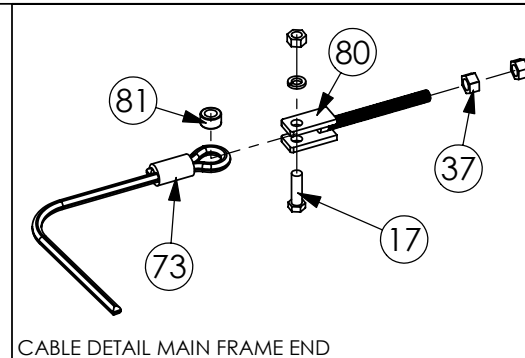
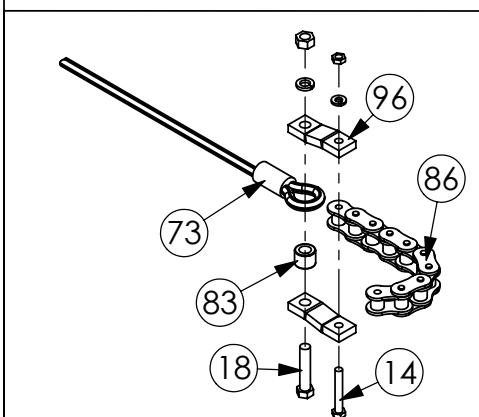
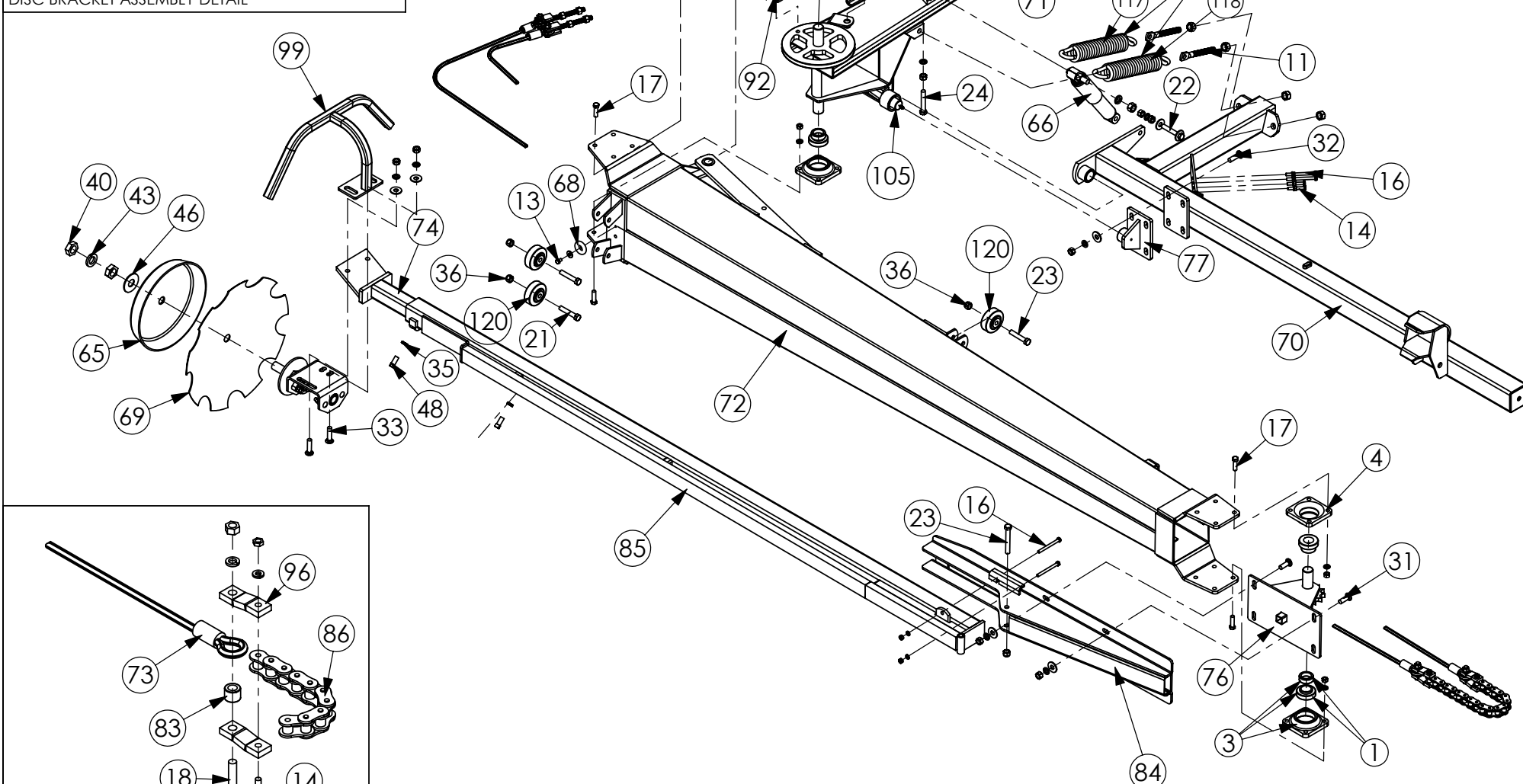


SA-9041 with 18" blade and depth
guage complete is sold as SA-9034

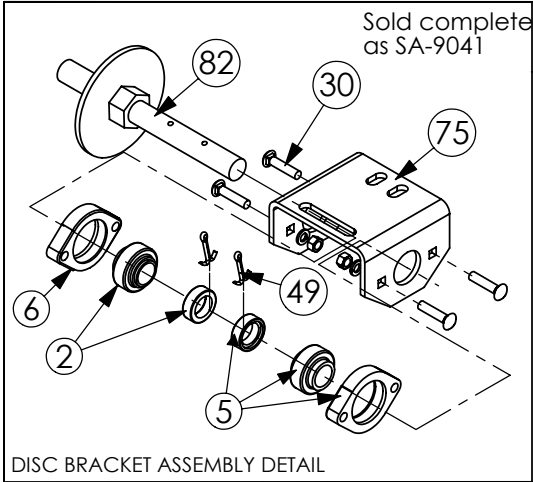
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246's require 2 - 116



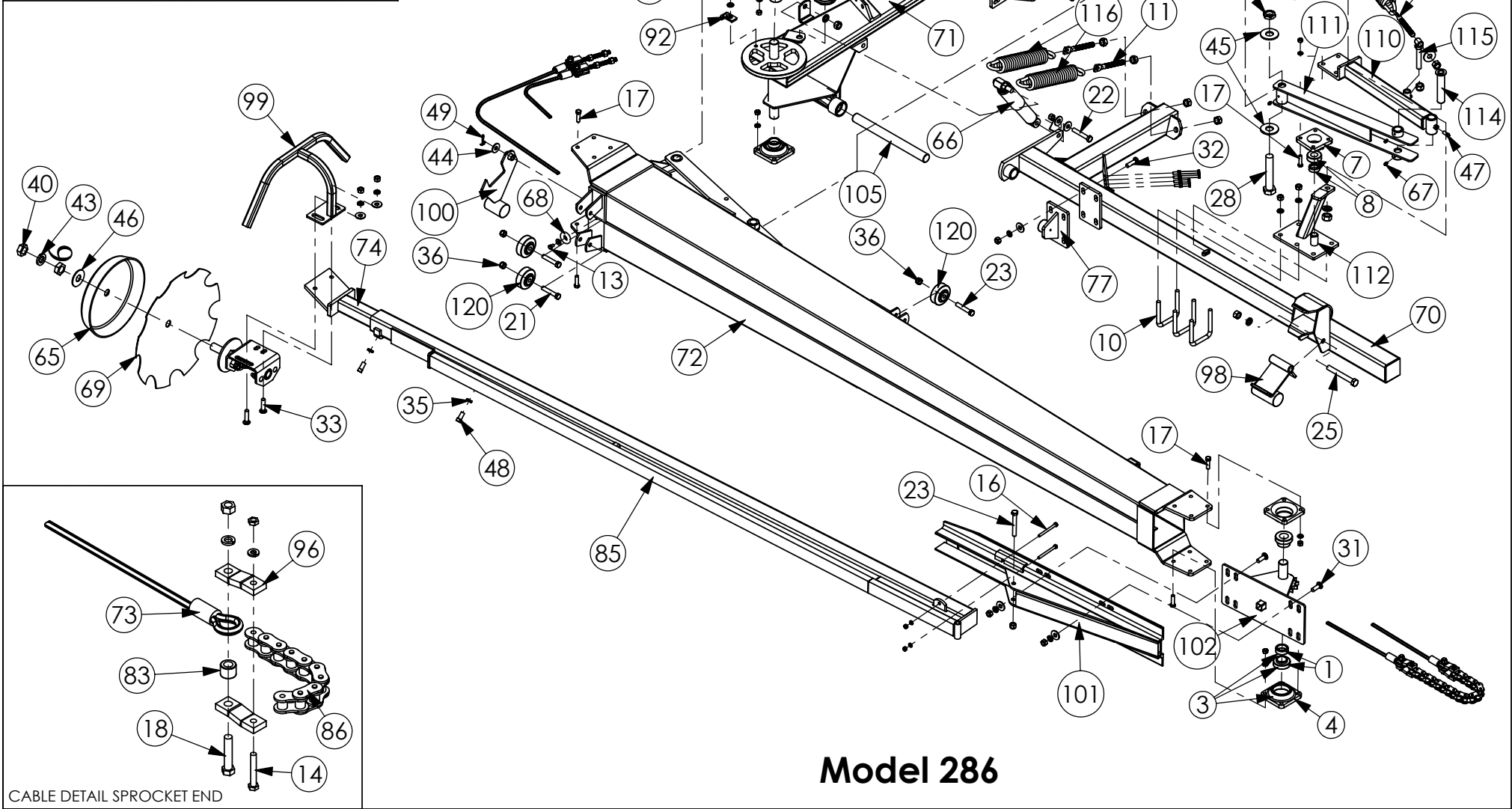
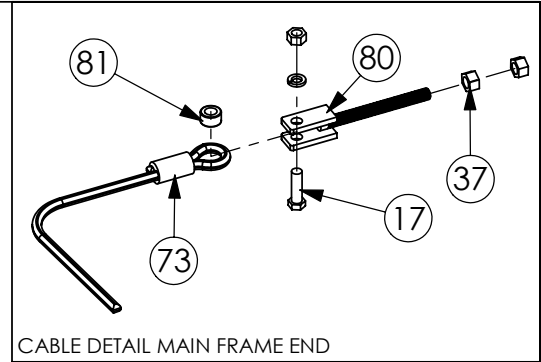
Model 136 & Model 246



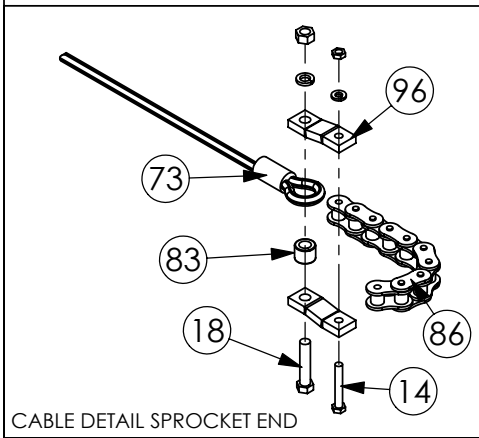
Sold complete
as SA-9041

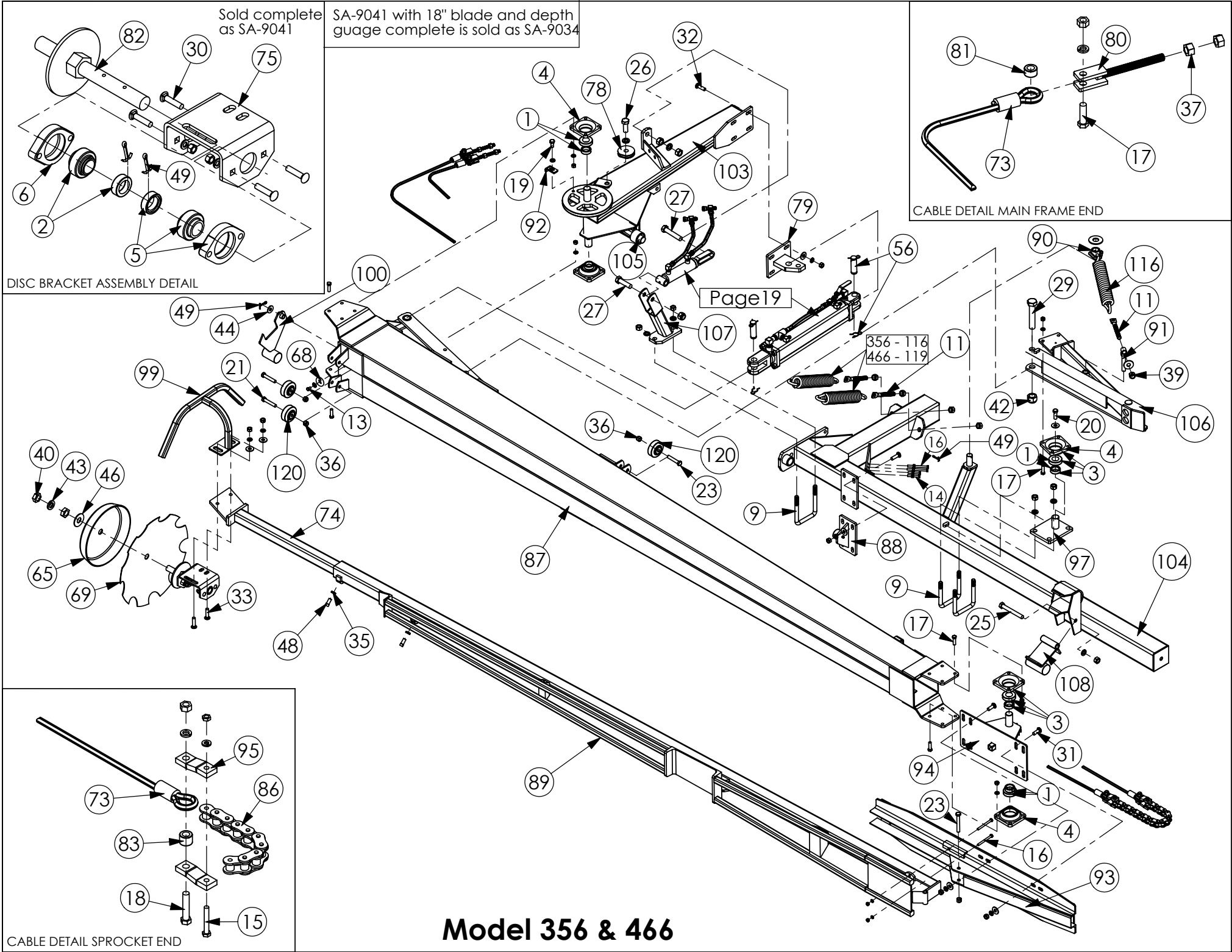
SA-9041 with 18" blade and depth
guage complete is sold as SA-9034

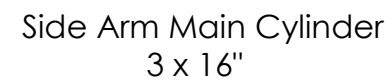
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Model 286







HAUKAAS FIELD MARKERS

THE FOLLOWING LIST OF PARTS CORRESPONDS WITH THE DRAWINGS ON THE PREVIOUS PAGES

Drw#	Part#	Description
1	BRG-2207	1-1/4" BEARING with LOCKING COLLAR
2	BRG-2209	1" BEARING with LOCKING COLLAR (for 2-BOLT)
3	BRG-2450	1-1/4" BEARING & HOUSING COMPLETE
4	BRG-2463	1-1/4" BEARING HOUSING ONLY
5	BRG-2476	1" BEARING & HOUSING COMPLETE (2 BLT)
6	BRG-2486	1" BEARING HOUSING ONLY (2 BLT)
7	BRG-2866	1" BEARING HOUSING ONLY (4 BOLT)
8	BRG-2867	1" BEARING with LOCKING COLLAR (for 4 BOLT)
9	FNS-02290	5/8" U-BOLT FOR 4x4" SQ. TUBE
10	FNS-02357	1/2" U-BOLT FOR 3x3" SQ. TUBE
11	FNS-02392	5/8-11x6" I-BOLT (4" THREAD)
12	FNS-02531	3/8"x16x3/8" SETSCREW
13	FNS-110B5PC	5/16 x 1/2" GR. 5 HEX BOLT
14	FNS-112-5PC	5/16x2" GR. 5 HEX BOLT
15	FNS-112-8PC	5/16x2" GR. 8 HEX BOLT
16	FNS-113B5PC	5/16x3-1/2" GR. 5 SHEAR BOLT
17	FNS-131B5PC	7/16x1-1/2" GR. 5 SHEAR BOLT
18	FNS-132-5PC	7/16x2" GR. 5 HEX BOLT PLT
19	FNS-140C5PC	1/2 x 3/4" GR. 5 HEX BOLT
20	FNS-141-5PC	1/2 x 1" GR. 5 HEX BOLT
21	FNS-142C5PC	1/2x2-3/4" GR. 5 HEX BOLT
22	FNS-143-5PC	1/2 x 3" GR. 5 HEX BOLT
23	FNS-143C8PC	1/2x3-3/4" GR. 8 HEX BOLT
24	FNS-144B5PC	1/2x4-1/2" STOP BOLT
25	FNS-165B5PC	5/8x5-1/2" GR. 5 HEX BOLT
26	FNS-172-5PC	3/4 x 2" GR. 5 HEX BOLT
27	FNS-172C5PC	3/4x2-3/4" GR. 5 HEX BOLT
28	FNS-195B5PC	1" x 5-1/2" GR. 5 HEX BOLT
29	FNS-197-5PC	1" x 7" GR. 5 HEX BOLT
30	FNS-221B5PC	3/8x1-1/2" GR. 5 CARRIAGE BOLT
31	FNS-241A5PC	1/2x1-1/4" GR. 5 CARRIAGE BOLT
32	FNS-241B5PC	1/2x1-1/2" GR. 5 CARRIAGE BOLT
33	FNS-241C5PC	1/2x1-3/4" GR. 5 CARRIAGE BOLT
34	FNS-3685PC	5/8"x8"NC GR. 5 SPADE BLT
35	FNS-54JPC	1/2"- 13 NC JAM NUT
36	FNS-54LPC	1/2"- 13 NC NYLON LOCKNUT
37	FNS-54RPC	1/2"-13 NC HEX NUT
38	FNS-57LPC	3/4"- NC NYLON LOCKNUT
39	FNS-57SPC	3/4"-10 STOVER NUT
40	FNS-59JPC	1" - 8 JAM NUT PLT
41	FNS-59RPC	1"-8 HEX NUT PLT
42	FNS-59SPC	1"-8 STOVER NUT PL
43	FNS-69RP	1" LOCK WASHER PLT
44	FNS-74RP	1/2" FLAT WASHER PLT
45	FNS-79NP	1" FLAT WASHER SAE
46	FNS-79RP	1" FLAT WASHER PLT
47	FNS-82CPC	3/8x3/4" SQ HD SET SCREW
48	FNS-8A41BPC	1/2 x1-1/2"SQ HD SET SCREW
49	FNS-8CB-1BP	3/16 x 1-1/2 COTTER-PIN
50	FNS-96SLN	5/8" STOVER LOCK NUT
51	HP-9JF026	1/4"HOSEx26" 9/16" FEMALE JIC
52	HP-9JF032	1/4"HOSEx32" 9/16" FEMALE JIC
53	HYD-2368	HYDRAULIC CYLINDER

HAUKAAS FIELD MARKERS

THE FOLLOWING LIST OF PARTS CORRESPONDS WITH THE DRAWINGS ON THE PREVIOUS PAGES

54	HYD-2515	9/16" JIC MxFxF TEE
55	HYD-2516	1/4" MALE NPT->9/16" MALE JIC 90 DEG ELBOW
56	HYD-2528	CYLINDER PIN KIT
57	HYD-2888	1/2" MALE NPT->3/8" FEMALE NPT 90 DEG ELBOW
58	HYD-2890	1-1/2"x4" HYDRAULIC CYLINDER (3000PSI)
59	HYD-25010606	9/16" 18 MJIC to 3/8" MNPT 90 DEG
60	HYD-2892	3/8" MALE NPT->#6 MALE JIC RUN TEE
61	HYD-2893	1/2" MALE NPT->3/8" MALE NPT 90 DEG ELBOW
62	HYD-2894	1/4"x11-1/2" HOSE 1/4" MALE NPT->#6 FEMALE JIC 9/16"-18
63	HYD-2895	3/8" BALL VALVE
64	HYD-2896	PILOT OPERATED CHECK VALVE
65	MIS-2192	NYLON DEPTH GAUGE
66	MIS-2195	SHOCK ABSORBER
67	MIS-2325	GF641 GREASE ZIRK
68	MIS-2362	RUBBER BUMPER PAD
69	MIS-2526	18" NOTCHED DISC BLADE
70	SA-8051L	SMALL SUB-FRAME LEFT
70	SA-8051R	SMALL SUB-FRAME RIGHT
71	SA-8052L	SMALL MAIN FRAME LEFT
71	SA-8052R	SMALL MAIN FRAME RIGHT
72	SA-8053/136L	PRIMARY ARM 136 LEFT
72	SA-8053/136R	PRIMARY ARM 136 RIGHT
72	SA-8053/246L	PRIMARY ARM 246 LEFT
72	SA-8053/246R	PRIMARY ARM 246 RIGHT
72	SA-8053/286L	PRIMARY ARM 286 LEFT
72	SA-8053/286R	PRIMARY ARM 286 RIGHT
73	SA-8054/136	136 CABLE 88" OVERALL
73	SA-8054/246	246 CABLE 112" OVERALL
73	SA-8054/286	286 CABLE 124" OVERALL
73	SA-8054/356	356 CABLE 134" OVERALL
73	SA-8054/466	466 CABLE 158" OVERALL
74	SA-8055	THIRD STAGE ARM
75	SA-8056	DISC ASSEMBLY BRACKET
76	SA-8057	SMALL SPROCKET ASSEMBLY (4 HOLE)
77	SA-8065	END BUSHING BRACKET ASSEMBLY
78	SA-8066	3" CABLE PULLEY
79	SA-8067	HYDRAULIC CYLINDER ANCHOR BRACKET
80	SA-8069	CABLE CLEVIS BOLTS
81	SA-8082	CABLE/CLEVIS BUSHING (1/2")
82	SA-8084	DISC AXLE
83	SA-8085	1/2 LINK BUSHING 11/16"
84	SA-8086	SMALL ANGLE IRON ASSEMBLY (4 HOLE)
85	SA-8087/136	136 2ND STAGE ARM TUBE ASSEMBLY
85	SA-8087/246	246 2ND STAGE ARM TUBE ASSEMBLY
85	SA-8087/286	286 2ND STAGE ARM TUBE ASSEMBLY
86	SA-8088	#80 ROLLER CHAIN (18 PINS-20" LONG)
87	SA-8104/356L	PRIMARY ARM 356 LEFT
87	SA-8104/356R	PRIMARY ARM 356 RIGHT
87	SA-8104/466L	PRIMARY ARM 466 LEFT
87	SA-8104/466R	PRIMARY ARM 466 RIGHT
88	SA-8109L	END BUSHING BRACKET ASSEMBLY LEFT
88	SA-8109R	END BUSHING BRACKET ASSEMBLY RIGHT
89	SA-8118/356	356 2ND STAGE ARM TUBE ASSEMBLY
89	SA-8118/466	466 2ND STAGE ARM TUBE ASSEMBLY

HAUKAAS FIELD MARKERS

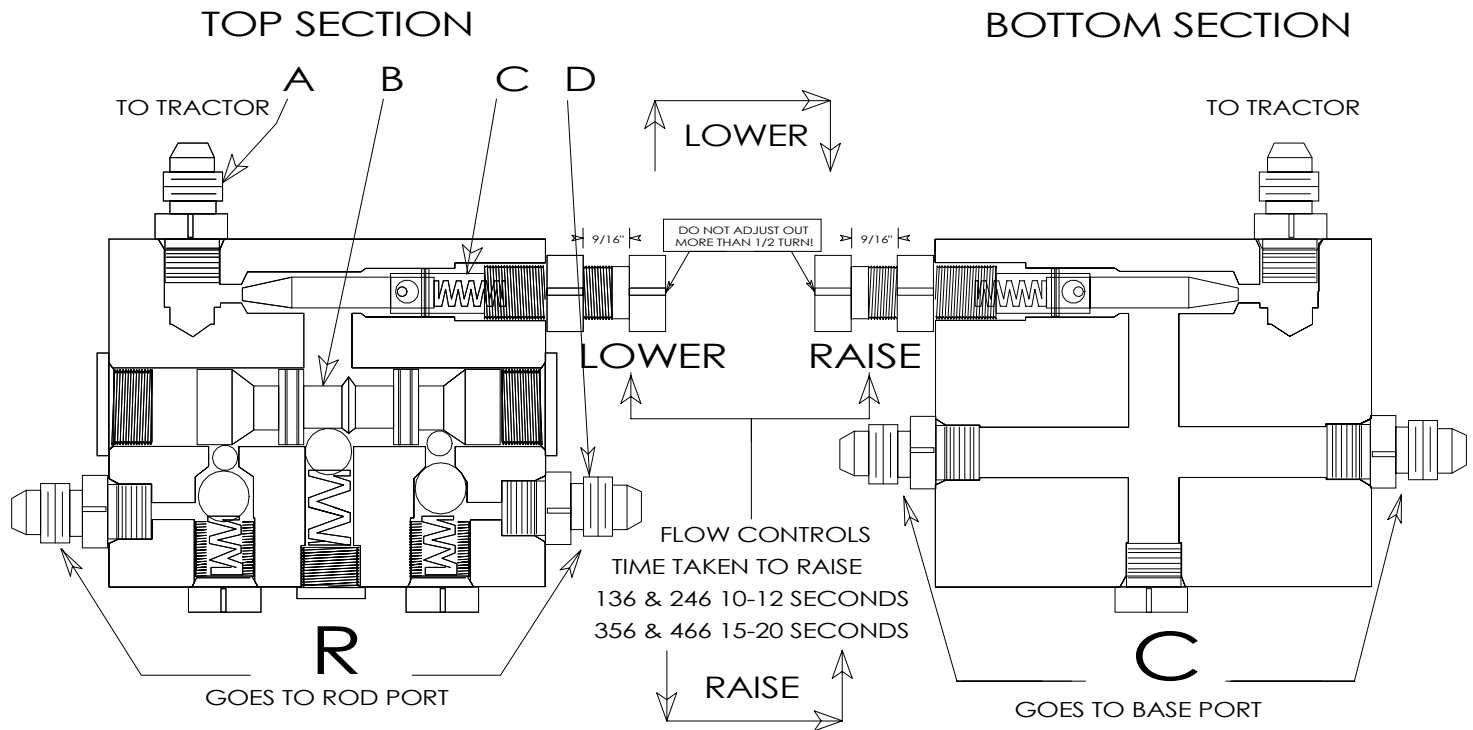
THE FOLLOWING LIST OF PARTS CORRESPONDS WITH THE DRAWINGS ON THE PREVIOUS PAGES

90	SA-8182	STABILIZER SPRING ANCHOR RING
91	SA-8183	STABILIZER SPRING LIFT BOLT/BUSHING
92	SA-8184	CABLE CLIP
93	SA-8195	LG ANGLE IRON ASSEMBLY (8 HOLE)
94	SA-8196	LG SPROCKET ASSEMBLY (8 HOLE)
95	SA-8218	3/8" EXTENDED HALF LINK
96	SA-8219	3/8" CABLE/CHAIN HALF LINK
97	SA-8221	STABILIZER ARM PIVOT ASSEMBLY
98	SA-8222	TUBE LOCK LATCH
99	SA-8223	1" SQUARE TUBE DISC GUARD
100	SA-8224	AUTO-LOCK LATCH
101	SA-8335	SM ANGLE IRON ASSEMBLY (8 HOLE)
102	SA-8336	SM SPROCKET ASSEMBLY (8 HOLE)
103	SA-8337L	466 MAIN FRAME LEFT
103	SA-8337R	466 MAIN FRAME RIGHT
104	SA-8338L	LARGE SUB-FRAME LEFT
104	SA-8338R	LARGE SUB-FRAME RIGHT
105	SA-8339	MAIN FRAME SHAFT (1-1/4" COLD ROLLED 14" LONG)
106	SA-8340	STABILIZER ARM ASSEMBLY
107	SA-8381	SL-HYD LIFT BRACKET 466
108	SA-8385	TUBE LOCK LATCH (LARGE MARKERS)
109	SA-8400	8x1.25x8MM SET SCREW 3/64" ORIFICE
110	SA-8417	SM STABILIZER TUBE ARM ASSEMBLY
111	SA-8418	SM STABILIZER WEB ARM ASSEMBLY
112	SA-8419	SM STABILIZER ARM PEDESTAL
113	SA-8420	SM STABILIZER ARM SPRING/ANCHOR ASSEMBLY
114	SA-8421	SM STABILIZER CENTRE PIN ASSEMBLY
115	SA-8422	STAB/I-BOLT HOLDER
116	SPR-2173	LARGE CB SPRING
117	SPR-2315	SMALL CB SPRING
118	SPR-2395	MEDIUM CB SPRING
119	SPR-2498	X-LARGE CB SPRING
120	WHL-2172	3" NYLON WHEEL
121	HYD-65000606	9/16 MJ - 9/16 FJS 90 DEG SWIVEL

SA-17ASK SEQUENCE VALVE

IMPORTANT! ORIFICE INSIDE RUN TEE AT BASE END PORT OF CYLINDER SHOULD BE REMOVED ON MODELS 136, 246, 286 AND 356 MARKERS.

BUT DO NOT REMOVE ORIFICE ON MODEL 466 MARKERS!!



The following are the instructions for plumbing a SHOEMAKER Sequencing Valve with the SIDE ARM Field Markers.

On the valve you will find stamped: R and C. Plumb the valve in as follows:

Front Ports - Connects to the hydraulics on tractor.

Port C - Connects to the BASE end port on the hydraulic cylinder. (Ball valve side)

Port R - Connects to the ROD end port on the cylinder. (Check-valve side)

The best location for the valve would be close to the point where the left side of the hitch joins to the center section of the implement. Use the supplied bracket to fasten the valve to the frame of implement.

From the valve there will be two hoses running to the tractor and two hoses running to each marker. (6 hoses in all)

We recommend 3/8" hose be used. Use 9/16" JIC female ends.

Note: Warranty is void if Teflon tape is used.

Note: The fine threaded bolts on the valve then can be adjusted to regulate the speed of the markers. It is possible to slow the oil flow down too much with this adjustment which will cause the valve not to sequence. Do not screw flow adjustment all the way out of valve body as damage to seals may result.

Parts List for SA-17ASK

- 1 - Shoemaker Sequence Valve (gold in color)
- 1 - Valve Bracket (3715)
- 1 - Instruction Sheet
- 1 - 4" x 5/8" U-bolt
- 2 - 3/8" x 1" Hex Bolts
- 2 - 5/8" Nuts
- 2 - 3/8" Lock washers
- 2 - 5/8" Lock washers

Parts List for SHOEMAKER VALVE

- Item A - 9/16" JIC Straight Connector - HYD-2510
- Item B - Spool - HYD-2509
- Item C - Adjustment Assembly (Flow) - HYD-2508
- Item D - Special C Fitting x 9/16" JIC - HYD-2481
- Item E - Seal, Spring and Ball Kit - HYD-2507