


82D2026HD			
Cross:	<i>Clean Cutter s(6023-706)</i> <i>Dandl (SA2021)</i> <i>Good Earth (GE706)</i> <i>Wasco (6023-706)</i>		
Uses:	Scoop Knife (82D204200) Side Knife (82D203900) Side Knife (82D606300) Side Knife (82D202700)		
	A	B	C
	1-1/2"	.500 gage	1-3/8"
			WT: 0.36



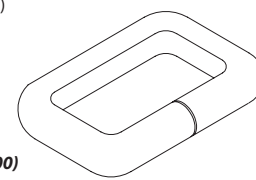
D-Ring

82A704300			
Cross:	<i>Clean Cutter s(6023-704)</i> <i>Wasco (6023-704P)</i>		
Uses:	Flail (82J875000)		
	A	B	C
	2-1/2"	.562 gage	1-15/16"
			WT: 0.57



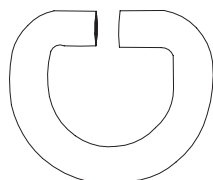
D-Ring

82L50300			
Cross:	<i>Clean Cutter s(6023-503)</i>		
Uses:	Scoop Knife (82L702000)		
	A	B	C
	2-5/16"	.531 gage	1-1/16"
			WT: 0.34



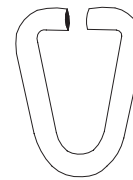
Square Ring

82A705300			
Cross:	<i>Alloway (505-3-0008)</i> <i>Balzer (12356)</i> <i>Buffalo (18020019)</i> <i>Clean Cutter s(6023-708)</i> <i>Fox Brady(65142)</i> <i>Good Earth h(GE505-3-0008)</i> <i>Wasco (6023-705)</i>		
Uses:	Flail (82A636300) Flail (82B604000)		
	A	B	C
	1-11/16"	.531 gage	1-1/4"
			WT: 0.40



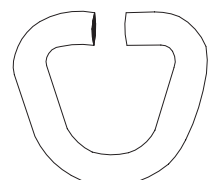
D-Ring

82V221580			
Cross:	<i>Good Earth h(GEV)</i> <i>Wasco (6023-710)</i>		
Uses:			
	A	B	C
	7/16"	3-1/8"	2-1/4"
			WT: 0.34

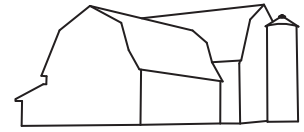


D-Ring

82D202600			
Cross:	<i>Clean Cutter s(6023-707)</i> <i>Good Earth h(GE707)</i> <i>Wasco (6023-709)</i>		
Uses:	Side Knife (82D202700)		
	A	B	C
	1-1/2"	.434 gage	1-3/16"
			WT: 0.30



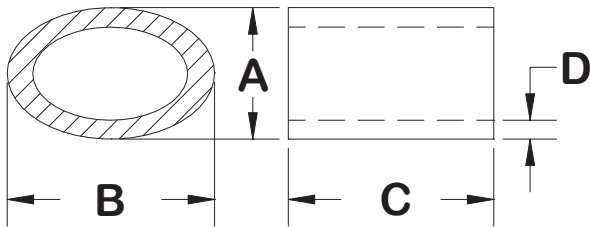
D-Ring



SERIES 82

Flail Mower Knives & Hardware

HANGERS SLIP TYPE



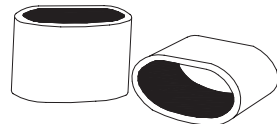
82V48309

Cross:

Clean Cutter s(6023-711)
Dandl (SA2047)
Good Earth h(GE711)
Vrisimo (CD2120)

Uses:

Scoop Knife (82D204200)
Side Knife (82D202700)

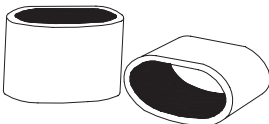


Hangers Slip Type

A	B	C	D	
1"	1-7/16"	1-1/4"	1/8"	WT: 0.20

82V48309L

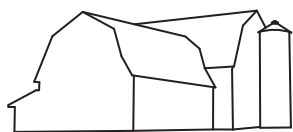
Cross: *Clean Cutter s(6023-712)*
Dandl (SA2111)
Flory (MR6001)
Good Earth h(GE712)
Wasco (6023-712)



Uses: ***Scoop Knife (82D204200)***

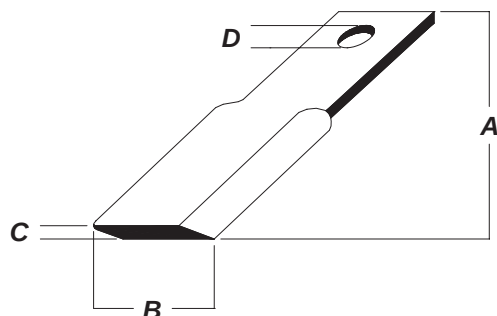
Hangers Slip Type

A	B	C	D	
1"	1-7/8"	1-1/4"	1/8"	WT: 0.25



SERIES 82 Rotary Cutter Blades

We offer a wide variety of Rotary Cutter Blades, all manufactured to O.E.M. specifications, using high carbon steel and heat-treated to provide extra strength and wear capabilities. All blades listed below are special order items and are available plain or hardfaced.



OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number

SPECIAL NOTE

Other O.E.M. Rotary Cutter Blades NOT listed below may be available on a special order basis, subject to availability. Please check with your salesperson for pricing and availability. Please have O.E.M. model number or specific blade part number to help in ordering non-listed cutter blades.

BRILLION (SPECIAL ORDER)

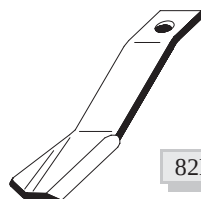
Part Number	O.E.M Number	A	Dimensions*		D	Optional Styles	Weight Each
			B	C			
82B512000	ID-512	18-1/2"	3"	1/2"	1-1/2"	H	7.6
82B513000	ID-513	18-1/2"	3"	1/2"	1-1/2"	H	7.6



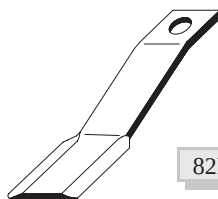
82B512000

BUSH HOG

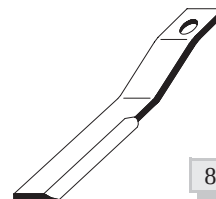
Part Number	O.E.M Number	A	Dimensions*		D	Optional Styles	Weight Each
			B	C			
82BH36000	36	24-3/4"	3"	1/2"	1-1/2"	H	11.0
82BH60044	60044	19-1/2"	4"	1/2"	1-1/2"	H	11.0
82BH78280	7828	19-1/2"	4"	1/2"	1-1/2"	H	10.4
82BH78290	7829	19-1/2"	4"	1/2"	1-1/2"	H	10.4



82BH78280

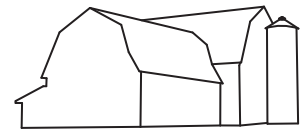


82BH60044



82BH36000

ALL ROTARY CUTTER BLADES ARE SPECIAL ORDER ONLY.



SERIES 82

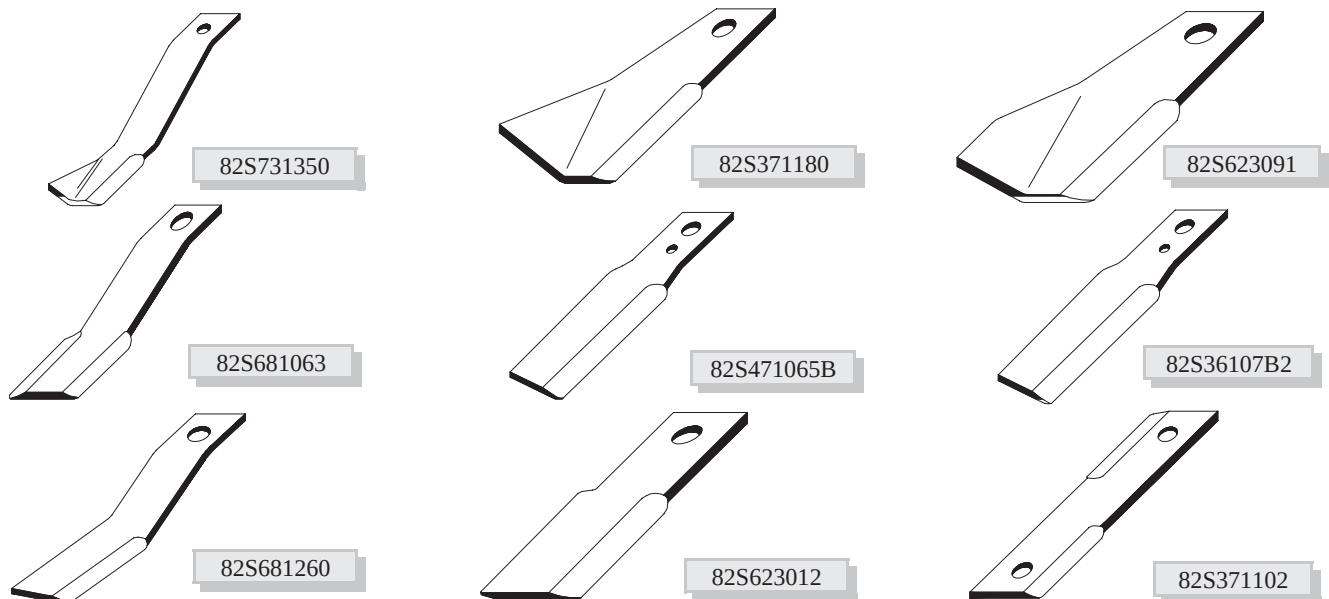
Rotary Cutter Blades

WOODS

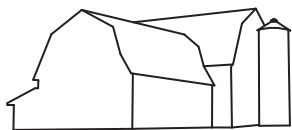
Part Number	O.E.M Number	A	Dimensions*		D	Optional Styles	Weight Each
			B	C			
82W108700	1087	9-1/4"	3"	3/8"			
82W390000	3900	18-5/8"	3"	3/8"	1-1/2"	H	6.0
82W390100	3901	18-5/8"	3"	3/8"	1-1/2"	H	6.0

SERVIS/RHINO

Part Number	O.E.M Number	A	Dimensions*		D	Optional Styles	Weight Each
			B	C			
82S36107B2	36-107-B2	13"	4"	3/8"	1-3/8"	H	6.0
82S371102	37-110-2B	20"	4"	1/2"	2@ 1-3/8"	H	11.0
82S371180	37-118	18-1/4"	4"	1/2"	1-3/8"	H	12.4
82S471065B	47-106-5B	15-1/2"	3"	3/8"	1"	H	5.0
82S623012	62-301-2	14"	4"	1/2"	1-3/8"	H	8.0
82S623091	62-309-1	14"	4"	1/2"	1-3/8"	H	8.0
82S681063	68-106-3	19-1/2"	4"	1/2"	1-3/8"	H	11.0
82S681260	68-126	19-1/2"	4"	1/2"	1-3/8"	H	10.7
82S681270	68-127	19-1/2"	4"	1/2"	1-3/8"	H	10.7
82S731340	73-134	20-1/2"	3"	3/8"	1"	H	6.7
82S731350	73-135	20-1/2"	3"	3/8"	1"	H	6.7



ALL ROTARY CUTTER BLADES ARE SPECIAL ORDER ONLY.



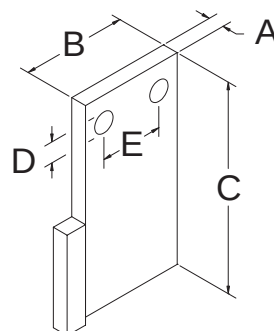
SERIES 82 Incorporator Blades

Our fabricated Incorporator blades are for a variety of bed-shaping mulchers. All parts are made from heat-treated steel and made to O.E.M. specifications. Available in three styles - plain, hardfaced, or with a welded chromium carbide insert on the cutting edge.

OPTIONAL WEAR-EXTENDING STYLES

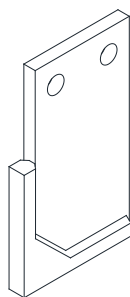
Chromium Carbide - Add "C" to end of part number
Full Chrome - Add "FC" to end of part number

Series 39 edge insert 39MBS1100 welded to cutting corner as per reference drawing.

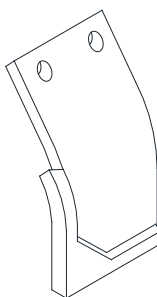


BUTTONWILLOW

Part Number	Style	Dimensions			Hole Size D	Hole Centers E	Weight Each
		A	B	C			
82BW38100C		3/8"	2"	5"	1/2"	1"	1.0
82BW38600C		3/8"	3"	6"	1/2"	1-3/4"	1.5
82BW38700C		3/8"	3"	5"	1/2"	1-3/4"	1.5
82BW38800		3/8"	3"	5-1/2"	1/2"	1-3/4"	1.7
82BW388CL		3/8"	3"	5-1/2"	1/2"	1-3/4"	1.7
82BW388CR		3/8"	3"	5-1/2"	1/2"	1-3/4"	1.7
(Curved)							
82BW3860FCT		3/8"	3"	5-1/2"	1/2"	1-3/4"	1.7
82BW388CLFCT		3/8"	3"	5-1/2"	1/2"	1-3/4"	1.7
82BW388CRFCT		3/8"	3"	5-1/2"	1/2"	1-3/4"	1.7
(Teardrop Chrome)							



Full Chrome Style



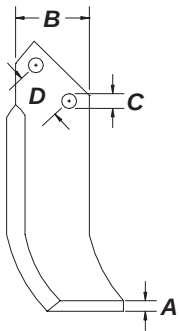
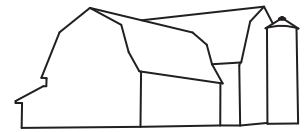
Teardrop Chrome Style

JOHNSON

Part Number	Dimensions			Hole Size D	Hole Centers E	Weight Each
	A	B	C			
82J038600C	3/8"	3"	5-1/2"	1/2"	1-1/4"	1.5

SERIES 84

Rotary Tiller Blades



All Listed replacement blades manufactured to O.E.M. specifications using high carbon steel, properly heat-treated to provide extra strength & wear-capabilities.

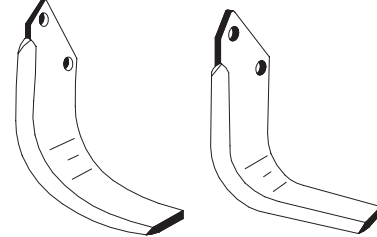
OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number

Wear Coat - Add "W" to end of part number

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

Note: All parts listed by Manufacturer.



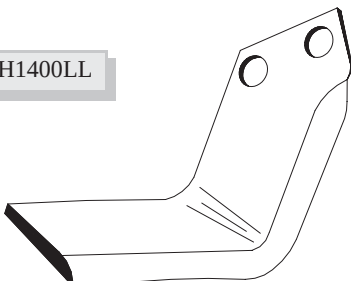
AGRATOR

Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
'D'	L	84H1400LR	RH	1/4" x 3-1/4"	7/16"	2-1/4"	2.2	D-03-111	R1L	L121R
'D'	L	84H1400LL	LH	1/4" x 3-1/4"	7/16"	2-1/4"	2.2	D-03-112	L1L	L121R
Heavy Duty	L	84H3800LR	RH	3/8" x 3-1/4"	5/8"	2-1/4"	3.9		R78L	L122R
Heavy Duty	L	84H3800LL	LH	3/8" x 3-1/4"	5/8"	2-1/4"	3.9		L78L	L122L
Heavy Duty	C	84H5600CR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9	UR-01-335C	R2C	C122R
Heavy Duty	C	84H5600CL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9	UR-01-354C	L2C	C122L
'D'	L	84H5600LR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.7	D-03-111	R2L	L122R
'D'	L	84H5600LL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.7	D-03-112	L2L	L122L
	J	84H5620JR	RH	5/16" x 1-1/2"	7/16"	4-1/4"	1.5	L-14-R	R0L	J111R
	J	84H5620JL	LH	5/16" x 1-1/2"	7/16"	4-1/4"	1.5	L-14-L	L0L	J111L
Heavy Duty	L	84N5600LR	RH	5/16" x 3-1/4"	5/8"	2-1/4"	3.1	A-66-1-RH	R75L	L223R
Heavy Duty	L	84N5600LL	LH	5/16" x 3-1/4"	5/8"	2-1/4"	3.1	A-66-1-LH	L75L	L223L

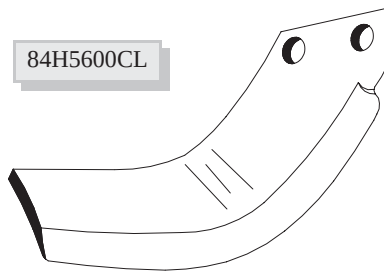
AGRIC

Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
"A"	L	84H1400LL	LH	1/4" x 3-1/4"	7/16"	2-1/4"	2.2		L1L	L121L
"A"	L	84H1400LR	RH	1/4" x 3-1/4"	7/16"	2-1/4"	2.2		R1L	L121R
Heavy Duty	C	84H5600CR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9		R2C	C122R
Heavy Duty	C	84H5600CL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9		L2C	C122L
"B"	L	84H5600LR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.7		R2L	L122R
Heavy Duty	L	84H5600LL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.7		L2L	L122L

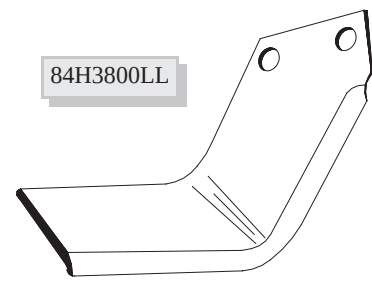
84H1400LL

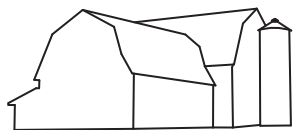


84H5600CL



84H3800LL





SERIES 84

Rotary Tiller Blade

AMCO UNI-VATOR

Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
6"	S	84J5660SR	RH	5/16" x 2"	1/2"	2"	1.6		R8L	S232R
6"	S	84J5660SL	LH	5/16" x 2"	1/2"	2"	1.6		L8L	S232L
8-1/2"	S	84J5680SR	RH	5/16" x 2"	1/2"	2"	1.9		R9L	S132R
8-1/2"	S	84J5680SL	LH	5/16" x 2"	1/2"	2"	1.9		L9L	S132L

BEFCO

Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
No. 5	C	84H5600CR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9		R2C	
No. 5	C	84H5600CL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9		L2C	
No. 5	L	84H5600LR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.8		R2L	
No. 5	L	84H5600LL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.8		L2L	

BUTTONWILLOW

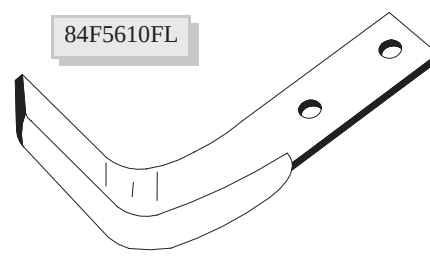
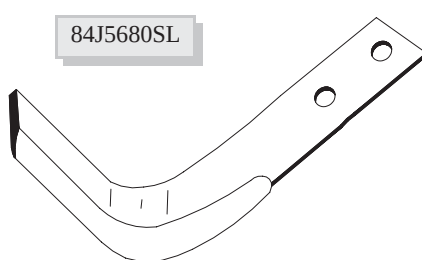
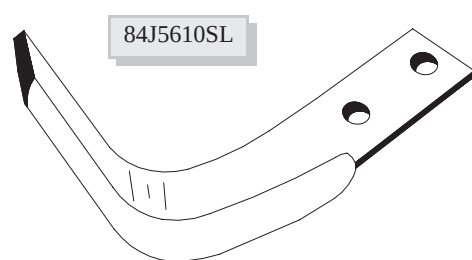
Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
	C	84BW380CR	LH	3/8" x 3-1/4"	1/2"	2-1/4"	2.8			N/A
	C	84BW380CL	LH	3/8" x 3-1/4"	1/2"	2-1/4"	3.0			N/A

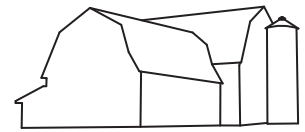
EVERSMAN

Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
10"	S	84J5610SR	RH	5/16" x 2"	1/2"	2"	2.0		R9LS	
10"	S	84J5610SL	LH	5/16" x 2"	1/2"	2"	2.0		L9LS	
6"	S	84J5660SR	RH	5/16" x 2"	1/2"	2"	1.6		R8L	S232R
6"	S	84J5660SL	LH	5/16" x 2"	1/2"	2"	1.6		L8L	S232L
8-1/2"	S	84J5680SR	RH	5/16" x 2"	1/2"	2"	1.9		R9L	S132R
8-1/2"	S	84J5680SL	LH	5/16" x 2"	1/2"	2"	1.9		L9L	S132L

FERGUSON

Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
9"	S	84F5610FR	RH	5/16" x 2"	1/2"	2-5/8"	2.0	11-9R	R11L	
9"	S	84F5610FL	LH	5/16" x 2"	1/2"	2-5/8"	2.0	11-9L	L11L	





SERIES 84

Rotary Tiller Blades

FMC SIDEWINDER

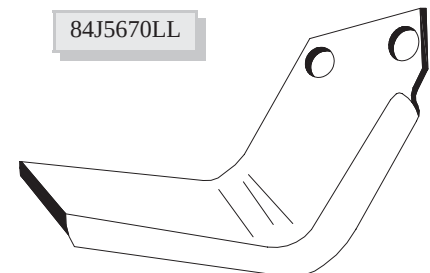
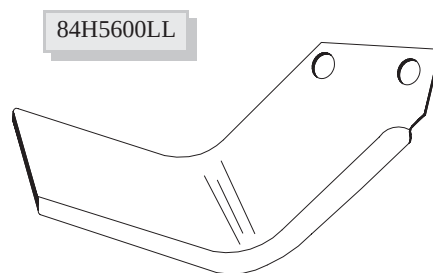
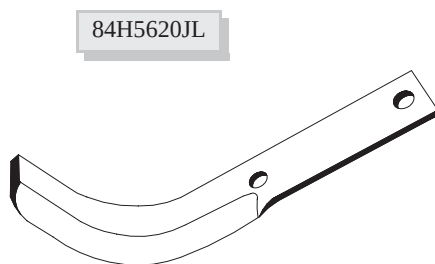
Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
10"	S	84J5610SR	RH	5/16" x 2"	1/2"	2"	2.1	21703	R9LS	
10"	S	84J5610SL	LH	5/16" x 2"	1/2"	2"	2.1	21702	L9LS	
6"	S	84J5660SR	RH	5/16" x 2"	1/2"	2"	1.6	CCTB	R8L	S232R
6"	S	84J5660SL	LH	5/16" x 2"	1/2"	2"	1.6	CCTB	L8L	S232L
8-1/2"	S	84J5680SR	RH	5/16" x 2"	1/2"	2"	1.9	1584902	R9L	S132R
8-1/2"	S	84J5680SL	LH	5/16" x 2"	1/2"	2"	1.9	1584802	L9L	S132L

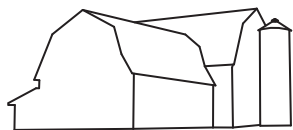
GEARMORE

Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
G-L-S	C	84MAC14CL	LH	1/4" x 2-1/4"	7/16"	2-9/16"	1.5	466159L	L3M	
H.D.	C	84MAC14CR	RH	1/4" x 2-1/4"	7/16"	2-9/16"	1.5	466159R	R3M	

HOWARD

Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
HL, HR 8&10 HA, D & GEM	L	84H1400LR	RH	1/4" x 3-1/4"	7/16"	2-1/4"	2.2	9900	R1L	L121R
	L	84H1400LL	LH	1/4" x 3-1/4"	7/16"	2-1/4"	2.2	9901	L1L	L121L
	C	84H3800CR	RH	3/8" x 3-1/4"	5/8"	2"	3.9	9950	R3C	C233R
	C	84H3800CL	LH	3/8" x 3-1/4"	5/8"	2"	3.9	9951	L3C	C233L
	L	84H3800LR	RH	3/8" x 3-1/4"	5/8"	2-1/4"	3.3	9949	R2L	
	L	84H3800LL	LH	3/8" x 3-1/4"	5/8"	2-1/4"	3.3	9948	L2L	
	L	84H3802LR	RH	3/8" x 3-1/4"	5/8"	2"	3.3	9863	R3L	L233R
	L	84H3802LL	LH	3/8" x 3-1/4"	5/8"	2"	3.3	9863	L3L	L233L
	C	84H5600CR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9	9949(5/16)	R2C	C122R
	C	84H5600CL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9	9948(5/16)	L2C	C122L
HR 20-30-E-HB-ST180	L	84H5600LR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.7	3900	R2L	L122L
	L	84H5600LL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.7	3901	L2L	L122L
HR-J-HN	J	84H5620JR	RH	5/16" x 1-1/2"	7/16"	4-1/2"	1.5	9941	R0L	J111R
	J	84H5620JL	LH	5/16" x 1-1/2"	7/16"	4-1/2"	1.5	9942	L0L	J111L





SERIES 84

Rotary Tiller Blades

JOHN DEERE

Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
550 & 660	C	84H5600CR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9	PT8446	R2C	
550 & 660	C	84H5600CL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9	PT8447	L2C	
550 & 660	L	84H5600LR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.7	PT8445	R2L	
550 & 660	L	84H5600LL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.7	PT8444	L2L	

JOHNSON

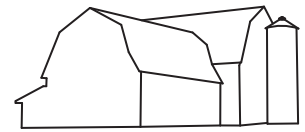
Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
10"	S	84J5610SR	RH	5/16" x 2"	1/2"	2"	2.1		R9LS	
10"	S	84J5610SL	LH	5/16" x 2"	1/2"	2"	2.1		L9LS	
6"	S	84J5660SR	RH	5/16" x 2"	1/2"	2"	1.6	6239OR	R8L	L232R
6"	S	84J5660SL	LH	5/16" x 2"	1/2"	2"	1.6	6239L232	L8L	L8L
6" Special	C	84J5670CR	RH	5/16" x 3-1/4"	5/8"	2-1/4"	2.8			
6" Special	C	84J5670CL	LH	5/16" x 3-1/4"	5/8"	2-1/4"	2.8			
6" Special	L	84J5670LR	RH	5/16" x 3-1/4"	5/8"	2-1/4"	2.8	62278R	R7L	L123R
6" Special	L	84J5670LL	LH	5/16" x 3-1/4"	5/8"	2-1/4"	2.8	62319L	L7L	L132L
8-1/2"	S	84J5680SR	RH	5/16" x 2"	1/2"	2"	1.9	62373R	R9L	S132R
8-1/2"	S	84J5680SL	LH	5/16" x 2"	1/2"	2"	1.9	62374L	L9L	S132L

KUBOTA

Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
	L	84H1400LR	RH	1/4" x 3-1/4"	7/16"	2-1/4"	2.2		R1L	L121R
	L	84H1400LL	LH	1/4" x 3-1/4"	7/16"	2-1/4"	2.2		L1L	L121R
K50 & L50	J	84H5620JR	RH	5/16" x 1-1/2"	7/16"	4-1/2"	1.5	00003	R0L	J11R
K50 & L50	L	84H5620JL	LH	5/16" x 1-1/2"	7/16"	4-1/2"	1.5	00002	L0L	J11L

KUHN

Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
EL 35	L	84H1400LR	RH	1/4" x 3-1/4"	7/16"	2-1/4"	2.2		R1L	L121R
EL 35	L	84H1400LL	LH	1/4" x 3-1/4"	7/16"	2-1/4"	2.2		L1L	L121L
EL100	C	84H5600CR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9		R2C	C122R
EL100	C	84H5600CL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9		L2C	C122L
EL100	L	84H5600LR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.7		R2L	L122R
EL100	L	84H5600LL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.7		L2L	L122L
EL 30 & 45	J	84H5620JR	RH	5/16" x 1-1/2"	7/16"	4-1/2"	1.5		R0L	J111R
EL 30 & 45	J	84H5620JL	LH	5/16" x 1-1/2"	7/16"	4-1/2"	1.5		L0L	J111L



SERIES 84

Rotary Tiller Blades

MARVIN TILLER

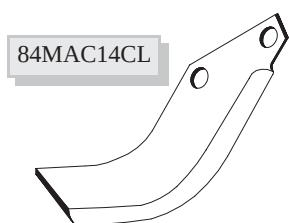
Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
	L	84H5600LR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.7		R2L	L122R
	L	84H5600LL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.7		L2L	L122L
	L	84M5610LR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9		N/A	
	L	84M5610LL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	2.9		N/A	
	L	84M5620LR	RH	5/16" x 3-1/4"	1/2"	2-1/4"	3.2		N/A	
	L	84M5620LL	LH	5/16" x 3-1/4"	1/2"	2-1/4"	3.2		N/A	

MASCHIO

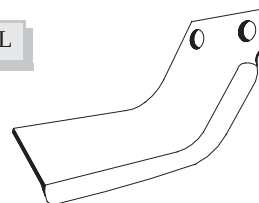
Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
L-RC-H-D Blades	C	84MAC14CR	RH	1/4" x 2-1/4"	7/16"	2-1/2"	1.3	566103	R3M	
L-RC-H-D Blades	C	84MAC14CL	LH	1/4" x 2-1/4"	7/16"	2-1/2"	1.3	566153	L3M	
	C	84MAC38CR	RH	3/8" x 3-1/4"	9/16"	2-1/4"	3.1		R12C	
	C	84MAC38CL	LH	3/8" x 3-1/4"	9/16"	2-1/4"	3.1		L12C	
B-F-C-U-NC-2 Heavy Duty	L	84MAC38LL	LH	3/8" x 3-1/4"	9/16"	2-1/4"	3.5		L12L	
	L	84MAC38LR	RH	3/8" x 3-1/4"	9/16"	2-1/4"	3.5		R12L	
B-F-C-U-NC-2 HD Blades	C	84MAC56CL	LH	5/16" x 3-1/4"	9/16"	2-1/4"	2.6		L12C	C124L
	C	84MAC56CR	RH	5/16" x 3-1/4"	9/16"	2-1/4"	2.6		R12C	C124R
B-F-C-U-NC-2 Heavy Duty	L	84MAC56LL	LH	5/16" x 3-1/4"	9/16"	2-1/4"	3.1		L12L	L124L
	L	84MAC56LR	RH	5/16" x 3-1/4"	9/16"	2-1/4"	3.1		R12L	L124R

NORTHWEST

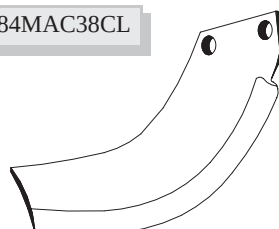
Model	Blade Type	Part No.	L&R Key	Size A x B	Bolt C	Centers D	WT EA.	OEM #	Clean Cutter	McKay Empire
	L	84N3800LR	RH	3/8" x 3-1/4"	5/8"	2-1/4"	3.8	RB26	R78L	
	L	84N3800LL	LH	3/8" x 3-1/4"	5/8"	2-1/4"	3.8	RB27	L78L	
	L	84N5600LR	RH	5/16" x 3-1/4"	5/8"	2-1/4"	3.1	RB66	R75L	L223R
	L	84N5600LL	LH	5/16" x 3-1/4"	5/8"	2-1/4"	3.1	RB67	L75L	L223L



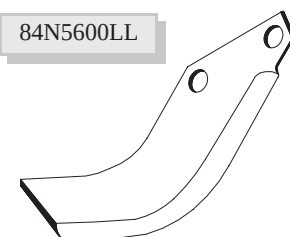
84MAC56LL

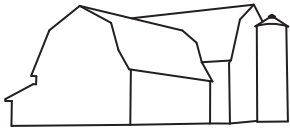


84MAC38CL



84N5600LL

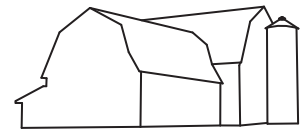




SERIES 84 Rotary Tiller Blades

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SERIES 86

Plow Shares & Parts

The moldboard plow, the old reliable workhorse of the farming industry, was designed with the purpose of completely turning the soil over to a cut depth of from 8 to 14 inches. This helps place crop residue and/or trash which was on top of the soil, either under or mixed thoroughly with the soil, thus speeding up decomposing process.

3 MAIN TYPES OF MOLDBOARD PLOWS:

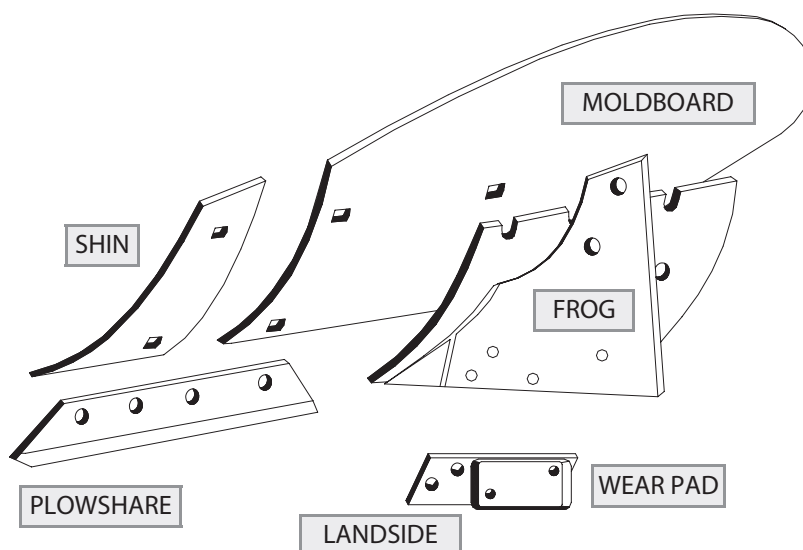
- 1) **ONE WAY PLOW** - The original and still most popular plow. Soil is always turned to the right hand side.
- 2) **TWO WAY or ROLLOVER PLOW** - Has two sets of bottoms; half being right hand and the other half being left hand.
- 3) **SWITCH PLOW** - Latest design, hydraulically controlled moldboard with entire bottom reversible; using specially designed double-ended plow shares and moldboards.

All moldboard plows have three parts in common. The frame, the beam, and the frog. The beam attaches to the frame of the plow and the frog attaches to the beam. The frog and its attached components, the share, shin, landside and moldboard, is the part that engages the soil.

NON-STOCKED PLOW PARTS

Plow Shares, Landsides, & Moldboards listed are regular stock items and reflect the more popular West Coast O.E.M. models currently available. Other O.E.M. plow parts are also available on a special order basis direct from the manufacturer. Please check with our salesperson on any unlisted plow part for pricing and availability.

MOLDBOARD PLOW TERMS



Flat-Blade Type Share - Has no deep suck penetration point, two styles available-ribbed and rock.

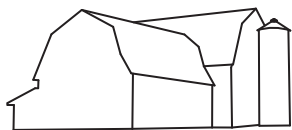
Deep Suck Type Share - Share with large dropped penetration point on the nose of the share that enables the share to pull itself into the soil.

Moldboard - Large contoured steel plate which attaches to frog and engages earth cut by share blade, rolls it over, and completes the turning and mixing of soil.

Shin - A replaceable extension for the front of the moldboard where the heaviest wear is encountered.

Landside - A reversible steel pad bolted to the landside face which helps prolong the landside life and can be replaced at less cost than an entire landside assembly.

Wear Pad - A reversible steel pad bolted to the landside face which helps prolong the landside life and can be replaced at less cost than an entire landside assembly.



SERIES 86 Plow Shares & Parts

RIBBED SHARES

Ribbed shares are a flat-blade type of plow share with a 1/2" thick beveled breaker bar, or "Rib", running the entire length of the cutting edge to provide strength and longer field life for the share. Made from 1080 high carbon steel, oil quenched and heat-treated, it is an ideal share for adding wear-extending chromium carbide tips and edge inserts. Available individually or in cartons of six.

*Clipped head plow bolts not included -
See Series 81 for plow bolts.*

OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number

Chromium Carbide Inserts - Two Styles available
- Add "C" & "FC" to end of part number per examples at right

Wear Coat - Add "W" to end of part number

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

Hardfaced

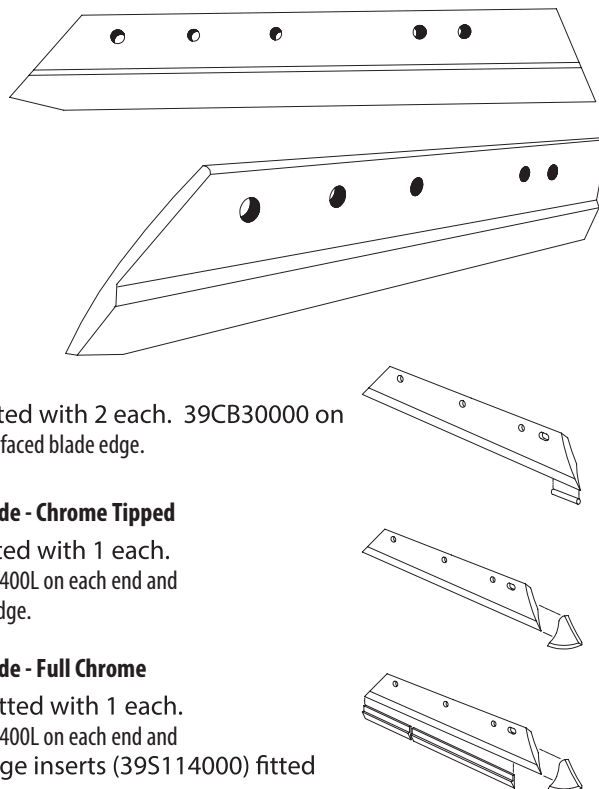
"H" - Share fitted with 2 each. 39CB30000 on each end and hardfaced blade edge.

Chromium Carbide - Chrome Tipped

"C" - Share fitted with 1 each. 39PST400R/39PST400L on each end and hardfaced blade edge.

Chromium Carbide - Full Chrome

"FC" - Share fitted with 1 each. 39PST400R/39PST400L on each end and chromium edge inserts (39S114000) fitted onto blade edge.



ALLIS CHALMERS - RIBBED SHARES

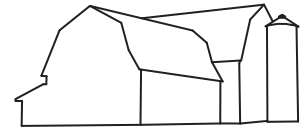
Part Number	O.E.M Number	LH/RH Key	Plow Bottom Series	Size	Bolts Used	Optional Styles	Weight Each
86PSA185R	344194	RH	900	18"	5 -- 3/8"	H,W,C,FC	10.0
86PSA185L	344193	LH					10.0

MASSEY-FERGUSON - RIBBED SHARES

Part Number	O.E.M Number	LH/RH Key	Plow Bottom Series	Size	Bolts Used	Optional Styles	Weight Each
86PSMF164R	475167M1	RH	"N" - HEAVY D	16"	4 -- 1/2"	H,W,C,FC	9.0
86PSMF164L	475716M1	LH					9.0
86PSMF184R	475823M1	RH	"N" - HEAVY D	18"	4 -- 1/2"	H,W,C,FC	10.0
86PSMF184L		LH					10.0

INTERNATIONAL (IHC) - RIBBED SHARES

Part Number	O.E.M Number	LH/RH Key	Plow Bottom Series	Size	Bolts Used	Optional Styles	Weight Each
86PSI164R	143241R1	RH	SUPER CHIEF	16"	4 -- 3-7/16"	H,W,C,FC	7.3
86PSI164L	463237R1	LH			4 -- 1-1/2"		7.3
86PSI184R	143238R1	RH	SUPER CHIEF	18"	4 -- 3-7/16"	H,W,C,FC	8.1
86PSI184L	463254R1	LH			4 -- 1-1/2"		8.1



SERIES 86

Plow Shares & Parts

JOHN DEERE - RIBBED SHARES

Part Number	O.E.M Number	LH/RH Key	Plow Bottom Series	Size	Bolts Used	Optional Styles	Weight Each
86PSD164R	A10227	RH	HS & NU	16"	4 -- 3-7/16"	H,W,C,FC	7.3
86PSD164L		LH			4 -- 1-1/2"		7.3
86PSD185R	A14243	RH	NU	18"	5 -- 4-7/16"	H,W,C,FC	8.1
86PSD185L		LH			5 -- 1-1/2"		8.1

OLIVER / WHITE - RIBBED SHARES

Part Number	O.E.M Number	LH/RH Key	Plow Bottom Series	Size	Bolts Used	Optional Styles	Weight Each
86PS0164R	RR16R	RH	619-625	16"	4 -- 7/16"	H,W,C,FC	9.0
86PS0164L	RCA6R	LH					9.0
86PS0185R	RR18R	RH	619-625	18"	5 -- 7/16"	H,W,C,FC	10.0
86PS0185L	RCA8R	LH					10.0

DEEP-SUCK SHARES

The heavy-duty, deep-suck blade share is produced from 3/8" high carbon steel and is upset to a full 5/8" at the nose for break resistant wear. A "true" deep-suck share with a large dropped penetration point on the nose of the share that enables the share to "pull" itself into the soil. Oil quenched and heat-treated, they are available individually or in cartons of six.

Standard plow bolts not included - see Series 81 for plow bolts.

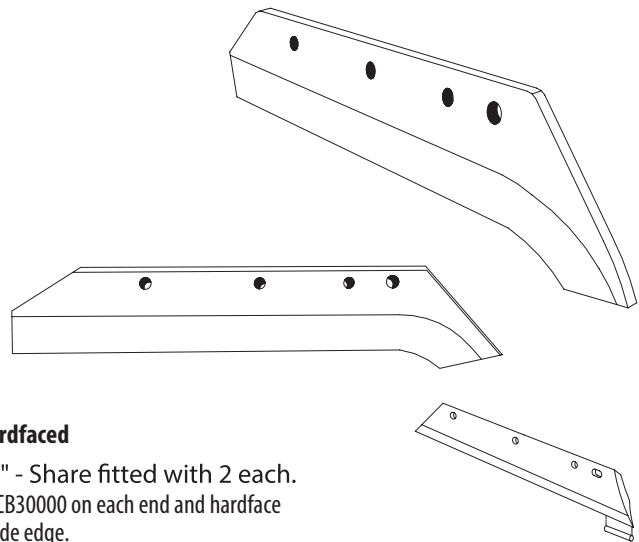
OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

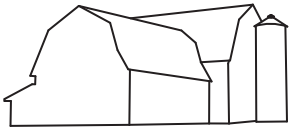
Hardfaced

"H" - Share fitted with 2 each. 39CB30000 on each end and hardface blade edge.



INTERNATIONAL (IHC) - DEEP-SUCK

Part Number	O.E.M Number	LH/RH Key	Plow Bottom Series	Size	Bolts Used	Optional Styles	Weight Each
86C464590	464590	LH		16"	4 -- 1-1/2"		7.4
86C462227	46328R1/462	RH	SUPER CHIEF	16"	4 -- 3-7/16"	H	8.0
86C464591	464591	LH		18"	4 -- 1-1/2"		8.2
86C463254	463254R1	RH	SUPER CHIEF	18"	4 -- 3-7/16"	H	9.0



SERIES 86 Plow Shares & Parts

WILCOX PLOW SHARES

A flat type of plow share specifically designed for a popular west coast O.E.M. Two styles available, with or without extended nose point, and both fitted with welded quarter-bar bracket, made from 1080 high carbon steel, oil quenched and heat-treated.

Clipped head plow bolts not included - see Series 81 for plow bolts.

OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number

Chromium Carbide Inserts - Two Styles available
- Add "C" & "FC" to end of part number per examples at right

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

Hardfaced

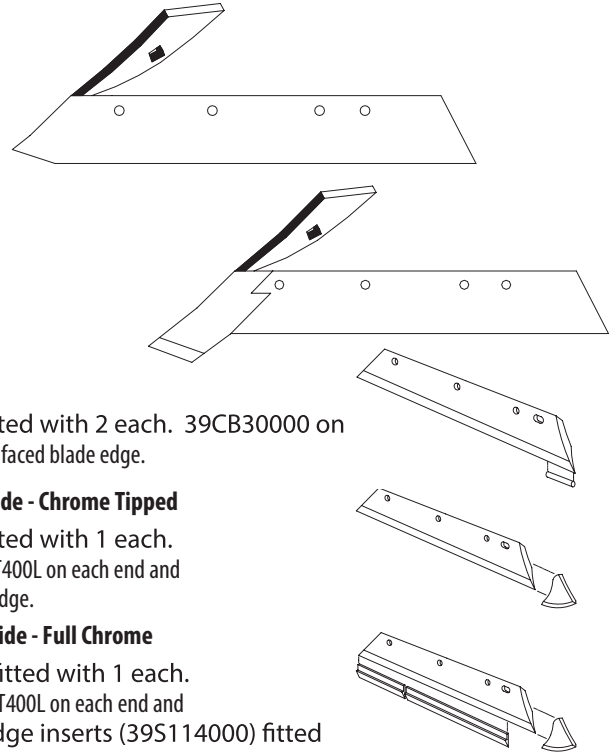
"H" - Share fitted with 2 each. 39CB30000 on each end and hardfaced blade edge.

Chromium Carbide - Chrome Tipped

"C" - Share fitted with 1 each. 39PST400R/39PST400L on each end and hardfaced blade edge.

Chromium Carbide - Full Chrome

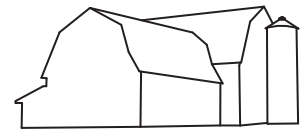
"FC" - Share fitted with 1 each. 39PST400R/39PST400L on each end and chromium edge inserts (39S114000) fitted onto blade edge.



WILCOX - PLOW SHARES

Part Number	O.E.M Number	LH/RH Key	Plow Bottom Series	Size	Bolts Used	Optional Styles	Weight Each
86PSW184L		RH	WILCOX PLOWS	18"	4 -- 1-1/2"	H,C,FC	0
86PSW184R		LH					0
86PSW184LS		RH	With Extended Nose	18"	4 -- 1-1/2"	H,FC*	15
86PSW184RS		LH					15

*** Full chrome option and extended nose share includes hardfaced nose with chromium edge inserts (39S114000) fitted onto blade edge.



SERIES 86

Plow Shares & Parts

SWITCH PLOWS & PARTS

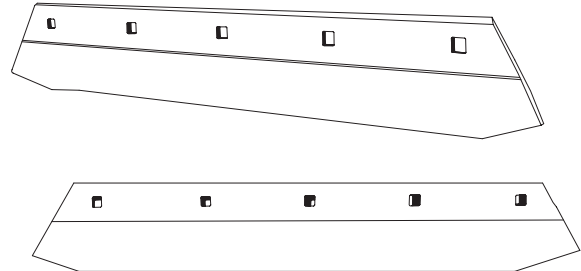
Switch plows are the latest design in moldboard plows, using specifically designed double-ended plow shares. Both O.E.M. styles listed below are ribbed style flat-blade type plow shares, made from 1080 high carbon steel, oil quenched, and heat-treated. Available individually or in cartons of six, and does not include hardware.

*Clipped head plow bolts not included -
See Series 81 for plow bolts.*

OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number
Chromium Carbide Inserts - Two Styles available
 - Add "C" & "FC" to end of part number per examples at right

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.



Hardfaced

"H" - Share fitted with 2 each. 39CB30000 on each end and hardfaced blade edge.

Chromium Carbide - Chrome Tipped

"C" - Share fitted with 1 each. 39PST400R/39PST400L on each end and hardfaced blade edge.

Chromium Carbide - Full Chrome

"FC" - Share fitted with 1 each. 39PST400R/39PST400L on each end and chromium edge inserts (39S114000) fitted onto blade edge.

HARRELL - SWITCH PLOW

Part Number	O.E.M Number	Description	Size	Bolts Used	Optional Styles	Weight Each
86SWH79006	7900636	5 Hole, Double Ended	24"	5 -- 7/16"	H,C,FC	11.5

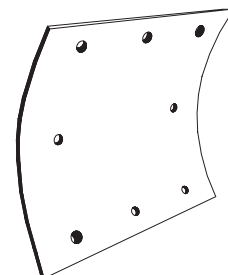
JOHN DEERE - SWITCH PLOW

Part Number	O.E.M Number	Description	Size	Bolts Used	Optional Styles	Weight Each
86SWD57270	57270	4 Hole, Double Ended	24"	4 -- 7/16"	H,C,FC	11.5

SWITCH PLOW MOLDBOARDS

Special design moldboard made from 1080 high carbon steel, oil quenched and heat-treated. Available individually or in cartons of six, and dose not include hardware.

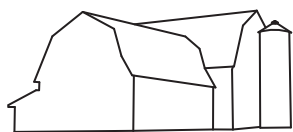
Standard head plow bolts not included - see Series 81 for plow bolts.



867921736

HARRELL / JD

Part Number	O.E.M Number	Description	Size	Bolts Used	Optional Styles	Weight Each
86JD57264	57264	Reversible Moldboards, JD	24"			30.0
867921736	7921736	Reversible Moldboards	24"			30.0

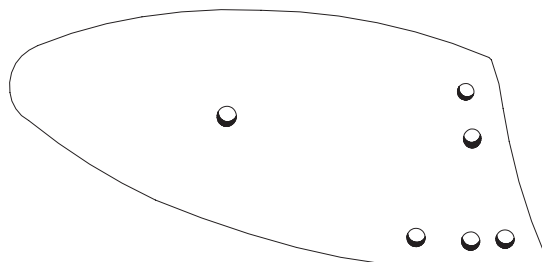


SERIES 86 Plow Shares & Parts

MOLDBOARDS

A moldboard is a large contoured steel plate which attaches to the frog and engages earth cut by share blade, rolls it over, and completes the turning and mixing of soil.

All moldboards are made of 1080 high carbon steel oil quenched and heat-treated. Heat treating leaves the wear face harder, thus enabling moldboards to "scour" in most soil conditions. All are available individually or packed in cartons of six.



Standard head plow bolts not included - see Series 81 for plow bolts.

NON-STOCKED MOLDBOARD

All the moldboards listed below are regular stock items and reflect the more popular O.E.M. models currently available. Other O.E.M. moldboards are also available on a special order basis direct from manufacturer. Please check with salesperson on any unlisted moldboards for pricing and availability.

JOHN DEERE - MOLDBOARDS

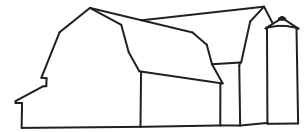
Part Number	O.E.M Number	LH/RH Key	Plow Bottom Series	Description	Bolts Used	Weight Each
86JD14885	A15596	RH	NU-1036-1046	5-1/16" x 16"	4-7/16" x 1"	31
86JD14888	A15607	LH	NU-1036-1046		1-7/16" x 1-1/2"	31
86JD15673	A17431	RH	NU-1048	5/16" x 18"	3-7/16" x 1-1/2"	31
86JD15674	A17432	LH	NU-1048		1-7/16" x 1-3/4"	31

INTERNATIONAL (IHC) - MOLDBOARD

Part Number	O.E.M Number	LH/RH Key	Plow Bottom Series	Description	Bolts Used	Weight Each
86IH462314	462314R	RH	Super Chief	High Speed	4-7/16" x 1"	30
86IH464603	464603R	LH	Super Chief	5/16" x 16", 18", & 20"	1-7/16" x 1-1/2"	30
86IH491634	491634R	RH	Super Chief	General Purpose	5-7/16" x 1-1/4"	34
86IH491633	491634R	LH	Super Chief	5/16" x 18"	1-7/16" x 1-3/4"	34

WILCOX - MOLDBOARD

Part Number	O.E.M Number	LH/RH Key	Plow Bottom Series	Description	Bolts Used	Weight Each
86WI22004R	22004R	RH	All Wilcox Plows	Moldboard 5/16"		35
86WI22004L	22004L	LH	All Wilcox Plows			35



SERIES 86

Plow Shares & Parts

PLOW SHINS

Plow shins are a replaceable extension for the front of the moldboard where the heaviest wear is encountered. All shins are manufactured from high carbon steel, oil quenched and heat-treated. Shins are 5/16" thick and use 7/16" x 1-1/2" clipped head plow bolts for attachment. Available individually or packed six per carton.

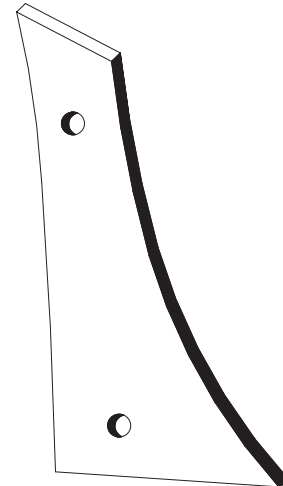
Standard head plow bolts not included - see Series 81 for plow bolts.

OPTIONAL WEAR-EXTENDING STYLES

Hardfaced - Add "H" to end of part number

Wear Coat - Add "W" to end of part number

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.



NON-STOCKED MOLDBOARD

Plow Shins listed are regular stock items and reflect the more popular O.E.M. models currently available. Other O.E.M. plow shins are also available on a special order basis direct from the manufacturer. Please check with our salesperson on any unlisted plow shins for pricing and availability.

JOHN DEERE - SHINS

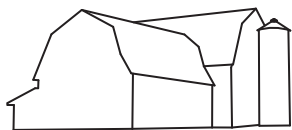
Part Number	O.E.M. Number	LH/RH Key	Plow Bottom Series	Size	Optional Styles	Weight Each
86ND3000R	A14883	RH	NU-1035-46-48	16"-18"	H,W	4.3
86ND3000L	A14887	LH			H,W	4.5

INTERNATIONAL (IHC) - SHINS

Part Number	O.E.M. Number	LH/RH Key	Plow Bottom Series	Size	Optional Styles	Weight Each
86NI2500R	522325, 488266R	RH	SUPER CHIEF	14", 16"	H,W	4.0
86NI2500L	55075C, 464595	LH				4.1
86NI2600R	491631	RH	SUPER CHIEF	18"	H,W	3.5
86NI2600L	491630	LH				3.5

WILCOX - SHINS

Part Number	O.E.M. Number	LH/RH Key	Plow Bottom Series	Size	Optional Styles	Weight Each
86WI22005R		LH	ALL WILCOX PLOW		H,W	3.5
86WI22005L		RH	ALL WILCOX PLOW		H,W	3.5



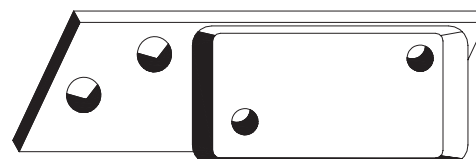
SERIES 86

Plow Shares & Parts

LANDSIDES / WEAR PADS

LANDSIDES - A heavy steel or cast iron plate which bolts to the plow frog assembly to help counteract the natural lateral deflection of the plow-bottom by holding it flat against the cut of the land.

WEAR PAD - A reversible steel pad bolted to the landside face which helps prolong the landside life, and can be replaced at less cost than the entire landside assembly. Manufactured from high carbon steel, oil quenched and heat-treated for longer wear. Landsides are drop forged or sheared depending upon configuration. Attachment by O.E.M. specifications is with #3 head plow bolts which are not included with parts listed below.



*Standard head plow bolts not included -
See Series 81 for plow bolts.*

NON-STOCKED MOLDBOARD

All the landsides listed below are regular stock items and reflect the most popular O.E.M. models currently available. Other O.E.M. landsides are also available on a special order basis direct from the manufacturer. Please check with our salesperson on any unlisted plow shins for pricing and availability.

JOHN DEERE

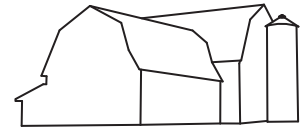
Part Number	O.E.M Number	LH/RH Key	Plow Bot. Series	Description	Position	Bolts Used	Weight Each
86JD263W0	AA15263	LH	3DT, Slat bottom	-- 1/2" x 7"	Reversible	Clipped Head	3.8
86JD262W0	AA15262	RH	HS or NU Series	Wear Pad		2-7/16" x 1-3/4"	3.8
86JD494W0	AA16494	LH	3DT, Slat bottom	1/2" x 11-3/4"	Rear	1ea. - 7/16" x 2"	5.5
86JD493W0	AA16493	RH	HS or NU Series	Landside	Front	2ea. - 1/2" x 2"	5.5

INTERNATIONAL (IHC)

Part Number	O.E.M Number	LH/RH Key	Plow Bot. Series	Description	Position	Bolts Used	Weight Each
86LAI3220	543321	LH	Super Chief	5/8" x 24"	Rear	Hex Head, Cap Screws	2.7
86LAI3220	543322	RH	Super Chief	Special Application	Rear	2ea. - 5/8" x 3"	2.7
86LAI3420	522342R	RH	Super Chief	Landside	Front	2ea. - 7/16" x 1-1/4"	5.5
86LAI324L	464592	LH	Super Chief	9/16" X 10-3/4"	Front	2ea. - 7/16" x 1-1/4"	5.5
86LAI3430	522343R	RH	Super Chief	Special Application	Rear	2ea. - 7/16" x 1-1/4"	7.0
86LAI3220	522343R	LH	Super Chief	5/8" x 24"	Rear	2ea. - 7/16" x 1-1/4"	7.0

WILCOX

Part Number	O.E.M Number	LH/RH Key	Plow Bot. Series	Description	Position	Bolts Used	Weight Each
86WI22002R	22002R	RH	All Wilcox Plows	Landside	Rear	4 ea. - 5/8"	11.5
86WI22002L	22002L	LH	All Wilcox Plows	1/2" Thick	Rear	4 ea. - 5/8"	11.5



SERIES 88

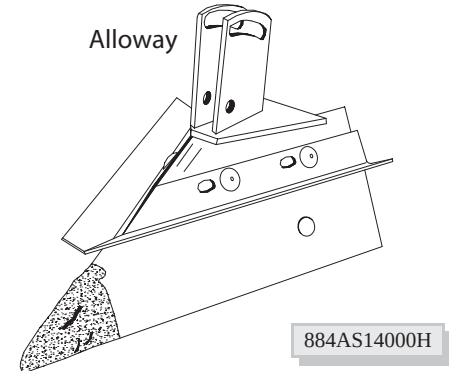
Welded Shovels

CHARACTERISTICS

Welded shovels are available in four styles designed for heavy duty furrowing or where a very flat bottom furrow is desired. Used extensively in tomato bed preparation. Two styles available with 1 x 3 standards welded on each in a fixed, ridged position, while the other two styles have attachment stems with slotted holes for pitch adjustment that mount directly to straight cultivating standards.

ALLOWAY / HAWKINS SHOVEL (SPECIAL ORDER)

Heavy duty welded shovel available in three furrowing widths with an attachment stem that has a 1/2" slotted hole pattern to fit a straight 1x3 cultivating standard to allow for pitch adjustment. Shovels consist of 3 component parts: (1) the body, or frog (2) RH and LH Dirt Deflectors (3) one piece V-shaped wear strip. Dirt deflectors and wear strip are replaceable and attach to shovel frog by bolts. Shovels, as well as replacement wear strips are available plain or hardfaced.



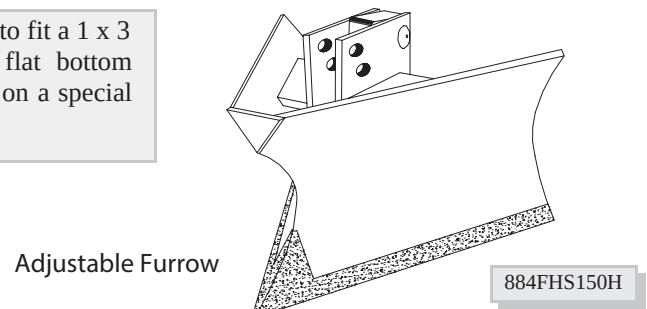
**PLAIN or
HARDFACED**

Part Number	Optional Styles	Furrow Width	Description	Weight Each
884AS1200	H*	12"	Complete Shovel-Assembled	21
884AS1400	H*	14"	Complete Shovel-Assembled	24
884AS1600	H*	16"	Complete Shovel-Assembled	26
884AS12WS	H*	12"	V-Shaped Wear Strip	
884AS14WS	H*	14"	V-Shaped Wear Strip	
884AS16WS	H*	16"	V-Shaped Wear Strip	
884AS00DDL	N/A	Fits All Sizes	LH Bolt-On Dirt Deflector	
884AS00DDR	N/A	Fits All Sizes	RH Bolt-On Dirt Deflector	
884AS000F	N/A	Sized For All	Shovel Body (frog) Assembly - Less wear strip and dirt deflector	

*Add "H" to end of part number to specify hardfaced part.

ADJUSTABLE FURROWING SHOVEL

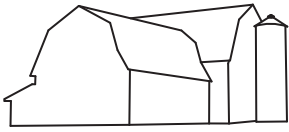
Solid, one-piece shovel, 10" tall, with slotted attachment stem to fit a 1 x 3 straight cultivating standard. Design allows for V-shape of flat bottom furrows, with a furrow width of 15". Extension wings available on a special order basis that will allow for furrow width up to 24" wide.



**PLAIN or
HARDFACED**

Part Number	Optional Styles	Furrow Width	Description	Weight Each
884FHS150	H*	15"	Adjustable furrowing shovel	33

*Add "H" to end of part number to specify hardfaced part.

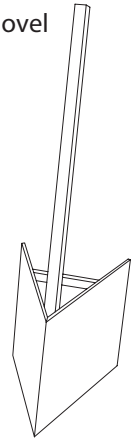


SERIES 88 Welded Shovels

BREA SHOVEL

Fabricated one-piece design with welded 1 x 3 shank. Furrower width is 14" that makes a very flat bottom furrow at high speed with minimum ground disturbance. Overall height of furrower is 11" and is made from 1/4" material.

Brea Shovel

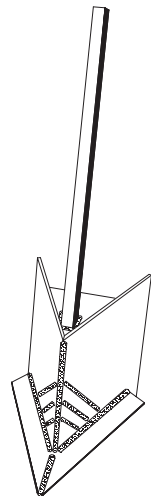


Part Number	Optional Styles	Furrow Width	Description	Weight Each
884BS1400	H*	14"	Brea Shovel w\ 1 x 3 welded Standard	50

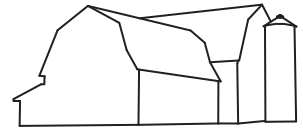
ANGLED FURROWING SHOVEL

Similar design to that of Brea shovel, with two notable differences: (1) welded 1 x 3 standard is angled back approximately 15" to pitch forward the shovel which, in turn, makes V-shaped furrows, instead of the flat bottom "Brea" type. (2) A 1-1/2" edge is welded on bottom of furrower to help shovel stabilize as it is pulled thru field.

Angled Furrowing Sh

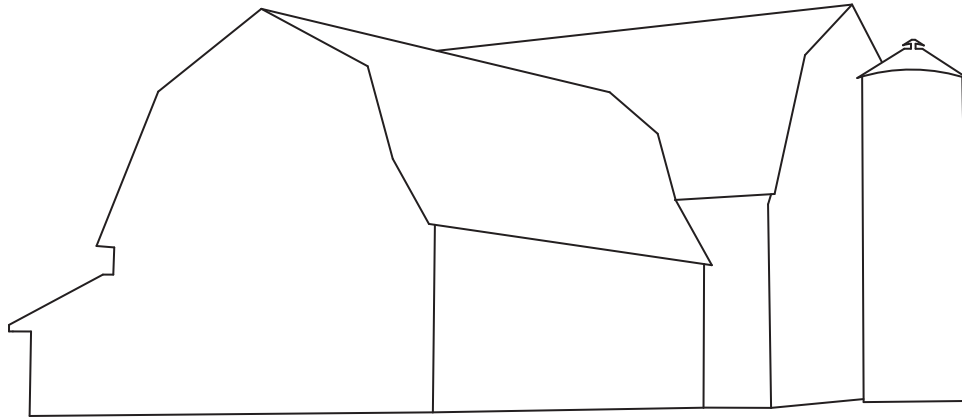


Part Number	Optional Styles	Furrow Width	Description	Weight Each
884PG1400	H*	14"	Angled furrowing shovel w\ edge	44

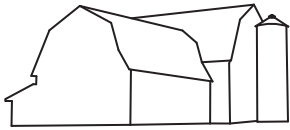


SERIES 89

Rolling Cultivator Parts Book

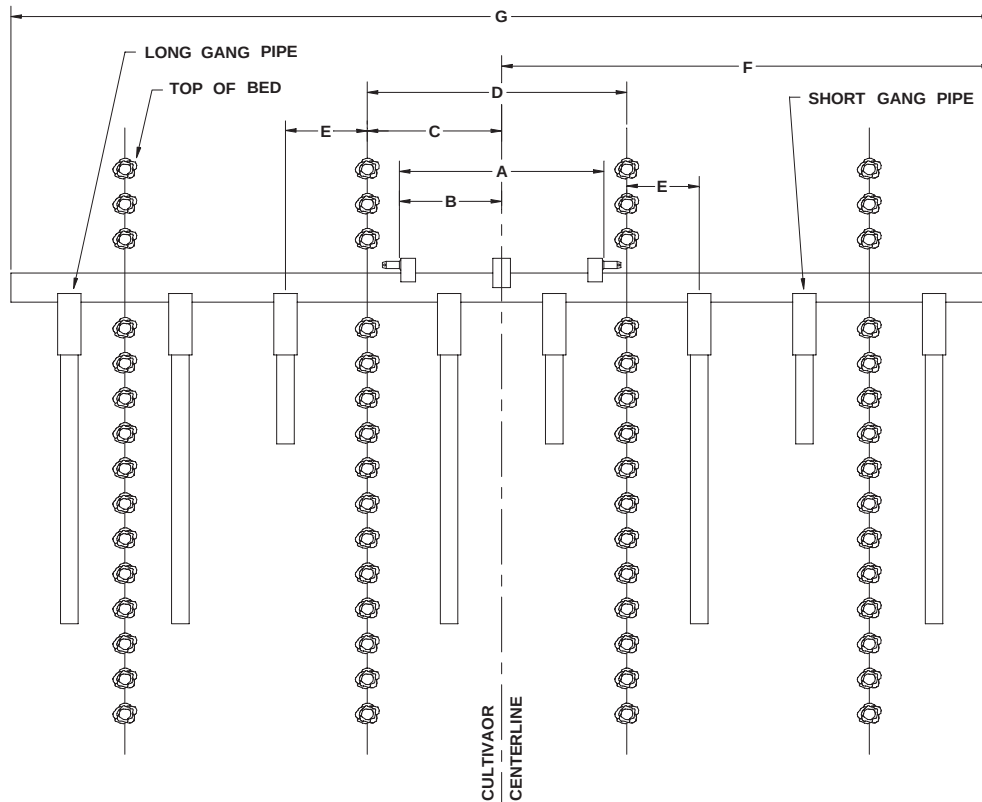


- Rolling Cultivator Parts
- Vegetable Cultivator Parts
- Parts Book

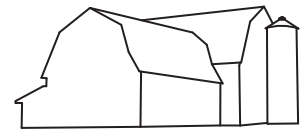


SERIES 89 Rolling Cultivator Parts Book

BASIC ASSEMBLY DIAGRAM



SETUP DIMENSIONS	A	B	C	D	E	F	G
Category II Hitches (1-1/8")	32-1/2"	16-1/4"					
Category III Hitches (1-7/16")	38"	19"					
168" Tool Bar						84"	168"
188" Tool Bar						94"	188"
248" Tool Bar						124"	248"
328" Tool Bar						164"	328"
24" Row Spacing			12"	24"	8"		
28" Row Spacing			14"	28"	9-1/2"		
30" Row Spacing			15"	30"	10"		
32" Row Spacing			16"	34"	11"		
34" Row Spacing			17"	34"	11-1/2"		
36" Row Spacing			18"	36"	12"		
38" Row Spacing			19"	38"	12-1/2"		
40" Row Spacing			20"	40"	13"		
42" Row Spacing			21"	42"	14"		



SERIES 89

Rolling Cultivator Parts Book

SERIES 89 - SCHEMATICS INDEX

AUXILIARY HITCH SUPPORT BRACKET P. 189

Auxiliary Hitch Support Fig. 28

AUXILIARY TOOL BAR ADAPTER P. 173

Auxiliary Tool Bar 7" x 5" Fig. 9
Auxiliary Tool Bar 7" x 7" Fig. 9

CLOD BUSTERS ROLLERS P. 182

Clod Busters Fig. -

CULTIVATOR JACKSTAND P. 189

Jackstand Fig. 29

DIAMOND BAR GAUGE WHEEL P. 181

Gauge Wheels For 2-1/4" Diamond Bar Fig. 21

DISC ASSEMBLY P. 184

Disc Assembly Complete Fig. 23
Disc Weeder Clamp Fig. 23A
Hub Assembly Fig. 23B

DISC WEEDER ASSEMBLY P. 185

Disc Weeder Complete Assembly Fig. 24
Hoe Shank Assembly Fig. 24A

DOUBLE GUIDE CONE ASSEMBLY P. 178

Double Guide Cone Fig. 17

FIELD PARALLELOGRAM ASSEMBLY P. 187

Field Parallelogram Fig. 26

FLAT BAR WITH DUAL WHEELS P. 180

Double Gauge Wheel (Flat Bar) Fig. 20

FLAT BAR WITH SINGLE WHEEL P. 179

Single Gauge Wheel (Flat Bar) Fig. 19

FOOT PIECE SHANK ASSEMBLY P. 174

Adjustable Foot Piece Shank 1" x 3" Fig. 12

SPIDER GANG ASSEMBLIES P. 191

Spider Cultivator Gang No. 1 & 2 Fig. 30

GAUGE WHEEL ASSEMBLY P. 183

Gauge Wheel Assembly (Semi-Pneumatic) Fig. 22

LONGBAR SPACER P. 173

Long Bar Spacer for 3-1/2" Tool Bar Fig. 10
Long Bar Spacer for 7" x 5" Tool Bar Fig. 10
Long Bar Spacer for 7" x 7" Tool Bar Fig. 10

PARALLELOGRAM PIPE ASSEMBLY P. 188

Parallelogram Pipe Fig. 27

PIPE ASSEMBLIES-DIAMOND BAR P. 170

Long Pipe Bar Assembly Fig. 4
Short Pipe Bar Assembly Fig. 4

PIPE ASSEMBLIES-FLAT BAR P. 169

Long Pipe Bar Assembly Fig. 3
Short Pipe Bar Assembly Fig. 3

PIVOT CLAMP ASSEMBLY P. 172

Pivot Clamp Fig. 8

RIGID SHANK ASSEMBLY P. 171

Rigid Shank Fig. 6

ROW GANG ASSEMBLY P. 177

No. 1 Slicer Tine Gang Assembly Fig. 16
No. 2 Slicer Tine Gang Assembly Fig. 16
Slicer Tine Split Row Gang Assembly Fig. 16

ROW GANG SUPPORT P. 176

Complete Over The Row Slicer Tine Gang Fig. 15
Row Gang Support Bracket Fig. 15

ROW MARKER ASSEMBLY P. 175

Row Marker Fig. 13

SINGLE GUIDE CONE ASSEMBLY P. 178

Single Guide Cone Fig. 18

STANDARD SUPPORT ASSEMBLY P. 175

Standard Support Assembly Fig. 14

THREE POINT HITCHES (A-FRAMES) P. 167&168

7" x 5" Straight Hitch Assembly Fig. 1
7" x 5" Offset Hitch Assembly Fig. 2
7" x 7" Offset Hitch Assembly Fig. 2

TOOL BAR CLAMP P. 174

7" x 5" Tool Bar, 1" x 3" Clamp Fig. 11
7" x 7" Tool Bar, 1" x 3" Clamp Fig. 11

TOOL BARS P. 171

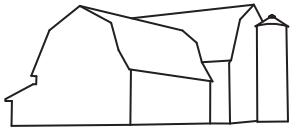
7" x 5" Tool Bar Fig. 5
7" x 7" Tool Bar Fig. 5

TWIN ROW PRECISION CULT. ASSEM. P. 186

Twin Row Precision Cultivator Fig. 25

U-BOLT SET FOR PIPE BARS P. 172

U-Bolt Set for 7" x 5" Tool Bar Fig. 7
U-Bolt Set for 7" x 7" Tool Bar Fig. 7



SERIES 89

Rolling Cultivator Parts Book

THREE POINT HITCHES

(A-Frames)

ROLLING CULTIVATOR
PARTS BOOK

COMPLETE ASSEMBLY

Figure 1

7" x 5" Straight Hitch Assembly

897500200

7" x 7" Straight Hitch Assembly

897700200

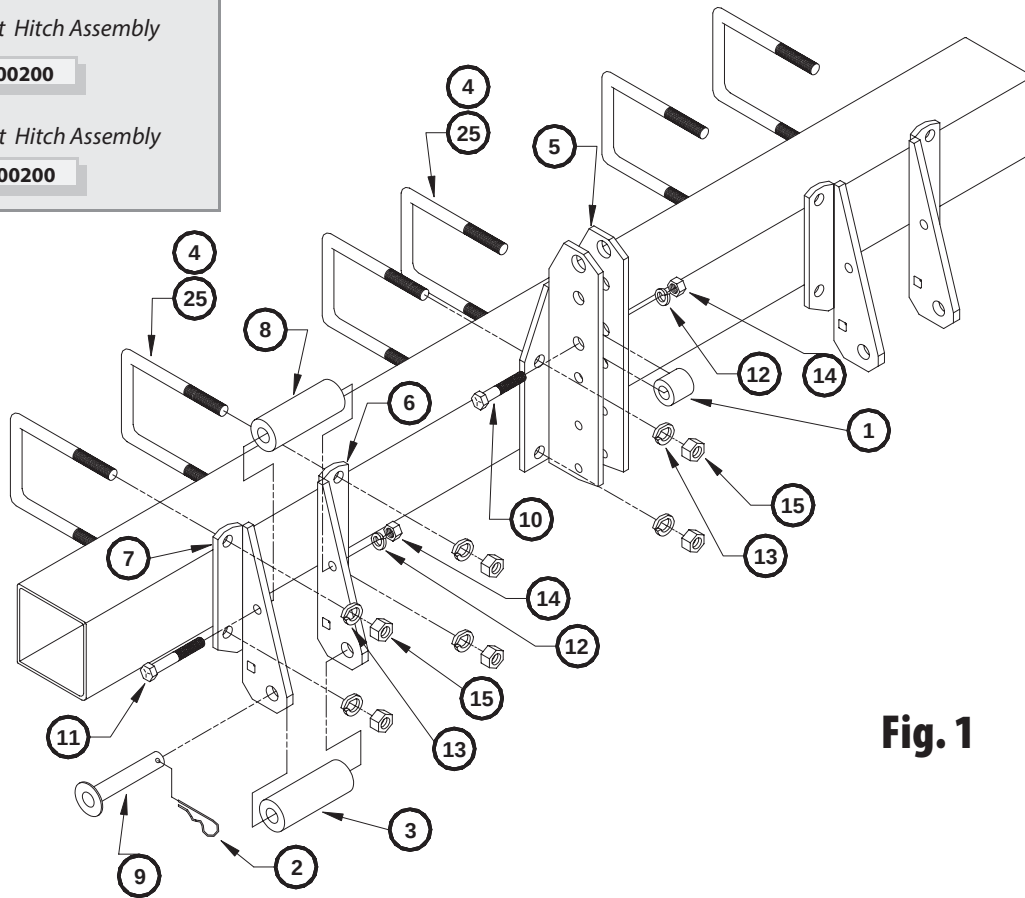
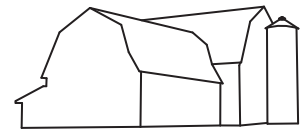


Fig. 1

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897500201	Top Link Bushing	1
2	897500202	Hair Pin	2
3	897500203	Lift Arm Bushing	2
4	897500204	7/8" U-Bolt for 7" x 5" Tool Bar	6
5	897500205	Hitch Center Mast	1
6	897500206	Number 1 Straight Hitch	2
7	897500207	Number 2 Straight Hitch	2
8	897500208	Lift Bracket Spacer	2
9	897500209	Hitch Lift Arm Bolt	2
10	81CS34400	3/4" x 4" Hex Bolt	1
11	81CS34500	3/4" x 5" Hex Bolt	2
12	81LW34000	3/4" Lock Washer	3
13	81LW78000	7/8" Lock Washer	12

Ref.	Part No.	Description	Req.
14	81HN34000	3/4" Hex Nut	3
15	81HN7800F	7/8" Fine Thread Hex Nut	12
16	897500225	Hitch Brace	2
17	897500221	Left Offset Hitch	1
18	897500224	Right Offset Hitch	1
19	81CB121340	1/2" x 1-3/4" Carriage Bolt	2
20	81CB58200	5/8" x 2" Carriage Bolt	2
21	81LW12000	1/2" Lock Washer	2
22	81LW58000	5/8" Lock Washer	2
23	81HN12000	1/2" Hex Nut	2
24	81HN58000	5/8" Hex Nut	2
25	897503204	7/8" U-Bolt for 7" x 7" Tool Bar	6



SERIES 89

Rolling Cultivator Parts Book

ROLLING CULTIVATOR
PARTS BOOK

THREE POINT HITCHES

(A-Frames)

COMPLETE ASSEMBLY

Figure 2

7" x 5" Offset Hitch Assembly

897511200

7" x 7" Offset Hitch Assembly

897711200

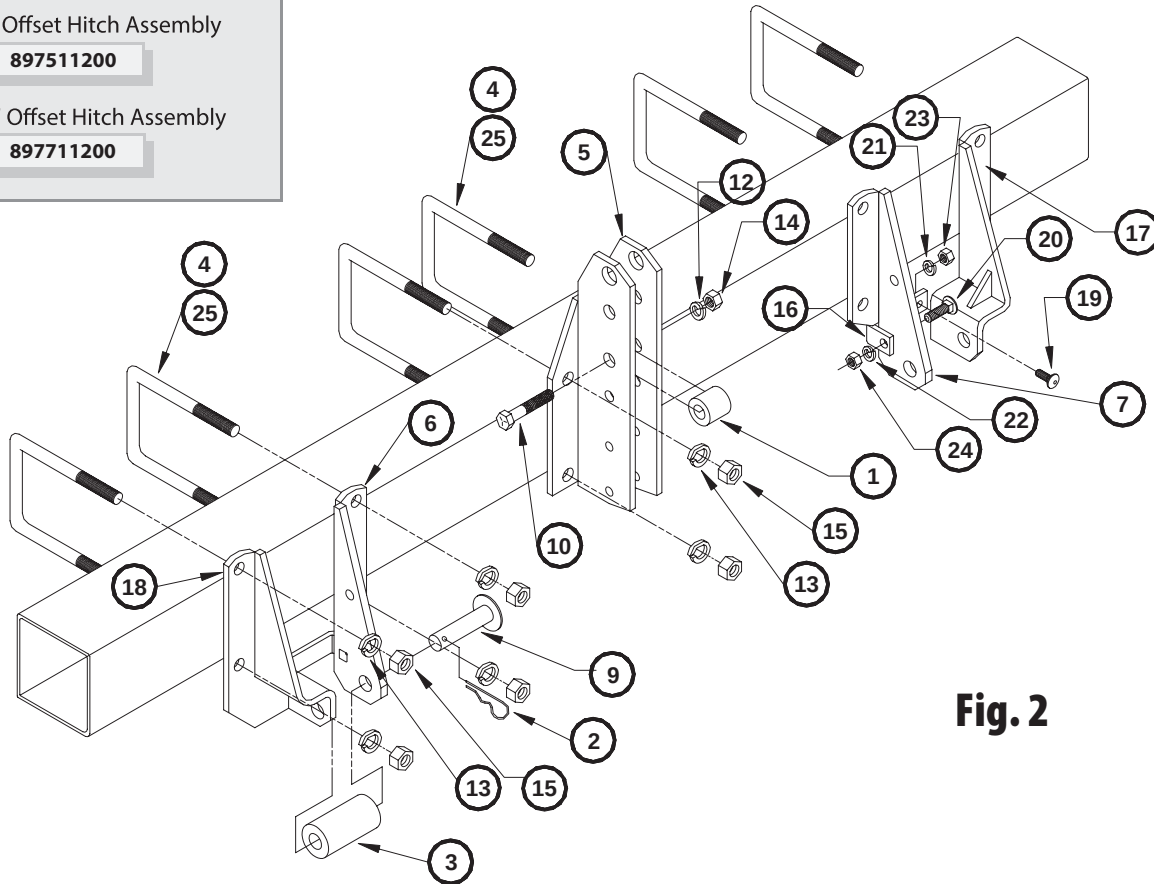
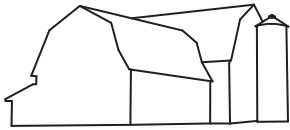


Fig. 2

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897500201	Top Link Bushing	1
2	897500202	Hair Pin	2
3	897500203	Lift Arm Bushing	2
4	897500204	7/8" U-Bolt for 7" x 5" Tool Bar	6
5	897500205	Hitch Center Mast	1
6	897500206	Number 1 Straight Hitch	2
7	897500207	Number 2 Straight Hitch	2
8	897500208	Lift Bracket Spacer	2
9	897500209	Hitch Lift Arm Bolt	2
10	81CS34400	3/4" x 4" Hex Bolt	1
11	81CS34500	3/4" x 5" Hex Bolt	2
12	81LW34000	3/4" Lock Washer	3
13	81LW78000	7/8" Lock Washer	12

Ref.	Part No.	Description	Req.
14	81HN34000	3/4" Hex Nut	3
15	81HN7800F	7/8" Fine Thread Hex Nut	12
16	897500225	Hitch Brace	2
17	897500221	Left Offset Hitch	1
18	897500224	Right Offset Hitch	1
19	81CB121340	1/2" x 1-3/4" Carriage Bolt	2
20	81CB58200	5/8" x 2" Carriage Bolt	2
21	81LW12000	1/2" Lock Washer	2
22	81LW58000	5/8" Lock Washer	2
23	81HN12000	1/2" Hex Nut	2
24	81HN58000	5/8" Hex Nut	2
25	897503204	7/8" U-Bolt for 7" x 7" Tool Bar	6



SERIES 89

Rolling Cultivator Parts Book

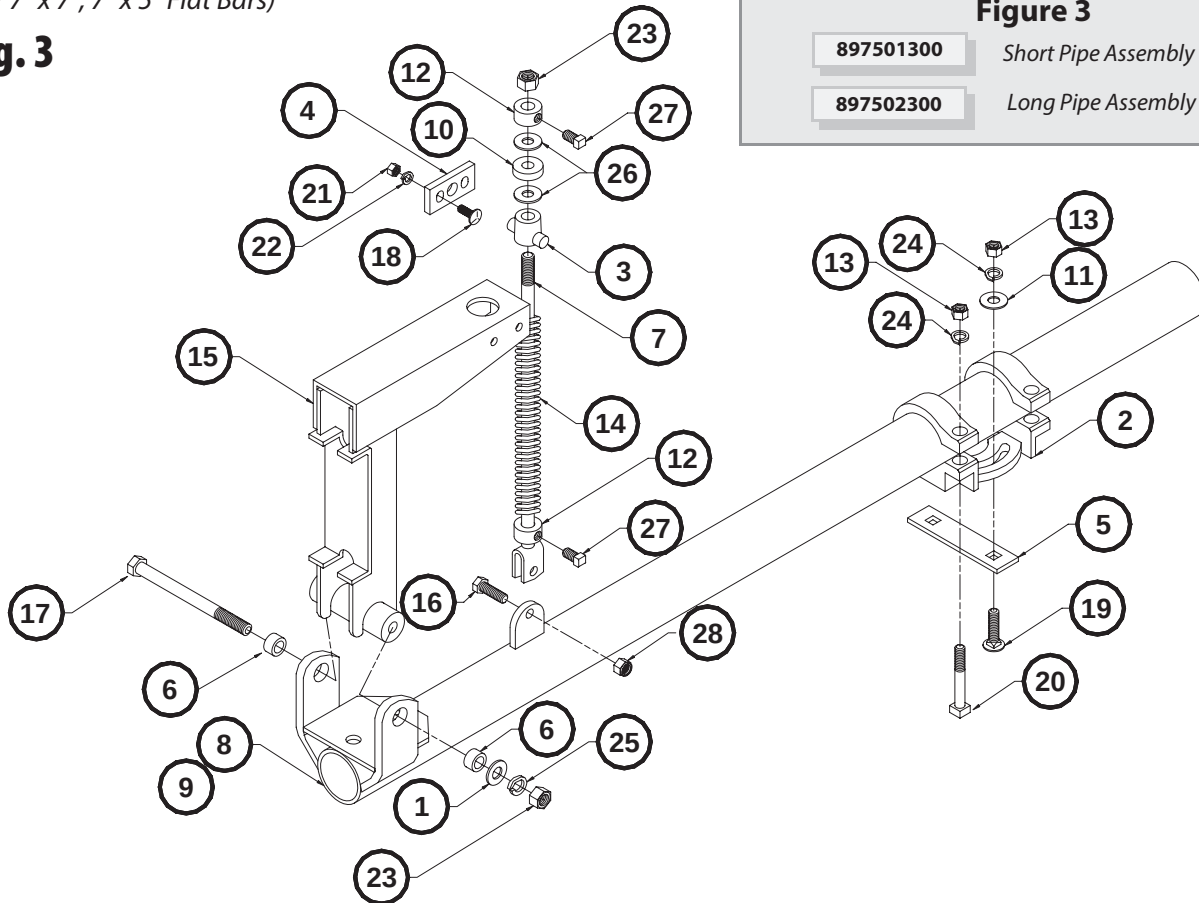
PIPE BAR ASSEMBLIES

ROLLING CULTIVATOR
PARTS BOOK

PIPE BAR ASSEMBLY

(For 7" x 7", 7" x 5" Flat Bars)

Fig. 3



ASSEMBLY - U-Bolt not Included

Figure 3

897501300 Short Pipe Assembly

897502300 Long Pipe Assembly

Note: For U-Bolt Set, see Figure 7

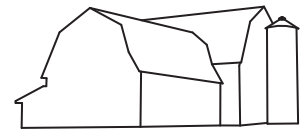
COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	81FW58000	5/8" Flat Washer	1
2	897535601B	Pivot Clamp Body	1
3	897535311	Trunnion	1
4	897535312	Trunnion Bracket	2
5	897535602	Pivot Clamp Gang Spacer	1
6	897535313	Hardened Pivot Bushing	2
7	897535317	Tension Rod	1
8	897500301	Gang Pipe, Short	1
9	897500302	Gang Pipe, Long	1
10	897535315	Rubber Buffer	1
11	81FW12000	1/2" Flat Washer	2
12	897535316	Adjusting Collar	2
13	81HN12000	1/2" Hex Nut	4
14	897535314	Tension Rod Spring	1

Ref.	Part No.	Description	Req.
15	897535318	Pipe Support Bracket	1
16	81CS121120	1/2" x 1-1/2" Hex Bolt	1
17	81CS587120	5/8" x 7-1/2" Hex Bolt	1
18	81CB38100	3/8" x 1" Carriage Bolt	4
19	81CB121340	1/2" x 1-3/4" Carriage Bolt	2
20	81SQH12312	1/2" x 3-1/2" Square Head Bolt	2
21	81HN38000	3/8" Hex Nut	4
22	81HN58000	5/8" Hex Nut	2
23	81LW38000	3/8" Lock Washer	4
24	81LW12000	1/2" Lock Washer	4
25	81LW58000	5/8" Lock Washer	1
26	81FW58000	5/8" Flat Washer	2
27	81SS123400	1/2" x 3/4" Set Screw	2
28	81NYL1200	1/2" Lock Nut	1

SERIES 89

Rolling Cultivator Parts Book



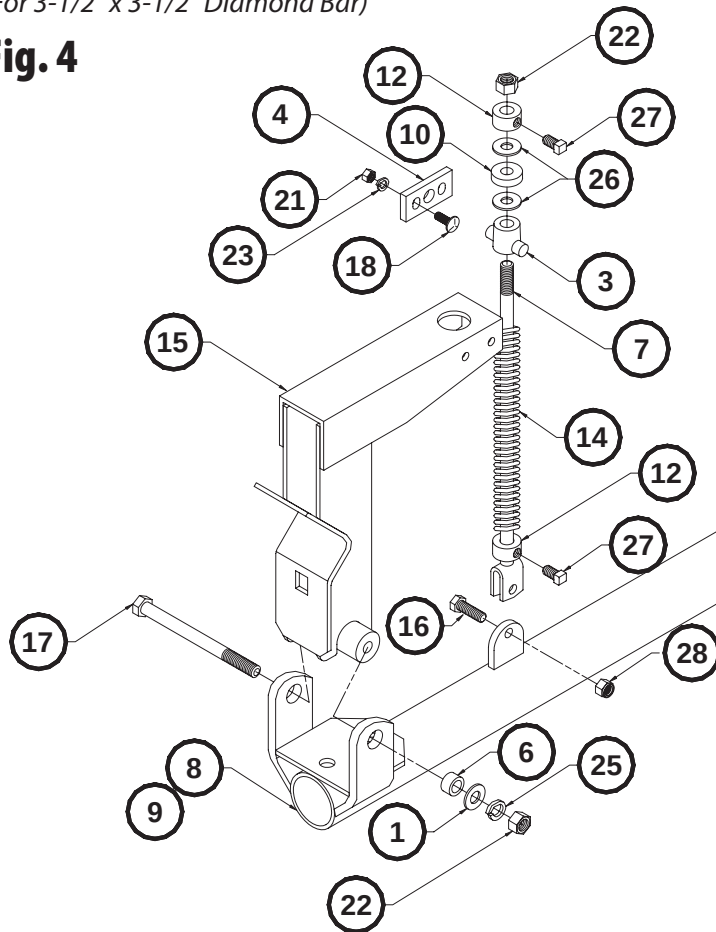
ROLLING CULTIVATOR PARTS BOOK

PIPE BAR ASSEMBLIES

PIPE BAR ASSEMBLY

(For 3-1/2" x 3-1/2" Diamond Bar)

Fig. 4



ASSEMBLY - U-Bolt not Included

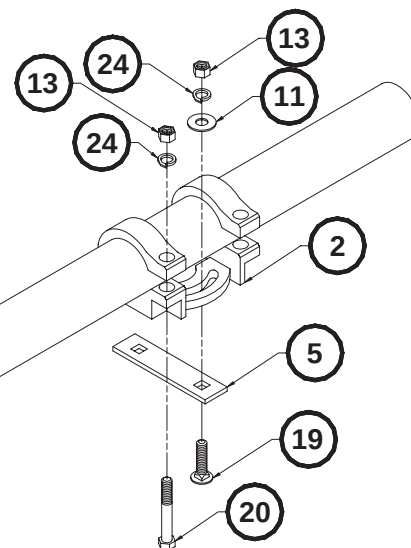
Figure 4

8975013350

Short Pipe Assembly

8975023350

Long Pipe Assembly



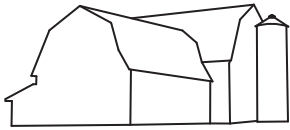
Note: Cap to mount Bar is **76CCL3535** (Ref. # 15)
and Special Hardware (listed below)

PART NO.	DESCRIPTION	REQ.
81CS34100	3/4" x 10" Cap Screw	2
81LW3400	3/4" Lock Washer	2
81HN3400	3/4" Hex Nut	2

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	81FW58000	5/8" Flat Washer	1
2	897535601B	Pivot Clamp Body	1
3	897535311	Trunnion	1
4	897535312	Trunnion Bracket	2
5	897535602	Pivot Clamp Gang Spacer	1
6	897535313	Hardened Pivot Bushing	2
7	897535317	Tension Rod	1
8	897500301	Gang Pipe, Short	1
9	897500302	Gang Pipe, Long	1
10	897535315	Rubber Buffer	1
11	81FW12000	1/2" Flat Washer	2
12	897535316	Adjusting Collar	2
13	81HN12000	1/2" Hex Nut	4
14	897535314	Tension Rod Spring	1

Ref.	Part No.	Description	Req.
15	8950004213	Pipe Support Bracket	1
16	81CS121120	1/2" x 1-1/2" Hex Bolt	1
17	81CS587120	5/8" x 7-1/2" Hex Bolt	1
18	81CB38100	3/8" x 1" Carriage Bolt	4
19	81CB121340	1/2" x 1-3/4" Carriage Bolt	2
20	81SQH12312	1/2" x 3-1/2" Square Head Bolt	2
21	81HN38000	3/8" Hex Nut	4
22	81HN58000	5/8" Hex Nut	2
23	81LW38000	3/8" Lock Washer	4
24	81LW12000	1/2" Lock Washer	4
25	81LW58000	5/8" Lock Washer	1
26	81FW58000	5/8" Flat Washer	2
27	81SS123400	1/2" x 3/4" Set Screw	2
28	81NYL1200	1/2" Lock Nut	1



SERIES 89

Rolling Cultivator Parts Book

TOOL BARS / RIGID SHANK

ROLLING CULTIVATOR PARTS BOOK

COMPLETE ASSEMBLY

Figure 5

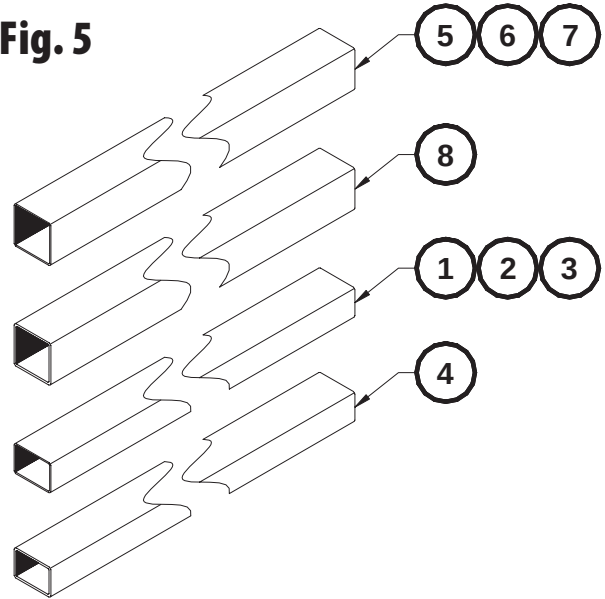
7" x 5" and 7" x 7" Tool Bar

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897500101	7" x 5" x 1/4" x 168" Tool Bar	1
2	897500102	7" x 5" x 1/4" x 192" Tool Bar	1
3	897500103	7" x 5" x 1/4" x 248" Tool Bar	1
4	897500104	7" x 5" x 3/8" x 328" Tool Bar	1
5	897700101	7" x 7" x 1/4" x 168" Tool Bar	1
6	897700102	7" x 7" x 1/4" x 188" Tool Bar	1
7	897700103	7" x 7" x 1/4" x 248" Tool Bar	1
8	897700104	7" x 7" x 3/8" x 328" Tool Bar	1

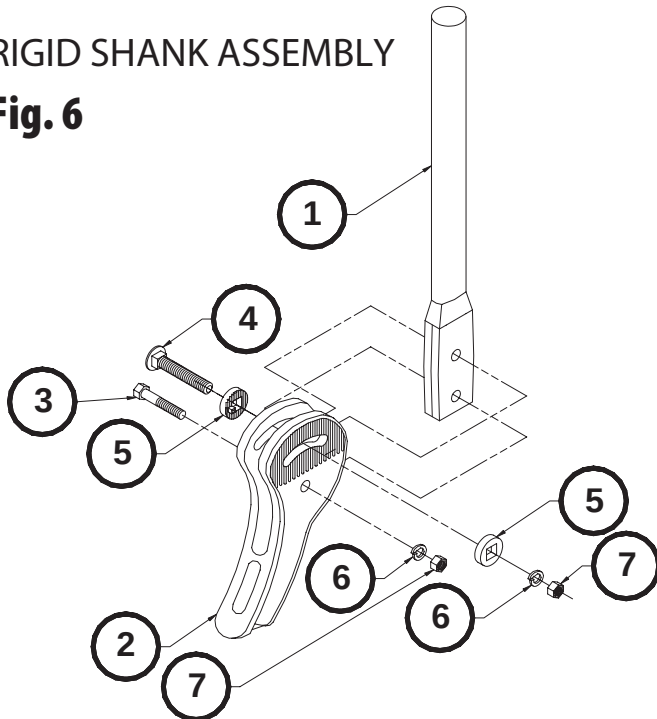
TOOL BARS

Fig. 5



RIGID SHANK ASSEMBLY

Fig. 6



COMPLETE ASSEMBLY

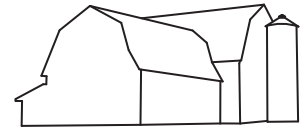
Figure 6

Rigid Shank Assembly

897535800

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897535801	Sweep Shank	1
2	897535802	Footpiece	1
3	81CS122000	1/2" x 2" Hex Bolt	1
4	81CB122120	1/2" x 2-1/2" Carriage Bolt	1
5	897535805	Ratchet Washer with Ear	2
6	81LW12000	1/2" Lock Washer	2
7	81HN12000	1/2" Hex Nut	2

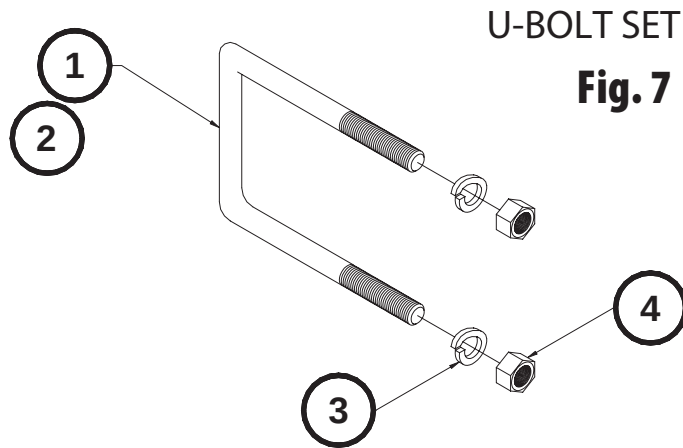


SERIES 89

Rolling Cultivator Parts Book

ROLLING CULTIVATOR
PARTS BOOK

PIPE ASSEMBLIES



U-BOLT SET
Fig. 7

COMPLETE ASSEMBLY

Figure 7

897512800 U-Bolt Set for 7" x 5" Tool Bar

897512900 U-Bolt Set for 7" x 7" Tool Bar

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897501204	7/8" U-Bolt for 7" x 5" Tool Bar	1
2	897502204	7/8" U-Bolt for 7" x 7" Tool Bar	1
3	81LW78000	7/8" Lock Washer	2
4	81HN7800F	7/8" Fine Thread Hex Nut	2

COMPLETE ASSEMBLY

Figure 8

Pivot Clamp Assembly

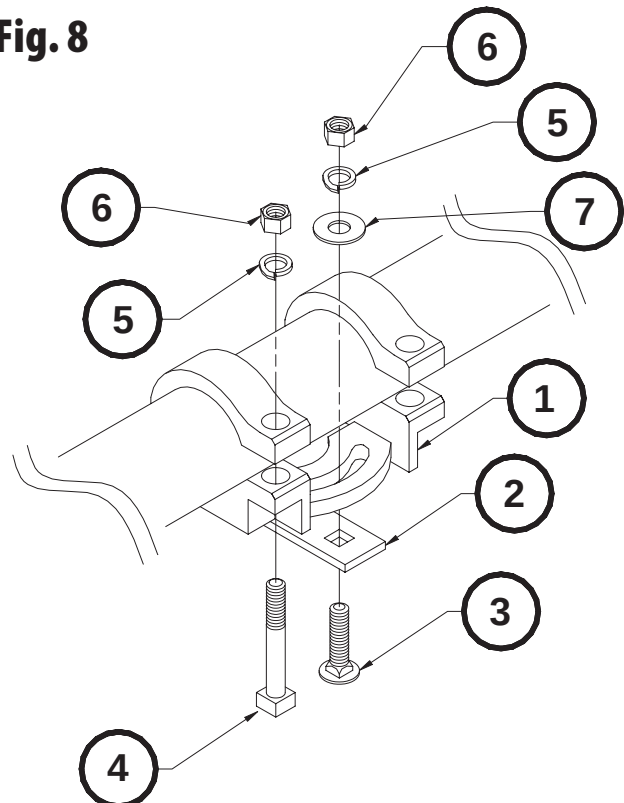
897535600

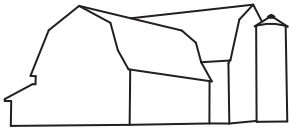
COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897535601B	Pivot Clamp Body	1
2	897535602	Pivot Clamp Gang Spacer	1
3	81CB121340	1/2" x 1-3/4" Carriage Bolt	2
4	81SQH12312	1/2" x 3-1/2" Square Head Bolt	2
5	81LW12000	1/2" Lock Washer	4
6	81HN12000	1/2" Hex Nut	4
7	81FW12000	1/2" Flat Washer	2

PIVOT CLAMP ASSEMBLY

Fig. 8





SERIES 89

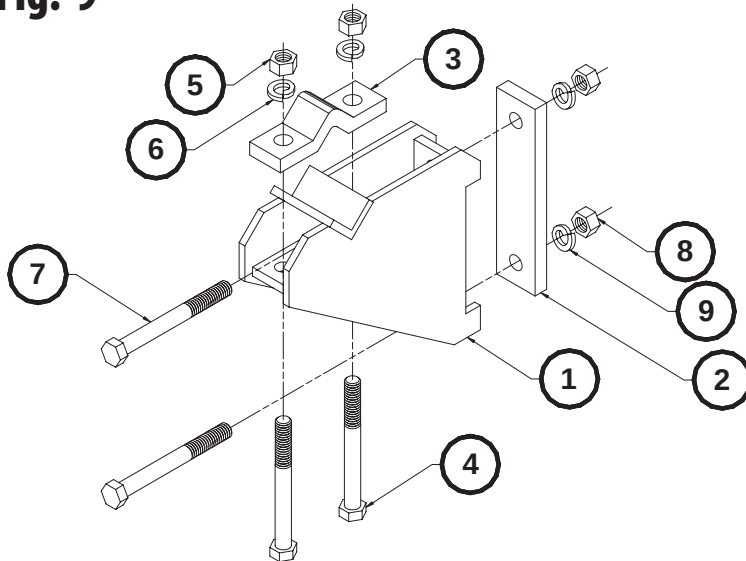
Rolling Cultivator Parts Book

AUXILIARY ADAPTER / SPACER

ROLLING CULTIVATOR PARTS BOOK

AUXILIARY TOOL BAR ADAPTER

Fig. 9



COMPLETE ASSEMBLY

Figure 9

897500AUX Auxiliary Tool Bar Adapter 7" x 5"

897700AUX Auxiliary Tool Bar Adapter 7" x 7"

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897510AUX	Auxiliary Adapter Main Frame	1
2	897535132	Clamp Cap	1
3	76CCHB545	Clamp Cap (Type 2)	1
4	81CS78500	7/8" x 5" Hex Bolt	2
5	81HN78000	7/8" Hex Nut	2
6	81LW78000	7/8" Lock Washer	2
7	81CS34800	3/4" x 8" Hex Bolt (For 7" x 5" Tool Bar)	2
7	81CS34100	3/4" x 10" Hex Bolt (For 7" x 7" Tool Bar)	2
8	81HN34000	3/4" Hex Nut	2
9	81LW34000	3/4" Lock Washer	2

COMPLETE ASSEMBLY

Figure 10

897500EXT Long Bar Spacer for 7" x 5" Tool Bar

897700EXT Long Bar Spacer for 7" x 7" Tool Bar

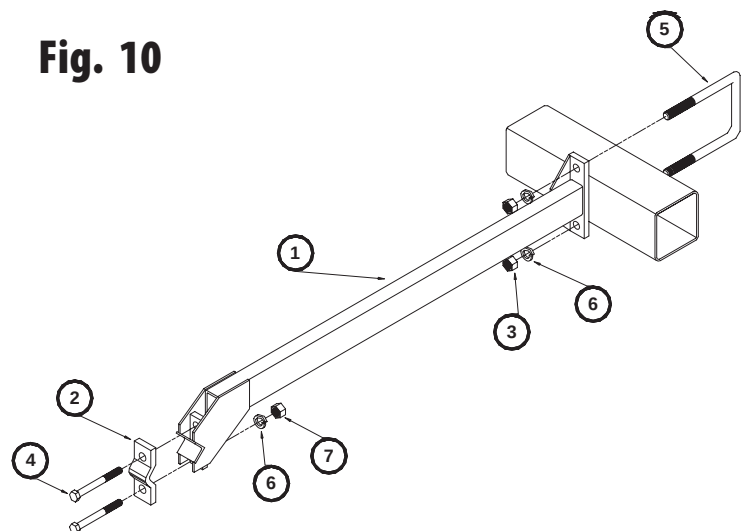
893500EXT Long Bar Spacer for 3-1/2" Tool Bar

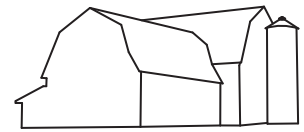
COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897535133	Main Bar Spacer Frame	1
2	76CCHB545	Clamp Cap for 2-1/4" Tool Bar	1
3	81HN7800F	7/8" Fine Thread Hex Nut	2
4	81CS78500	7/8" x 5" Hex Bolt	2
5	897503204	7/8" U-Bolt for 7" x 7" Tool Bar	1
5	897500204	7/8" U-Bolt for 7" x 5" Tool Bar	1
6	81LW78000	7/8" Lock Washer	4
7	81HN78000	7/8" Hex Nut	2

LONG BAR SPACER

Fig. 10





SERIES 89

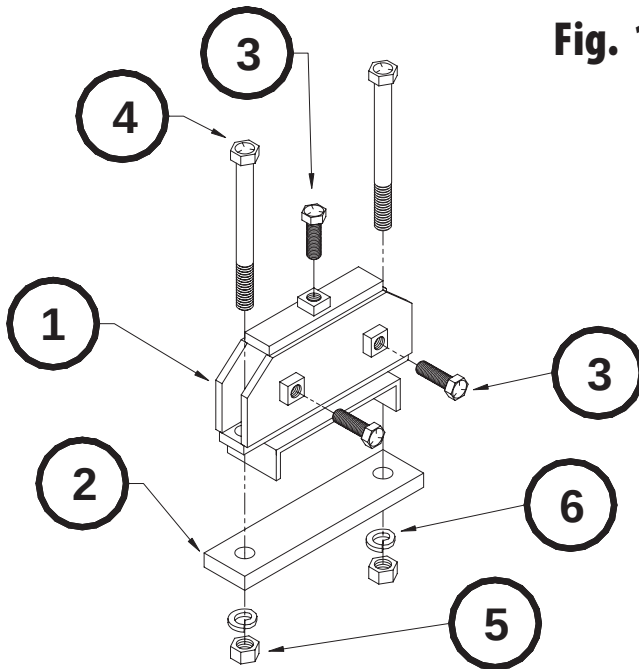
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PARTS BOOK

CLAMP / FOOT PIECE SHANK

TOOL BAR CLAMP

Fig. 11



COMPLETE ASSEMBLY

Figure 11

7503L0750 7" x 5" Tool Bar, 1" x 3" Clamp

7503L0770 7" x 7" Tool Bar, 1" x 3" Clamp

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	7503L000	Clamp Body	1
2	76CCL0075	Cap	1
3	81CS58200	5/8" x 2" Grade 5 Cap Screw	3
4	81CS34800	3/4" x 8" Grade 5 Cap Screw	2
5	81HN340000	3/4" Hex Nut	2
6	81LW34000	3/4" Lock Washer	2

CAST ALSO AVAILABLE

COMPLETE ASSEMBLY

Figure 12

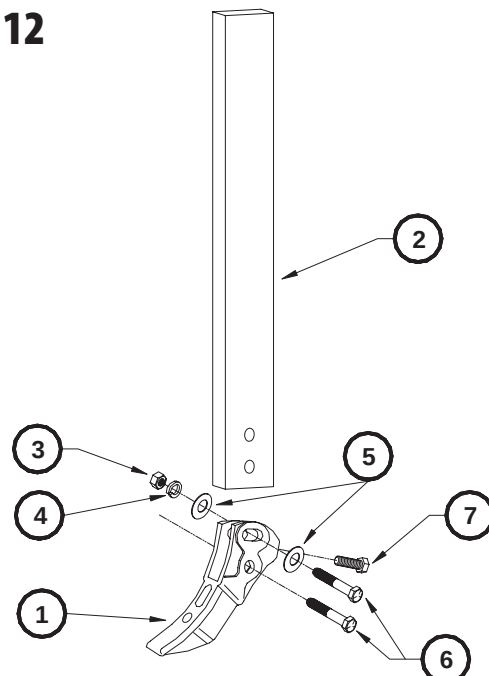
95FS133F3L Adjustable Foot Piece Shank 1" x 3"

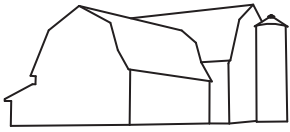
COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	94FP3133CB	Footpiece	1
2	940302236	Shank	1
3	81HN58000	5/8" Hex Nut	2
4	81LW58000	5/8" Lock Washer	2
5	81FW58000	5/8" Flat Washer	2
6	81CS583120	5/8" x 3-1/2" Grade 5 Cap Screw	2
7	81CS58200	5/8" x 2" Grade 5 Cap Screws	1

ADJUSTABLE FOOT PIECE SHANK 1" x 3"

Fig. 12





SERIES 89

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ROW MARKER ASSEMBLY

ROLLING CULTIVATOR
PARTS BOOK

COMPLETE ASSEMBLY

Figure 13

Row Marker Assembly

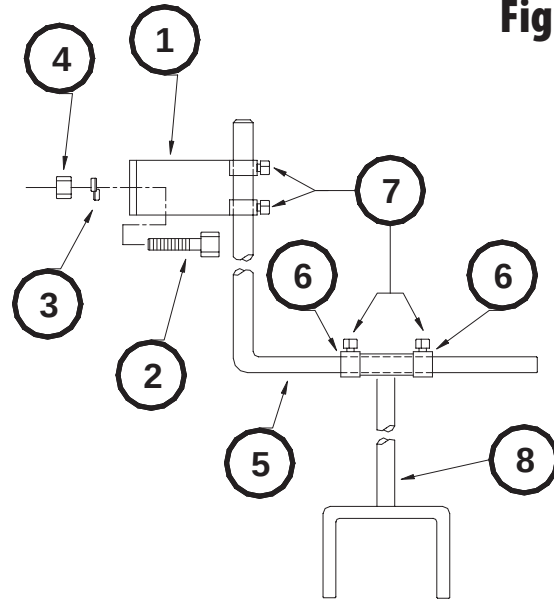
897501200

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897501201	Mounting Bracket	1
2	81CS58200	5/8" x 2" Cap Screw	1
3	81LW58000	5/8" Lock Washer	1
4	81HN58000	5/8" Hex Nut	1
5	897501206	Yolk Support	1
6	897535316	Adjusting Collar	2
7	81SS123400	1/2" x 3/4" Set Screw	4
8	897501209	Yolk Assembly	1

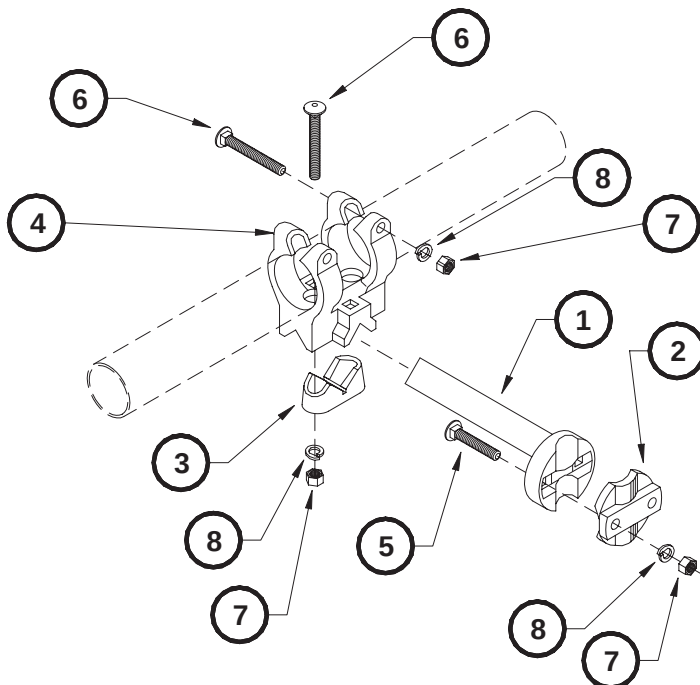
ROW MARKER ASSEMBLY

Fig. 13



STANDARD SUPPORT ASSEMBLY

Fig. 14



COMPLETE ASSEMBLY

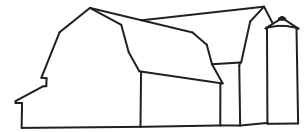
Figure 14

Standard Support Assembly

897535700

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897535703	Shank Bracket	1
2	897535702	Shank Clamp	1
3	897535701	Clamp Cap	1
4	897535704	Sweep Clamp	1
5	81CB123000	1/2" x 3" Carriage Bolt	2
6	81CB12400	1/2" x 4" Carriage Bolt	4
7	81HN12000	1/2" Hex Nut	6
8	81LW12000	1/2" Lock Washer	6



SERIES 89

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ROLLING CULTIVATOR
PARTS BOOK

ROW GANG SUPPORT

COMPLETE ASSEMBLY

Figure 15

8975351900 Row Gang Support Bracket (#1-27)

897502400

Complete Over The Row Slicer Tine Gang Assembly
(Includes **8975351900** and **897502200**)

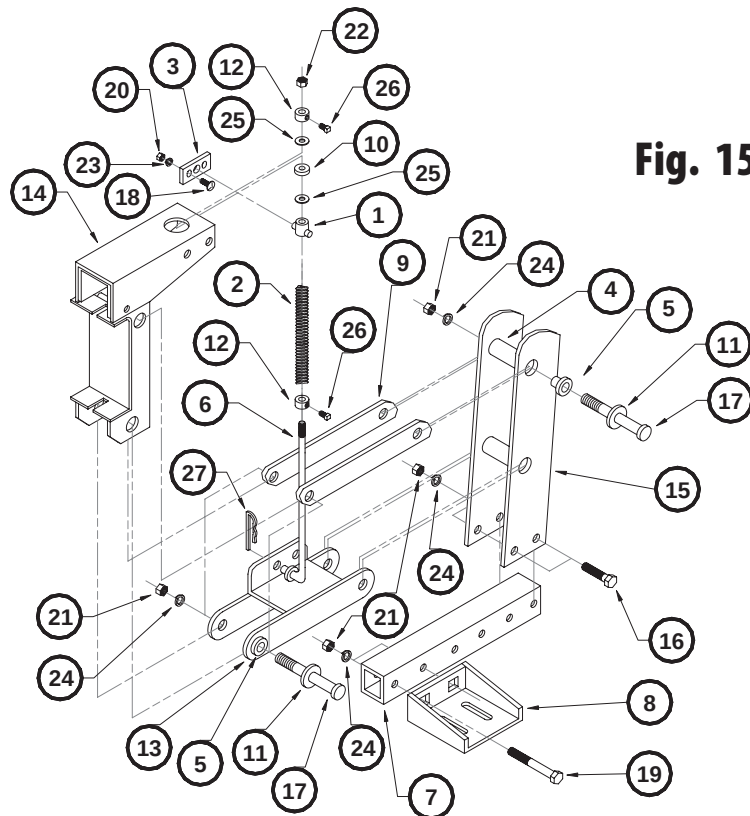
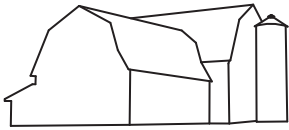


Fig. 15

Note: For U-Bolt Set, see Figure 7

COMPONENT PARTS

Ref.	Part No.	Description	Req.	Ref.	Part No.	Description	Req.
1	897535311	Trunnion	1	15	8975351916	Row Gang Support	1
2	897534314	Compression Spring	1	16	81CS121340	1/2" x 1-3/4" Hex Bolt	2
3	897535312	Trunnion Bracket	2	17	81CS124120	1/2" x 4-1/2" Hex Bolt	4
4	8975351905	Spacer	2	18	81CB38100	3/8" x 1" Carriage Bolt	4
5	8975351906	Pivot Bushing	8	19	81CB123000	1/2" x 3" Carriage Bolt	4
6	8975351907	Pressure Rod	1	20	81HN38000	3/8" Hex Nut	4
7	8975351908	Row Gang Beam	1	21	81HN12000	1/2" Hex Nut	10
8	8975351909	Beam Plate	2	22	81HN58000	5/8" Hex Nut	1
9	8975351910	Top Link	2	23	81LW38000	3/8" Lock Washer	4
10	897535315	Rubber Buffer	1	24	81LW12000	1/2" Lock Washer	10
11	81FW12000	1/2" Flat Washer	12	25	81FW58000	5/8" Flat Washer	2
12	897535316	Adjusting Collar	2	26	81SS123400	1/2" x 3/4" Set Screw	2
13	8975351914	Bottom Link	2	27	8975351929	3/16" x 1-1/2" Cotter Pin	1
14	8975351915	Support Bracket	1				



SERIES 89

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ROW GANG ASSEMBLY

ROLLING CULTIVATOR PARTS BOOK

COMPLETE ASSEMBLY

Figure 16

897502200

*Slicer Tine Split Row Gang Assembly
Includes No. 1 & No. 2 Gangs (Fig. 15)*

89750220-1

No. 1 Slicer Tine Gang Assembly

89750220-2

No. 2 Slicer Tine Gang Assembly

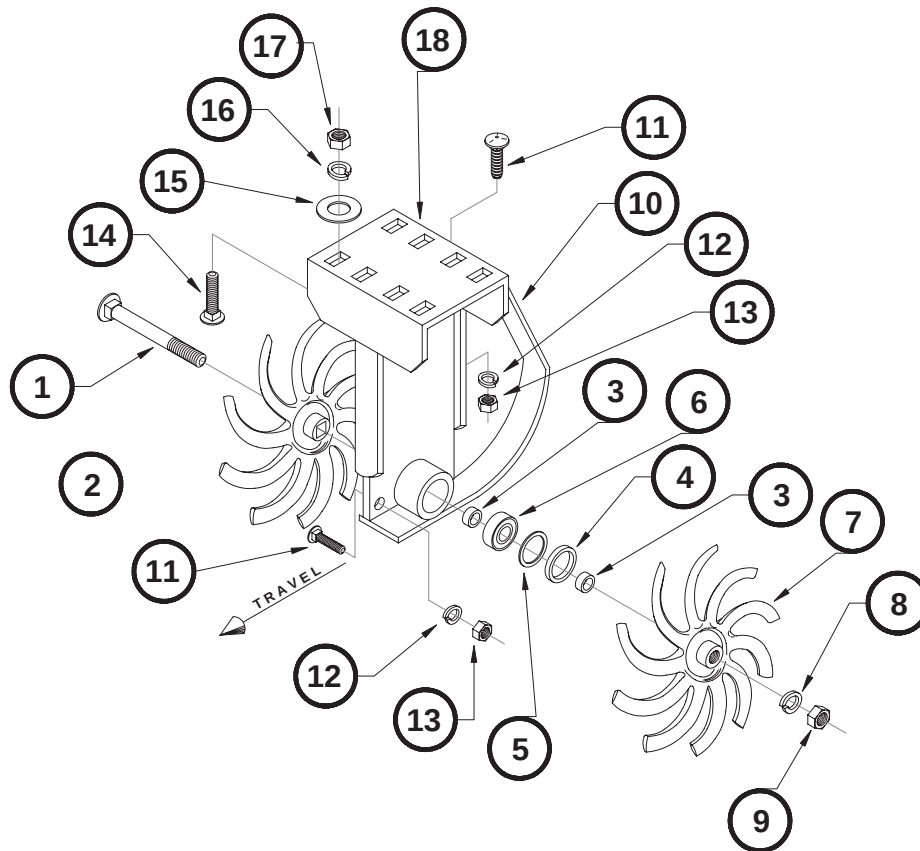
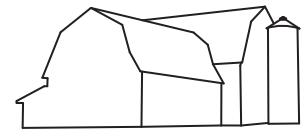


Fig. 16

COMPONENT PARTS

Ref.	Part No.	Description	Req.	Ref.	Part No.	Description	Req.
1	89FCB34500G5	Row Gang Axle	1	10	897502010	Row Gang Scraper	1
2	893500120-1P	No. 1 Square Bore Spider	1	11	81CB38114	3/8" x 1-1/4" Carriage Bolt	2
2	893500120-2P	No. 2 Square Bore Spider	1	12	81LW38000	3/8" Lock Washer	2
3	897502003	Row Gang Spacer	3	13	81HN38000	3/8" Hex Nut	2
4	897502004	Seal	2	14	81CB12112	1/2" x 1-1/2" Carriage Bolt	2
5	897502005	Retaining Ring	2	15	81FW12000	1/2" Flat Washer	2
6	897500610	Bearing	2	16	81LW12000	1/2" Lock Washer	2
7	893500130-1P	No. 1 Threaded Bore Spider	1	17	81HN12000	1/2" Hex Nut	2
7	893500130-2P	No. 2 Threaded Bore Spider	1	18	897502018	Row Gang Arm	1
8	81LW34000	3/4" Lock Washer	1				
9	81HN34000	3/4" Hex Nut	1				



SERIES 89

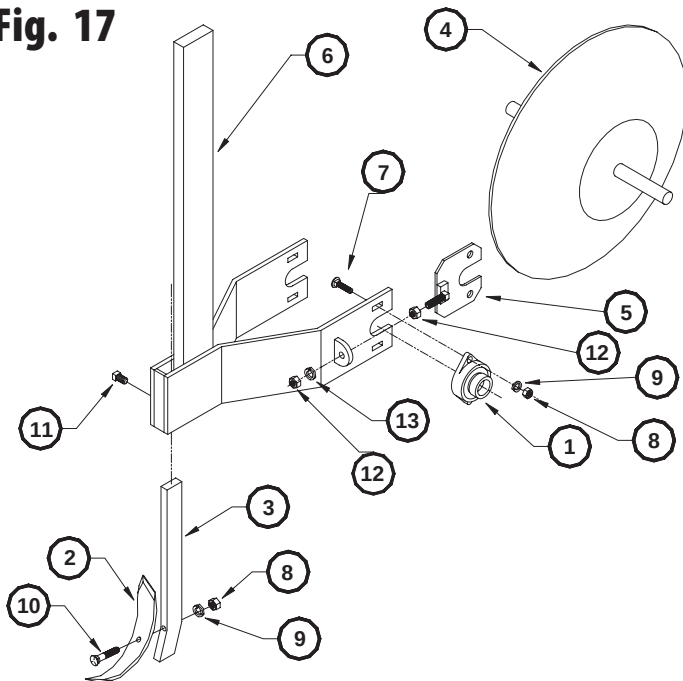
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ROLLING CULTIVATOR PARTS BOOK

GUIDE CONE ASSEMBLIES

DOUBLE GUIDE CONE ASSEMBLY

Fig. 17



COMPLETE ASSEMBLY

Figure 17

897501000 Double Guide Cone Assembly

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897501001	Guide Cone Bearing	2
2	897501002	Cultivator Tooth	1
3	897501003	Chisel Shank	1
4	897501004	Double Cone Guide Wheel	1
5	897501005	Take-up Bracket	2
6	897501006	Guide Wheel Fork	1
7	81CB38112	3/8" x 1-1/2" Carriage Bolt	4
8	81HN38000	3/8" Hex Nut	5
9	81LW38000	3/8" Lock Washer	5
10	813821200	3/8" x 2-1/2" Plowbolt	1
11	81SS38100	3/8" x 1" Square Head Set Screw	1
12	81HN12000	1/2" Hex Nut	4
13	81LW12000	1/2" Lock Washer	2

COMPLETE ASSEMBLY

Figure 18

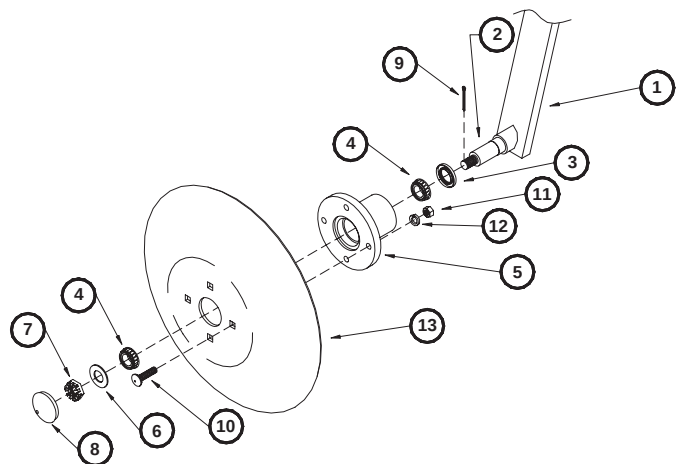
972CGDLAMD Single Guide Cone Assembly

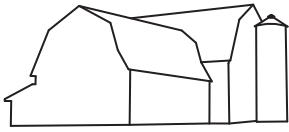
COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	972CGDL50	1" x 3" Shank Only	1
2	972CGDLSP	Spindle Only	1
2	972CGDLS1	1" x 3" Shank & Spindle REFERENCE 1&2	1
Ref.	Part No.	Description	Req.
	972CGDLP0	Complete Hub Assembly Less Spindle & Nut	
3	972CGDLP3	Hub Grease Seal	1
4	972CGDLP4	Hub Bearing	2
5	972CGDLP5	Hub Housing with Race Rings	1
6	972CGDLP6	Bearing Washer	1
7	972CGDLP7	3/4" Castellated Nut N.F.	1
8	972CGDLP8	Hub Dust Cap	1
9	972CGDLP9	5/36" x 1" Cotter Pin	1
10	81CB122120	1/2" x 2-1/2" Carriage Bolt	4
11	972CGDLP1N	Hub Wheel Nut	4
12	81LW12000	1/2" Lock Washer	4
13	972CGDLMA	20" x 1/4" Med. Duty Cone Blade	1

SINGLE GUIDE CONE ASSEMBLY

Fig. 18





SERIES 89

Rolling Cultivator Parts Book

GAUGE WHEELS - FLAT BARS

ROLLING CULTIVATOR PARTS BOOK

COMPLETE ASSEMBLY

Figure 19

Single Gauge Wheel

PART NO.	DESCRIPTION	RH/LH KEY
972SGWRSTR/L	for 7" x 5" bar	RH/LH
972SGWRSTR4/L4	for 4" x 4" bar	RH/LH
972SGWRSTR5/L5	for 5" x 7" bar	RH/LH
972SGWRSTR7/L7	for 7" x 7" bar	RH/LH

FLAT BAR WITH SINGLE WHEEL

Please specify tool bar size when ordering Gauge wheels. Standard flat bar sizes are 7" x 5", 5" x 7", 7" x 7", or 4" x 4". Other sizes may be special orders

Fig. 19

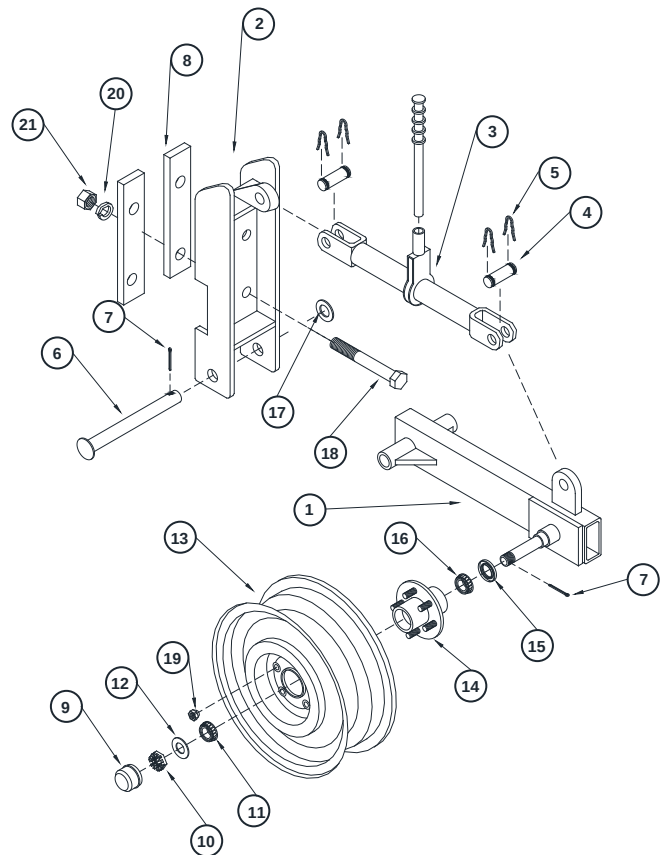
COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	972SGWRS1	RH or LH Leg	1
2	972SGWRS2	Bracket	1
3	972SGWRS3	Adjusting Ratchet	1
4	972SGWRS4	Cylinder Pin	2
5	972SGWRS5	Lock Clip	4
6	972SGWRS6	Pivot Pin	1
7	972SGWRS7	Cotter Pin	2
8	972SGWRS8	Clamp Strap	2
9	972SGWRS9	Dust Cap	1
10	972SGWRS10	Castelated Nut	1
11	972SGWRS11	Bearing	1
12	972SGWRS12	Flat Washer	1
13	972SGWRS13	15" Wheel	1
14	972SGWRS14	Hub Casting w/ Race	1
15	972SGWRS15	Seal	1
16	972SGWRS16	Bearing	1
17	972SGWRS17	1" Flat Washer	1
18	972SGWRS18	1" x 7", 1/2" Hex Bolt*	4
18	972SGWRS18A	1" x 9", 1/2" Hex Bolt**	4
18	972SGWRS18B	1" x 6-1/2" Hex Bolt***	4
19	972SGWRS19	Lug Nut	5
20	972SGWRS20	1" Lock Washer	4
21	972SGWRS21	1" Hex Nut	4

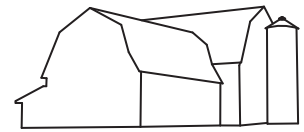
* Fits 7" x 5" Tool Bar

** Fits 5" x 7" and 7" x 7" Tool Bar

*** Fits 4" x 4" Tool Bar



Note: See Series 97 for more gauge wheels.



SERIES 89

Rolling Cultivator Parts Book

ROLLING CULTIVATOR
PARTS BOOK

GAUGE WHEELS - FLAT BARS

COMPLETE ASSEMBLY

Figure 20

Dual Gauge Wheels

PART NO.	DESCRIPTION
972SGWRSTD	for 7" x 5" bar
972SGWRSTD4	for 4" x 4" bar
972SGWRSTD5	for 5" x 7" bar
972SGWRSTD7	for 7" x 7" bar

FLAT BAR WITH DUAL WHEELS

Please specify tool bar size when ordering Gauge wheels. Standard flat bar sizes are 7" x 5", 5" x 7", 7" x 7", or 4" x 4". Other sizes may be special orders

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	972SGWRSD	Dual Leg	1
2	972SGWRS2	Bracket	1
3	972SGWRS3	Adjusting Ratchet	1
4	972SGWRS4	Cylinder Pin	2
5	972SGWRS5	Lock Clip	4
6	972SGWRS6	Pivot Pin	1
7	972SGWRS7	Cotter Pin	3
8	972SGWRS8	Clamp Strap	2
9	972SGWRS9	Dust Cap	2
10	972SGWRS10	Castelated Nut	2
11	972SGWRS11	Bearing	2
12	972SGWRS12	Flat Washer	2
13	972SGWRS13	15" Wheel	2
14	972SGWRS14	Hub Casting w/ Race	2
15	972SGWRS15	Seal	2
16	972SGWRS16	Bearing	2
17	972SGWRS17	1" Flat Washer	1
18	972SGWRS18	1" x 7", 1/2" Hex Bolt*	4
18	972SGWRS18A	1" x 9", 1/2" Hex Bolt**	4
18	972SGWRS18B	1" x 6-1/2" Hex Bolt***	4
19	972SGWRS19	Lug Nut	10
20	972SGWRS20	1" Lock Washer	4
21	972SGWRS21	1" Hex Nut	4

* Fits 7" x 5" Tool Bar

** Fits 5" x 7" and 7" x 7" Tool Bar

*** Fits 4" x 4" Tool Bar

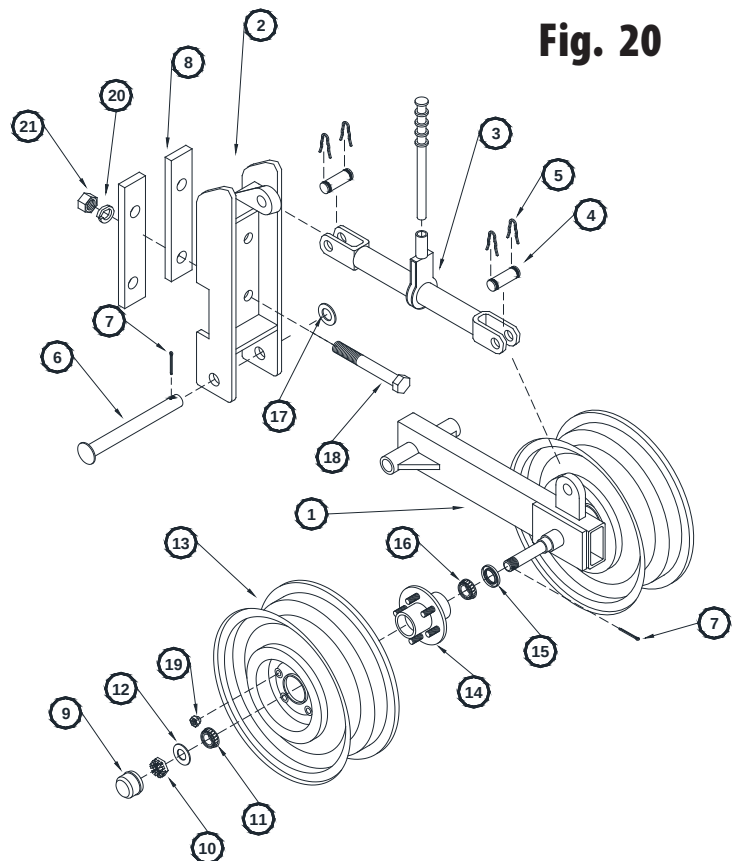
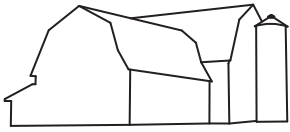


Fig. 20

Note: See Series 97 for more gauge wheels.



SERIES 89

Rolling Cultivator Parts Book

GAUGE WHEELS - DIAMOND BAR

ROLLING CULTIVATOR
PARTS BOOK

ADJUSTABLE FOR 2-1/4" DIAMOND BAR

Fig. 21

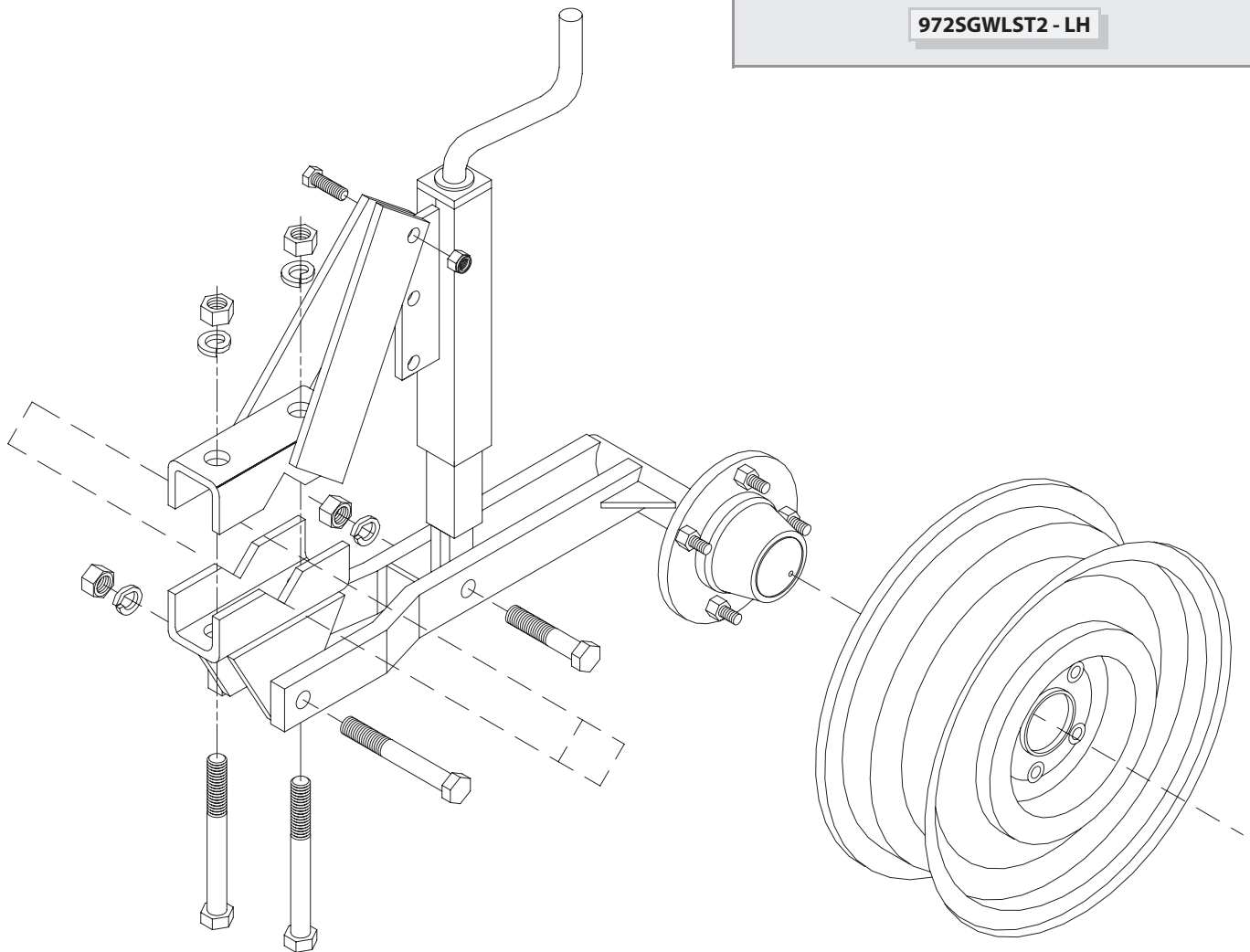
COMPLETE ASSEMBLY

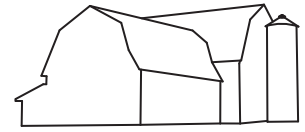
Figure 21

Gauge Wheels For 2-1/4" Diamond Bar (RH/LH)

972SGWRST2 - RH

972SGWLST2 - LH





SERIES 89

Rolling Cultivator Parts Book

GAUGE WHEELS - CLOD BUSTERS

ROLLING CULTIVATOR PARTS BOOK

CLOD BUSTER ROLLERS*

(See also Series 97)

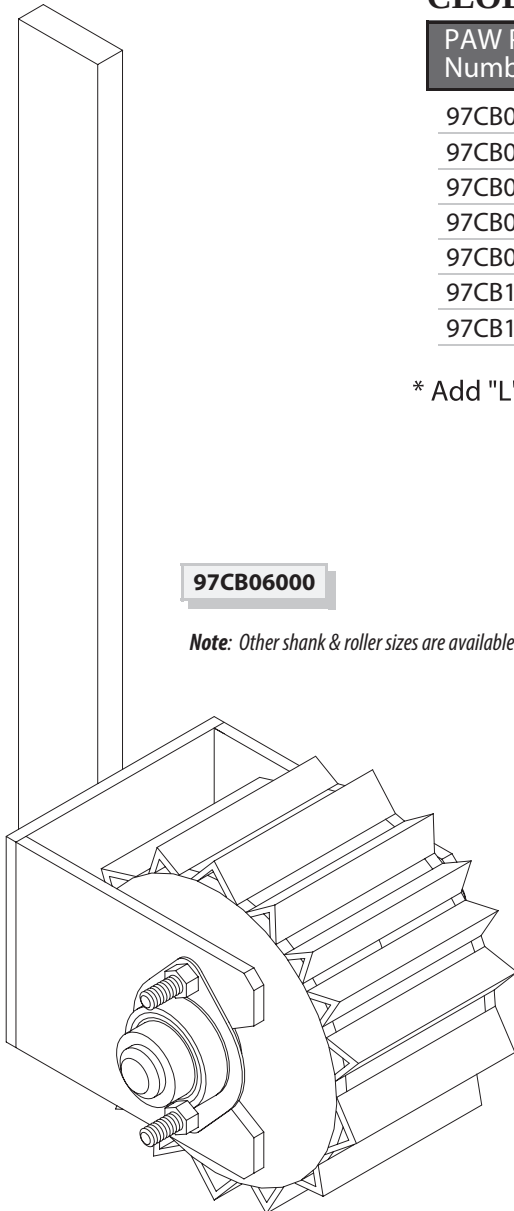
CLOD BUSTER ROLLERS

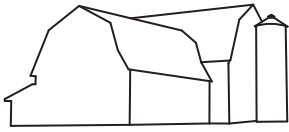
PAW Part Number	Shank Size	Roller Width
97CB04000	5/8" x 2" x 20"	4"
97CB05000	5/8" x 2" x 20"	5"
97CB06000	5/8" x 2" x 20"	6"
97CB07120	5/8" x 2" x 20"	7-1/2"
97CB08000	5/8" x 2" x 20"	8"
97CB12000	5/8" x 2" x 20"	12"
97CB15000	5/8" x 2" x 20"	15"

* Add "L" or "R" to end of part number for an offset shank.

97CB06000

Note: Other shank & roller sizes are available.





SERIES 89

Rolling Cultivator Parts Book

ROLLING CULTIVATOR
PARTS BOOK

GAUGE WHEELS

GAUGE WHEEL ASSEMBLY

(Semi-Pneumatic)

COMPLETE ASSEMBLY

Figure 22

897535030

*Gauge Wheel Assembly
(Semi-Pneumatic)*

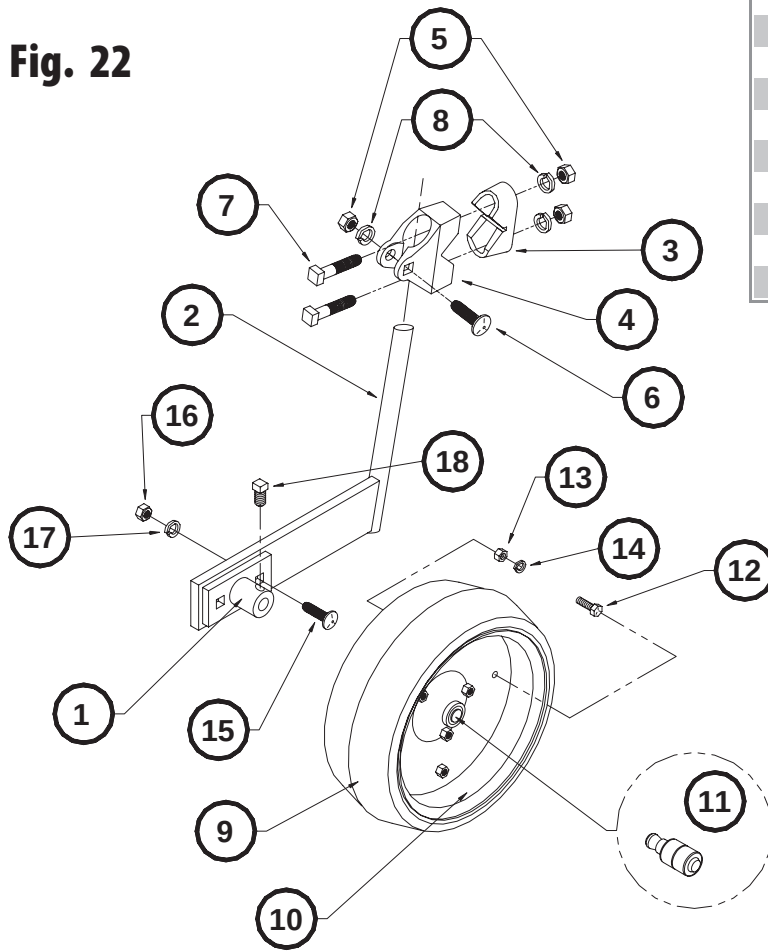
89GW412-10-2A

*Tire and Wheel Assembly with
Bearing (Items #9-14)*

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897535001	Gauge Wheel Hub Only	1
2	897535002	Gauge Wheel Arm Assembly	1
3	897535701	Clamp Cap	1
4	897500601B	Round Shank Clamp Body	1
5	81HN12000	1/2" Hex Nut	3
6	81CB121340	1/2" x 1-3/4" Carriage Bolt	1
7	81SQH12212	1/2" X 1-1/2" Square Head Bolt	2
8	81LW12000	1/2" Lock Washer	3
9	897535009	4" x 12" Semi-Pneumatic Tire	1
10	897535010	Half Wheel	2
11	897535011	Bearing	1
12	81CS516340	5/16" x 3/4" Cap Screw	7
13	81HN51600	5/16" Hex Nut	7
14	81LW51600	5/16" Lock Washer	7
15	81CB38114	3/8" x 1-1/4" Carriage Bolt	2
16	81HN38000	3/8" Hex Nut	2
17	81LW38000	3/8" Lock Washer	2
18	81SS38340	3/8" x 3/4" Set Screw	1

Fig. 22



ACCESSORIES & OPTIONS

897535009

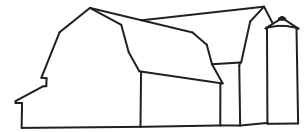
- Tire Only

897535010

- Half Wheel (Yellow) Only

897535011

- Water Pump Bearing Only



SERIES 89

Rolling Cultivator Parts Book

DISC ASSEMBLIES

ROLLING CULTIVATOR PARTS BOOK

COMPLETE ASSEMBLY

Figure 23

897500600 Disc Assembly Comp. (Fig. 23)

897500661 Disc Assembly Less Clamp
(Fig. 23 Less Fig. 23A)

Figure 23A

Disc Weeder Clamp (Fig. 23A)

897500601

Figure 23B

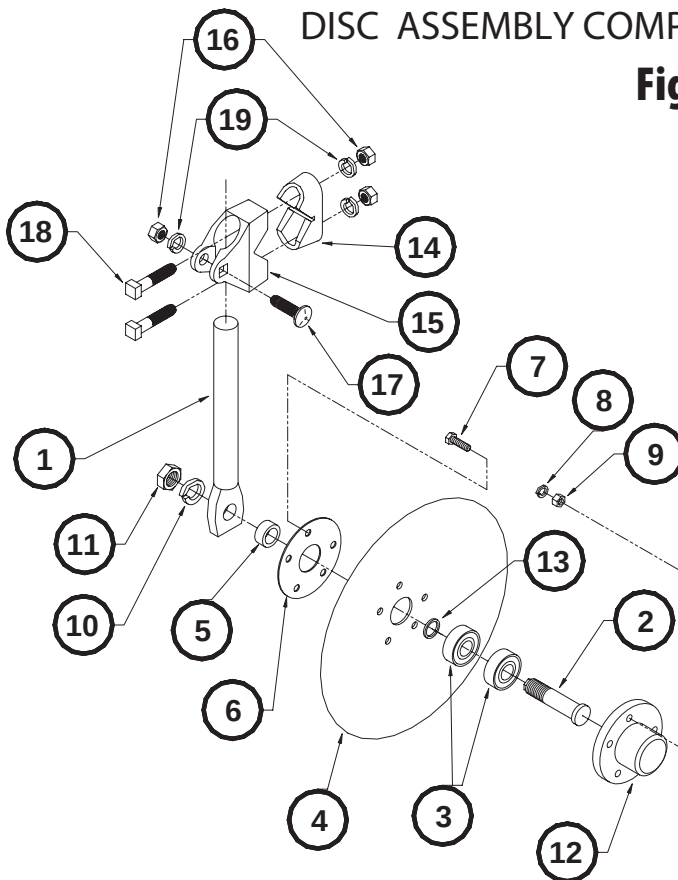
Hub Assembly

Hub Assembly With Disc (#4)
(Fig. 23B With **89AS12180P**)

897500662

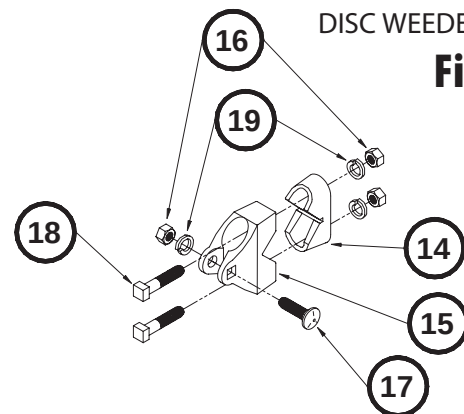
DISC ASSEMBLY COMPLETE

Fig. 23



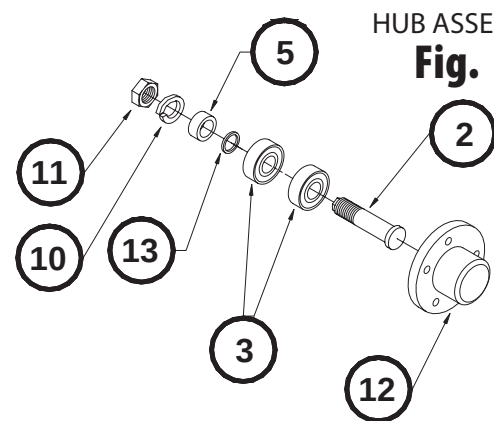
DISC WEEDER CLAMP

Fig. 23A



HUB ASSEMBLY

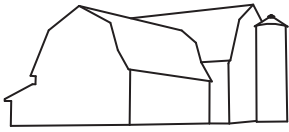
Fig. 23B



COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897500605	Disc Shank - Standard	1
1	897500705	Disc Shank - Long (Optional)	-
2	897500609	Disc Axle	1
3	897500610	Bearing	2
4	89AS1218P	12" Disc Blade, 5 Bolt Pattern	1
5	897500611	Bearing Spacer	1
6	897500612	Disc Blade Backing Plate	1
7	81CS51610	5/16" x 1" Cap Screw	5
8	81LW51600	5/16" Lock Washer	5
9	81HN51600	5/16" Hex Nut	5

Ref.	Part No.	Description	Req.
10	81LW34000	3/4" Lock Washer	1
11	81JN34000	3/4" Jam Nut	1
12	897500608	Machined Hub Casting Only	1
13	897500613	O-Ring	1
14	897535701	Clamp Cap	1
15	897500601B	Disc Weeder Clamp Body	1
16	81HN12000	1/2" Hex Nut	3
17	81CB121340	1/2" x 1-3/4" Carriage Bolt	1
18	81SQH12212	1/2" x 2-1/2" Square Head	2
19	81LW12000	1/2" Lock Washer	3



SERIES 89

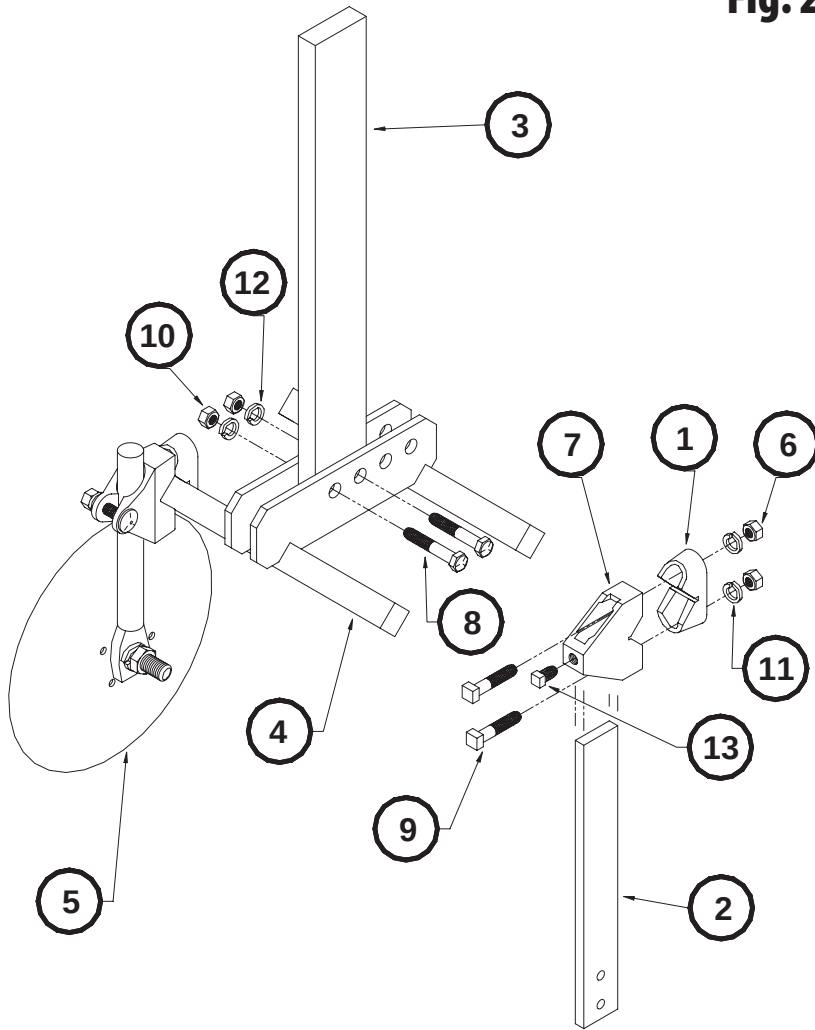
Rolling Cultivator Parts Book

ROLLING CULTIVATOR
PARTS BOOK

DISC WEEDER ASSEMBLY

DISC WEEDER ASSEMBLY

Fig. 24



COMPLETE ASSEMBLY

Figure 24

Disc Weeder Assembly Complete

897500660

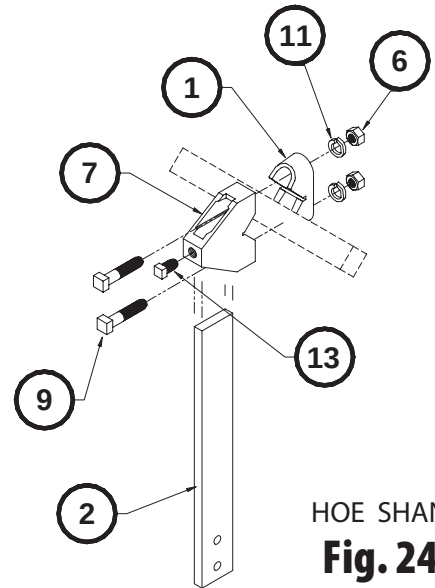
Figure 24A

Hoe Shank Assembly

897500900

Hoe Shank Clamp (Less Ref. #2)

897500604

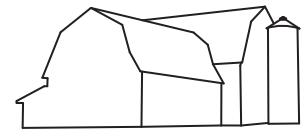


HOE SHANK
Fig. 24A

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897535701	Clamp Cap	1
2	897500602	Hoe Shank	1
3	897500603	Shank 1" x 3"	1
4	897500606	Disc Weeder Link Assembly	1
5	897500600	Disc Assembly Complete	2
6	81HN12000	1/2" Hex Nut	2
7	897500604C	Clamp Body (5/8" Also Available)	1

Ref.	Part No.	Description	Req.
8	81CS582120	5/8" x 2-1/2" Hex Bolt	2
9	81SQH12212	1/2" x 2-1/2" Square Head	2
10	81HN58000	5/8" Hex Nut	2
11	81LW12000	1/2" Lock Washer	2
12	81LW58000	5/8" Lock Washer	2
13	81SS123400	1/2" x 3/4" Set Screw	1



SERIES 89

Rolling Cultivator Parts Book

COMPLETE ASSEMBLY

Figure 25

*Twin Row Precision Cultivator
Frame Assembly (Fig. 25)*

897503570

Does Not Include:

Disc Weeder (897500600)

Gauge Wheel (897535030)

Hoe Shank Assemblies (897500900)
and all Attaching Clamps

BUILD OPTIONS

*Twin Row Precision Cultivator
Assembly*

897503500

Includes:

4 - Disc Weeder (897500600)

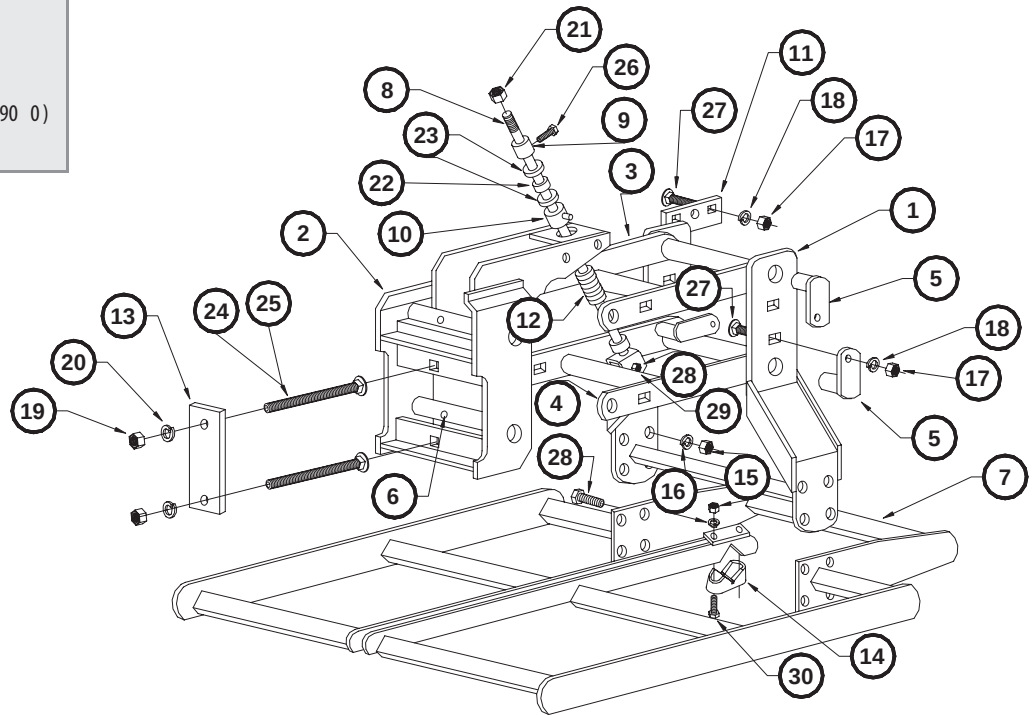
1 - Gauge Wheel (897535030)

4 - Hoe Shank Assemblies
(897500900)

and all Attaching Clamps

**Twin Row Precision Cultivator
and Twin Row Precision Cultivator Assembly**

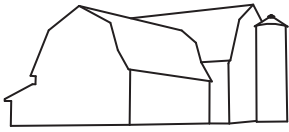
Fig. 25



See previous pages
for tools and accessories

Ref.	Part No.	Description	Req.
1	897503530	Twin Row Tool Attaching Support	1
2	897503510	Twin Row Gang Support Bracket	1
3	897503550	Twin Row Upper Link	1
4	897503560	Twin Row Lower Link	1
5	897503540	Twin Row Lock Pin	8
6	81GZ14000	1/4" Grease Zerk	4
7	897503520	Tool Attaching Assembly	1
8	897535317	Tension Rod	1
9	897535316	Adjusting Collar	2
10	897535311	Trunnion	1
11	897535312	Trunnion Bracket	2
12	897535314	Tension Rod Spring	1
13	897535312	Clamp Strap for 7" x 5" or 7" x 7" Tool Bar	1
14	897535701	Clamp Cap	1
15	81HN12000	1/2" Hex Nut	10
16	81LW12000	1/2" Lock Washer	10
17	81HN38000	3/8" Hex Nut	12

Ref.	Part No.	Description	Req.
18	81LW38000	3/8" Lock Washer	12
19	81HN34000	3/4" Hex Nut	2
20	81LW34000	3/4" Lock Washer	2
21	81HN58000	5/8" Hex Nut	1
22	897535315	Rubber Buffer	1
23	89FFW585	5/8" Special Washer	2
24	81CB349120	3/4" x 9-1/2" Carriage Bolt	2
25	81CB34112	3/4" x 11-1/2" Carriage Bolt	2
26	81SS123400	1/2" x 3/4" Set Screw	2
27	81CB38100	3/8" x 1" Carriage Bolt	12
28	81CS121120	1/2" x 1-1/2" Hex Bolt	9
29	81NYL12000	1/2" Hex Lock Nut	1
30	81CB122120	1/2" x 2-1/2" Hex Bolt	2
31	897503511	Clamp Strap set for 7" x 5" Tool Bar. Includes (Ref # 13,19,20, and 25)	-

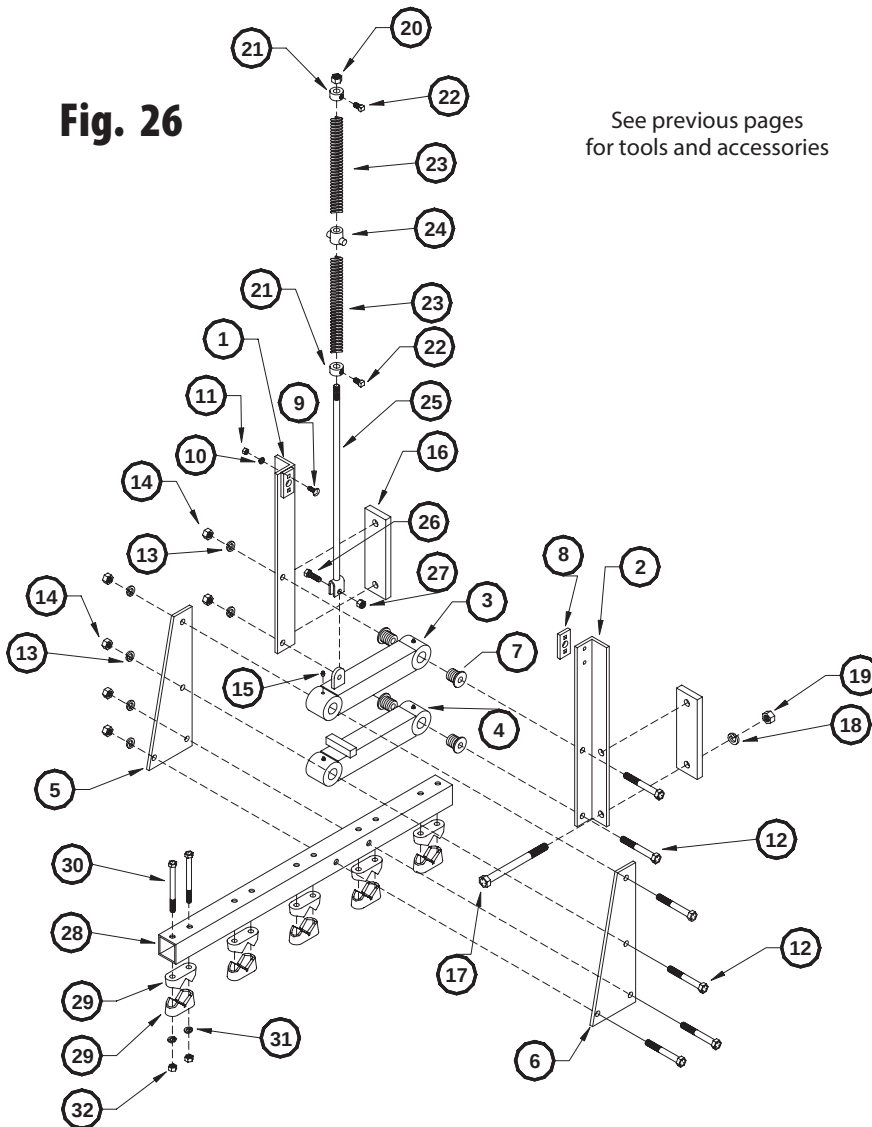


SERIES 89

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Fig. 26

See previous pages
for tools and accessories



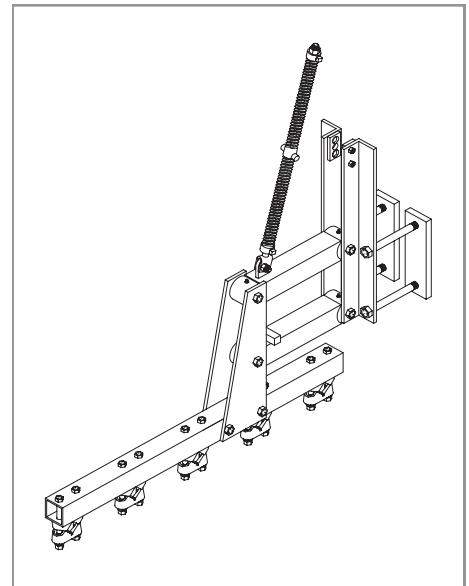
Field Parallelogram

COMPLETE ASSEMBLY

Figure 26

8975001600

Field Parallelogram



Ref.	Part No.	Description	Req.
1	89750016001	Angle, Left	1
2	89750016002	Angle, Right	1
3	89750016003	Parallelogram Bar, Upper	1
4	89750016004	Parallelogram Bar, Lower	1
5	89750016005	Left Support	1
6	89750016006	Right Support	1
7	89750016007	Bushing	8
8	89750016008	Trunnion Bracket	2
9	81CB38114	3/8" x 1-1/4" (32) Carriage Bolt NC	4
10	81LW38000	3/8" Lock Washer	4
11	81HN38000	3/8" Hex Nut NC	4
12	81CS58412	5/8" x 4-1/4" (106) Capscrew NC	6
13	81LW58000	5/8" Lock Washer	6
14	81HN58000	5/8" Hex Nut NC	6
15	89750016015	1/4" NF Grease Fitting	4
16	89750016016	Counter Clamp	2

Ref.	Part No.	Description	Req.
17	81CS34900	3/4" x 9" (230) Cap Screw NC	4
18	81LW34000	3/4" Lock Washer	4
19	81HN34000	3/4" Hex Nut NC	4
20	81HN58000	5/8" Hex Nut NC	1
21	89750016021	Adjusting Collar	2
22	81SS123400	1/2" x 3/4" (19) Square Head Set Screw NC	2
23	89750016023	Spring 200 MM	2
24	89750016024	Trunnion	1
25	89750016025	Tension Rod	1
26	81CS121120	1/2" x 1-1/2" (38) Capscrew NC	1
27	81NYL1200	1/2" Lock Nut NC Nylock	1
28	89750016028	Carrier Bar	1
29	89750016029	Clamp Cap	8
30	81CS126000	1/2" x 6" (150) Cap Screw NC	8
31	81LW12000	1/2" Lock Washer	8
32	81HN12000	1/2" Hex Nut NC	8

SERIES 89

Rolling Cultivator Parts Book

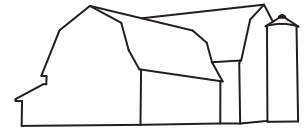


Fig. 27

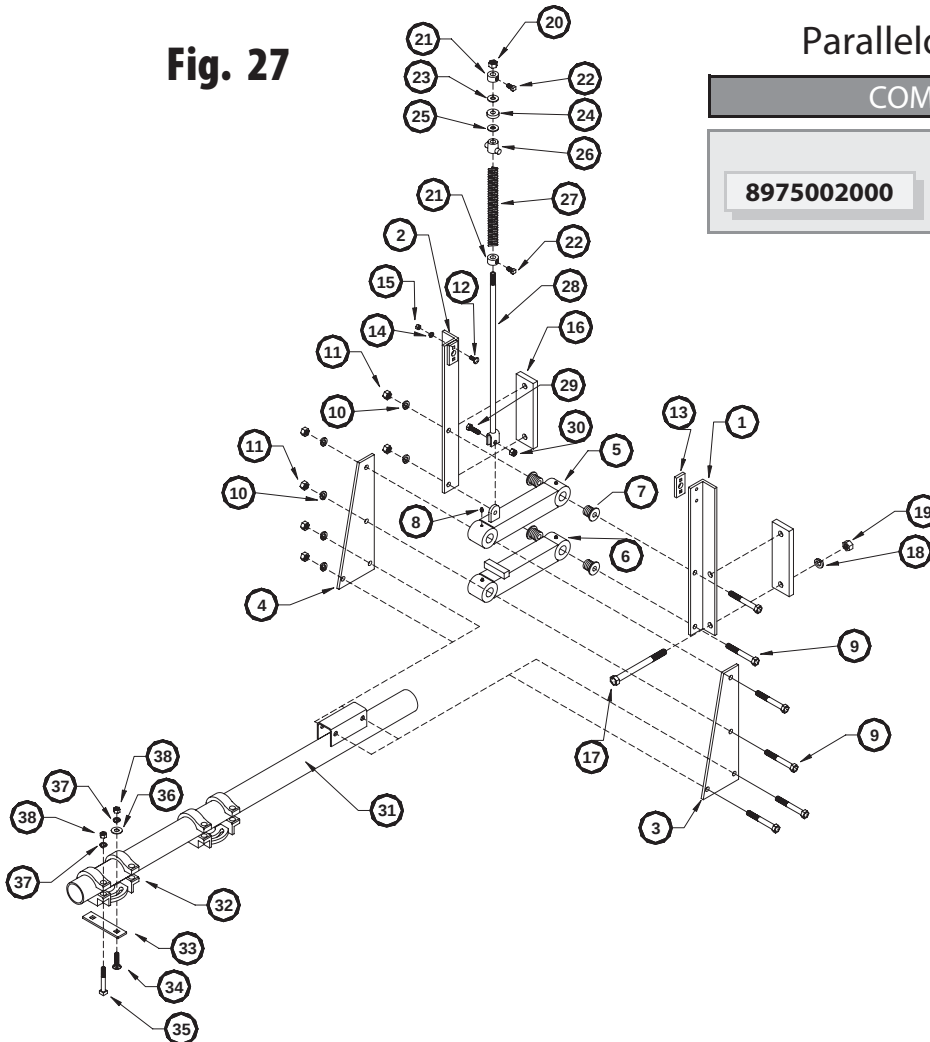
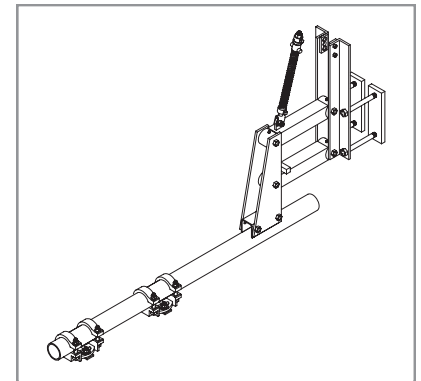
Parallelogram Pipe Assembly

COMPLETE ASSEMBLY

Figure 27

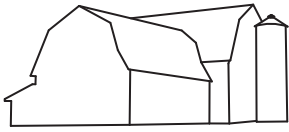
8975002000

Parallelogram Pipe Assembly



Ref.	Part No.	Description	Req.
1	89750020001	Angle, Right	1
2	89750020002	Angle, Left	1
3	89750020003	Right Support	1
4	89750020004	Left Support	1
5	89750020005	Parallelogram Bar, Upper	1
6	89750020006	Parallelogram Bar, Lower	1
7	89750020007	Bushing	8
8	89750020008	1/4" NF Grease Fitting	4
9	81CS054812	5/8" x 4-1/4" (106) Capscrew NC	6
10	81LW58000	5/8" Lock Washer	6
11	81HN58000	5/8" Hex Nut NC	6
12	81CB38114	3/8" x 1-1/4" (32) Carriage Bolt NC	4
13	897535312	Trunnion Bracket	2
14	81LW38000	3/8" Lock Washer	4
15	81HN38000	3/8" Hex Nut NC	4
16	89750020016	Counter Clamp	2
17	81CS34900	3/4" x 9" (230) Capscrew NC	4
18	81LW34000//	3/4" Lock Washer	4
19	81HN34000	3/4" Hex Nut NC	4

Ref.	Part No.	Description	Req.
20	81HN58000	5/8" Hex Nut	1
21	897535316	Adjusting Collar	2
22	81SS123400	1/2" x 3/4" (190) Square SS NC	2
23	89750020023	5/8" Gear Box Mount Washer	1
24	89750020024	Rubber Buffer	1
25	81FW58000	5/8" Washer	1
26	897535311	Trunnion	1
27	89750020027	Spring 200 MM	1
28	897535317	Tension Rod	1
29	81CS121120	1/2" x 1-1/2" 9(38) Capscrew NC	1
30	81NYL1200	1/2" Lock Nut NC	1
31	89750020031	Gang Pipe	1
32	89750020032	Gang Pivot Clamp	2
33	89750020033	Counter Clamp	2
34	81CB121340	1/2" x 1-3/4" (45) Carriage Bolt NC	4
35	81CB123000	1/2" x 3" (75) Square Head Bolt NC	4
36	81FW12000	1/2" Washer	4
37	81LW12000	1/2" Lock Washer	8
38	81HN12000	1/2" Hex Nut NC	8



SERIES 89

Rolling Cultivator Parts Book

AUXILIARY HITCH SUPPORT

ROLLING CULTIVATOR
PARTS BOOK

COMPLETE ASSEMBLY

Figure 28

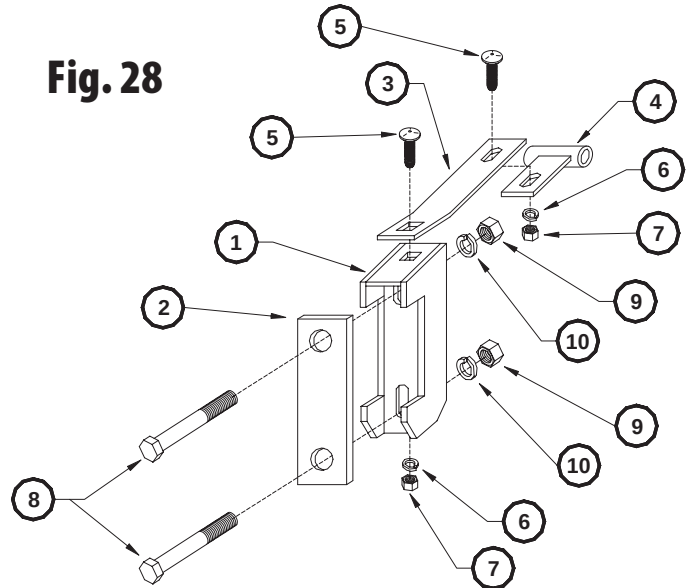
Auxiliary Hitch Support Bracket

89AFSS200

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	89AFSS001	Hitch Support Main Frame	1
2	897535132	Clamp Strap	1
3	89AFSS002	Hitch Support Strap	1
4	89AFSS003	Hitch Support A-Frame Strap	1
5	81CB12112	1/2" x 1-1/2" Carriage Bolt	2
6	81LW12000	1/2" Lock Washer	2
7	81HN12000	1/2" Hex Nut	2
8	81CS34700	3/4" x 7" Hex Bolt (For 7" x 5" Tool Bar)	2
9	81HN34000	3/4" Hex Nut	2
10	81LW34000	3/4" Lock Washer	2

Fig. 28



CULTIVATOR JACKSTAND

For 7" x 5", 7" x 7" Tool Bar

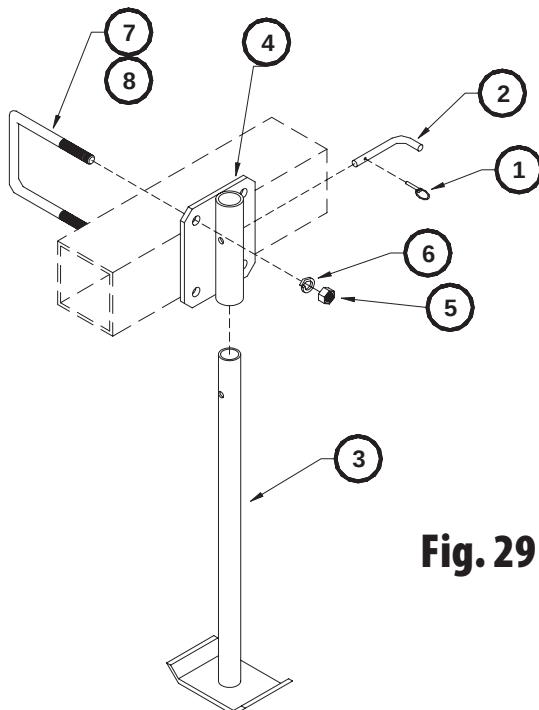


Fig. 29

COMPLETE ASSEMBLY

Figure 29

Cultivator Jackstand for 7" x 5" Tool Bar

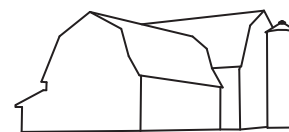
897501500

Cultivator Jackstand for 7" x 7" Tool Bar

897502500

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	8975002020	Hair Pin	1
2	8975015020	Jack Pin	1
3	8975015030	Leg Stand	1
4	8975015040	Jackstand Support	1
5	81HN7800F	7/8" Hex Nut Fine Thread	4
6	81LW78000	7/8" Lock Washer	4
7	897500204	7/8" U-Bolt for 7" x 5" Tool Bar	2
8	897503204	7/8" U-Bolt for 7" x 7" Tool Bar	2



SERIES 89

Rolling Cultivator Parts Book

CHARACTERISTICS

The spider-type cultivating gang is designed for use in row crop cultivation and ground preparation on a wide variety of areas and applications. The complete gang assembly is available in two sizes of wheels (14-1/2" or 16") and in a number of spider wheels per gang assembly (3-4-5-10 per gang). All component parts are also available and are interchangeable with most varieties of spider cultivating gang manufacturers. Schematic parts diagrams are shown to help aid in determining correct component parts.

OPTIONAL WEAR-EXTENDING STYLES

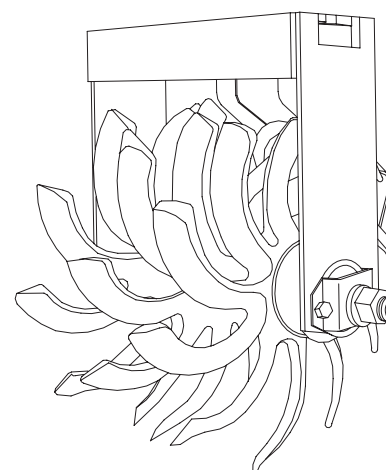
Wear Coat - Add "W" to end of part number

Refer to Product info pages in catalog Preface section for further explanations and descriptions of available options.

GANG ASSEMBLIES

**No. 1 (Right Hand) or
No. 2 (Left Hand)**

Part Number	Optional Styles	L&R Key	Wheel Diameter	No. Of Wheels	Weight Each
89CG14300L	W	LH (No. 2)	14-1/2"	3	51#
89CG14300R	W	RH (No. 1)	14-1/2"	3	51#
89CG14400L	W	LH (No. 2)	14-1/2"	4	63#
89CG14400R	W	RH (No. 1)	14-1/2"	4	63#
89CG14500L	W	LH (No. 2)	14-1/2"	5	76#
89CG14500R	W	RH (No. 1)	14-1/2"	5	76#
89CG16100L	W	LH (No. 2)	16"	10	163#
89CG16100R	W	RH (No. 1)	16"	10	163#
89CG16300L	W	LH (No. 2)	16"	3	58#
89CG16300R	W	RH (No. 1)	16"	3	58#
89CG16400L	W	LH (No. 2)	16"	4	70#
89CG16400R	W	RH (No. 1)	16"	4	70#
89CG16500L	W	LH (No. 2)	16"	5	85#
89CG16500R	W	RH (No. 1)	16"	5	85#



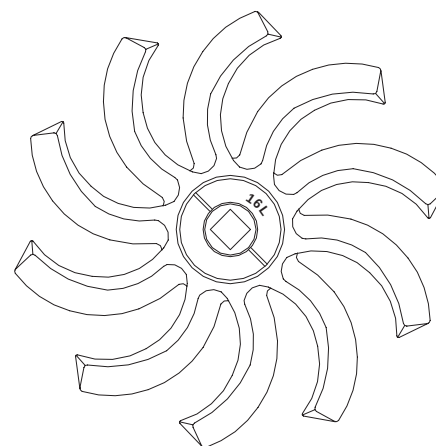
89CG14300

SPIDER WHEELS

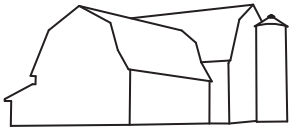
15/16" SQ Axle

Refer to either Fig. 30 of parts schematic for specific applications.

Part Number	Size	L&R Key	Description	Weight Each
89L14000R	14-1/2"	RH (No. 1)	Plain wheel only	8.5
89L14000RW	14-1/2"	RH (No. 1)	Wear Coat wheel only	8.9
89L16000R	16"	RH (No. 1)	Plain wheel only	10.3
89L16000RW	16"	RH (No. 1)	Wear Coat wheel only	10.6
89L14000L	14-1/2"	LH (No. 2)	Plain wheel only	8.5
89L14000LW	14-1/2"	LH (No. 2)	Wear Coat wheel only	8.9
89L16000L	16"	LH (No. 2)	Plain wheel only	10.3
89L16000LW	16"	LH (No. 2)	Wear Coat wheel only	10.6



89L16000L

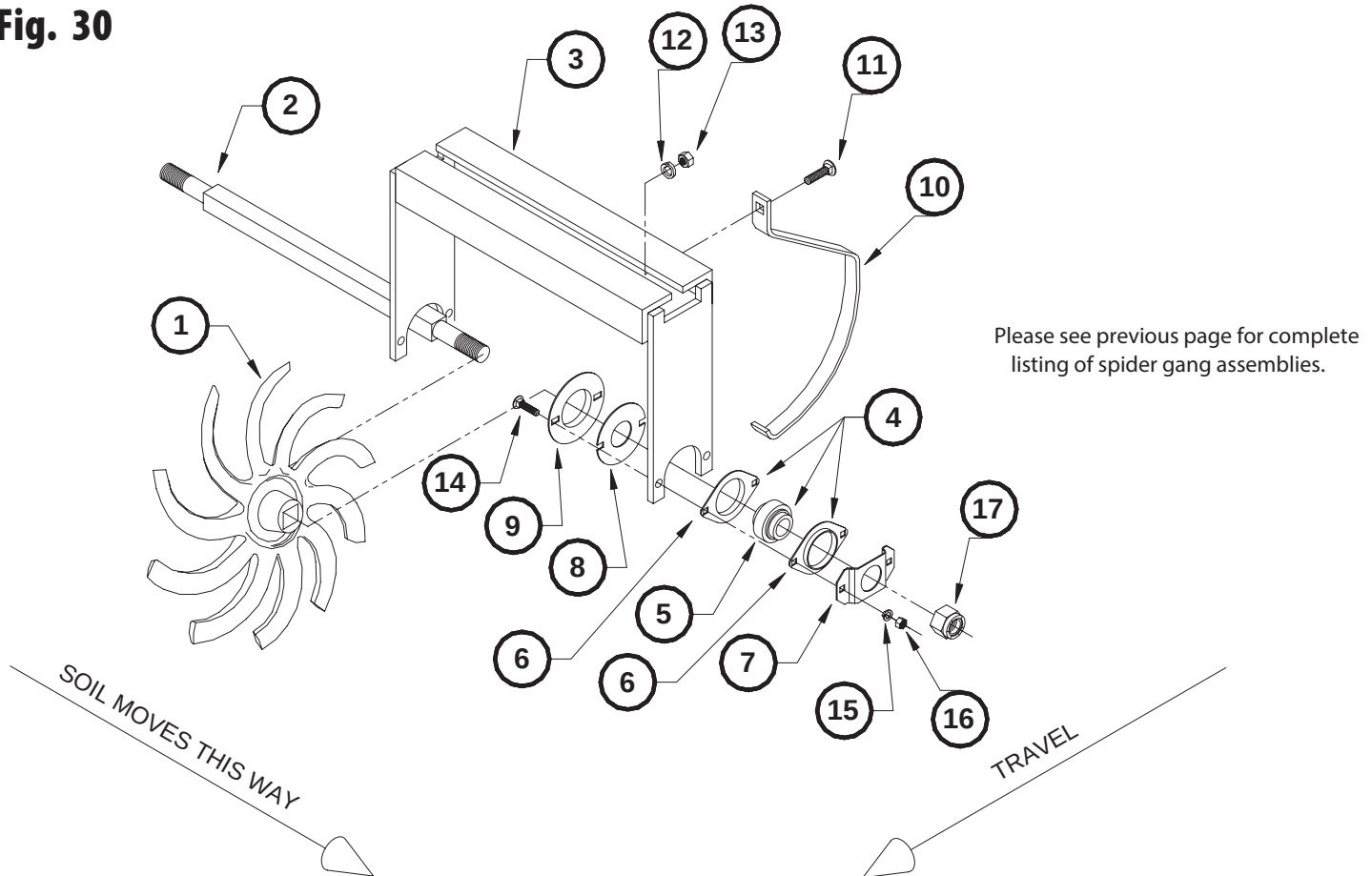


SERIES 89

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Spider Cultivator Gang No. 1 (RH)

Fig. 30

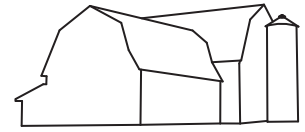


COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	89L14000L	14" Spider Wheel (LH)	As Req.
	89L14000LW	14" Spider Wheel (LH) Wear Coated	As Req.
	89L14000R	14" Spider Wheel (RH)	As Req.
	89L14000RW	14" Spider Wheel (RH) Wear Coated	As Req.
	89L16000L	16" Spider Wheel (LH)	As Req.
	89L16000LW	16" Spider Wheel (LH) Wear Coated	As Req.
	89L16000R	16" Spider Wheel (RH)	As Req.
	89L16000RW	16" Spider Wheel (RH) Wear Coated	As Req.
2	89GP02AX10	10-Gang - 15/16" Square Axle	1
	89GP02AX3	3-Gang - 15/16" Square Axle	1
	89GP02AX4	4-Gang - 15/16" Square Axle	1
	89GP02AX5	5-Gang - 15/16" Square Axle	1
	89GP03F1014	10-gang HD Frame (14-1/2")	1
	89GP03F1016	10-gang HD Frame (16")	1
3	89GP03F314	3-gang HD Frame (14-1/2")	1
	89GP03F316	3-gang HD Frame (16")	1
	89GP03F414	4-gang HD Frame (14-1/2")	1
	89GP03F416	4-gang HD Frame (16")	1
	89GP03F514	5-gang HD Frame (14-1/2")	1
	89GP03F516	5-gang HD Frame (16")	1

INTERCHANGEABLE

Ref.	Part No.	Description	Req.
4	89GP04BBA	Bearing Assembly. Includes (1) #5 and (2) #6s	As Req.
5	89L205PPB7	15/16" Bearing	2
6	89GP0652MST	52 MST bearing shield	4
7	89GP0705G	Outer Seal Guard	2
8	89GP08ISL	Inner Seal	2
9	89GP09IS6	Inner Shield Guard	2
10	89GP10SCP	Rear Gang Scraper	As Req.
11	81CB38100	3/8" x 1" Carriage Bolt	As Req.
12	81LW38000	3/8" Lock Washer	As Req.
13	81HN38000	3/8" Hex Nut N.C.	As Req.
14	81CB516114	5/16" x 1-1/4" Carriage Bolt	4
15	81LW51600	5/16" Lock Washer	4
16	81HN51600	5/16" Hex Nut	4
17	81NYL78000	7/8" Nylock Lock Nut	2



SERIES 89

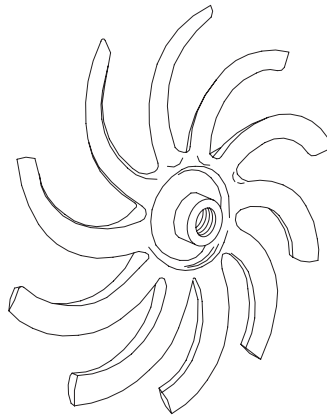
Rolling Cultivator Parts Book

ADD-ON SPIDER WHEELS

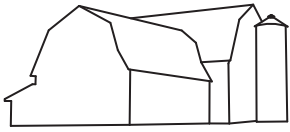
7/8" N.C. THREAD

Add-on spider wheels are threaded at axle bore to fit on exposed ends of spider axle to allow for wider cultivating width. Refer to Fig. 30 of parts schematic for specific applications.

Part Number	Size	L&R Key	Description	Weight Each
89L16A00L	16"	LH (No. 2)	Plain wheel only	11.3
89L16A00LW	16"	LH (No. 2)	Wear Coat wheel only	12.0
89L16A00R	16"	RH (No. 1)	Plain wheel only	11.3
89L16A00RW	16"	RH (No. 1)	Wear Coat wheel only	12.0



89L16A00L/R

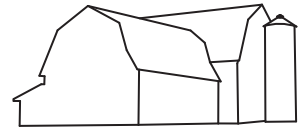


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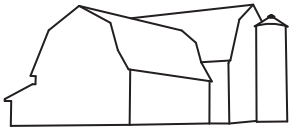


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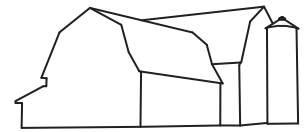


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SERIES 90

Straight Cultivator Standards

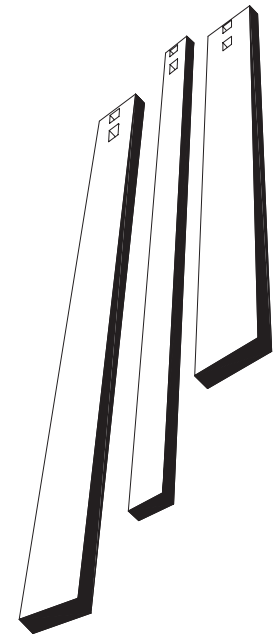
CHARACTERISTICS

The straight cultivator standard has the hole punch on one end for a square hole for 7/16" carriage bolt and a slot which allows center line spacing of 1-5/8" to 1-7/8". Shank material is C-1080 Plow Steel.

HOLE PUNCH - Reference Below

28 – Square hole and slot for 7/16" bolt on 1-5/8" to 1-7/8" centers.

Part Number	Style	Thickness	Width	Length	Hole Punch	Weight Each
900252824	Straight	3/4"	2-1/2"	24"	28	13.0
900252830	Straight	3/4"	2-1/2"	30"	28	16.0
900302836	Straight	1"	3"	36"	28	30.6
909152816	Straight	5/8"	1-1/2"	16"	28	4.5
909152824	Straight	5/8"	1-1/2"	24"	28	6.2
909152830	Straight	5/8"	1-1/2"	30"	28	8.4
909202824	Straight	5/8"	2"	24"	28	8.4
909202830	Straight	5/8"	2"	30"	28	10.3



SERIES 91

Side Offset Cultivator Standards

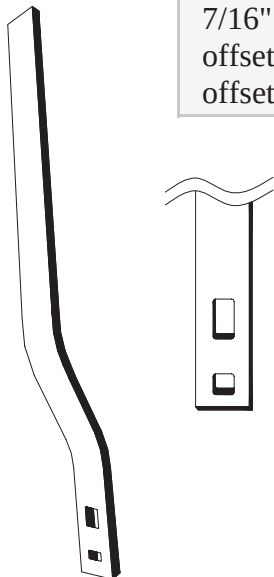
CHARACTERISTICS

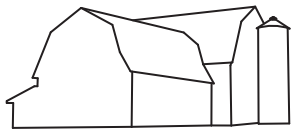
The side offset cultivator standard has the hole punch on one end for a square hole for 7/16" carriage bolt and a slot which allows center line spacing of 1-5/8" to 1-7/8". It is offset 3" to allow for mounting of tillage tools. The design of this standard allows the offset to be either right-handed or left-handed. It is heat-treated after offsetting.

HOLE PUNCH - Reference Below

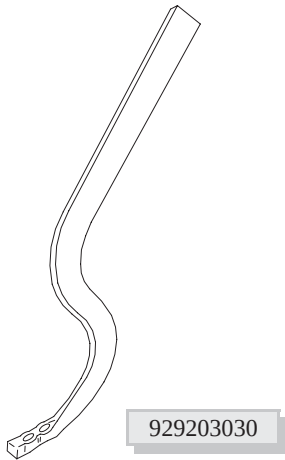
28 – Square hole and slot for 7/16" bolt on 1-5/8" to 1-7/8" centers.

Part Number	Style	Thickness	Width	Length	Hole Punch	Weight Each
910252824	3" Offset	3/4"	2-1/2"	24"	28	13.0
910252830	3" Offset	3/4"	2-1/2"	30"	28	16.0
910302836	3" Offset	1"	3"	36"	28	30.6
919152816	3" Offset	5/8"	1-1/2"	16"	28	4.5
919152824	3" Offset	5/8"	1-1/2"	24"	28	6.2
919152830	3" Offset	5/8"	1-1/2"	30"	28	8.4
919202824	3" Offset	5/8"	2"	24"	28	8.4
919202830	3" Offset	5/8"	2"	30"	28	10.3





SERIES 92 Rear Offset Cultivator Standards



CHARACTERISTICS

The rear offset cultivator standard has a forged foot for direct mounting of the tillage tool. It is mounted to the tool bar by use of a clamp. Shank material is heat-treated C-1080 Plow Steel.

HOLE PUNCH - Reference Below

30 – 1/2" diameter hole and slot for 7/16" bolt on **1-1/4" to 2"** centers.

Part Number	Style	Thickness	Width	Length	Hole Punch	Weight Each
929203030	Rear Offset	5/8"	2"	30"	30	12.0

929203030

SERIES 93 Cultivator Standard w/Forged Mounting Foot

CHARACTERISTICS

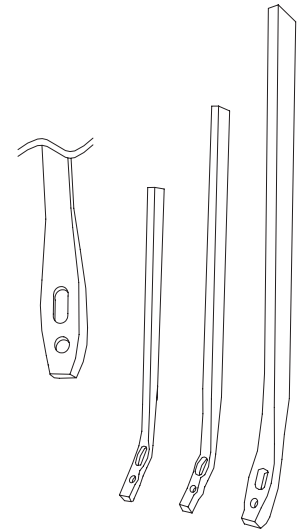
This is a straight cultivating standard with a forged mounting foot for direct front mounting of the tillage tool. In addition, all sizes, except for the 1 x 3 standard (930303036), have Hole Punch 28 at opposite end of shank for side mounting to tools. In effect, this creates a two-in-one combination standard for all tillage applications. Shank material is heat-treated C-1080 Plow Steel.

SIDE OFFSET STYLES:

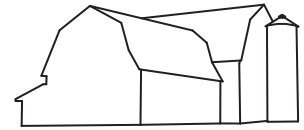
All Series 93 shanks have 3" side-offsetting of the forged end as an available option. To specify either right-hand or left-hand offset, and either an "L" for left-hand or "R" for right-hand at end of appropriate size. (ex: 930303036R = right hand offset)

HOLE PUNCH - Reference Below

30 – 1/2" diameter hole and slot for 7/16" bolt on **1-1/4" to 2"** centers.
28 – Square hole and slot for 7/16" bolt on **1-5/8" to 1-7/8"** centers.



Part Number	Style	Thickness	Width	Length	Hole Punch		WT Each
					FGD End	SQ End	
930253036	Combo	3/4"	2-1/2"	36"	30	28	17.8
930303036	Forged Foot	1"	3"	36"	30	N/A	30.8
939153024	Combo	5/8"	1-1/2"	24"	30	28	6.0
939203030	Combo	5/8"	2"	30"	30	28	10.3



SERIES 94

Adjustable Foot Piece & Standards

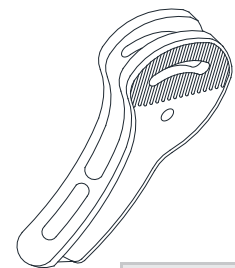
CHARACTERISTICS - Adjustable Foot Pieces

Specially designed foot pieces with rear adjustment set screws that attach directly to a corresponding Series 94 standard. A fabricated steel style is available in 3 shank sizes (5/8" - 3/4" - 1"), while a heavy duty fabricated steel 1" size made from 1/2" material is also available. Solid, one-piece cast steel foot pieces are also offered in the 3/4" and 1" size.



94FP31330C

Part Number	Styles	Shank Size	Bolt Size	Bolt Centers	Weight Each
94FP15820	Fabricated	5/8" x 2"	3/8"	1-3/4"	2.9
94FP23420	Fabricated	3/4" x 2-1/2"	1/2"	2"	4.4
94FP23420C	Cast	3/4" x 2-1/2"	1/2"	2"	4.1
94FP31330	Fabricated	1" x 3"	5/8"	2"	6.7
94FP31330C	Cast	1" x 3"	5/8"	2"	6.5
94FP3133CL	Cast	1" x 3"	5/8"	2-1/4"	6.5



94FP3133CL

CHARACTERISTICS - Standards Only

Specially punched standard for attachment of the above adjustable footpiece, which will allow for pitch adjustments of all front mounting tillage tools. Special offset hole punch pattern for each size. Shank material is heat treated 1080 Plow Steel.

See Series 95 for complete shank assembly.

Series 94 Shanks have 3" side-offsetting of the tool end as an available option. To specify either right-hand or left-hand offset, a marked "L" for left-hand or "R" for right hand at end of appropriate size. (Ex: 940253030L = left hand offset)

Part Number	Thickness	Width	Length	Bolt Size	Applicable Foot Piece	Weight Each
940253030	3/4"	2-1/2"	30"	1/2"	94FP23420	15.6
940302236	1"	3"	36"	5/8"	94FP31330	30.6
940302236S	1"	3"	36"	3/8"	94FP15820	10.4
949203130	5/8"	2"	30"	3/8"	94FP15820	10.4

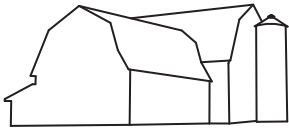
NOTE: Add "L" or "R" to end of part number when ordering 3" side-offset styles.



940302236



940302236S



SERIES 95 Assembled Foot Pieces Standards

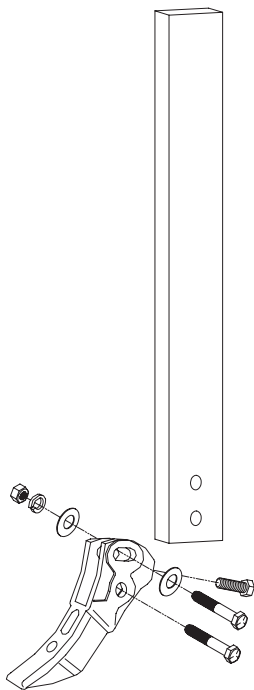
CHARACTERISTICS

Complete shank & fabricated footpiece assembled and ready to use, which will allow for pitch adjustments of all front mounting. Tillage tools shank material is heated treated C-1080 Plow Steel. The 3/4" & 1" size shanks also available with solid cast steel foot pieces - Add "C" to end of appropriate size.

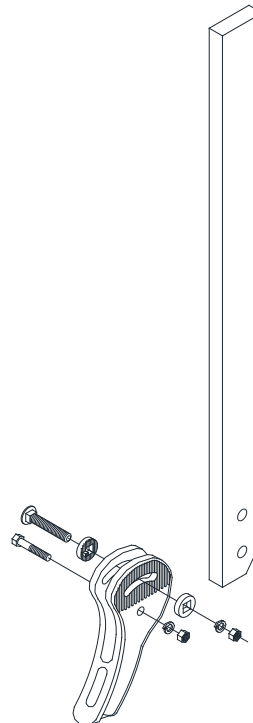
SIDE OFFSET STYLES

Series 95 Shanks Assemblies have 3" side-offsetting of the tool end as an available option. To specify either right-hand or left-hand offset, and either an "L" for left-hand or "R" for right-hand at end of appropriate size. (Ex: 95FS582F1R = right hand offset)

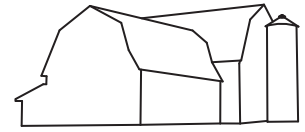
Part Number	Thickness	Width	Length	Corresponding Shank	Foot Piece	Foot Piece Style	Weight Each
95FS133F3	1"	3"	36"	940302236	94FP31330	Fabricated	37.7
95FS133F3C	1"	3"	36"	940302236	94FP31330CD	Cast	37.5
95FS133F3CS	1"	3"	36"	940302236S	94FP3133CL	Cast	37.5
95FS133F4	1"	3"	36"	940302236	94FP31332	Fabricated	39.8
95FS342F2	3/4"	2-1/2"	30"	940253030	94FP23420	Fabricated	20.8
95FS342F2C	3/4"	2-1/2"	30"	940253030	94FP23420CD	Cast	20.4
95FS582F1	5/8"	2"	30"	949203130	94FP15820	Fabricated	13.5



95FS133F3C



95FS133F3CS

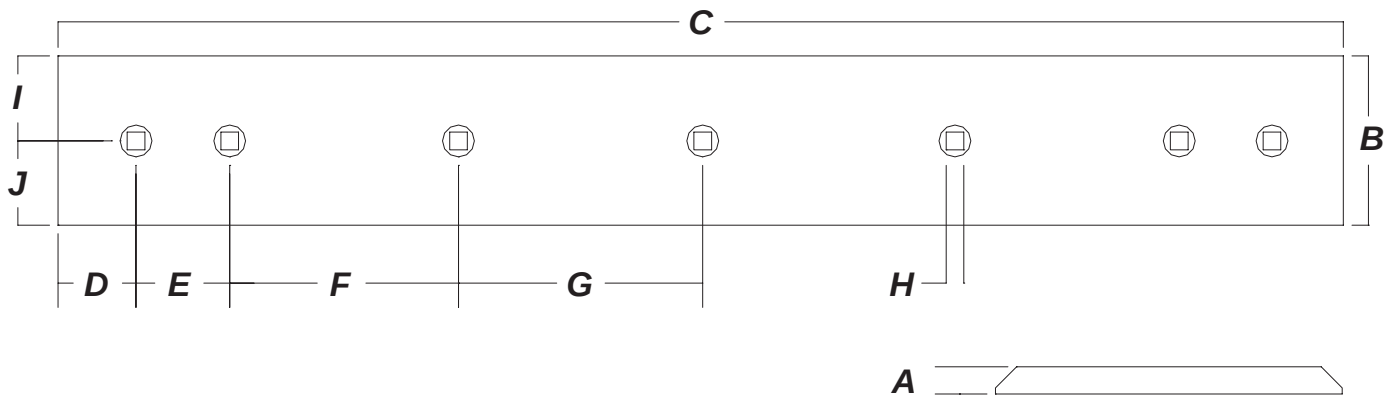


SERIES 96

Scraper Blades (Special Order)

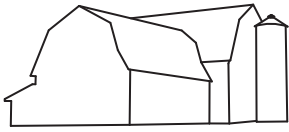
CUSTOM SCRAPER BLADE

SPECIFICATIONS FOR CUSTOM ORDERS



REFERENCE TABLE FOR DRAWING

REF.	DESCRIPTION	YOUR DIMENSIONS
A.	THICKNESS	
B.	WIDTH	
C.	LENGTH	
D.	DISTANCE TO CENTER OF 1st HOLE	
E.	CENTERS FROM 1st HOLE to 2nd HOLE	
F.	CENTERS FROM 2nd HOLE to 3rd HOLE	
G.	CENTERS FROM 3rd HOLE to 4th HOLE	
H.	BOLT SIZE	
I.	DISTANCE FROM BOLT HOLE TO TOP OF BLADE	
J.	DISTANCE FROM BOLT HOLE TO BOTTOM OF BLADE	
	PLOW BOLTS/CARRIAGE BOLTS	
	TOP OR BOTTOM COUNTERSINK	

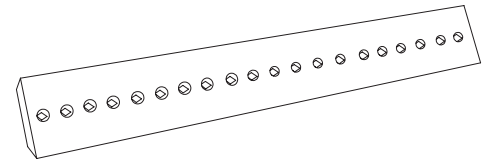


SERIES 96

Scraper Blades (Special Order)

DOUBLE BEVELED BLADES

Part Number	Description	Weight
96DBF120500	1/2" x 5"	9#
96DBF120600	1/2" x 6"	10#
96DBF120800	1/2" x 8"	14#
96DBF340800	3/4" x 8"	20#
96DBF341000	3/4" x 10"	26#
96DBF341200	3/4" x 12"	36#
96DBF341600	3/4" x 16"	41#
96DBF380400	3/8" x 4"	5#
96DBF380500	3/8" x 5"	6#
96DBF380600	3/8" x 6"	8#
96DBF580600	5/8" x 6"	15#
96DBF580800	5/8" x 8"	27#



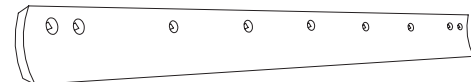
Basic hole spacing varies

GANNON BLADES

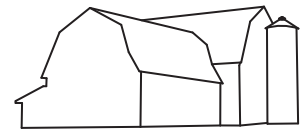
Part Number	Description	Weight
96GGBE02100	1/2" x 6" x 64"	47#
96GGBE10210	1/2" x 6" x 83"	60#
96GGBE21100	1/2" x 6" x 71"	52#
96GGBE42100	1/2" x 6" x 79"	58#
96GGBH49100	1/2" x 6" x 75"	54#

GRADER BLADES

Part Number	Description	Weight
96GBAT27500	1/2" x 5" x 60"	43#
96GBAT28100	5/8" x 6" x 108"	109#
96GBAT28600	5/8" x 6" x 72"	65#
96GBAT2860C	5/8" x 6" x 72"	65#
96GBAT286HT	5/8" x 6" x 72"	65#
96GBAT28700	5/8" x 6" x 84"	75#
96GBAT2870C	5/8" x 6" x 84"	75#
96GBAT287HT	5/8" x 6" x 84"	75#
96GBAT28800	5/8" x 6" x 96"	86#
96GBAT2880C	5/8" x 6" x 96"	86#
96GBAT28900	5/8" x 6" x 108"	97#
96GBAT2890C	5/8" x 6" x 108"	97#
96GBAT30500	5/8" x 8" x 60"	77#
96GBAT30600	5/8" x 8" x 72"	92#
96GBAT30700	5/8" x 8" x 84"	107#
96GBAT30800	5/8" x 8" x 96"	122#
96GBAT34600	3/4" x 8" x 72"	111#
96GBAT346HT	3/4" x 8" x 72"	111#
96GBAT34700	3/4" x 8" x 84"	129#
96GBAT347HT	3/4" x 8" x 84"	129#



Basic Hole Spacing
3", 3" and 12"

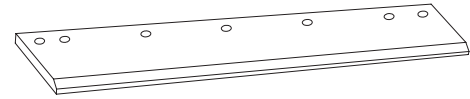


SERIES 96

Scraper Blades (Special Order)

SINGLE BEVELED BLADES

Part Number	Description	Weight
96SBF120500	1/2" x 5"	9#
96SBF120600	1/2" x 6"	10#
96SBF120800	1/2" x 8"	14#
96SBF340800	3/4" x 8"	20#
96SBF341000	3/4" x 10"	26#
96SBF341200	3/4" x 12"	36#
96SBF341600	3/4" x 16"	41#
96SBF380400	3/8" x 4"	5#
96SBF380500	3/8" x 5"	6#
96SBF380600	3/8" x 6"	8#



Basic hole spacing varies

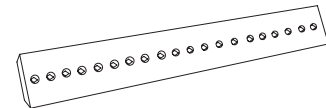
SCRAPER BLADES

Part Number	Description	Weight
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ATLAS

96SBATL0800	3/8" x 6" x 95"	61#
96SBATL1000	3/8" x 6" x 119"	77#
96SBATL1200	3/8" x 6" x 143"	92#
96SBATL1400	3/8" x 6" x 167"	107#

Atlas

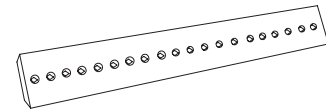


Basic Hole Spacing
5-1/4", 12", 12", 16", and 4-1/4"

BE GE

96SBBG06000	1/2" x 6" x 72"	46#
96SBBG07000	1/2" x 6" x 84"	54#
96SBBG08000	1/2" x 6" x 96"	61#
96SBBG10000	1/2" x 6" x 120"	77#

BE GE

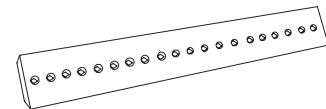


Basic Hole Spacing
3", 3" and 12"

BIG OX and IHC

96SBBO08000	1/2" x 6" x 96"	82#
96SBBO10000	1/2" x 6" x 120"	102#
96SBBO12000	1/2" x 6" x 144"	122#

Big Ox &
IHC

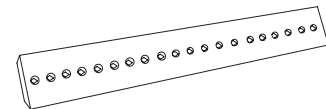


Basic Hole Spacing
2", 10" and 12"

JD

96SBJD08000	1/2" x 6" x 95"	82#
96SBJD10000	1/2" x 6" x 120"	102#
96SBJD12000	1/2" x 6" x 144"	122#

JD

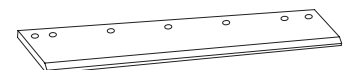


Basic Hole Spacing
3-1/2" and 8"

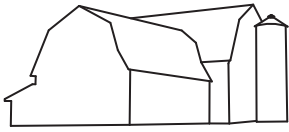
MARVIN LANDPLANE

96SBMAR1000	3/8" x 4.5" x 120"	57#
96SBMAR1200	3/8" x 4.5" x 144"	68#
96SBMAR1400	3/8" x 4.5" x 168"	80#
96SBMAR1500	3/8" x 4.5" x 180"	86#
96SBMAR15YR	3/4" x 10" x 167"	354#
96SBMAR1600	3/8" x 4.5" x 192"	91#
96SBMAR2400	3/8" x 5" x 288"	151#
96SBMARLZ16	1/2" x 6" x 192"	163#
96SBMARVT20	3/8" x 5" x 240"	126#

Marvin
Landplane



Basic hole spacing varies



SERIES 96

Scraper Blades (Special Order)

SCRAPER BLADES

Part Number	Description	Weight
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MURRAY

96SBMU08000	1/2" x 6" x 95-1/2"	82#
96SBMU10000	1/2" x 6" x 143-1/2"	102#
96SBMU12000	1/2" x 6" x 143-1/2"	122#

REYNOLDS

96SBREN14500	3/4" x 10" x 145"	305#
96SBREN16500	3/4" x 10" x 165"	356#
96SBREN168N0	3/4" x 10" x 168"	357#
96SBREN17500	3/4" x 10" x 175"	368#
96SBREN19200	3/4" x 10" x 192"	406#
96SBREN34800	3/4" x 8" x 168"	286#

TOWNER

96SBTNR0600	1/2" x 6" x 72"	46#
96SBTNR0700	1/2" x 6" x 84"	54#
96SBTNR0800	1/2" x 6" x 96"	61#
96SBTNR1000	1/2" x 6" x 120"	77#

YONKER & JOHNSON

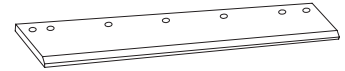
96SBYJ12000	3/8" x 3" x 144"	46#
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WELD ON BLADES

Part Number	Description	Weight
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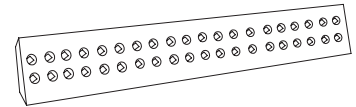
96WB1100000	1" x 10"	34#
96WB1120000	1" x 12"	41#
96WB1230000	1/2" x 3"	5#
96WB1240000	1/2" x 4"	7#
96WB1250000	1/2" x 5"	9#
96WB1260000	1/2" x 6"	10#
96WB1270000	1/2" x 7"	12#
96WB1280000	1/2" x 8"	14#
96WB3410000	3/4" x 10"	25#
96WB3412000	3/4" x 12"	31#
96WB3416000	3/4" x 16"	41#
96WB3450000	3/4" x 5"	13#
96WB3460000	3/4" x 6"	15#
96WB3480000	3/4" x 8"	20#
96WB3830000	3/8" x 3"	4#
96WB3840000	3/8" x 4"	5#
96WB3850000	3/8" x 5"	6#
96WB3860000	3/8" x 6"	8#
96WB5810000	5/8" x 10"	21#
96WB5812000	5/8" x 12"	25#
96WB5840000	5/8" x 4"	9#
96WB5850000	5/8" x 5"	11#
96WB5860000	5/8" x 6"	13#
96WB5880000	5/8" x 8"	17#

Murray

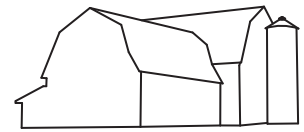


Basic hole spacing varies

Reynolds



Basic Hole Spacing
2 rows, 3" part hole spacing varies



SERIES 97

Gauge Wheels

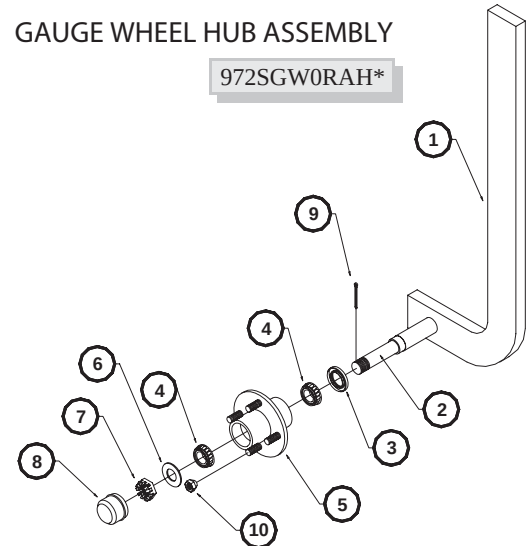
CHARACTERISTICS

Gauge wheels are available in 1" x 3" or 3/4" x 2-1/2" shank sizes with four options of tires & wheels available to fit most agricultural applications. Both shanks feature a 90° curved design and are determined RH or LH by positioning shank with curved section of shank facing rear. The tire/wheel will be either on the right (RH) or left (LH) side of shank, both sizes are attached to tool bar standard Series 75 clamps. Center of tire to top of shank height on all complete assemblies is 35".

COMPLETE ASSEMBLIES

Part Number	RH/LH	Shank Size	Tire/Wheel Size	Weight Each
972SGW1RA	RH	1" x 3"	(972SGA1TA)	60
972SGW1LA	LH	1" x 3"	4.80 x 4 x 8	60
973SGW1RA	RH	3/4" x 2-1/2"	(972SGA1TA)	60
973SGW1LA	LH	3/4" x 2-1/2"	4.80 x 4 x 8	60
972SGW2RA	RH	1" x 3"	(972SGA2TA)	70
972SGW2LA	LH	1" x 3"	5.70 x 5 x 8	70
973SGW2RA	RH	3/4" x 2-1/2"	(972SGA2TA)	70
973SGW2LA	LH	3/4" x 2-1/2"	5.70 x 5 x 8	70
972SGW3RA	RH	1" x 3"	(972SGA3TA)	80
972SGW3LA	LH	1" x 3"	20.5 x 8 x 10	80
972SGW5RA	RH	1" x 3"	(972SGA5TA)	80
972SGW5LA	LH	1" x 3"	18.5 x 8 x 8	80
973SGW3RA	RH	3/4" x 2-1/2"	(972SGA3TA)	80
973SGW3LA	LH	3/4" x 2-1/2"	20.5 x 8 x 10	80

GAUGE WHEEL HUB ASSEMBLY



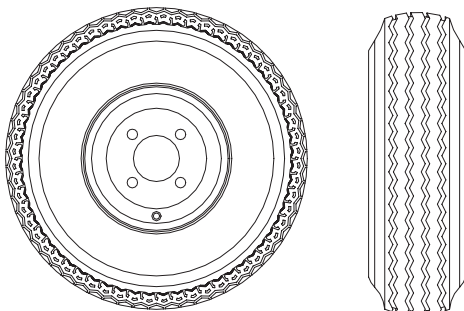
COMPONENT PARTS

Ref.	Part No.	Description	Req.
	973SGW005	3/4" x 2-1/2" Shank ONLY	1
	972MDBT12	Complete Hub Assembly Less Spindle & Nut	
1	972SGW005	1" x 3" Shank ONLY	1
2	972MDSP01	1-1/4" x 8-1/2" Spindle ONLY	1
3	972MDBT123	Hub Grease Seal	2
4	972MDBT124	Hub Bearing	2
5	972MDBT125	Hub Housing w/ Race Rings (Factory installed)	1
6	972MDBT126	Bearing Washer	1
7	972MDBT127	3/4" Castellated Nut N.F.	1
8	972MDBT128	Hub Dust Cap	1
9	972MDBT129	5/36" x 1" Cotter Pin	1
10	972MDBT121	Hub Wheel Nut	4

SHANKS W/ SPINDLES ONLY*

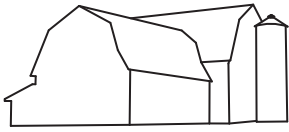
Part No.	RH/LH	Shank Size
972SGW0LA	LH	1" x 3"
972SGW0RA	RH	1" x 3"
973SGW0LA	LH	3/4" x 2-1/2"
973SGW0RA	RH	3/4" x 2-1/2"

*Add "H" to the end of part numbers to include **hub assembly**.



PNEUMATIC TIRES

Part Number	Description	Bolt Circle	Tire O.D.	Max P.S.I.	Tire Width	Max LD Rating
972SGA1TA	4.80 x 4 x 8	4 on 4"	16.5"	60 lbs.	4.8"	590 lbs.
972SGA2TA	5.70 x 5 x 8	4 on 4"	18.5"	50 lbs.	5.5"	715 lbs.
972SGA3TA	20.5 x 8.0 x 10	4 on 4"	20.5"	35 lbs.	8.2"	905 lbs.
972SGA5TA	18.5 x 8 x 8	4 on 4"	18.5"	35 lbs.	8.2"	905 lbs.



SERIES 97 Gauge Wheels

GAUGE WHEELS (45° SPINDLE)

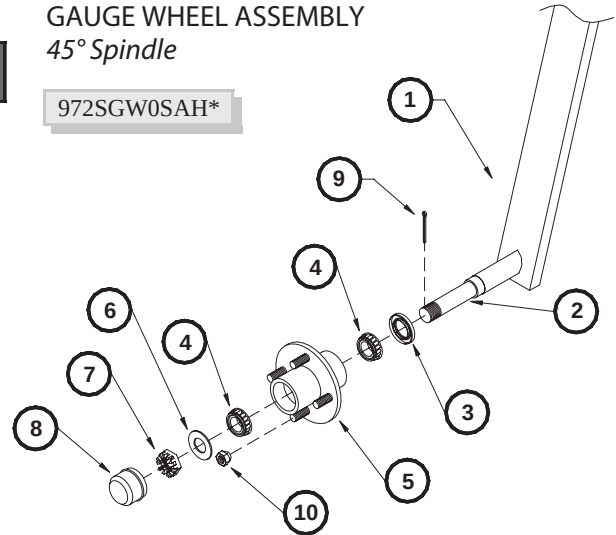
Part Number	Shank Size	Tire/Wheel Size	Weight Each
972SGW1SA	1" x 3"	(972SGA1TA) / 4.80 x 4 x 8	60
972SGW2SA	1" x 3"	(972SGA2TA) / 5.70 x 5 x 8	70
972SGW3SA	1" x 3"	(972SGA3TA) / 20.5 x 8 x 10	80
972SGW5SA	1" x 3"	(972SGA5TA) / 18.5 x 8 x 8	80

COMPONENT PARTS

Ref.	Part No.	Description	Req.
	972MDBT12	Complete Hub Assembly Less Spindle & Nut	
1	972SGW00SA	1" x 3" Shank ONLY	1
2	972MDSP01	1-1/4" x 8-1/2" Spindle ONLY	1
3	972MDBT123	Hub Grease Seal	2
4	972MDBT124	Hub Bearing	2
5	972MDBT125	Hub Housing w/ Race Rings (Factory installed)	1
6	972MDBT126	Bearing Washer	1
7	972MDBT127	3/4" Castellated Nut N.F.	1
8	972MDBT128	Hub Dust Cap	1
9	972MDBT129	5/36" x 1" Cotter Pin	1
10	972MDBT121	Hub Wheel Nut	4

GAUGE WHEEL ASSEMBLY 45° Spindle

972SGW0SAH*



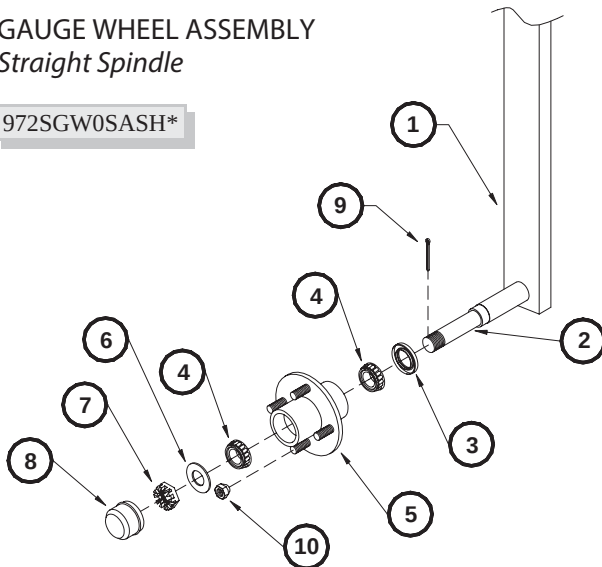
SHANKS W\ SPINDLES ONLY*

Part No.	Shank Size
972SGW0SA	1" x 3"

*Add "H" to the end of part numbers to include **hub assembly**.

GAUGE WHEEL ASSEMBLY Straight Spindle

972SGW0SASH*



SHANKS W\ SPINDLES ONLY*

Part No.	Shank Size
972SGW0SAS	1" x 3"

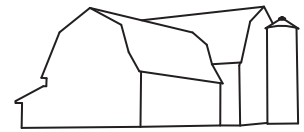
*Add "H" to the end of part numbers to include **hub assembly**.

GAUGE WHEELS (STRAIGHT SPINDLE)

Part Number	Shank Size	Tire/Wheel Size	Weight Each
972SGW1SAS	1" x 3"	(972SGA1TA) / 4.80 x 4 x 8	60
972SGW2SAS	1" x 3"	(972SGA2TA) / 5.70 x 5 x 8	70
972SGW3SAS	1" x 3"	(972SGA3TA) / 20.5 x 8 x 10	80
972SGW5SAS	1" x 3"	(972SGA5TA) / 18.5 x 8 x 8	80

COMPONENT PARTS

Ref.	Part No.	Description	Req.
	972MDBT12	Complete Hub Assembly Less Spindle & Nut	
1	972SGW00SAS	1" x 3" Shank ONLY	1
2	972MDSP01	1-1/4" x 8-1/2" Spindle ONLY	1
3	972MDBT123	Hub Grease Seal	2
4	972MDBT124	Hub Bearing	2
5	972MDBT125	Hub Housing w/ Race Rings (Factory installed)	1
6	972MDBT126	Bearing Washer	1
7	972MDBT127	3/4" Castellated Nut N.F.	1
8	972MDBT128	Hub Dust Cap	1
9	972MDBT129	5/36" x 1" Cotter Pin	1
10	972MDBT121	Hub Wheel Nut	4



SERIES 97

Gauge Wheels

COMPLETE ASSEMBLY

Single Gauge Wheels

PART NO.	DESCRIPTION	RH/LH KEY
972SGWRSTR/L	for 7" x 5" bar	RH/LH
972SGWRSTR4/L4	for 4" x 4" bar	RH/LH
972SGWRSTR5/L5	for 5" x 7" bar	RH/LH
972SGWRSTR7/L7	for 7" x 7" bar	RH/LH

FLAT BAR WITH SINGLE WHEEL

Please specify tool bar size when ordering Gauge wheels. Standard flat bar sizes are 7" x 5", 5" x 7", 7" x 7", or 4" x 4". Other sizes may be special orders.

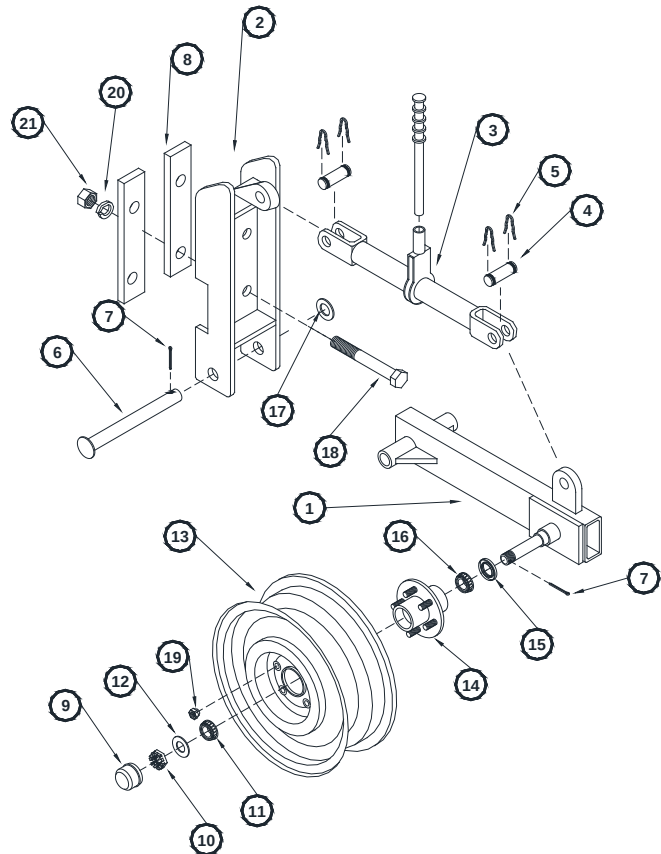
COMPONENT PARTS

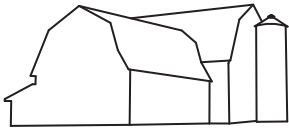
Ref.	Part No.	Description	Req.
1	972SGWRS1	RH or LH Leg	1
2	972SGWRS2	Bracket	1
3	972SGWRS3	Adjusting Ratchet	1
4	972SGWRS4	Cylinder Pin	2
5	972SGWRS5	Lock Clip	4
6	972SGWRS6	Pivot Pin	1
7	972SGWRS7	Cotter Pin	2
8	972SGWRS8	Clamp Strap	2
9	972SGWRS9	Dust Cap	1
10	972SGWRS10	Castelated Nut	1
11	972SGWRS11	Bearing	1
12	972SGWRS12	Flat Washer	1
13	972SGWRS13	15" Wheel	1
14	972SGWRS14	Hub Casting w/ Race	1
15	972SGWRS15	Seal	1
16	972SGWRS16	Bearing	1
17	972SGWRS17	1" Flat Washer	1
18	972SGWRS18	1" x 7", 1/2" Hex Bolt*	4
18	972SGWRS18A	1" x 9", 1/2" Hex Bolt**	4
18	972SGWRS18B	1" x 6-1/2" Hex Bolt***	4
19	972SGWRS19	Lug Nut	5
20	972SGWRS20	1" Lock Washer	4
21	972SGWRS21	1" Hex Nut	4

* Fits 7" x 5" Tool Bar

** Fits 5" x 7" and 7" x 7" Tool Bar

*** Fits 4" x 4" Tool Bar





SERIES 97 Gauge Wheels

COMPLETE ASSEMBLY

Dual Gauge Wheels

PART NO.	DESCRIPTION
972SGWRSTD	for 7" x 5" bar
972SGWRSTD4	for 4" x 4" bar
972SGWRSTD5	for 5" x 7" bar
972SGWRSTD7	for 7" x 7" bar

FLAT BAR WITH DUAL WHEELS

Please specify tool bar size when ordering Gauge wheels. Standard flat bar sizes are 7" x 5", 5" x 7", 7" x 7", or 4" x 4". Other sizes may be special orders.

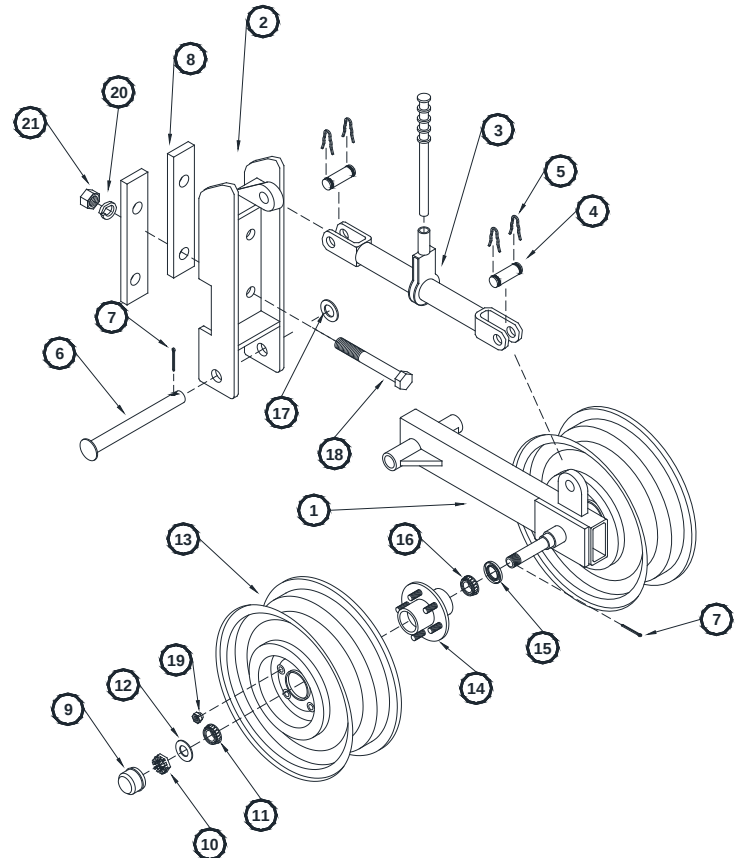
COMPONENT PARTS

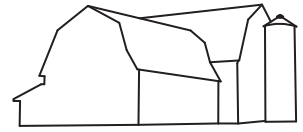
Ref.	Part No.	Description	Req.
1	972SGWRSD	Dual Leg	1
2	972SGWRS2	Bracket	1
3	972SGWRS3	Adjusting Ratchet	1
4	972SGWRS4	Cylinder Pin	2
5	972SGWRS5	Lock Clip	4
6	972SGWRS6	Pivot Pin	1
7	972SGWRS7	Cotter Pin	3
8	972SGWRS8	Clamp Strap	2
9	972SGWRS9	Dust Cap	2
10	972SGWRS10	Castelated Nut	2
11	972SGWRS11	Bearing	2
12	972SGWRS12	Flat Washer	2
13	972SGWRS13	15" Wheel	2
14	972SGWRS14	Hub Casting w/ Race	2
15	972SGWRS15	Seal	2
16	972SGWRS16	Bearing	2
17	972SGWRS17	1" Flat Washer	1
18	972SGWRS18	1" x 7", 1/2" Hex Bolt*	4
18	972SGWRS18A	1" x 9", 1/2" Hex Bolt**	4
18	972SGWRS18B	1" x 6-1/2" Hex Bolt***	4
19	972SGWRS19	Lug Nut	10
20	972SGWRS20	1" Lock Washer	4
21	972SGWRS21	1" Hex Nut	4

* Fits 7" x 5" Tool Bar

** Fits 5" x 7" and 7" x 7" Tool Bar

*** Fits 4" x 4" Tool Bar





SERIES 97 Gauge Wheels

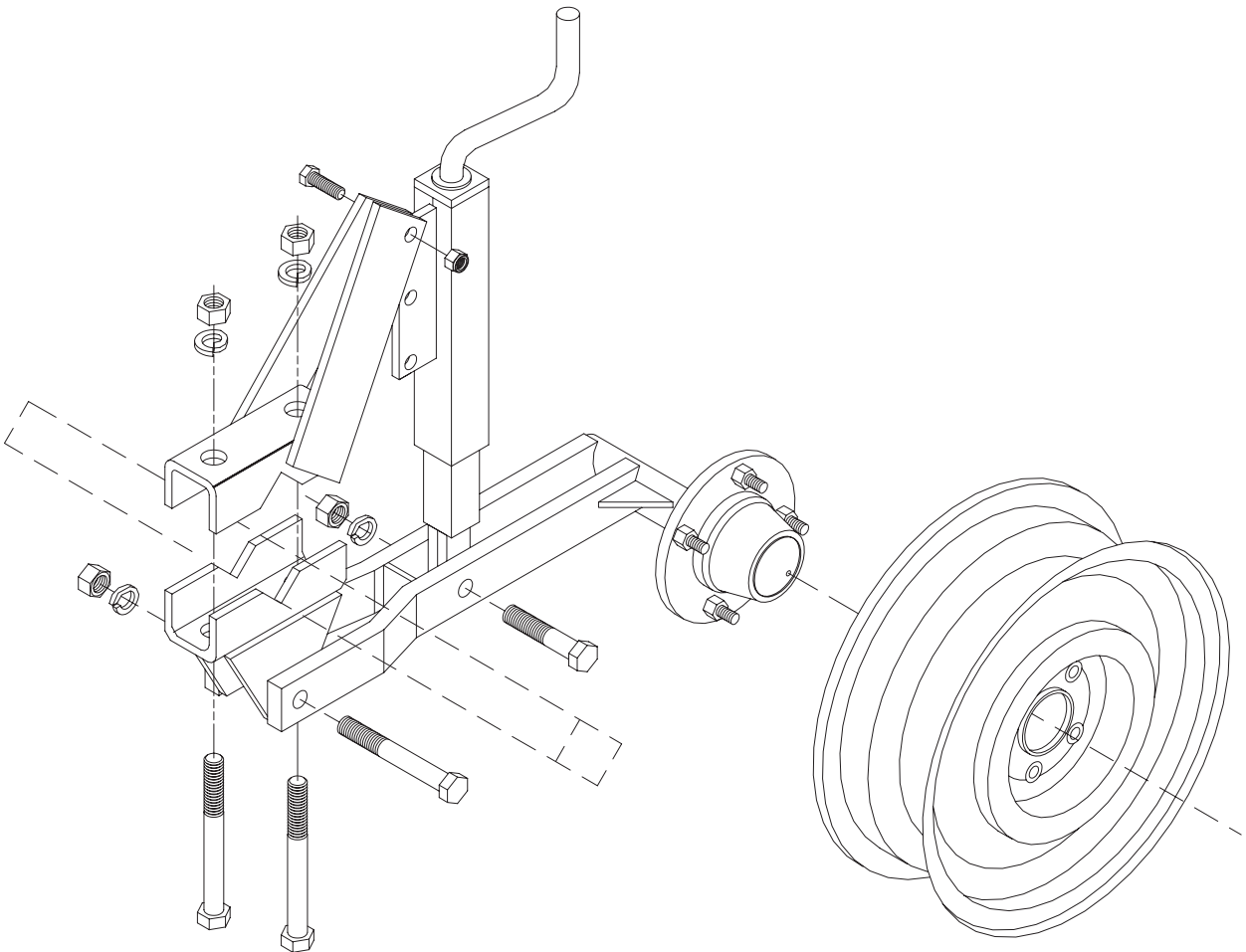
ADJUSTABLE FOR 2-1/4" DIAMOND BAR

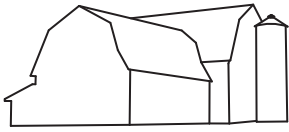
COMPLETE ASSEMBLY

Gauge Wheels For 2-1/4" Diamond Bar (RH/LH)

972SGWRST2 - RH

972SGWLST2 - LH





SERIES 97 Gauge Wheels

GAUGE WHEEL ASSEMBLY

(Semi-Pneumatic)

COMPLETE ASSEMBLY

897535030

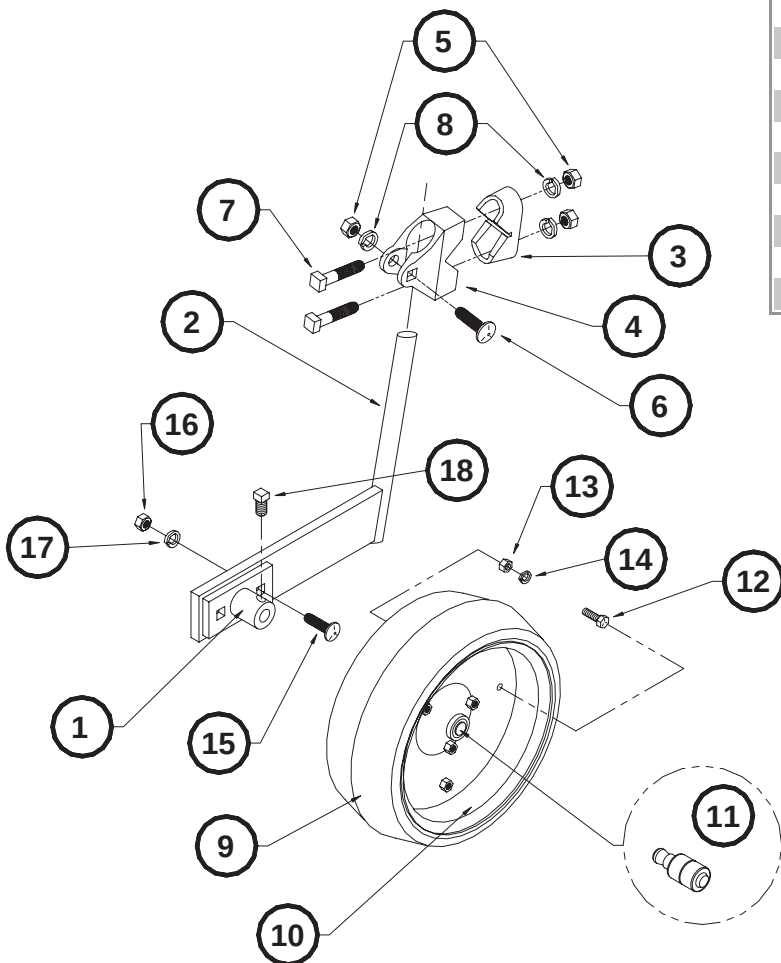
*Gauge Wheel Assembly
(Semi-Pneumatic)*

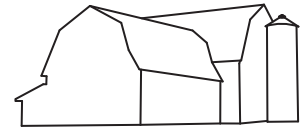
89GW412-10-2A

*Tire and Wheel Assembly with
Bearing (Items #9-14)*

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897535001	Gauge Wheel Hub Only	1
2	897535002	Gauge Wheel Arm Assembly	1
3	897535701	Clamp Cap	1
4	897500601B	Round Shank Clamp Body	1
5	81HN12000	1/2" Hex Nut	3
6	81CB121340	1/2" x 1-3/4" Carriage Bolt	1
7	81SQH12212	1/2" X 1-1/2" Square Head Bolt	2
8	81LW12000	1/2" Lock Washer	3
9	897535009	4" x 12" Semi-Pneumatic Tire	1
10	897535010	Half Wheel	2
11	897535011	Bearing	1
12	81CS516340	5/16" x 3/4" Cap Screw	7
13	81HN51600	5/16" Hex Nut	7
14	81LW51600	5/16" Lock Washer	7
15	81CB38114	3/8" x 1-1/4" Carriage Bolt	2
16	81HN38000	3/8" Hex Nut	2
17	81LW38000	3/8" Lock Washer	2
18	81SS38340	3/8" x 3/4" Set Screw	1





SERIES 97

Gauge Wheels

CLOD BUSTER ROLLERS*

(See also Series 89)

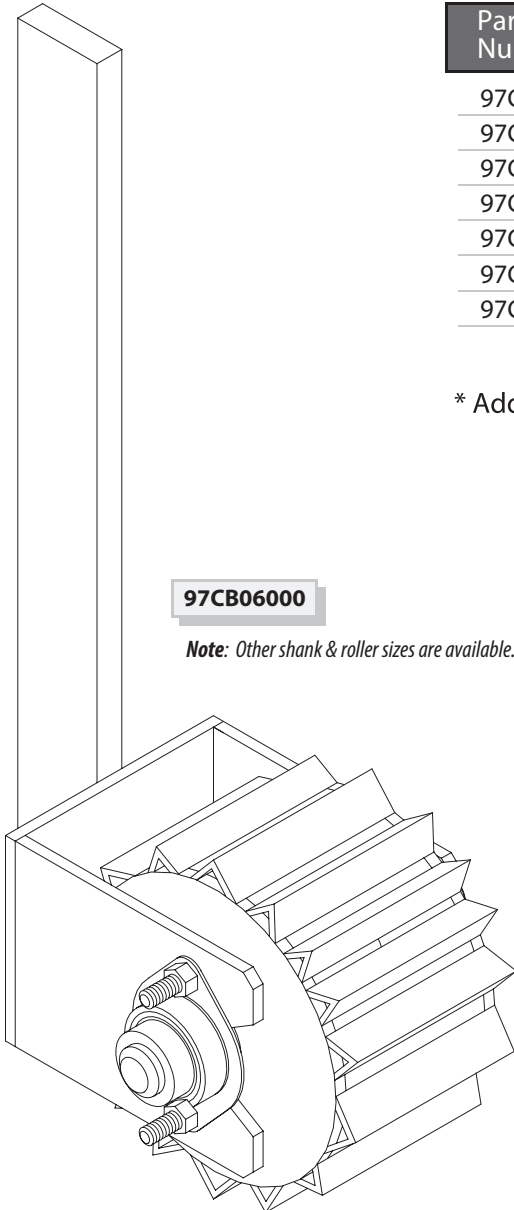
CLOD BUSTER ROLLERS

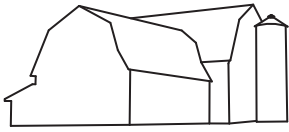
Part Number	Shank Size	Roller Width
97CB04000	5/8" x 2" x 20"	4"
97CB05000	5/8" x 2" x 20"	5"
97CB06000	5/8" x 2" x 20"	6"
97CB07120	5/8" x 2" x 20"	7-1/2"
97CB08000	5/8" x 2" x 20"	8"
97CB12000	5/8" x 2" x 20"	12"
97CB15000	5/8" x 2" x 20"	15"

* Add "L" or "R" to end of part number for an offset shank.

97CB06000

Note: Other shank & roller sizes are available.





SERIES 97

Guide Cones

JD/LILLISTON STYLE GUIDE CONE

Replaces similar style guide cones offered by above O.E.M.'s on a variety of their original equipment. 1x3x30 shank formed with proper pitch angle and sturdy medium duty hub/spindle assembly with a thicknesses of 1/4" (medium duty) that bolt on with 4 on 3-5/8" center hole pattern. Cone and hub/spindle assembly feature a flat outer cone center - (no extended hub/spindle) - which help to insure against plant damage to closely planted row crops when passing in fields.

COMPLETE ASSEMBLIES

Part Number	Type	Dia. x Thickness x Concavity	Guide Cone	Shank Size	Weight
972CGDLAMD2	Medium Duty	20" x 1/4" x 3-1/4"		1x3x30	62

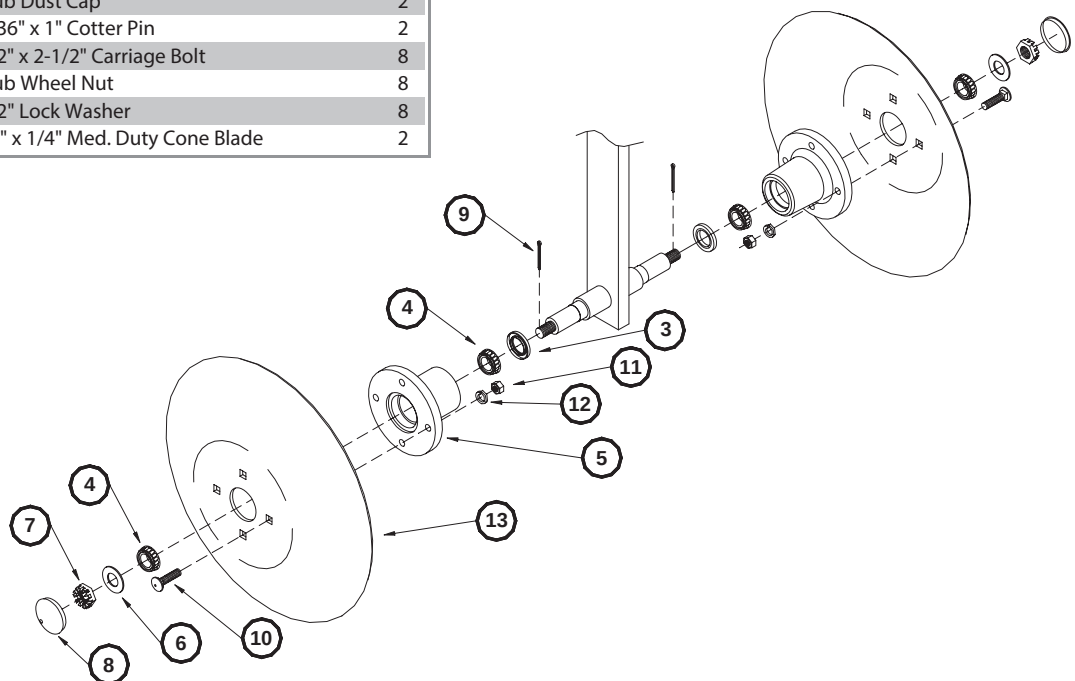
COMPONENT PARTS

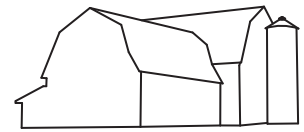
Ref.	Part No.	Description	Req.
1	972CGDLS0	1" x 3" Shank ONLY	1
2	972CGDLS0	Spindle ONLY	2
2	972CGDLS1	1" x 3" Shank & Spindle REFERENCE 1&2	1
Ref.	Part No.	Description	Req.
	972CGDLP0	Complete Hub Assembly Less Spindle & Nut	
3	972CGDLP3	Hub Grease Seal	2
4	972CGDLP4	Hub Bearing	4
5	972CGDLP5	Hub Housing w\ Race Rings (Factory installed)	2
6	972CGDLP6	Bearing Washer	1
7	972CGDLP7	3/4" Castellated Nut N.F.	2
8	972CGDLP8	Hub Dust Cap	2
9	972CGDLP9	5/36" x 1" Cotter Pin	2
10	81CB122120	1/2" x 2-1/2" Carriage Bolt	8
11	972CGDLP1N	Hub Wheel Nut	8
12	81LW12000	1/2" Lock Washer	8
13	972CGDLMA	20" x 1/4" Med. Duty Cone Blade	2

JD/LILLISTON GUIDE CONE ASSEMBLY

Complete Assembly

972CGDLAMD2

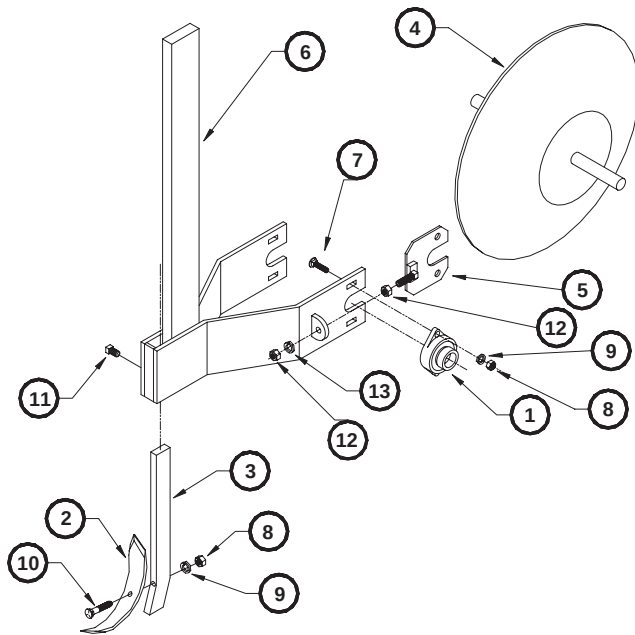




SERIES 97

Guide Cones

DOUBLE GUIDE CONE ASSEMBLY



COMPLETE ASSEMBLY

897501000 - Double Guide Cone Assembly

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	897501001	Guide Cone Bearing	2
2	897501002	Cultivator Tooth	1
3	897501003	Chisel Shank	1
4	897501004	Double Cone Guide Wheel	1
5	897501005	Take-up Bracket	2
6	897501006	Guide Wheel Fork	1
7	81CB38112	3/8" x 1-1/2" Carriage Bolt	4
8	81HN38000	3/8" Hex Nut	5
9	81LW38000	3/8" Lock Washer	5
10	813821200	3/8" x 2-1/2" Plowbolt	1
11	81SS38100	3/8" x 1" Square Head Set Screw	1
12	81HN12000	1/2" Hex Nut	4
13	81LW12000	1/2" Lock Washer	2

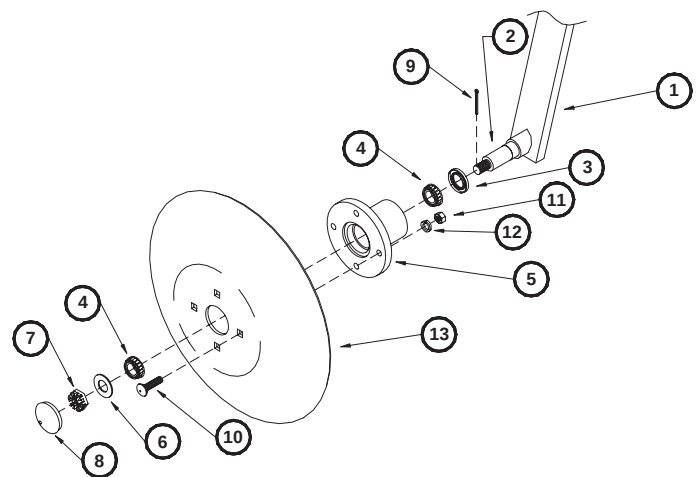
COMPLETE ASSEMBLY

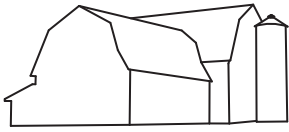
972CGDLAMD - Single Guide Cone Assembly

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	972CGDLS0	1" x 3" Shank Only	1
2	972CGDLS0	Spindle Only	1
2	972CGDLS1	1" x 3" Shank & Spindle REFERENCE 1&2	1
Ref.	Part No.	Description	Req.
	972CGDLP0	Complete Hub Assembly Less Spindle & Nut	
3	972CGDLP3	Hub Grease Seal	1
4	972CGDLP4	Hub Bearing	2
5	972CGDLP5	Hub Housing with Race Rings	1
6	972CGDLP6	Bearing Washer	1
7	972CGDLP7	3/4" Castellated Nut N.F.	1
8	972CGDLP8	Hub Dust Cap	1
9	972CGDLP9	5/36" x 1" Cotter Pin	1
10	81CB122120	1/2" x 2-1/2" Carriage Bolt	4
11	972CGDLP1N	Hub Wheel Nut	4
12	81LW12000	1/2" Lock Washer	4
13	972CGDLMA	20" x 1/4" Med. Duty Cone Blade	1

SINGLE GUIDE CONE ASSEMBLY



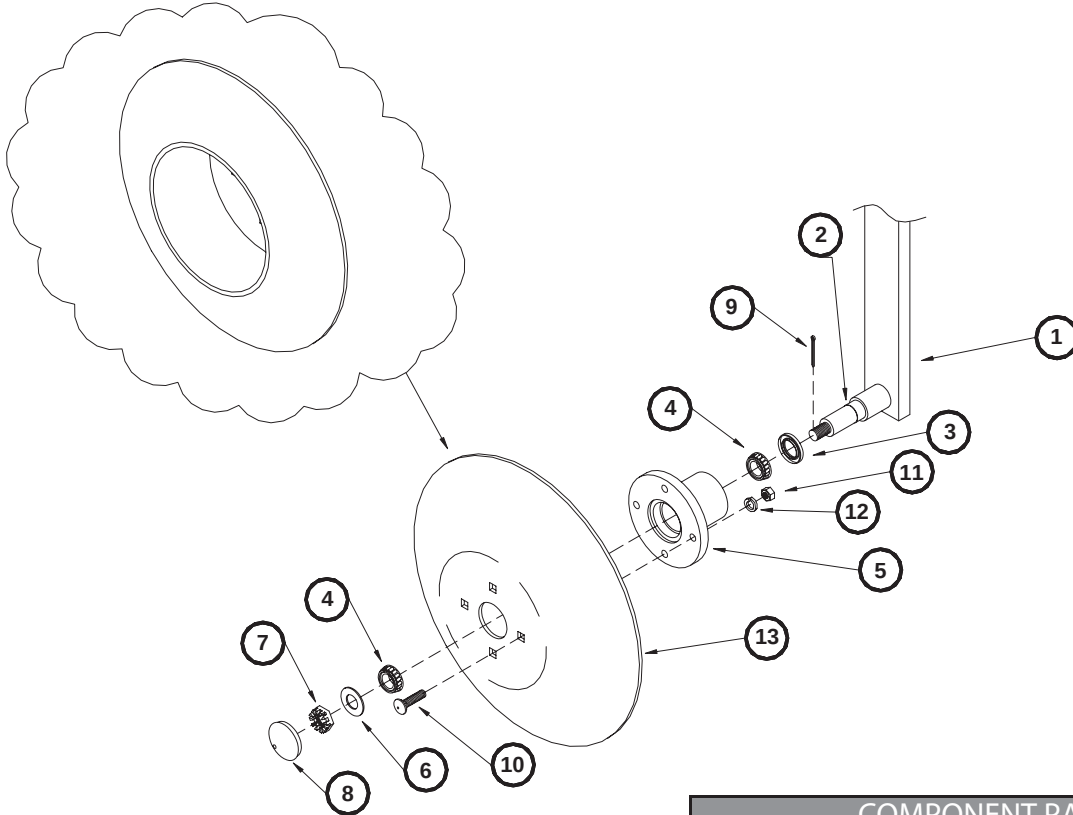


SERIES 97 Guide Cones

STRAIGHT GUIDE CONE ASSEMBLY

with 10" Pipe

BACKSIDE OF CONE/BLADE



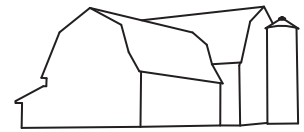
COMPLETE ASSEMBLY

972CGDSW10

- Straight Guide Cone Assembly

COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	972CGDLS05	1" x 3" Shank	1
2	972CGDLSP	Spindle	1
3	972CGDLP3	Hub Grease Seal	1
4	972CGDLP4	Hub Bearing	2
5	972CGDLP5	Hub Housing with Race Rings	1
6	972CGDLP6	Bearing Washer	1
7	972CGDLP7	3/4" Castellated Nut N.F.	1
8	972CGDLP8	Hub Dust Cap	1
9	972CGDLP9	5/36" x 1" Cotter Pin	1
10	81CB122120	1/2" x 2-1/2" Carriage Bolt	4
11	972CGDLP1N	Hub Wheel Nut	4
12	81LW12000	1/2" Lock Washer	4
13	972CGRDCWC0	Cone Only Chrome	As Req.
13	972CGRDCWCH	Cone Only Chrome with Hardfacing	As Req.



SERIES 97

Guide Cones

COMPLETE ASSEMBLY

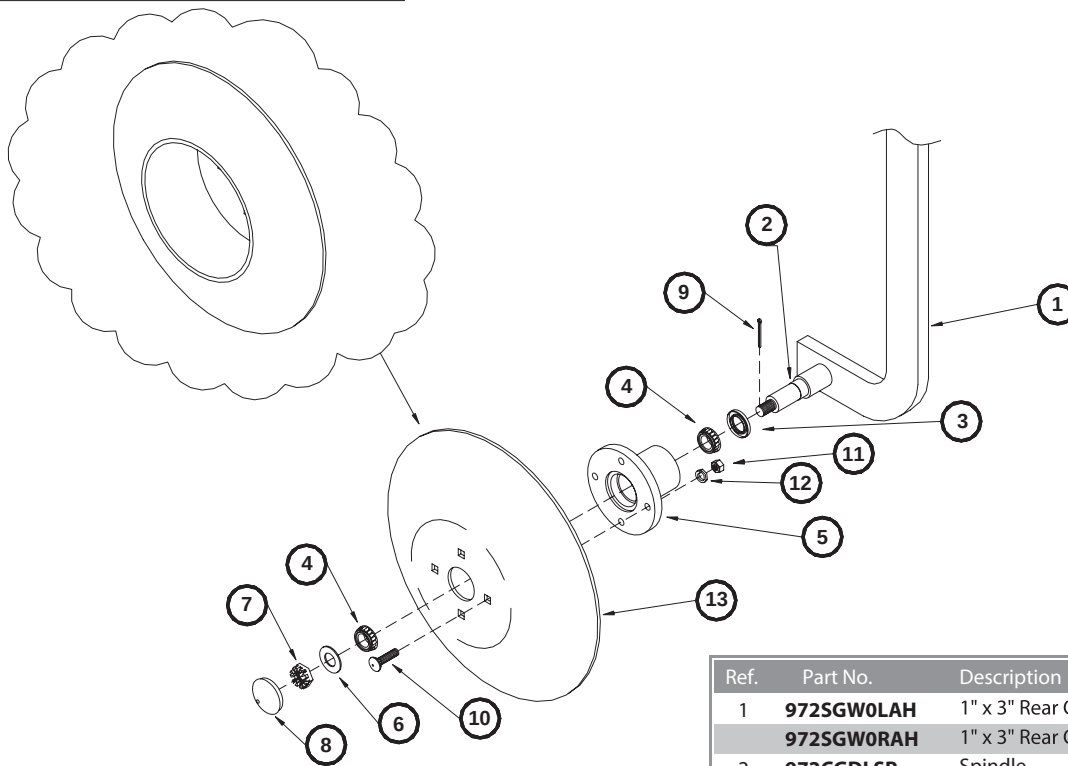
972CGDLW10L - (LH) Offset Guide Cone Assembly

972CGDLW10R - (RH) Offset Guide Cone Assembly

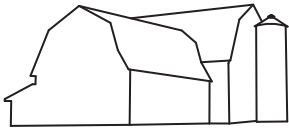
OFFSET GUIDE CONE ASSEMBLY

with 10" Pipe

BACKSIDE OF CONE/BLADE



Ref.	Part No.	Description	Req.
1	972SGW0LAH	1" x 3" Rear Offset Shank (LH)	1
	972SGW0RAH	1" x 3" Rear Offset Shank (RH)	1
2	972CGDLSP	Spindle	1
3	972CGDLP3	Hub Grease Seal	1
4	972CGDLP4	Hub Bearing	2
5	972CGDLP5	Hub Housing with Race Rings	1
6	972CGDLP6	Bearing Washer	1
7	972CGDLP7	3/4" Castellated Nut N.F.	1
8	972CGDLP8	Hub Dust Cap	1
9	972CGDLP9	5/36" x 1" Cotter Pin	1
10	81CB122120	1/2" x 2-1/2" Carriage Bolt	4
11	972CGDLP1N	Hub Wheel Nut	4
12	81LW12000	1/2" Lock Washer	4
13	972CGRDCWC0	Cone Only Chrome	As Req.
	972CGRDCWCH	Cone Only Chrome with Hardfacing	As Req.



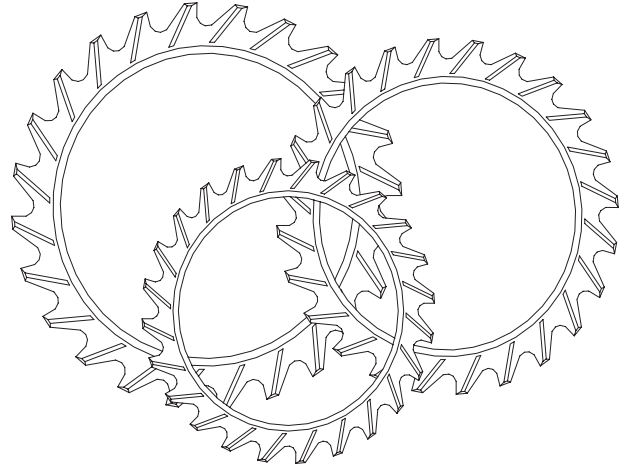
SERIES 98 Cast Roller Rings

CHARACTERISTICS

Cast steel replacement cultipacker rings in five sizes and available individually or in complete crates. Ring sizes are determined by two measurements - inside diameter of the ring and the overall outside diameter of the ring. All weights below are approximate weights due to manufacturing variants.

OPTIONAL WEAR-EXTENDING STYLES

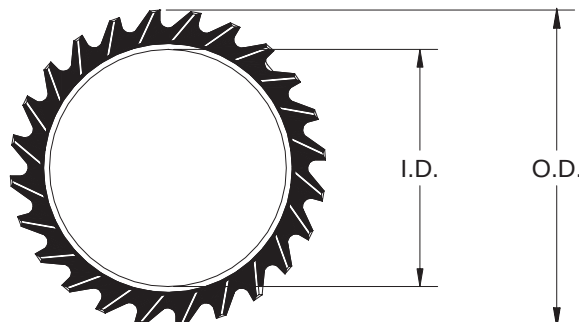
Ductile Iron Rings - Add "D" to end of part number
Grey Iron Rings - Add "G" to end of part number

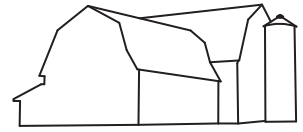


CAST RINGS STANDARD

Individual/Crates

Part Number	Inside Dia. (I.D.)	x	Outside Dia. (O.D.)	Crate Quantity	Weight Each
987121600	12"	x	16"	60	21.0
987121700	12"	x	17"	60	25.0
987131700	13"	x	17"	60	26.0
987142000	14"	x	20"	40	34.0
987162200	16"	x	22"	40	38.0

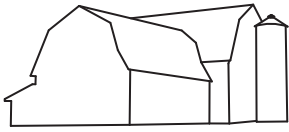




SERIES 99

Whole Goods

WHOLE GOODS



SERIES 99 Disc Ridgers

COMPLETE ASSEMBLY

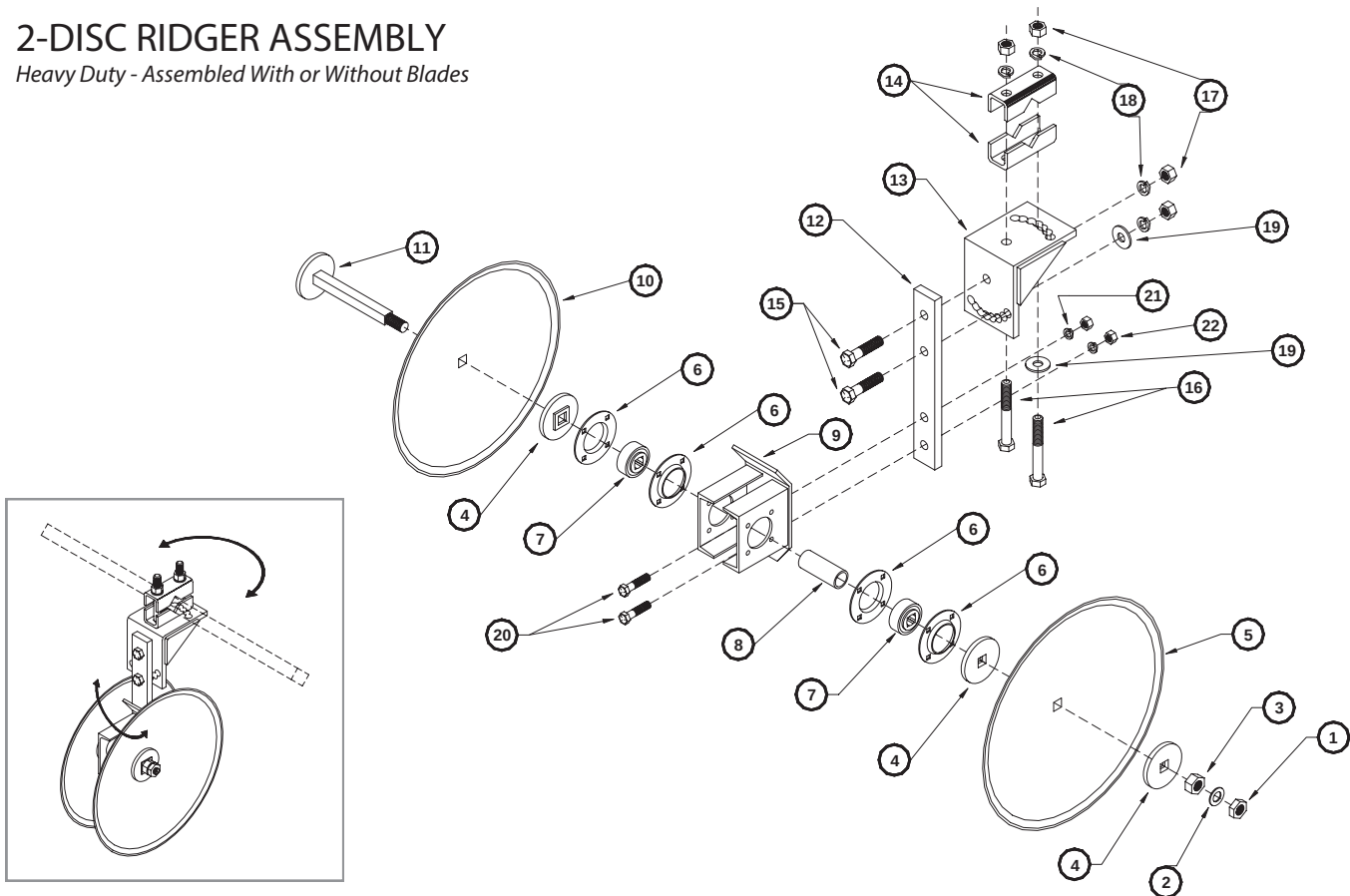
- 999DR20HR** 2-Disc Ridger, Heavy Duty Without Blades (Right)
999DR20HL 2-Disc Ridger, Heavy Duty Without Blades (Left)

COMPLETE ASSEMBLY

- 999DR20HRA** 2-Disc Ridger, Heavy Duty Assembled With Blades (Right)
999DR20HLA 2-Disc Ridger, Heavy Duty Assembled With Blades (Left)

2-DISC RIDGER ASSEMBLY

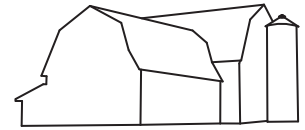
Heavy Duty - Assembled With or Without Blades



COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	81JN11800	1-1/8" Jam Nut	1
2	81FW11800	1-1/8" Flat Washer	1
3	81HN11800	1-1/8" Hex Nut	1
4	999DR200EC	Convexed Spacer	3
5	10V245S118	24" x 3/16" Disc Blade	1
6	999DR20FL	Bearing Shield	4
7	999DR20BR	Bearing	2
8	999DR200PB	Pivot Bushing	1
9	999DR200MF	Main Frame	1
10	10V225S118	22" x 3/16" Disc Blade	1
11	999DR200A	1-1/8" Axle	1

Ref.	Part No.	Description	Req.
12	999DR200AA	Arm Attachment	1
13	999DR200AB	Adjusting Bracket	1
14	768PC5458	Pressed Caps	2
15	81CS130000	1" x 3" Cap Screw	2
16	81CS171200	1" x 7-1/2" Cap Screw	2
17	81HN10000	1" Hex Nut	4
18	81LW10000	1" Lock Washer	4
19	81FENDW10	1" Fender Washer	2
20	81CS34300	3/4" x 3" Cap Screw	2
21	81LW34000	3/4" Lock Washer	2
22	81HN34000	3/4" Hex Nut	2



SERIES 99

Disc Ridgers

COMPLETE ASSEMBLY

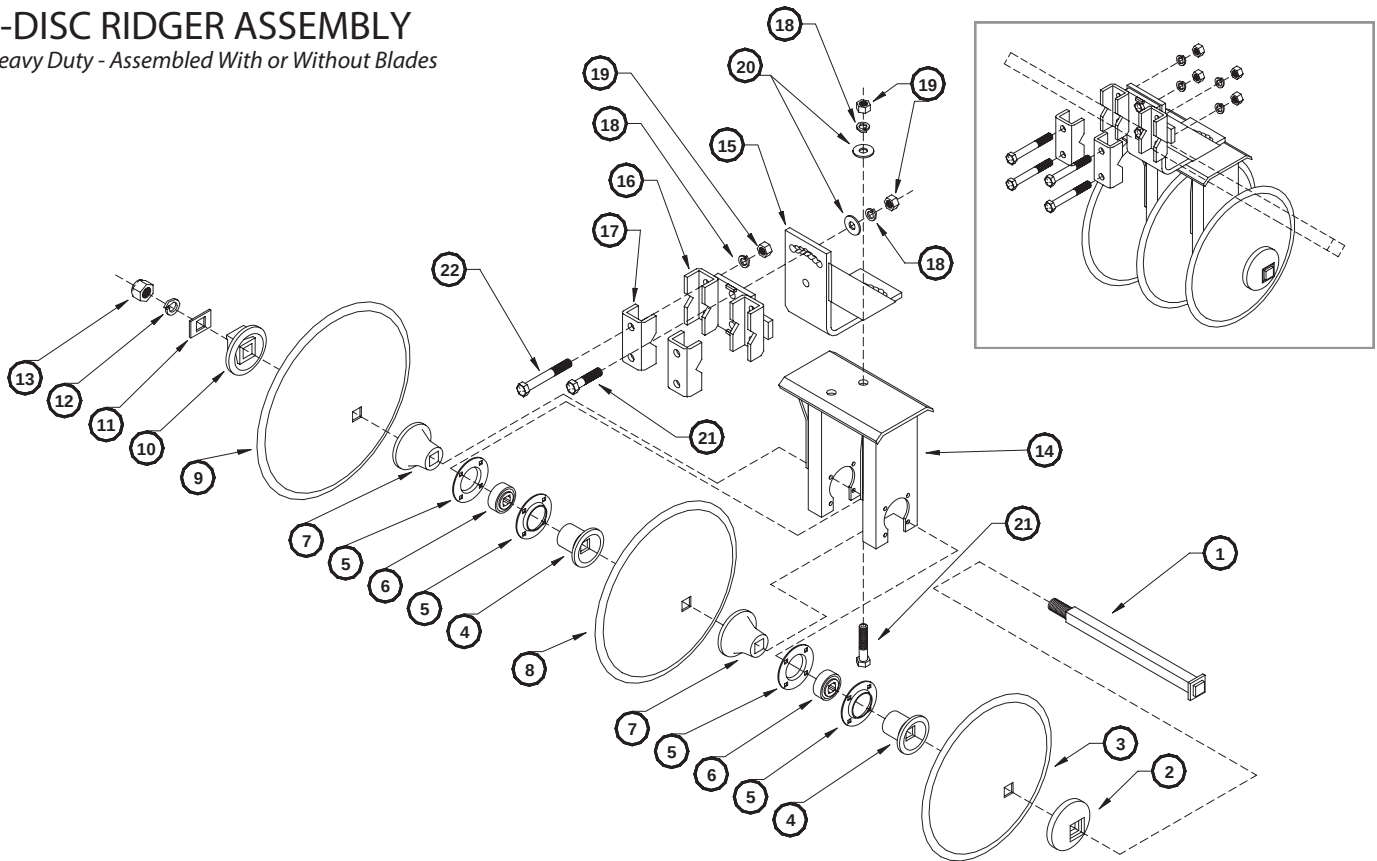
- 999DR30HR** 3-Disc Ridger, Heavy Duty Without Blades (Right)
- 999DR30HL** 3-Disc Ridger, Heavy Duty Without Blades (Left)

COMPLETE ASSEMBLY

- 999DR30HRA** 3-Disc Ridger, Heavy Duty Assembled With Blades (Right)
- 999DR30HLA** 3-Disc Ridger, Heavy Duty Assembled With Blades (Left)

3-DISC RIDGER ASSEMBLY

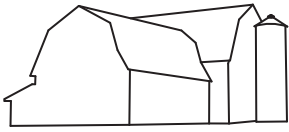
Heavy Duty - Assembled With or Without Blades



COMPONENT PARTS

Ref.	Part No.	Description	Req.
1	999DR300A	1-1/2" x 25" Axle	1
2	999DR30ECS	End Cap	1
3	10V226S112	22" x 1/4" Disc Blade	1
4	999DR30CVS	Convexed Spool	2
5	999DR30FL	Bearing Shield	4
6	999DR30BR	Bearing	2
7	999DR30CCS	Concaved Spool	2
8	10V246S112	24" x 1/4" Disc Blade	1
9	10V266S112	26" x 1/4" Disc Blade	1
10	999D230EC	Convexed End Cap	1
11	81SW11200	Square Washer/Stop	1

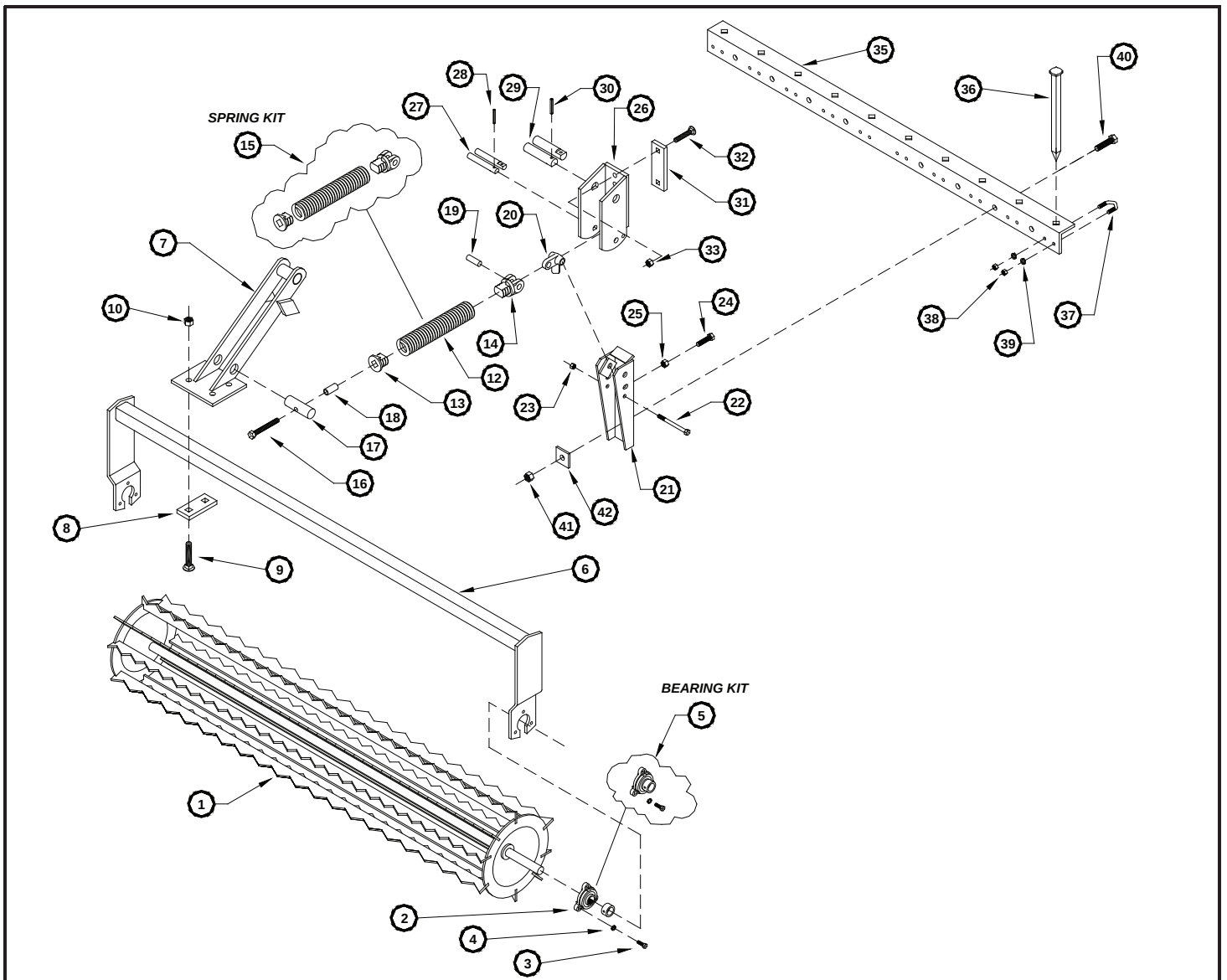
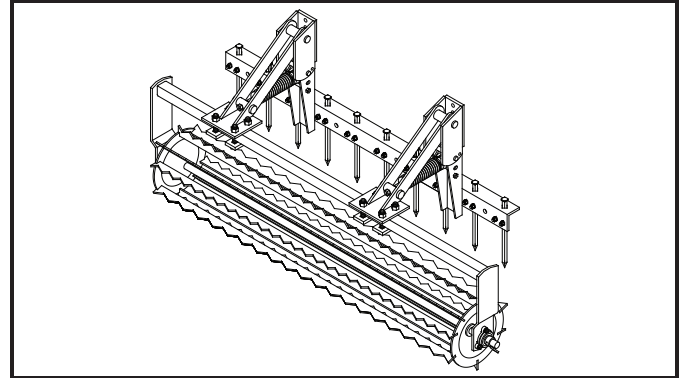
Ref.	Part No.	Description	Req.
12	81LW11200	1-1/2" Lock Washer	1
13	81NYL1120	1-1/2" Ny-Lock Nut	1
14	999DR30MF	Blade Housing Frame	1
15	999DR30AB	Adjusting Bracket	1
16	999DR30CM	Cap Backing Mount	1
17	768PC5458	Pressed Caps	2
18	81LW10000	1" Lock Washer	8
19	81HN10000	1" Hex Nut	8
20	81FENDW10	1" Fender Washer	2
21	81CS130000	1" x 3" Cap Screw	4
22	81CS171200	1" x 7-1/2" Cap Screw	4

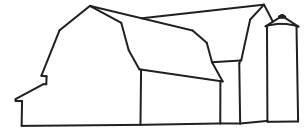


SERIES 99 VT Rolling Cages

VT ROLLING CAGES

Available in 2', 3', 4', 5', & 6' Applications





SERIES 99 VT Rolling Cages

COMPONENT PARTS

Ref.	Part No.	Description	Req.
	99VTCAGE01-2	2' Rolling Cage	
	99VTCAGE01-3	3' Rolling Cage	
1	99VTCAGE01-4	4' Rolling Cage	
	99VTCAGE01-5	5' Rolling Cage	
	99VTCAGE01-6	6' Rolling Cage	
2	99VTCAGE02	Bearing	2
3	99VTCAGE03	Cap Screw	6
4	99VTCAGE04	Lock Washer	6
5	99VTCAGE05	Bearing Kit	
	99VTCAGE06-2	2' Rolling Cage Frame	
	99VTCAGE06-3	3' Rolling Cage Frame	
6	99VTCAGE06-4	4' Rolling Cage Frame	
	99VTCAGE06-5	5' Rolling Cage Frame	
	99VTCAGE06-6	6' Rolling Cage Frame	
7	99VTCAGE07	Arm Weldment	2
8	99VTCAGE08	Arm Weldment Mount Cap	4
9	99VTCAGE09	Carriage Bolt	8
10	99VTCAGE10	Lock Nut	8
12	99VTCAGE12	Spring	2
13	99VTCAGE13	Spring Plug	2
14	99VTCAGE14	Spring Clevis	2
15	99VTCAGE15	Spring Kit	
16	99VTCAGE16	Complete Thread Bolt	2
17	99VTCAGE17	Trunnion	2
18	99VTCAGE18	Spacer	2
19	99VTCAGE19	Clevis Pin	2
20	99VTCAGE20	Clevis Link	2
21	99VTCAGE21	Arm	2
22	99VTCAGE22	Cap Screw	2
23	99VTCAGE23	Lock Nut	2
24	99VTCAGE24	Cap Screw	2
25	99VTCAGE25	Jam Nut	2
26	99VTCAGE26	Arm Mount Bracket	2
27	99VTCAGE27	D-Pin small	2
28	99VTCAGE28	Roll Pin small	2
29	99VTCAGE29	D-Pin large	2
30	99VTCAGE30	Roll Pin large	2
31	99VTCAGE31	Arm Mount Bracket Cap	2
32	99VTCAGE32	Carriage Bolt	4
33	99VTCAGE33	Lock Nut	4
	99VTCAGE35-2	2' Drag Bar	
	99VTCAGE35-3	3' Drag Bar	
35	99VTCAGE35-4	4' Drag Bar	
	99VTCAGE35-5	5' Drag Bar	
	99VTCAGE35-6	6' Drag Bar	
36	99VTCAGE36	Harrow Spike	
37	99VTCAGE37	V-Bolt	
38	99VTCAGE38	Hex Nut	
39	99VTCAGE39	Lock Washer	
40	99VTCAGE40	Cap Screw	
41	99VTCAGE41	Lock Nut	
42	99VTCAGE42	Square Washer	

COMPLETE ASSEMBLY

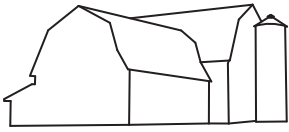
99VTCAGECA2	2' Cage Complete Assembly
99VTCAGECA3	3' Cage Complete Assembly
99VTCAGECA4	4' Cage Complete Assembly
99VTCAGECA5	5' Cage Complete Assembly
99VTCAGECA6	6' Cage Complete Assembly

CAGE & FRAME ASSEMBLY ONLY

99VTCAGECF02	2' Cage & Frame ONLY
99VTCAGECF03	3' Cage & Frame ONLY
99VTCAGECF04	4' Cage & Frame ONLY
99VTCAGECF05	5' Cage & Frame ONLY
99VTCAGECF06	6' Cage & Frame ONLY

DRAG BAR ASSEMBLY ONLY

99VTVCAGEDB2CA	2' Drag Bar Assembly ONLY
99VTVCAGEDB3CA	3' Drag Bar Assembly ONLY
99VTVCAGEDB4CA	4' Drag Bar Assembly ONLY
99VTVCAGEDB5CA	5' Drag Bar Assembly ONLY
99VTVCAGEDB6CA	6' Drag Bar Assembly ONLY



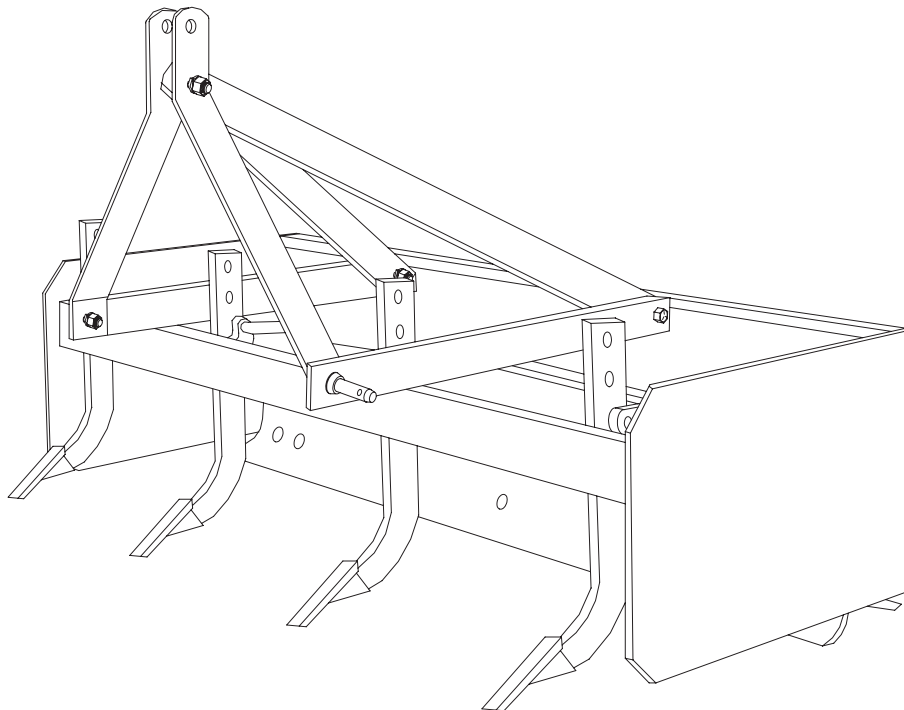
SERIES 99 Box Scrapers

Heavy duty welded box beam scarifier bar. 1/4" thick double formed moldboard and all welded construction. Standard with 1/2" x 6" high carbon replaceable double edged back fill blade. High strength easy to adjust scarifier shanks with replaceable tempered scarifier points. Storage position for scarifiers. Category I replaceable hitch pins.

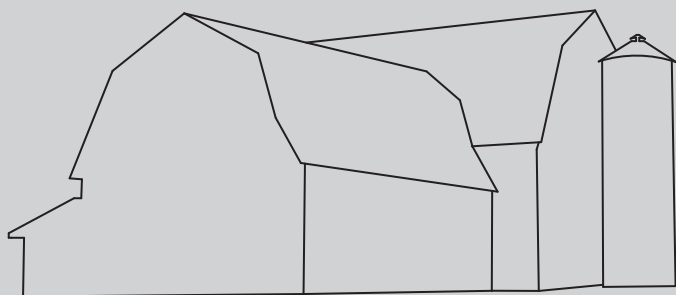
BOX SCRAPER

Part No.	Width	WT Each	MAX HP
996BS70W0	w/o Scarifier	462#	
996BS7000	7 ft.	532#	40hp
996BS60W0	w/o Scarifier	413#	
996BS6000	6 ft.	473#	40hp
996BS50W0	w/o Scarifier	299#	
996BS5000	5 ft.	349#	25hp
996BS40W0	w/o Scarifier	254#	
996BS4000	4 ft.	294#	25hp

BOX SCRAPER



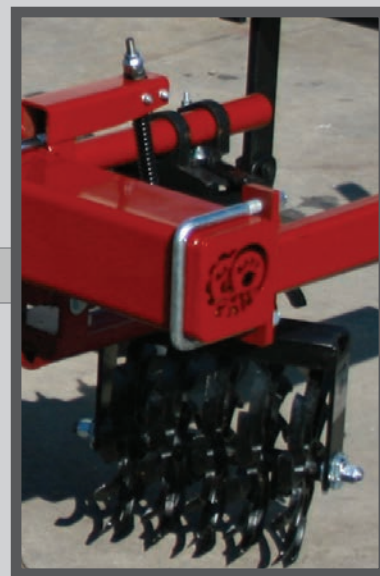
Note: Other material sizes available upon request.



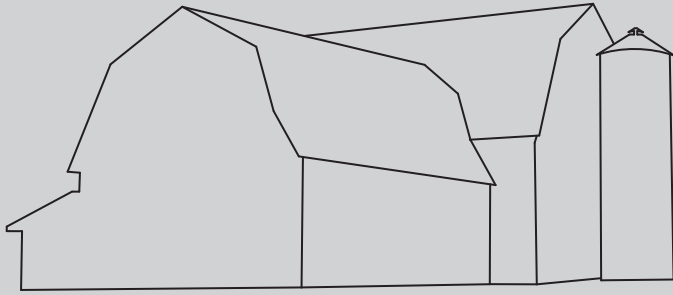
SPECIFICATIONS

*Available in most
row spacing with
or without back bar*

**Ask about our folding unit options*



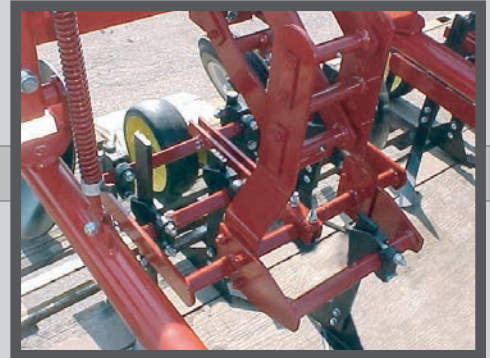
RIGID VEGETABLE CULTIVATOR

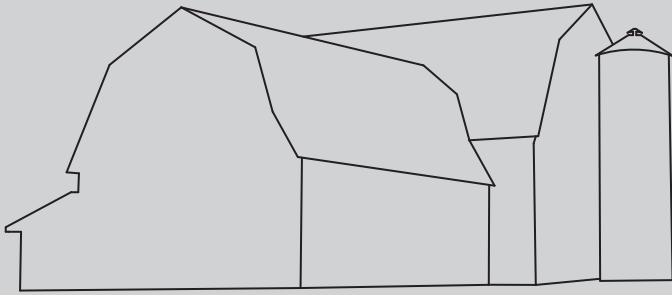


SPECIFICATIONS

***4 row 40" fixed
vegetable cultivator
with floating heads***

**Ask about our folding unit options*





SPECIFICATIONS

*Available in most
row spacing with
or without rear bar*

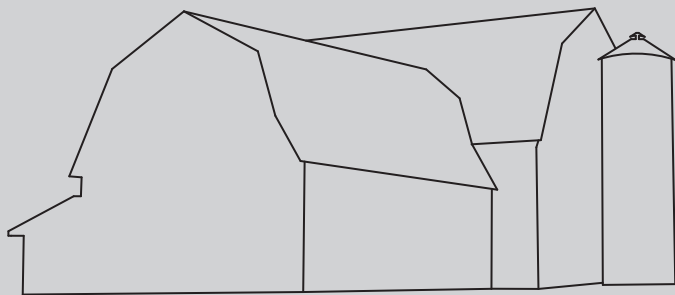
**Ask about our rigid unit options*



Growers Supply **SERIES 99 -RING ROLLERS**

TILLAGE TOOLS AND SUPPLIES

HEAVY DUTY RING ROLLER



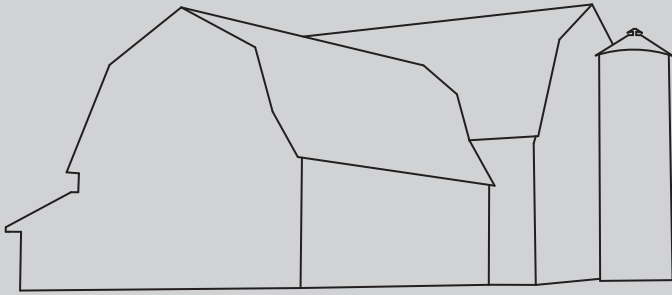
SPECIFICATIONS

*Available in
20' to 28'
configurations*

**Ask about our folding unit options*



SERIES 99 -VIBRATINE VIBRATINE CULTIVATOR OPEN FIELD



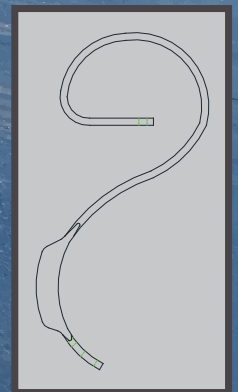
SPECIFICATIONS

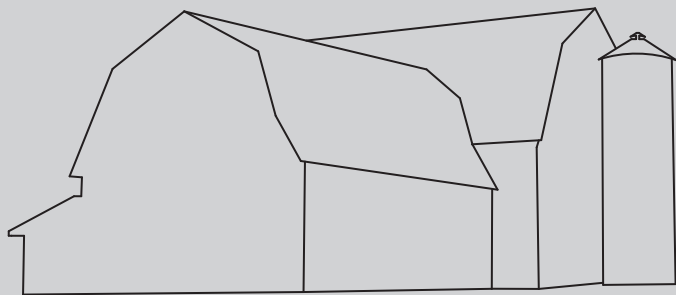
***Heavy Duty Open
Field VibraTines***

**8', 10', 12',14' & Up
**Folding Units Also Available*



***Heavy S-Tine
Standard***

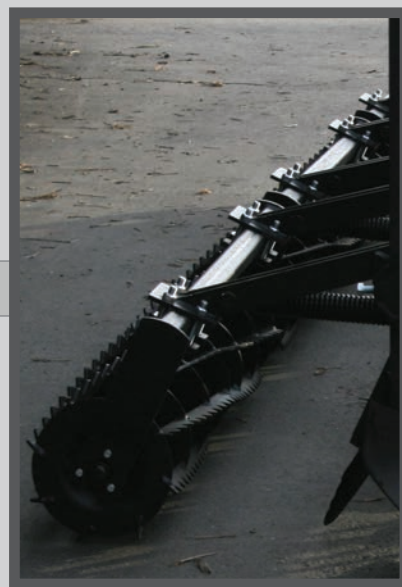




SPECIFICATIONS

*Available in both
open field and
bedded field styles*

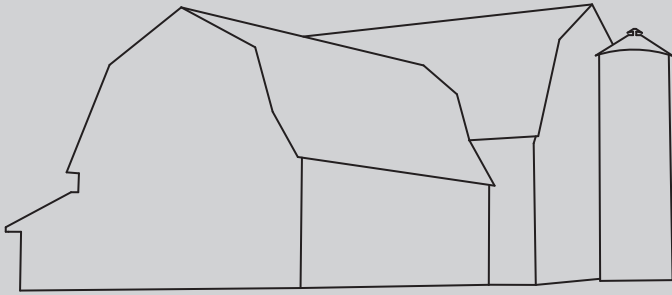
**Ask about our folding unit options*



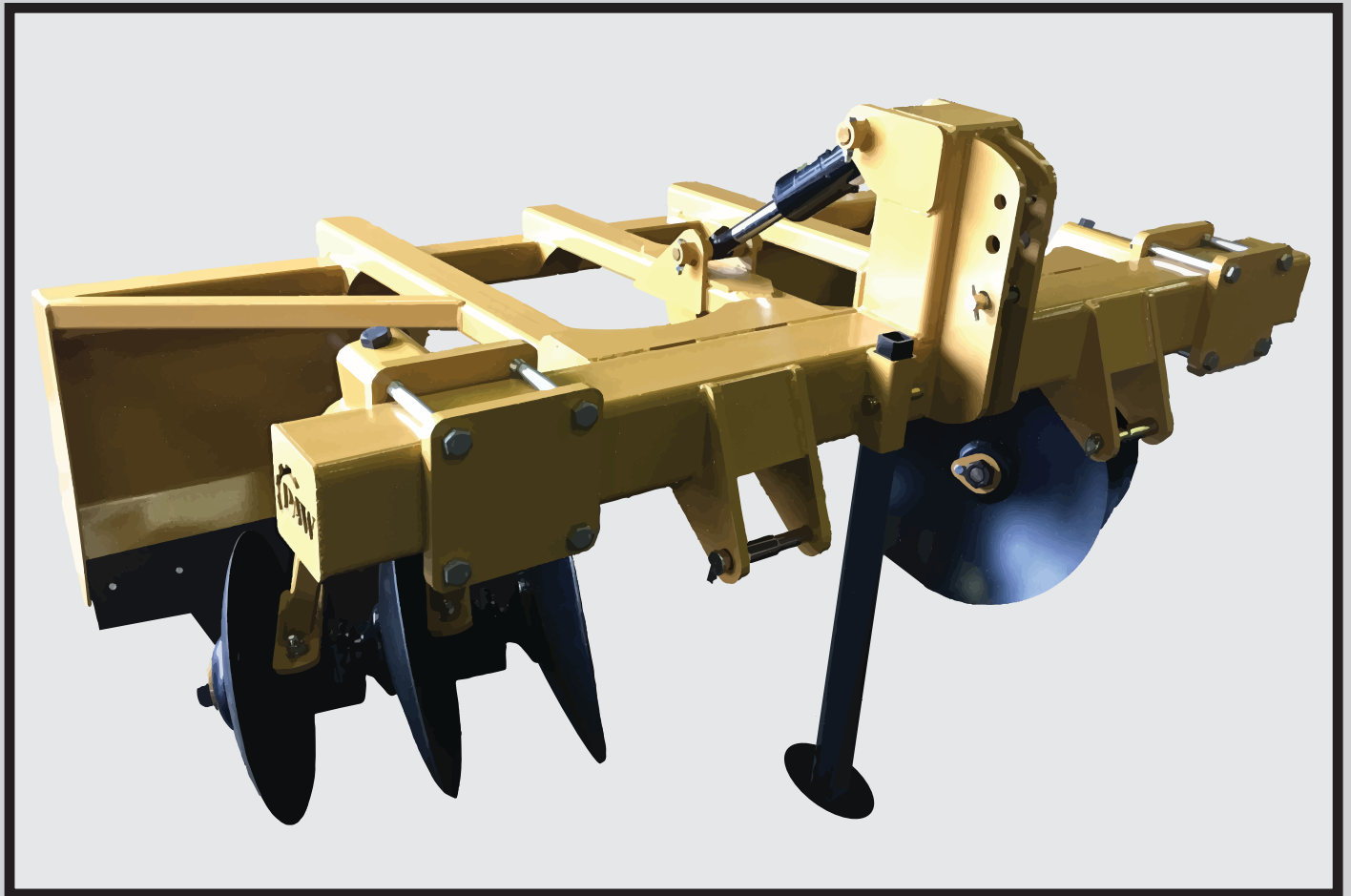
Growers **S**upply **SERIES 99 -DISC RIDGERS**

TILLAGE TOOLS AND SUPPLIES

Heavy Duty 3 Blade
Disc Ridgers



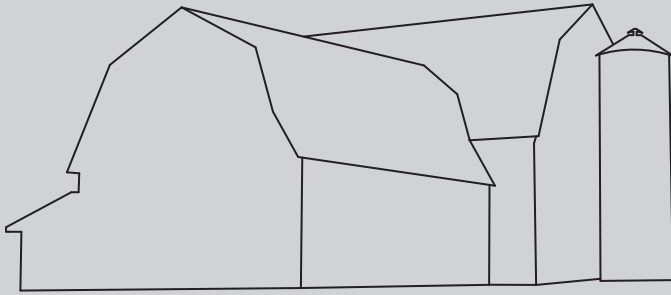
SPECIFICATIONS



Growers **S**upply **SERIES 99 -DISC RIDGERS**

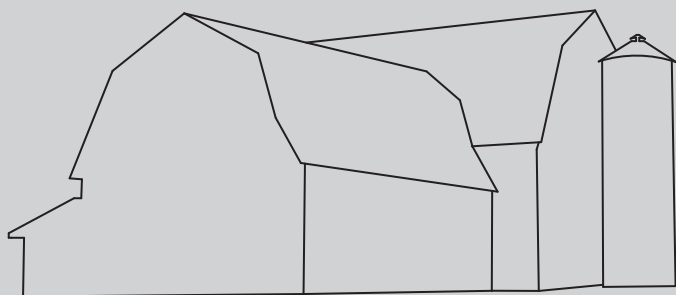
TILLAGE TOOLS AND SUPPLIES

**Heavy Duty 2 Blade
Disc Ridgers**



SPECIFICATIONS



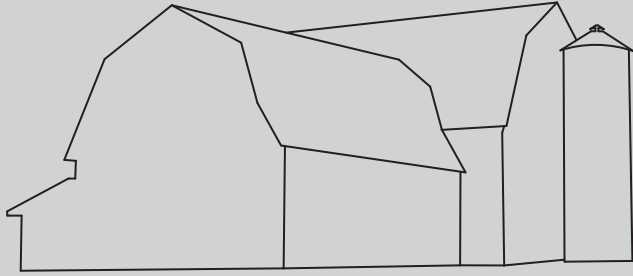


SPECIFICATIONS

*Available in most
bed and row
configurations*

**Ask about our folding unit options*



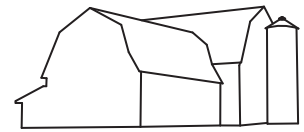


SPECIFICATIONS

*Available in most
bed and row
configurations*

**Ask about our folding unit options*





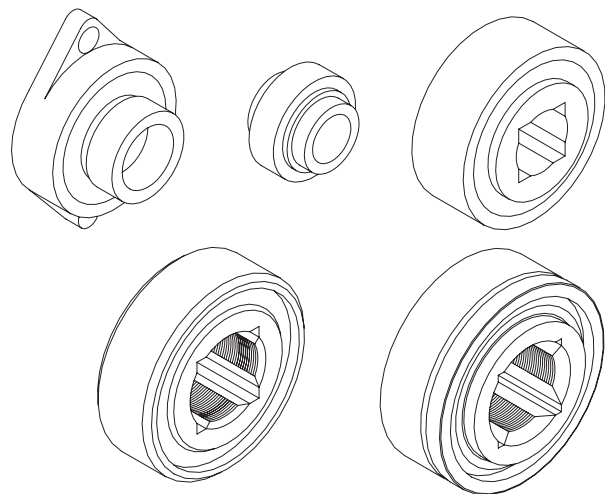
SERIES B

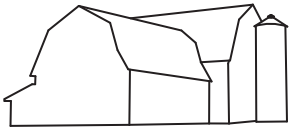
Bearings

BEARINGS

Part Number	Description	Weight Each
B60249C1	CASE IH Bearing 780 DISC	
BFD211-2-3/16RD	IH CASE ST3028 FA WDHU23/16R21	
BFD211REA		
BGW208PP17	1-1/8" SQ. Bore Bearing	1.36
BGW208PPB5	1-1/8" SQ. Bore Bearing	1.49
BGW208PPB6	1" SQ. Bore Bearing	1.62
BGW208PPB8	1-1/8" SQ. Bore Bearing	1.58
BGW209PPB11	1-3/4" RD. Bore Bearing	1.36
BGW209PPB4	1-1/2" RD. Bore Bearing	1.58
BGW209PPB8	1-1/8" SQ. Bore Bearing	1.65
BGW210PP3	1-13/32" RD. Bore Bearing	2.11
BGW210PP4	1-1/8" SQ. Bore Bearing	2.18
BGW210PPB2	1-15/16" RD. Bore Bearing	1.55
BGW210PPB4	1-1/8" SQ. Bore Bearing	2.06
BGW210PPB5	1-3/4" RD. Bore	1.58
BGW211PP17	1-1/2" SQ. Bore Bearing	3.00
BGW211PP2	2-3/16" RD. Bore Bearing	2.13
BGW211PP3	1-1/2" SQ. Bore Bearing	2.61
BGW211PP5	AC 112	
BGW211PP7	GW211PP7 Bearing	
BGW211PPB13	1-3/4" RD. Bore Bearing	2.27
BGW211PPB2	2-3/16" RD. Bore Bearing	1.97
BGW211PPB3	1-1/2" SQ. Bore Bearing	2.50
BGW211PPB7	GW211PPB7 Bearing	
BGW211PPB9	2-3/16" RD. Bore	2.06
BGW214PP2	2-3/4" RD Bore	3.84
BGW214PPB2	2-3/4" RD. Bore	4.39
BGW214PPB3	WISICK 2" RD	
BGW214PPB6	2-5/8" RD. Bore	4.49
BGW216PP2	2-1/4" SQ. Bore	6.91
BIH7801340	I/H 780 1-3/4" Bearing	
BIH780134R	Rubber buffer 780 Bearing	
BSA205-160	Squirrel cage with collar Bearing	
BW208K3	1-1/8" SQ. Bore Bearing	1.30
BW208PP10	1-1/2" RD. Bore Bearing	1.40
BW208PP5	1-1/8" SQ. Bore Bearing	1.46
BW208PP6	1" SQ. Bore Bearing	1.55
BW208PP8	1-1/8" SQ. Bore Bearing	1.72
BW208PPB11	1-3/4" SQ. Bore Bearing	2.30
BW208PPB12	1-1/8" SQ. Bore Bearing	2.00
BW208PPB13	7/8" SQ. Bore Bearing	1.70

Part Number	Description	Weight Each
BW208PPB16	1-1/4" HX. Bore Bearing	1.36
BW208PPB5	1-1/8" SQ. Bore Bearing	1.39
BW208PPB6	1" SQ. Bore Bearing	1.60
BW208PPB7	1-3/16" RD. Bore Bearing	1.37
BW209PPB2	1-3/4" RD. Bore Bearing	1.35
BW209PPB4	1-1/2" RD. Bore Bearing	1.56
BW209PPB5	1-1/4" SQ. Bore Bearing	1.78
BW209PPB8	1-1/4" SQ. Bore Bearing	1.65
BW210PP2	1-15/16" RD. Bore Bearing	1.67
BW210PPB2	1-15/16" RD. Bore Bearing	1.56
BW210PPB4	1-1/8" SQ. Bore Bearing	2.03
BW210PPB5	1-3/4" RD. Bore Bearing	1.64
BW210PPB6	1-1/2" SQ. Bore Bearing	2.30
BW211PP2	2-1/8" RD Bore Bearing	2.17
BW211PP3	1-1/2" SQ. Bore Bearing	2.67
BW211PP5	1-1/2" SQ. Bore Bearing	3.50
BW211PPB2	2-3/16" RD. Bore Bearing	1.97
BW211PPB3	1-1/2" SQ. Bore Bearing	2.53
BW211PPB6	1-1/2" SQ. Bore Bearing	3.46
BW211PPB8	2-1/8" RD Bore Bearing	2.17





SERIES WI

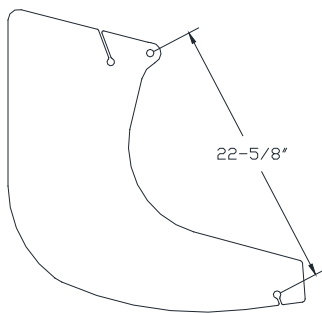
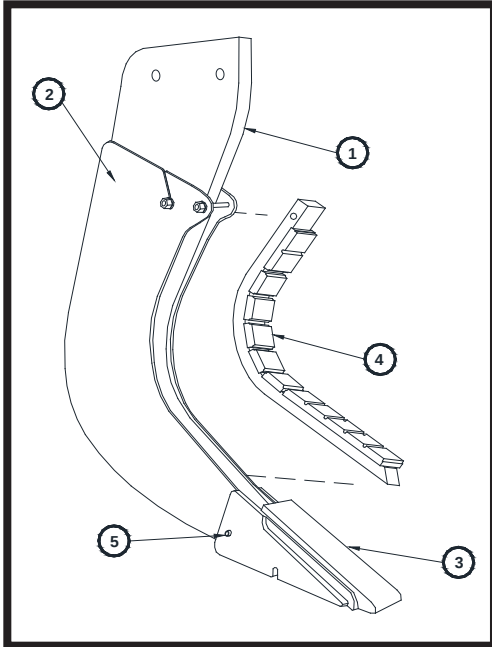
Wilcox Style Replacement Parts

WILCOX RIPPER SHANKS

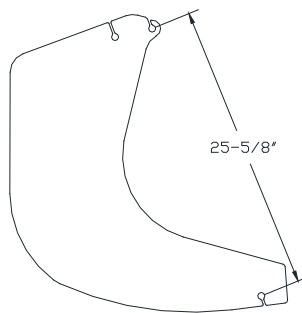
Part Number	Description	Shank Width
78WI15000	Plain Standard Shank	1-1/2"
78WI1505S	Complete w/Side Plates, Shin and Point	1-1/2"
78WI1500L	Plain Long Shank	1-1/2"
78WI1505SL	Complete w/Side Plates, Shin and Point	1-1/2"

WILCOX RIPPER SHANK SIDE PLATES AND SHINS

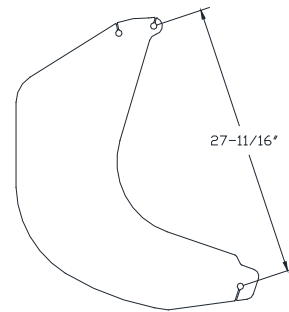
Part Number	Description	Shank Width
78WI000WP2	Fits 78WI15000 Shank	1-1/2"
78WI10145	Fits 78WI1500L Shank	1-1/2"
78WI60034		
78WI10083	Fits 78WI15000 Shank	1-1/2"
78WI10141	Fits 78WI1500L Shank	1-1/2"
78WI60046		



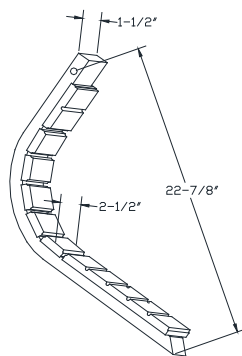
78WI000WP2 (1 Pair)



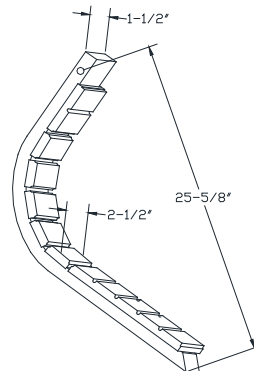
78WI10145 (1 Pair)



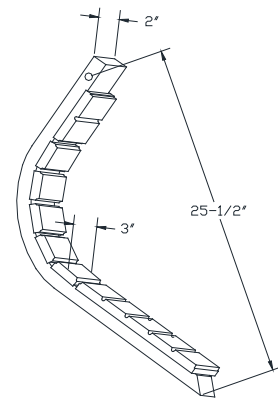
78WI60034 (1 Pair)



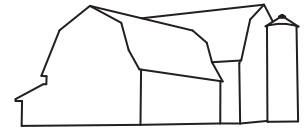
78WI10083



78WI10141



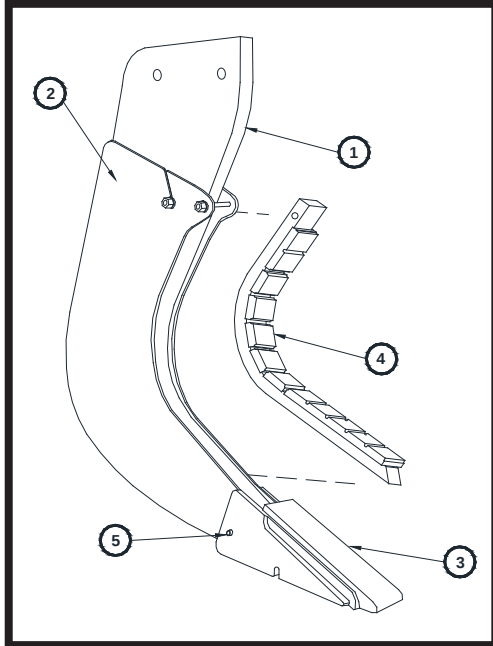
78WI60046



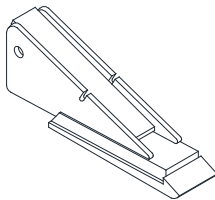
SERIES WI

Wilcox Style Replacement Parts

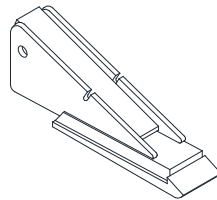
WILCOX RIPPER POINTS



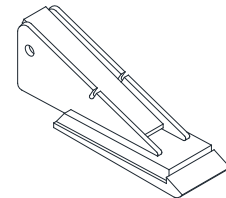
Part Number	Style	Description	Shank Width	Chrome Insert
77WI12500	Booted (3pc.)	1"x2-1/2"x12" Plain	1-1/4"	N/A
77WI12500H		HardFaced		N/A
77WI125BEC		BE-Style Chrome		39BE27812
77WI15000	Booted (3pc.)	1"x2-1/2"x12" Plain	1-1/2"	N/A
77WI15000H		HardFaced		N/A
77WI150BEC		BE-Style Chrome		39BE27812
77WI150BECW		with Wings		39BE27812
77WI2000	Booted (3pc.)	1"x3"x12" Plain	2"	N/A
77WI2000H		HardFaced		N/A
77WI200BEC		BE-Style Chrome		39BE33812
77WI200BECW		with Wings		39BE33812
77WI2030HH	Booted (3pc.)	1"x3"x16" Plain	2"	N/A
77WI20400H	Booted (3pc.)	1"x4"x12" Plain	2"	N/A
77WI20400HH	Booted (3pc.)	1"x4"x16" Plain	2"	N/A
77WI204BEC		BE-Style Chrome	2"	39BE43812
77WI204BECW		with Wings	2"	39BE43812
77WI204BECH		Heavy Duty BE-Style Chrome	2"	39BE43812
77WI212BEC	Booted (3pc.)	BE-Style Chrome	2-1/2"	39BE43812



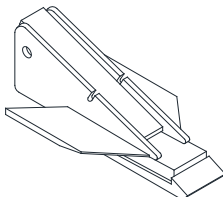
77WI150BEC



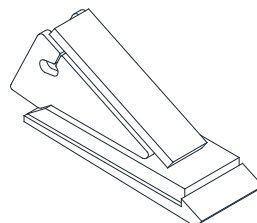
77WI200BEC



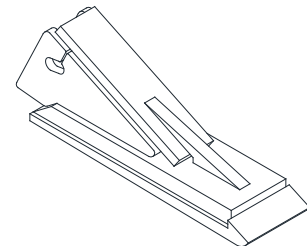
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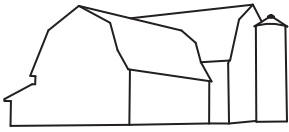
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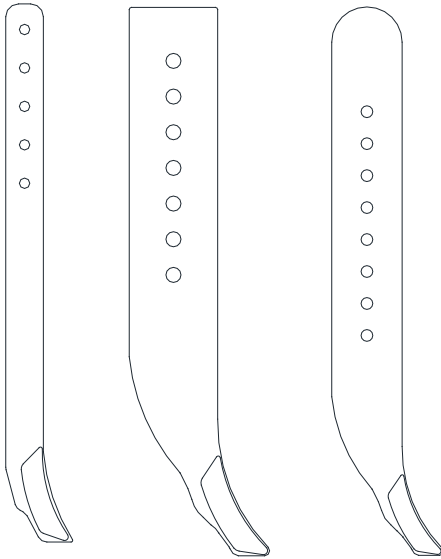
77WI212BEC



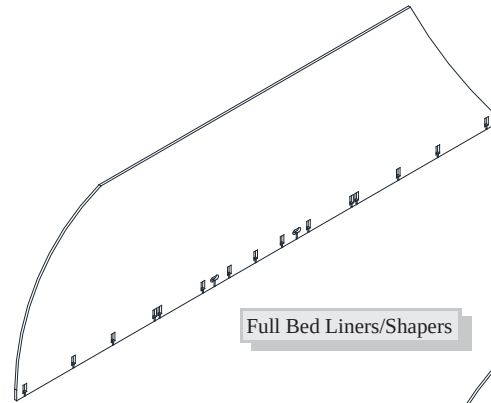
77WI204BECH



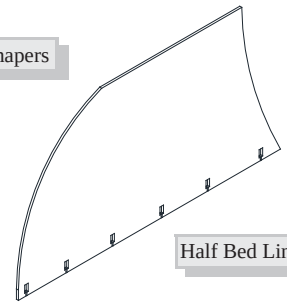
SERIES WI Wilcox Style Replacement Parts



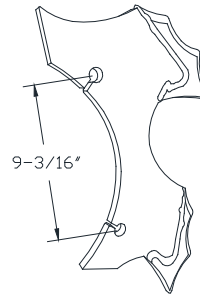
VARIOUS SHANKS AND SIZES



Full Bed Liners/Shapers

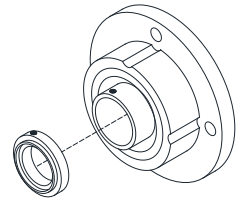


Half Bed Liners/Shapers



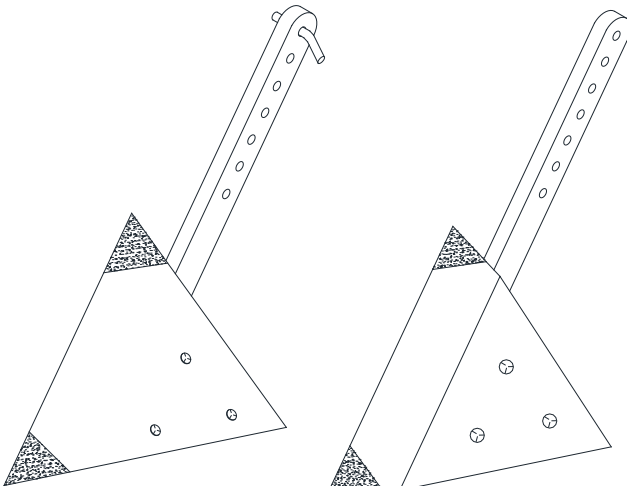
9-3/16"

78WI31059



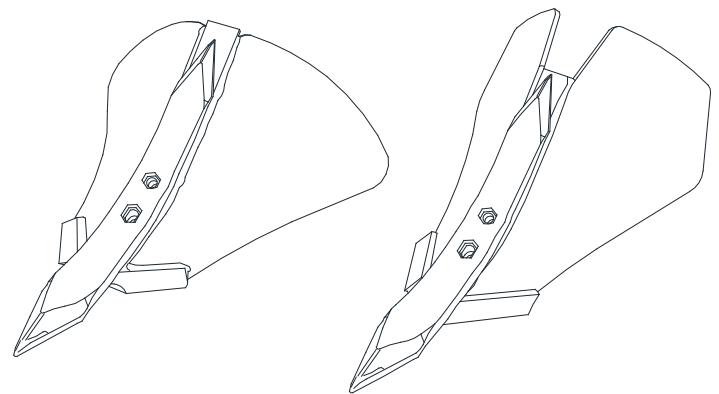
Bearings & Dust Caps

LOW ANGLE SHOVELS



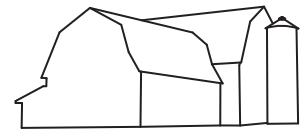
Full Shovels

LH & RH Shovels



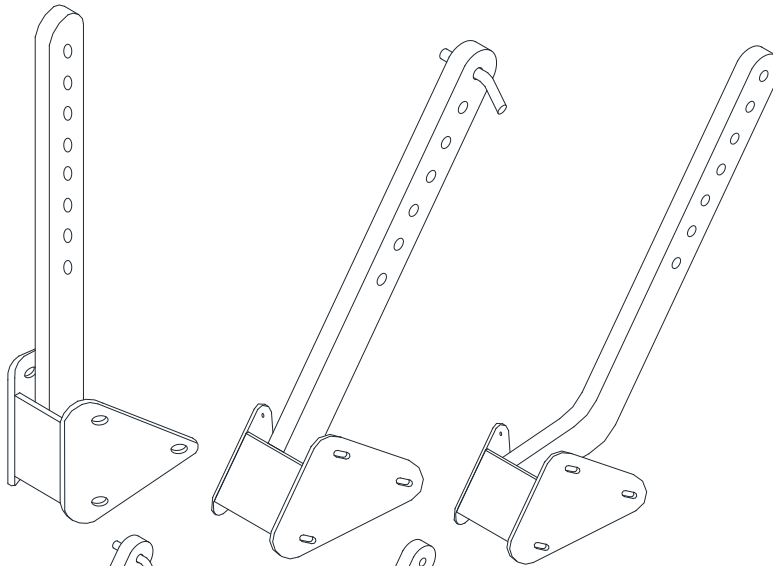
Salinas Style Shovels

*****MANY OTHER SIZES AND ASSEMBLIES AVAILABLE. PLEASE CALL FOR MORE INFORMATION.**



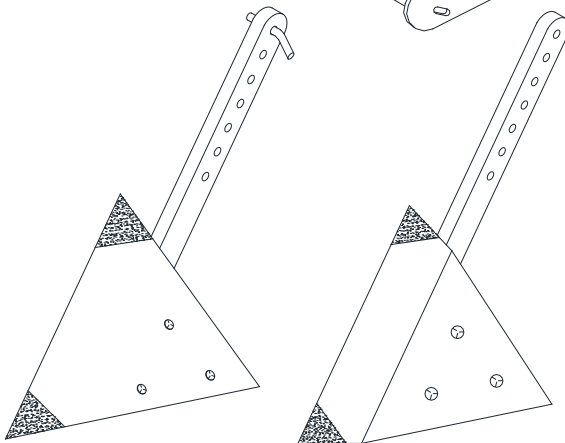
SERIES WI

Wilcox Style Replacement Parts



Shanks

884WI91629	Full Shovel/Moldboard
884WI91785	Right Hand
884WI91789	Left Hand

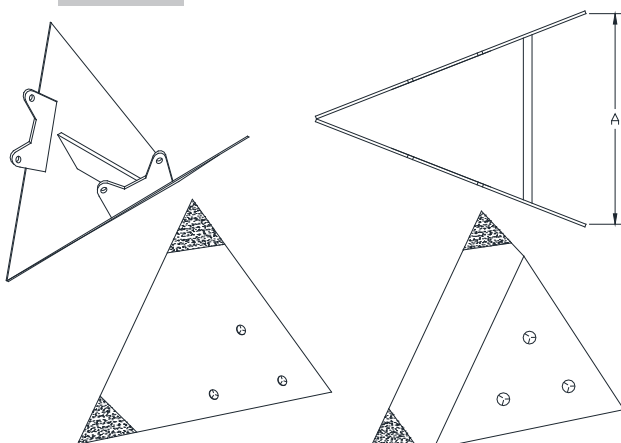


Complete Shovel Assemblies

884WI91630	Full Shovel/Moldboard
884WI97049	Right Hand
884WI97050	Left Hand

Full Shovels

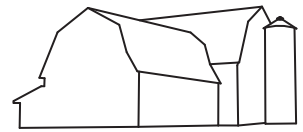
LH & RH Shovels



Shovels Only

Part#		"A" Dimension
884WI91288	Full Shovel/Moldboard	18"
884WI91292	Right Hand	11-1/2"
884WI91296	Left Hand	11-1/2"

*****MANY OTHER SIZES AND ASSEMBLIES AVAILABLE. PLEASE CALL FOR MORE INFORMATION.**



SERIES WI

Wilcox Style Replacement Parts

