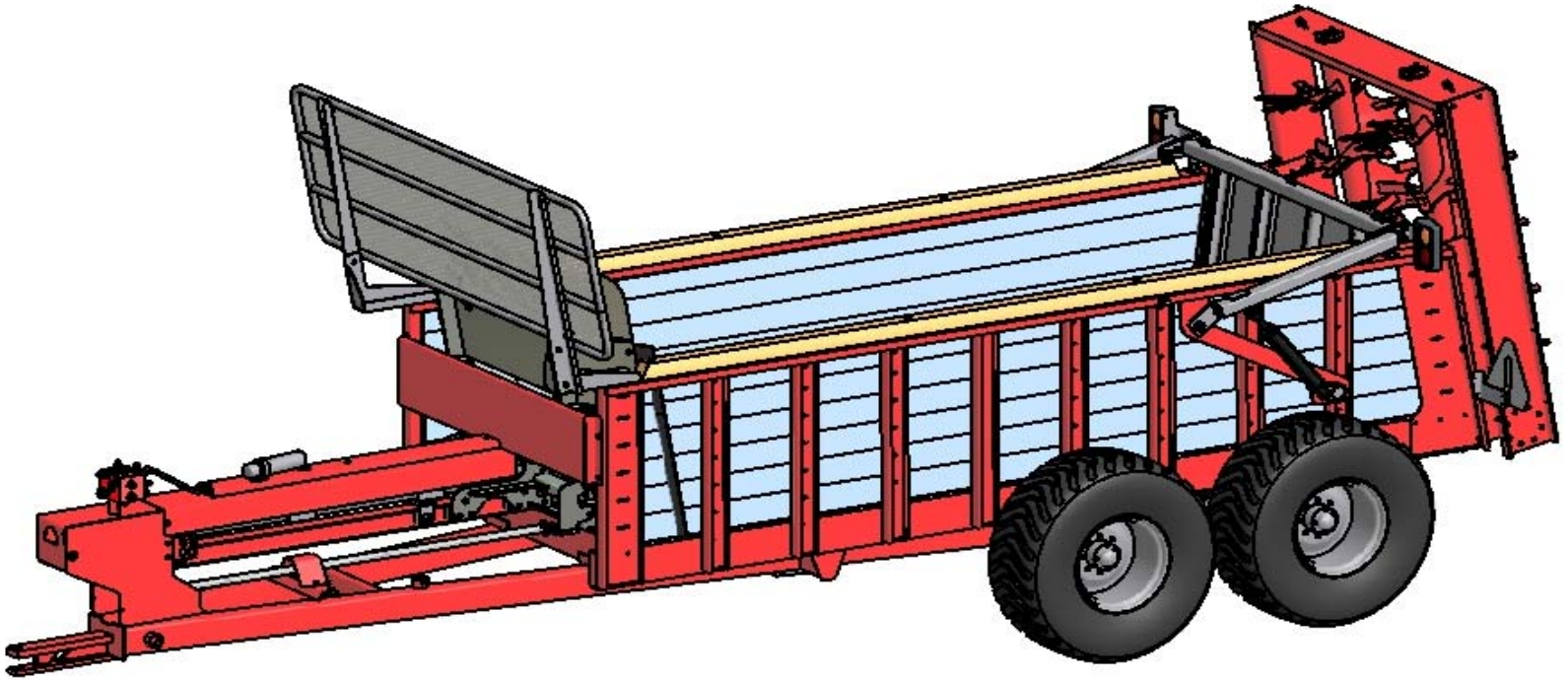
Hagedorn Parts Manual

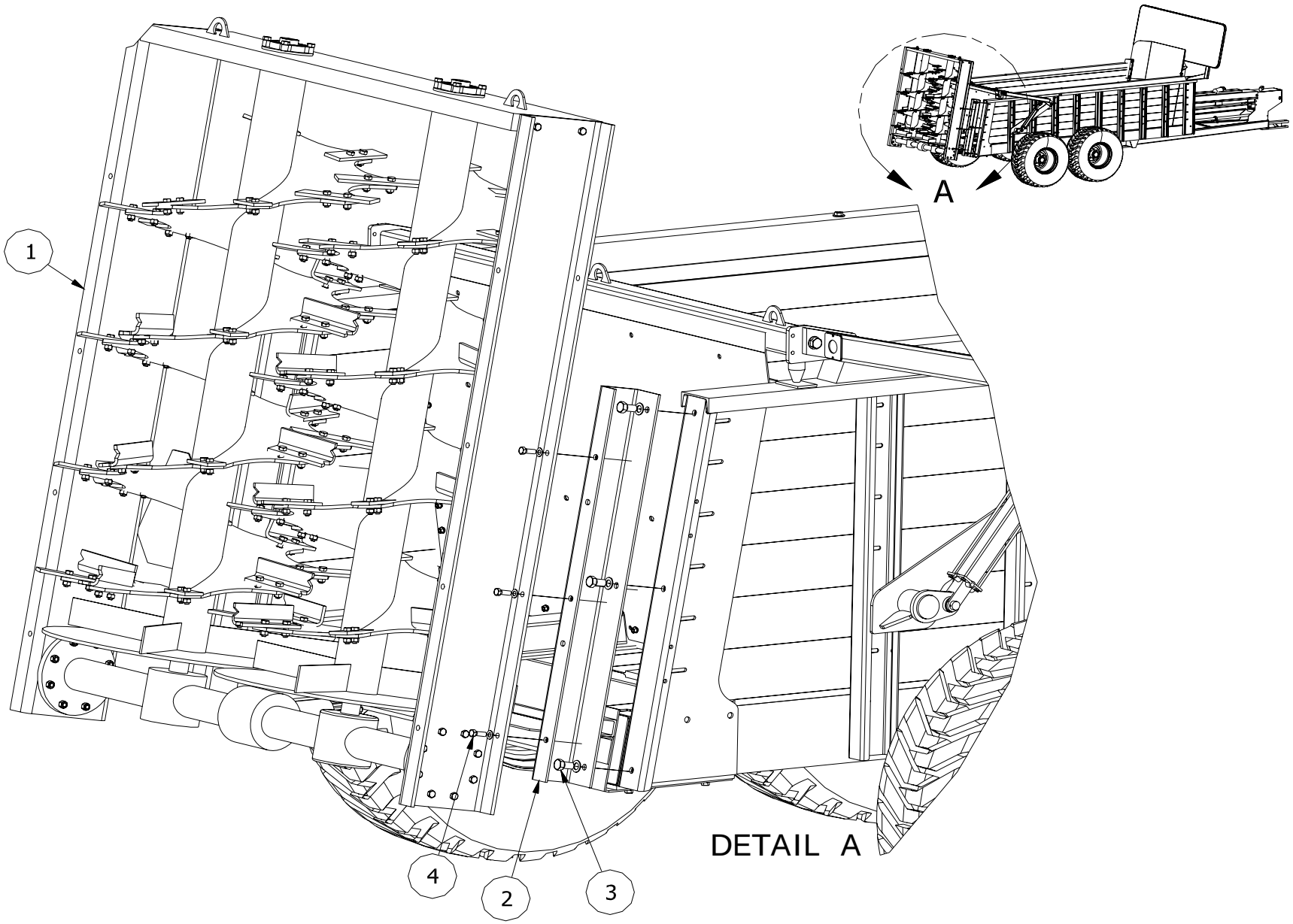
Extravert 5290



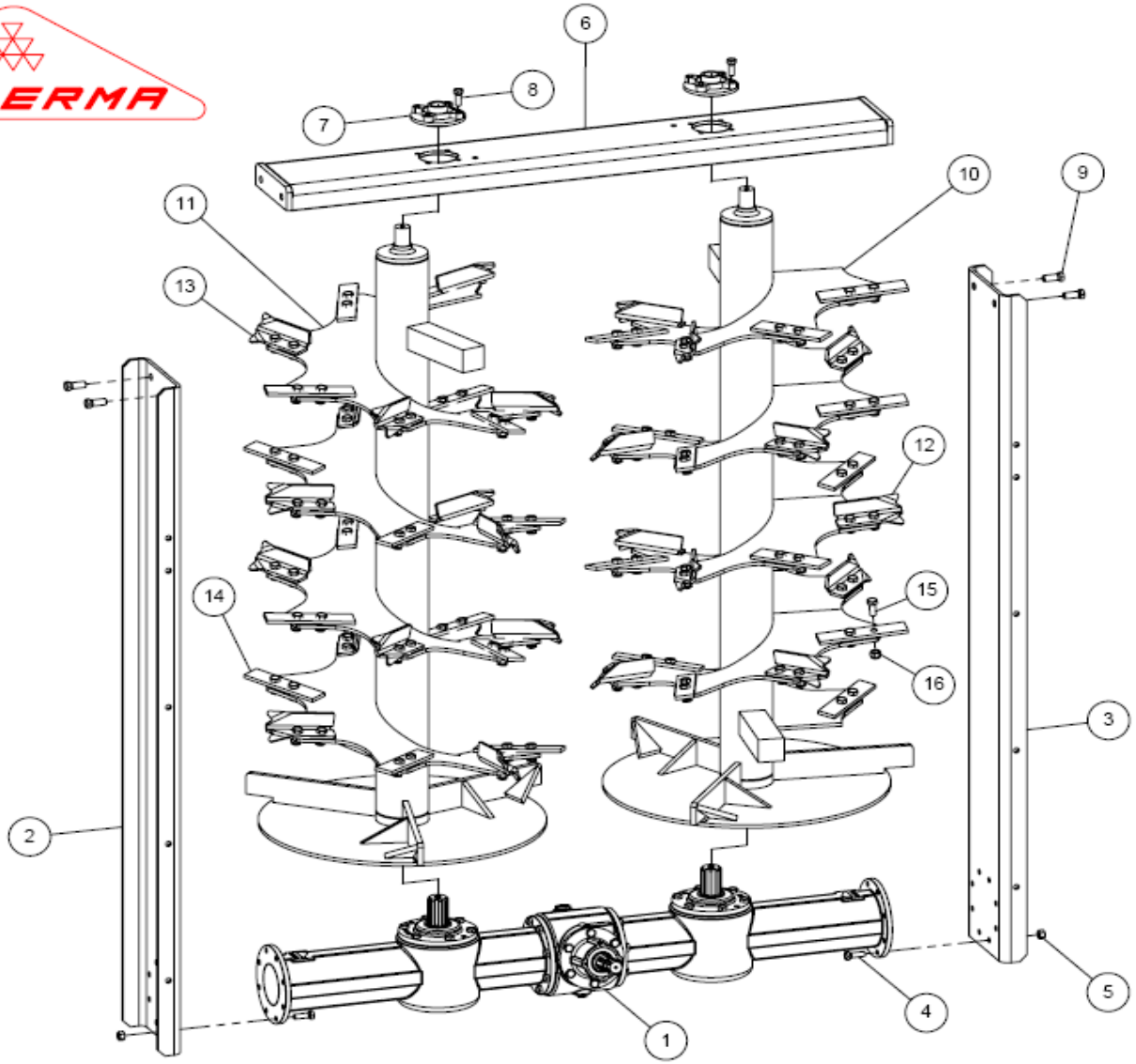
Beaters....Section 1
Beater Assembly....1.1
Beater Breakdown....1.3
Drivetrain....Section 2
Input Shaft, Bearings....2.1
Over-running clutch shaft....2.3
Gearbox....2.5
Beater Pan and Endgate....Section 3
Beater Pan....3.1
Endgate....3.3
Hydraulics....Section 4
Control Valve, Hoses, and Cylinders to SN 5386....4.1
Control Valve, Hoses and Cylinders SN 5387 – On....4.3
Push-off Cylinder Assembly, SN 5000 - 5413....4.5
Push-off Cylinder Assembly, SN 5414 - On....4.7
Push-off Cylinder Breakdown, SN 5000 - 5413....4.9
Push-off Cylinder Breakdown, SN 5414 – On....4.11
Special Endgate Cylinders, SN 5290-5345....4.13
Spreader Boards....Section 5
PTO Shafts....Section 6
PTO shaft assemblies....6.1
PTO shaft breakdown....6.3
Push-Gate and Slide Rail....Section 7
Push-gate assemblies....7.1
Push-gate seals....7.3
Slide rail....7.5
Shields, Covers, and Misc....Section 8
Shields, smv sign, jack, and lights, SN 5000 - 5178....8.1
Shields, smv sign, jack, and lights, SN 5179 - On....8.3
Stone Guard....8.5
Wheels, Axles, Hubs....Section 9
Axles....9.1
Tandem Axles, Spindles, and hubs....9.3
Wheels....9.5

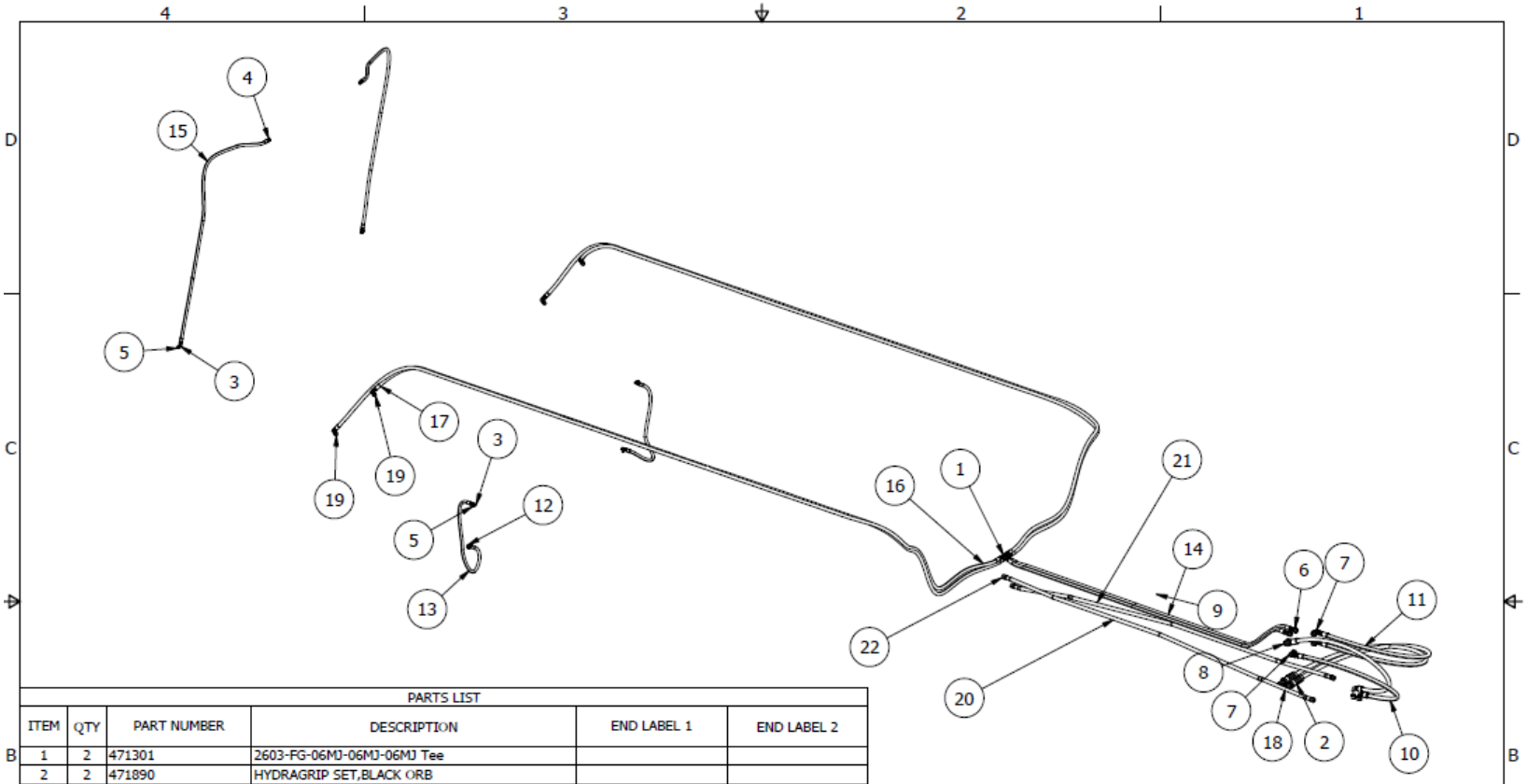
Beater Assembly	1.1
Beater Breakdown	1.3

key	Qty	Description		Part Number
1	1	Vertical Beaters COMPLETE KIT		DISCONTINUED
2	1	Vertical Beater Adaptor, Right		70497R
	1	Vertical Beater Adaptor, Left		70497L
3	AR	Bolts	3/4 x 1 1/2 (6), SAE Washer (12), Locknut (6)	
4	AR	Bolts	1/2 x 1 1/2 (6), SAE Washer (12), Locknut (6)	


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DETAIL A
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key	Qty	Description	Part Number
1		Gearbox Assembly	1399-1037
2		Beater frame, Right side	1334-1019
3		Beater frame, Left side	1314-1018
4, 5		Bolts	M14 x 45 - 8G, Nut M14 - 8G
6		Beater frame top cross-member	1314-1009
7		Bearing	9905-B
8		Bolts M14 X 50 - 8G	9911-1009
9		Bolts	M18 x 45 - 8G
10		Left side beater	1313-1014
11		Right side beater	1313-1015
12		Cup, left side beater --> NOW UNIVERSAL LEFT OR RIGHT	12833-B
13		Cup, right side beater --> NOW UNIVERSAL LEFT OR RIGHT	12833-B
14		Knife	9569-B
15		Bolts	M16 x 40 - 8G, Nut M16 x 1.5
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PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION	END LABEL 1	END LABEL 2
1	2	471301	2603-FG-06MJ-06MJ-06MJ Tee		
2	2	471890	HYDRAGRIP SET,BLACK ORB		
3	4	471973	ELBOW 90 DEG FNPT 1/8		
4	2	471974	ADAPTER, 1/4"-28SAE-LTX1/8"-27NPTF		
5	4	516010	GREASE FITTING 1/8" STAIGHT ZERK		
6	2	77191	#10 SAE ORB / # 6 JIC Straight		
7	3	77193	#10 SAE ORB / #8 JIC 90 Deg		
8	1	77194	#10 SAE ORB / #10 JIC 90 Deg		
9	1	77198	1/2 X 36 HOSE, #10FJIC, #8FJIC LONG SWEPT 90	SEQUENCE RET	PUSH CYL
10	1	9913-1085-036	1/2 X 36 HOSE, #8FJIC, #8FJIC SWEPT 90	SEQUENCE EXT	PUSH CYL
11	2	9913-1083-080	1/2 X 80 HOSE, #8FJIC, #8MORB	SEQUENCE	TRACTOR
12	2	77284	1501-FG-MP-FPS 1/8 90° Elbow		
13	2	9913-1086-036	1/4 X 36 HOSE, 1/8 NPT, 1/8 NPT		
14	2	9913-1001-082	3/8 X 82 HOSE, #6FJIC, #6FJIC	SEQUENCE ENDGATE	TEE
15	2	9913-1086-069	1/4 X 69 HOSE, 1/8 MNPT, 1/8 SWIVEL	GREASE	TOP BEARING
16	2	9913-1001-216	3/8 X 216 HOSE, #6FJIC, #6FJIC	TEE	ENDGATE EXTEND
17	2	9913-1001-198	3/8 X 198 HOSE, #6FJIC, #6FJIC	TEE	ENDGATE RETRACT
18	2	77500	ISO COUPLER TIP		
19	4	77520	L FITTING, #6MORB, #6MJIC		
20	1	9913-1002-86.25	1/2 X 86.25 HOSE, #8FJIC, #08FJIC	PUSH CYLINDER	PUSH CYLINDER
21	1	9913-1002-89.25	1/2 X 89.25 HOSE, #8FJIC, #8FJIC	PUSH CYLINDER	PUSH CYLINDER
22	6	77109	#8 JIC / #8 SAE STR		
23	1	79022	GREASE ZERK, 1/4-28, 45°		

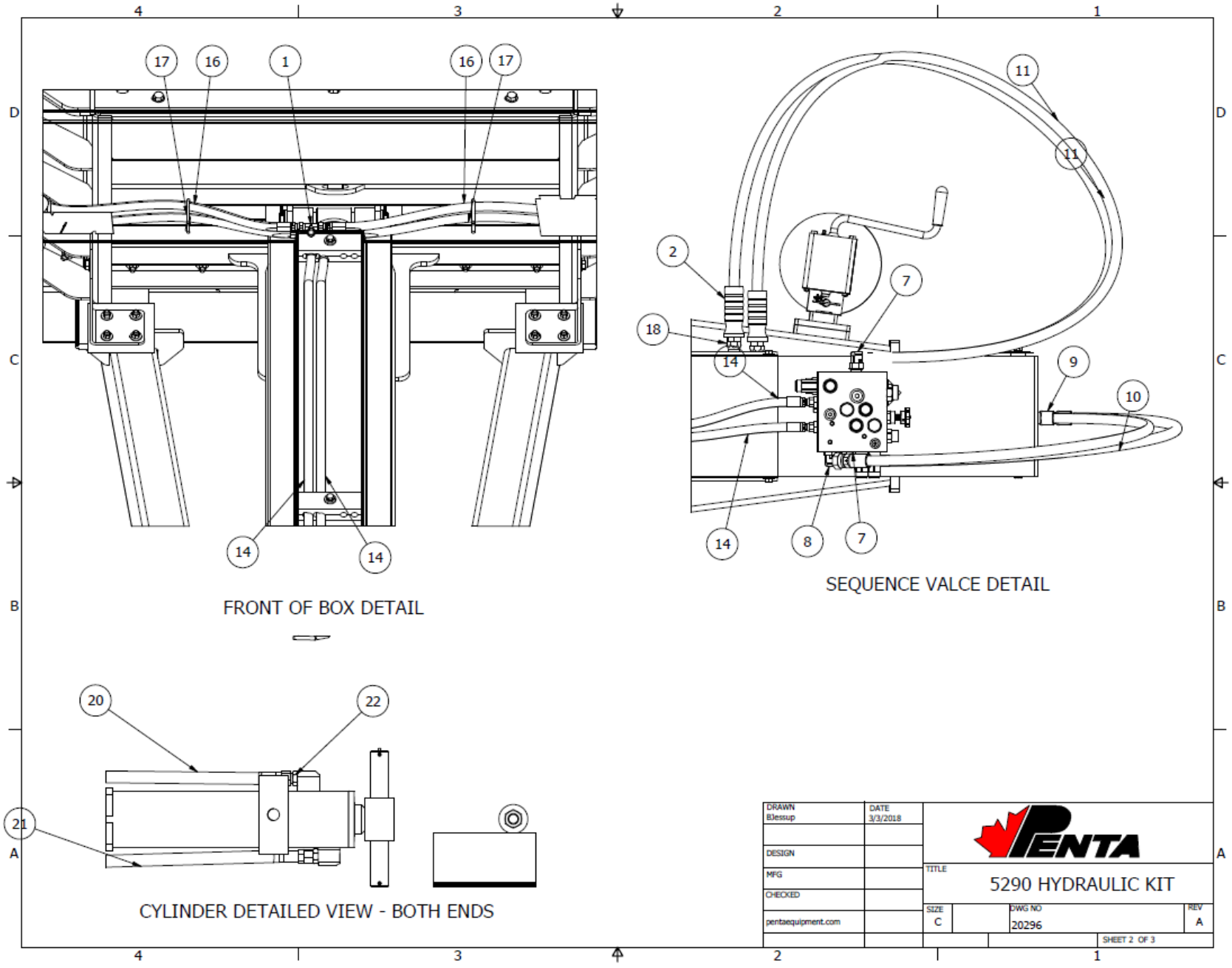
DRAWN BJessup	DATE 3/3/2018
DESIGN	
MFG	
CHECKED	
pentaequipment.com	

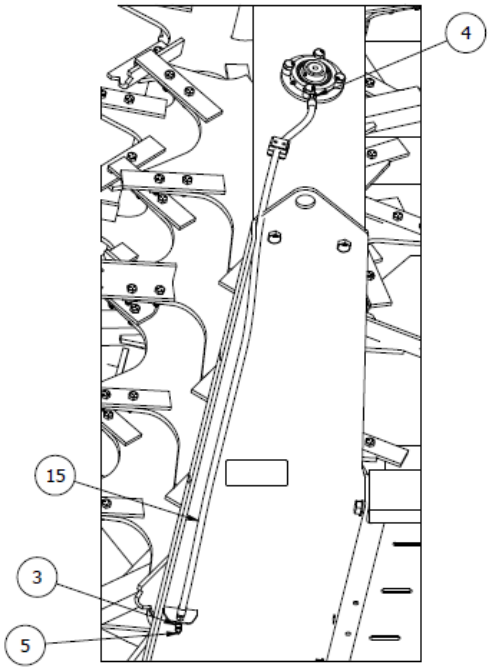
PENTA

TITLE: 5290 HYDRAULIC KIT

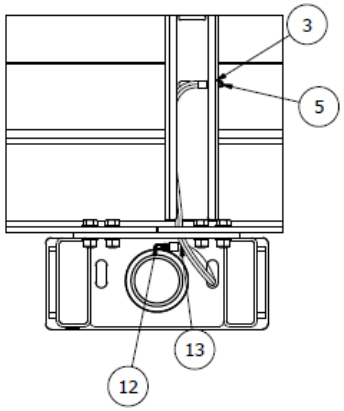
SIZE C | DWG NO 20296 | REV A

SHEET 1 OF 3

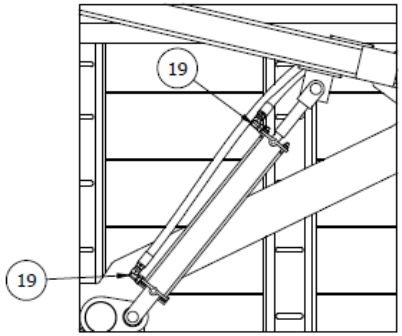

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FRONT OF BOX DETAIL
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SEQUENCE VALCE DETAIL
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CYLINDER DETAILED VIEW - BOTH ENDS
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BJessup
DATE
3/3/2018
DESIGN
MFG
CHECKED
pentaequipment.com
PENTA
TITLE
5290 HYDRAULIC KIT
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SHEET 2 OF 3



BEATER GREASE LINE DETAIL -BOTH SIDES



AXLE DETAIL - BOTH SIDES

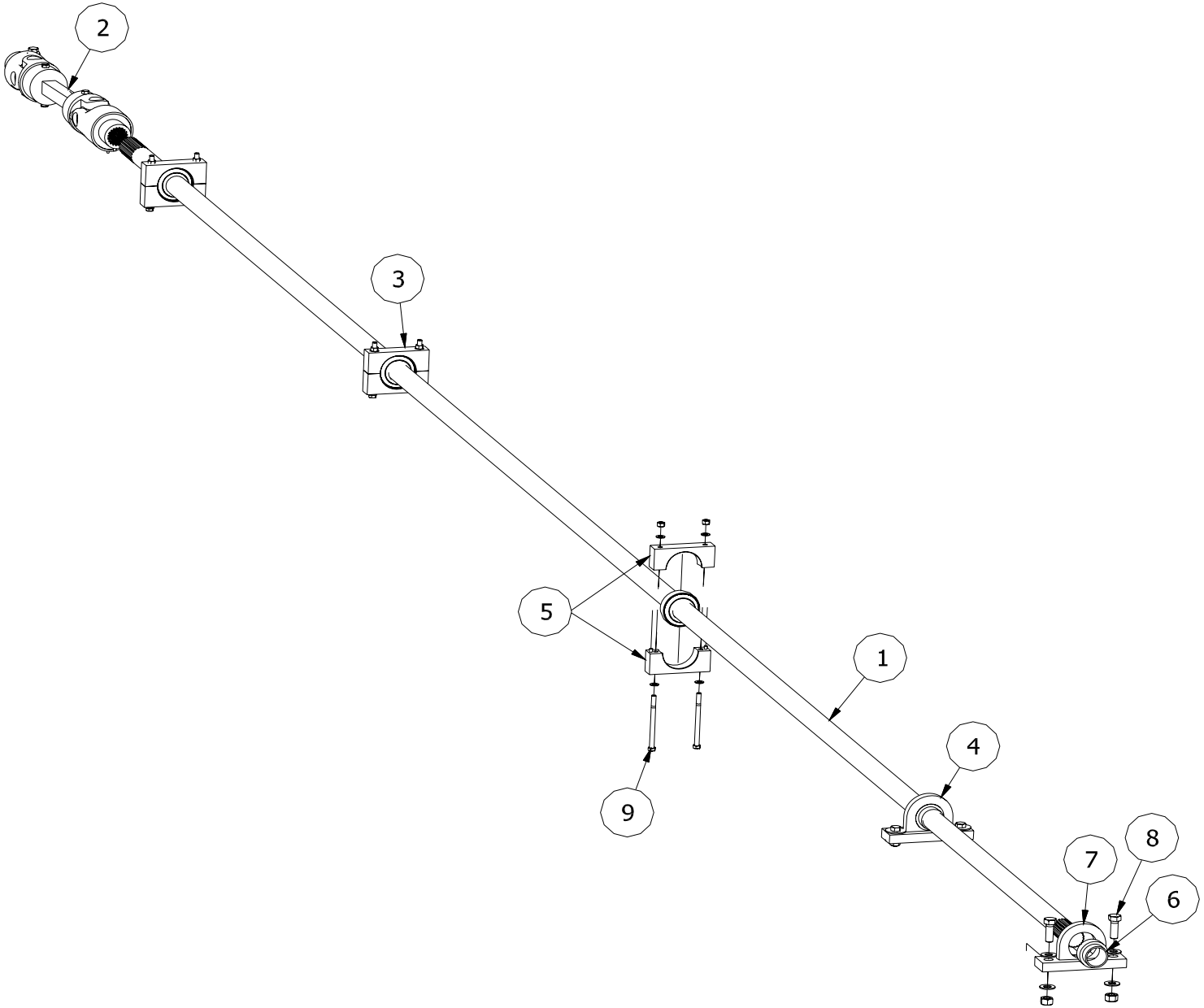


LIFTGATE CYLINDER - BOTH SIDES

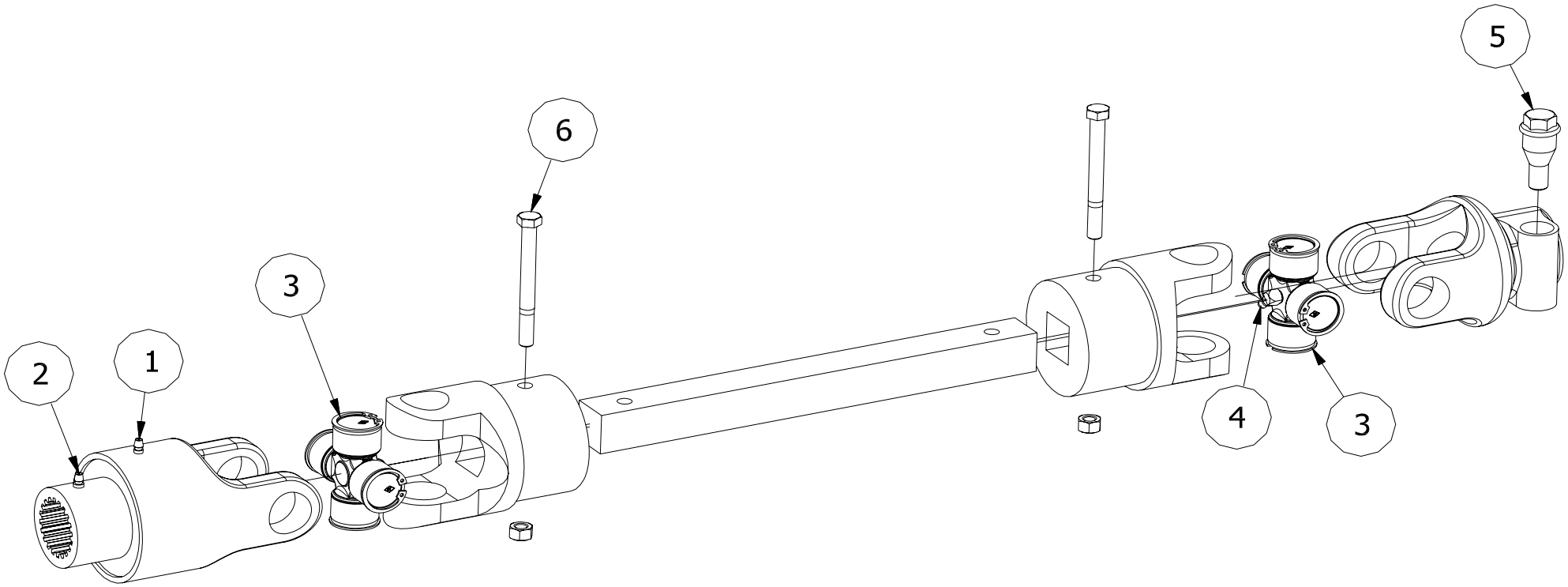
DRAWN BJessup	DATE 3/3/2018	PENTA	
DESIGN		TITLE 5290 HYDRAULIC KIT	
MFG			
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pentaequipment.com		SIZE C / DWG NO 20296 / REV A	
		SHEET 3 OF 3	

Input shaft, Bearings	2.1
Over-running clutch shaft	2.3
Gearbox	2.5

key	Qty	Description	Part Number
1	1	Input Shaft	76018
2	1	Drive shaft with over-running clutch	1399-1015
3	3	2 piece bearing assembly, Includes keys 5 & 6	76088
4	2	Bearing assembly, ductile pillow block, Includes keys 6 & 7	76048
5	3	2 piece bearing housing, machined steel	76009
6	5	Bearing Insert	76049
7	2	Pillow block bearing housing, ductile iron	76391
8	AR	Bolts	5/8 x 2 (4), SAE Flat Washers (8), Locknut (4)
9	AR	Bolts	3/8 x 5 (6), SAE Flat Washers (12), Locknut (6)


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key	Qty	Description	Part Number
1	1	Grease Zerk for Over-running Clutch - M8 x1	79820
2	1	Grease Zerk For Spline Connection - 1/4-28 UNF	79800
3	2	Cross kit	76440.5
4	2	Grease Zerk for Cross and Bearing Kit	76440.11
5	1	Locking pin for yoke	76111
6	AR	Bolts	3/8 x 4, Locknut


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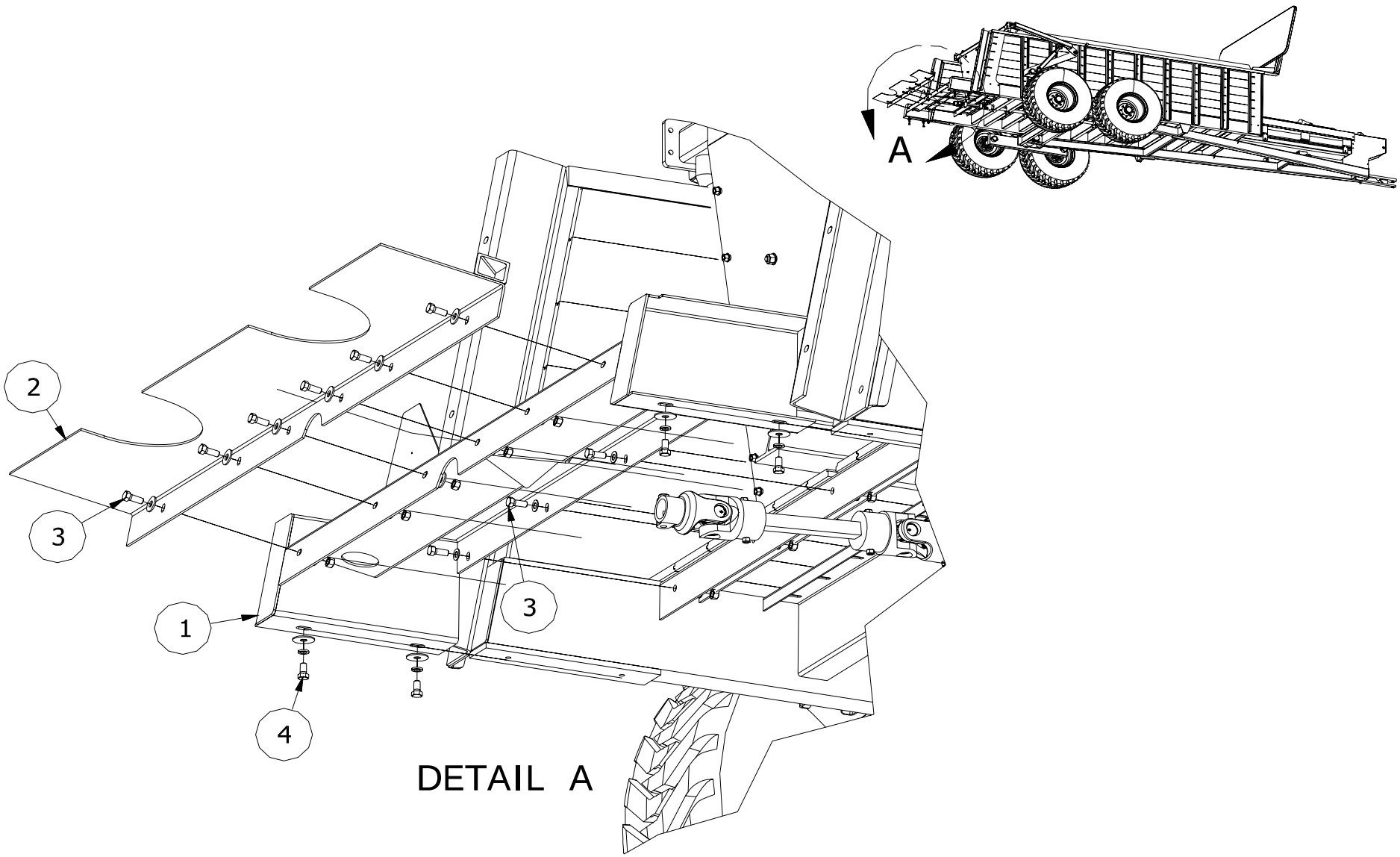
key	Qty	Description	Part Number
3	1	Input Shaft Housing Gasket	9133-B
4	4	Bearing 32209	1259-B
6	2	Washer M40x1.5	9137-B
7	3	Star Washer M40	9011-B
8	1	Oil Seal 55/85/10	7480-B
10	2	Gasket	9135-B
11	1	C-Clip	1540-B
12	1	Bearing 6311	1531-B
14	2	Spacer	9123-B
15	2	Gear	9052-B
16	2	Bearing 32210	3349-B
17	2	Bearing 6311 - 2RS	13103-B
18	2	Spacer	9124-B
20	2	Oil Seal 70/100/10	7481-B
21	2	Gasket	9134-B
22	2	Circlip	3436-B

Complete Gearbox	1399-1037

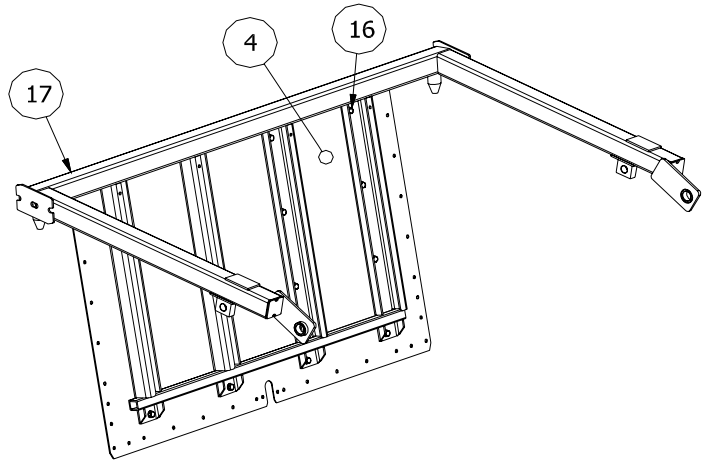
key	Qty	Description	Part Number
24	1	Shaft	10594-B
25	2	Gear	9051-B
26	1	Circlip	3430-B
27	1	Washer M40 x 1.5	9138-B
28	2	Cap 120mm	9345-B
29	1	Fill cap / Vent	9301-B
30	1	Oil Window	9179-B
31	1	Drain Cap	9707-B
32	22	Bolt M14 x 35 - 8G	3549-B
33	12	Bolt M14 x 30 - 8G	4138-B
34	2	Ring	9139-B
35	1	Gear	10380-B
36	1	Gear	10381-B
37	2	Output Shaft Assembly	9141-B
38	1	Input Shaft Assembly	9783-B

Beater pan	3.1
Endgate	3.3

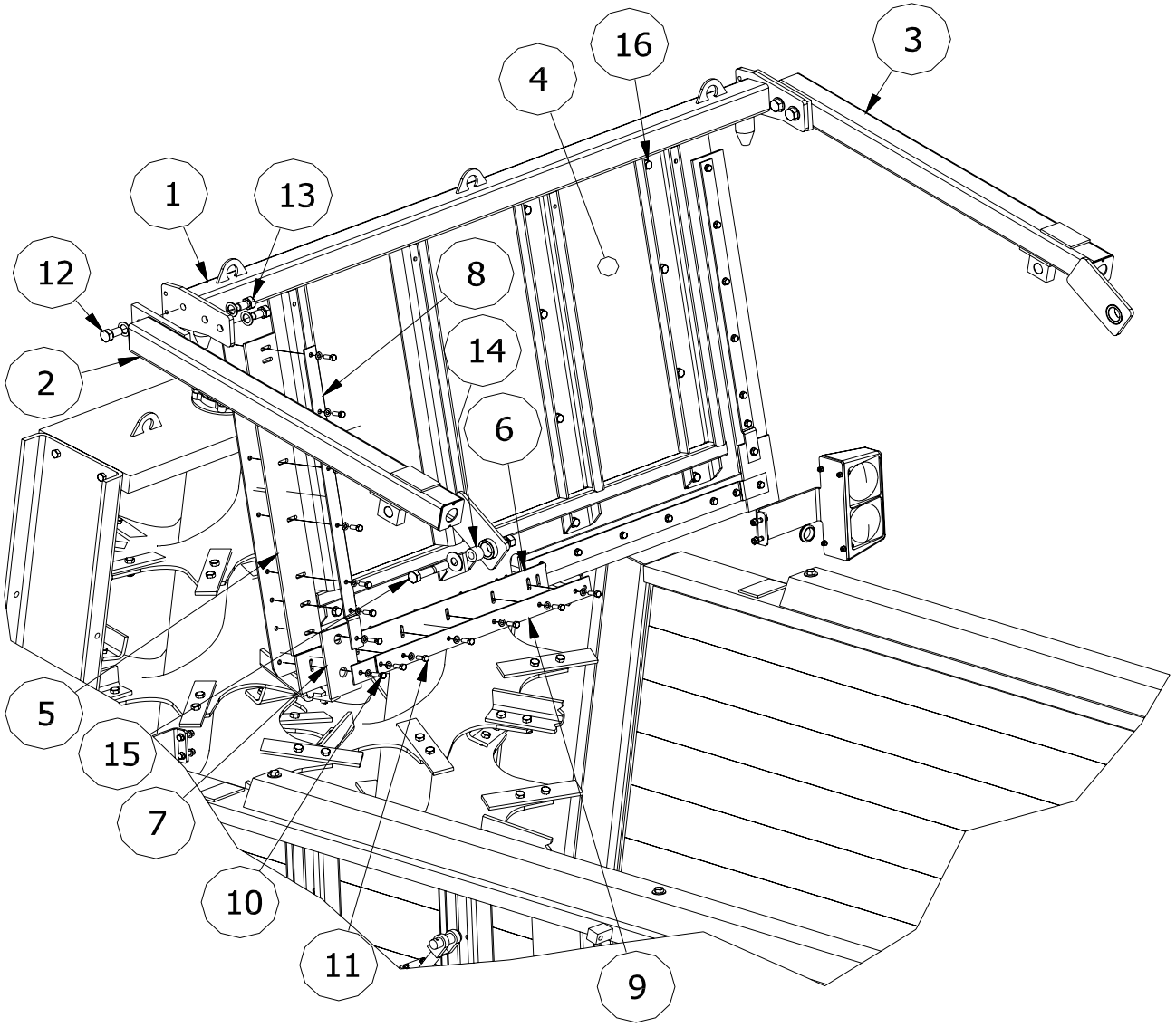
key	Qty	Description		Part Number
1	1	Front Section of Pan		20045
2	1	Back Section of Pan		70581
3	AR	Bolts	1/2 x 1.25 (11), 1/2 SAE flat washer (22), Locknut (11)	
4	AR	Bolts	1/2 x 1 (4), Special washer-79010 (4), 1/2 Lockwasher (4)	


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DETAIL A

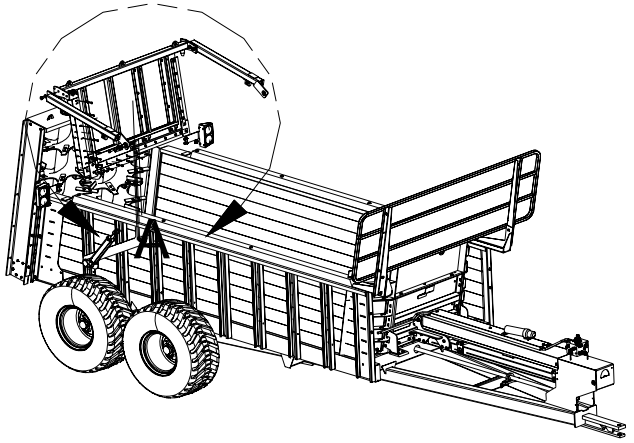
key	Qty	Description	Part Number
1	1	Endgate Frame	20134
2	1	Endgate Arm (right)	20145R
3	1	Endgate Arm (left)	20145L
4	1	Endgate Panel	74059
5	2	Rubber Strip, Endgate Side	78026
6	2	Rubber Strip, Endgate Bottom	78026
7	2	Rubber Strip, Corner	78250
8	14	SPECIAL WASHER, Endgate Side	79027
9	14	SPECIAL WASHER, Endgate Bottom	79027
	1	Endgate Seal Kit, Includes keys 5, 6, 7, 8, 9, 10, and 11	20118
10	AR	Bolts, Endgate Seal Kit	3/8 x 1 1/4 (4), SAE washer (8), Locknut (4)
11	AR	Bolts, Endgate Seal Kit	3/8 x 1 (24), SAE washer (48), Locknut (24)
12	AR	Bolts, Endgate Arm	3/4 x 1 1/2 GR 5 (2), GR 8 washer (2)
13	AR	Bolts, Endgate Arm	3/4 X 1 1/4 GR 5 (4), GR 8 washer (4)
14	2	Endgate Pivot Bushing	74240
15	2	Bolts, Endgate Pivot	3/4 x 4 (2), USS flat washer (1), Locknut (2)
16	AR	Bolts, Endgate Panel	1/2 x 1 1/4 (16), USS washer (32), Locknut (16)
17		Welded Arm endgate Frame	Replace with 20134, 20145R, and 20145L



Model 5290's SN 5000-5245 had welded frames. The very earliest machines had fully welded panels (see 3290). Later machines in this range had welded arm frames with a bolt-on panel as shown left. Replace both styles with endgate frame (20134) and 2 Arms (20145R and 20145L).
Panel is the same (74059). Welded panel is not replaceable.



DETAIL A



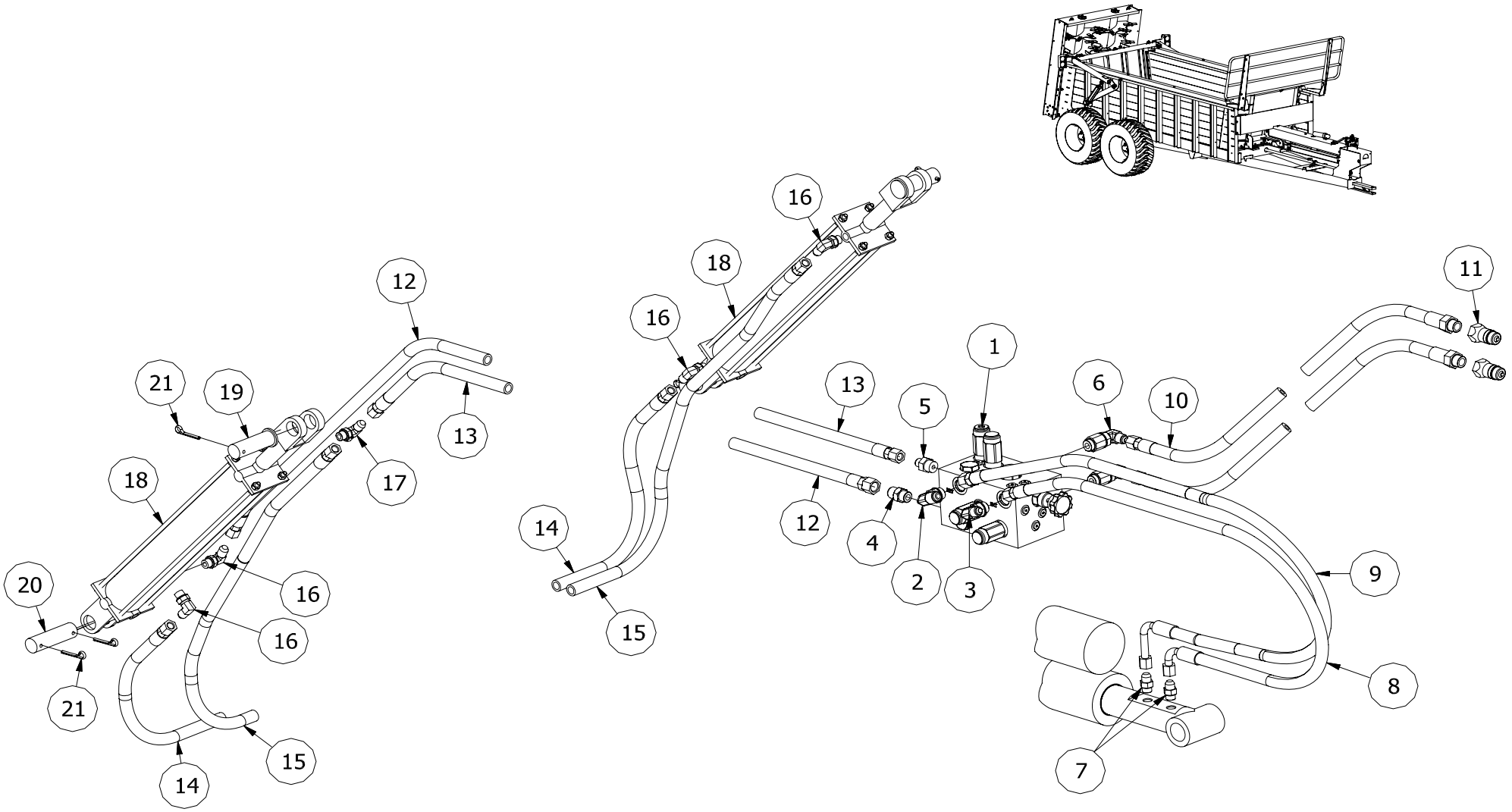
Control Valve, Hoses, and Cylinders to SN 5386	4.1
Control Valve, Hoses, and Endgate Cylinders SN 5387 - on	4.3
Push-off Cylinder Assembly, SN 5000 to 5413	4.5
Push-off Cylinder Assembly, SN 5414 - on	4.7
Push-off Cylinder Breakdown, SN 5000 to 5413	4.9
Push-off Cylinder Breakdown, SN 5414 - on	4.11
Special Endgate Cylinders, SN 5290 - 5345	4.13

key	Qty	Description	Part Number
1	1	Sequencing Control Valve Assembly, Includes Keys 1 - 6 (1)	N/A[1]
2	1	L-Fitting	471466
3	1	L-Fitting	77680
4	1	Straight Fitting	471313
5	1	Straight Fitting	77108
6	2	Flow regulator Assembly	CALL
7	2	Straight Fitting	77400
8	1	Hose Ext to Cyl	77232
9	1	Hose, Ret to Cyl	77222
10	2	Hose, to Tractor	77212
11	2	ISO Male Coupler Tip	471945
12	1	Hose, Raise to Cap end of Endgate Cyl	77117
13	1	Hose, Lower to Rod end of Endgate Cyl	77118
14	1	Hose, Cross over to cap end of endgate cyl	77051
15	1	Hose, Cross over to Rod end of endgate Cyl	77054
16	4	L-Fitting	471450
17	1	T-Fitting	77530
18	2	Endgate Cylinder - see notes — Serial 5000-5289[2]	77099
		Endgate Cylinder - see notes — Serial 5290-5386[3]	77154
19	2	Headed Cylinder Pin, for Rod End of Endgate Cyl	77070
20	2	Cylinder Pin, for Cap End of Endgate Cyl	77640
21	6	Cotter Pin 3/16 X 1 1/2	79011

(1) Sequence valves from this range should not be swapped onto machines from outside this range without factory approval

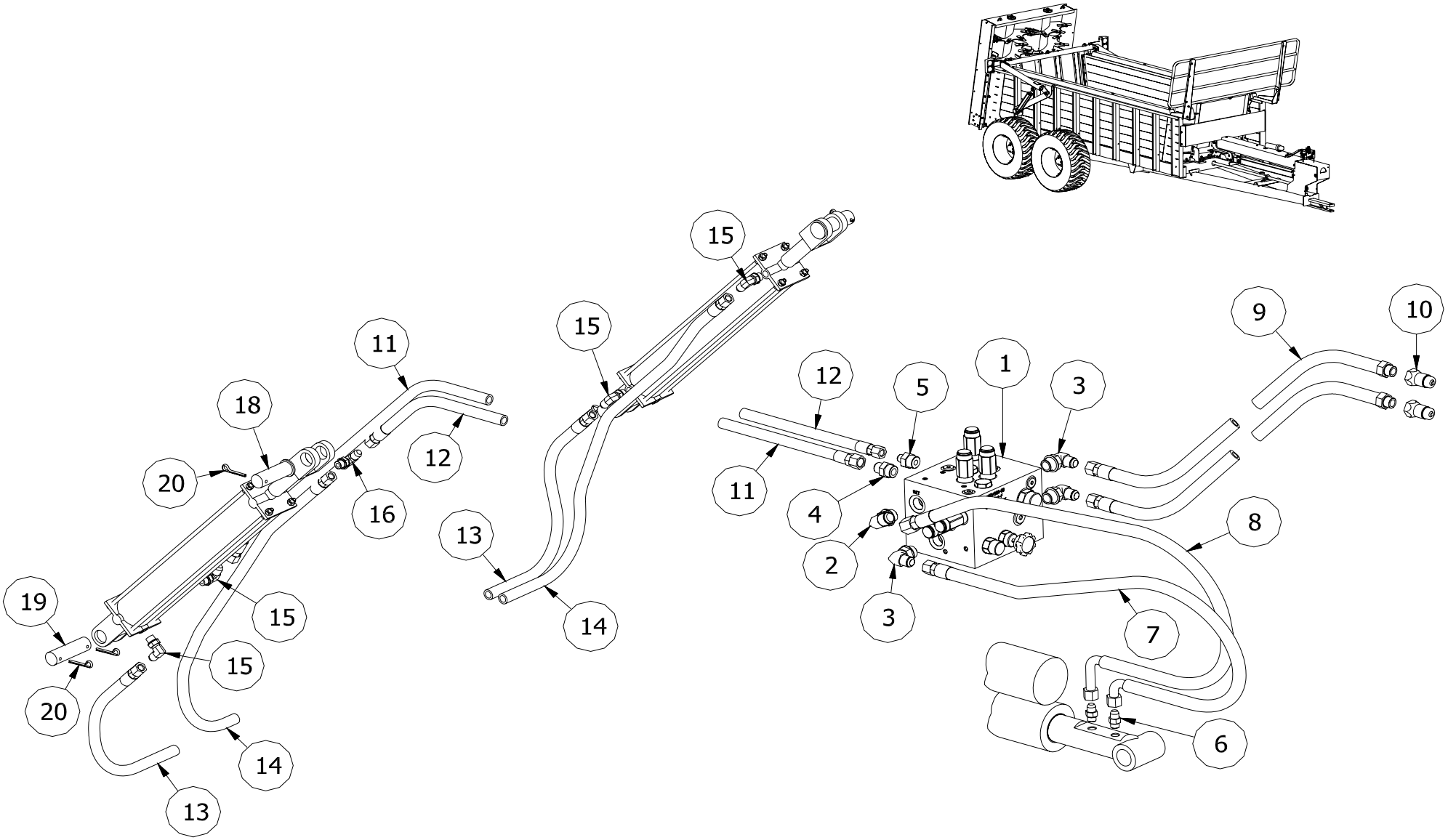
(2) Serial numbers 5281, and 5283 have cylinders with #8 SAE Ports. Replace with 77099 as well as new fittings from this page

(3) Serial numbers 5290 - 5345 had special cylinders. See Page 4.13 for more information.

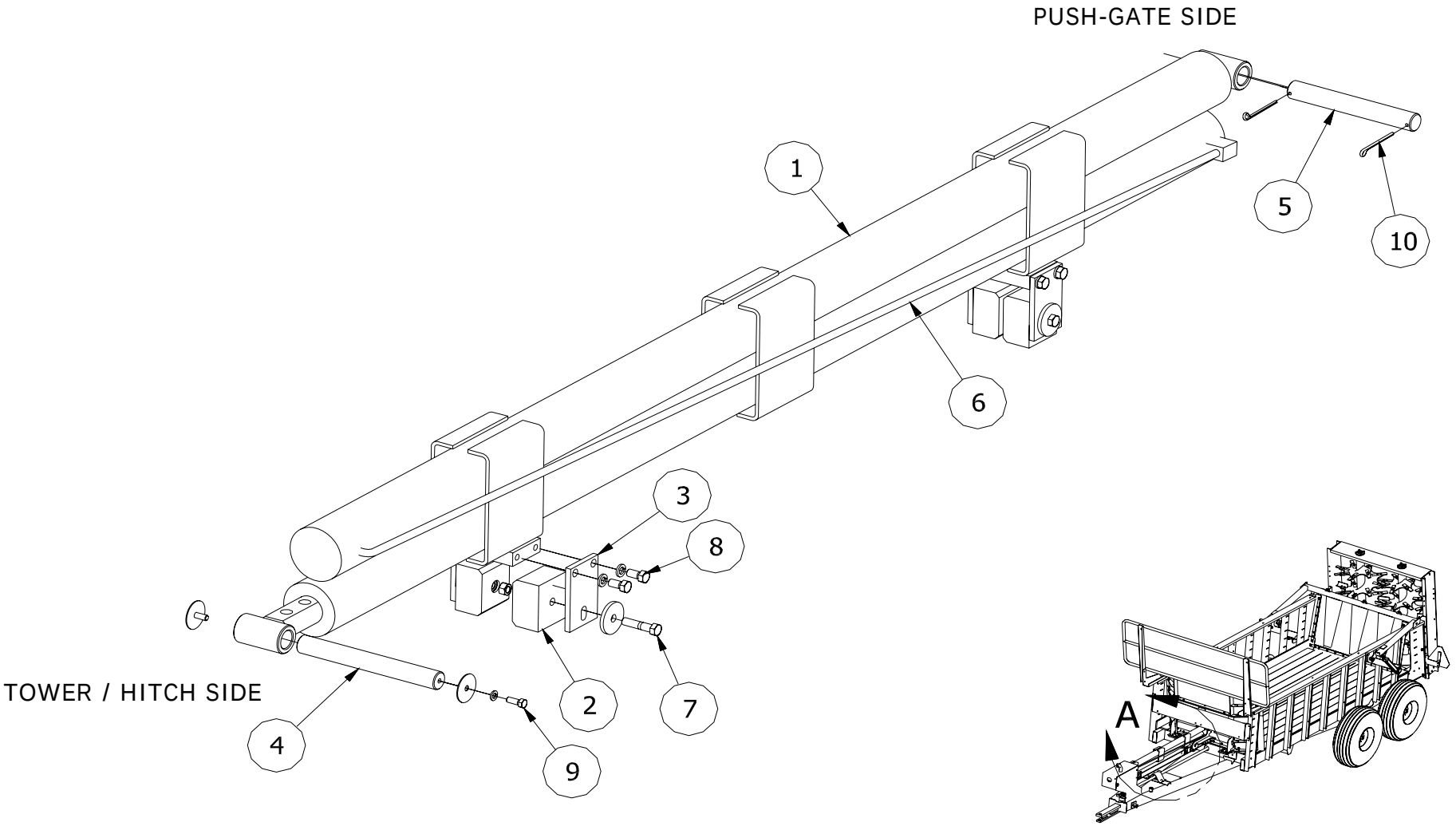

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			Serial Range -	5387-5413	5414-on
key	**Qty**	**Description**		**Part Number**	
1	1	Sequencing Control Valve Assembly, Includes Keys 1 - 5 (1)		20186	20187
2	1	L-Fitting		471958	471959
3	1	L-Fitting		77196	471958
4	1	Straight Fitting		77192	
5	1	Straight Fitting		471307	
6	2	Straight Fitting		77400	471313
7	1	Hose Ext to Cyl		77232	77199
8	1	Hose, Ret to Cyl		77222	77198
9	2	Hose, to Tractor		77212	77201
10	2	ISO Male Coupler Tip		471945	
11	1	Hose, Raise to Cap end of Endgate Cyl		77117	
12	1	Hose, Lower to Rod end of Endgate Cyl		77118	
13	1	Hose, Cross over to cap end of endgate cyl		77051	
14	1	Hose, Cross over to Rod end of endgate Cyl		77054	
15	4	L-Fitting		471450	
16	1	T-Fitting		77530	
17	2	Endgate Cylinder		77154	
18	2	Headed Cylinder Pin, for Rod End of Endgate Cyl		77070	
19	2	Cylinder Pin, for Cap End of Endgate Cyl		77640	
20	6	Cotter Pin 3/16 X 1 1/2		79011	

(1) Seqence valves from serial 5414-On cannot be swapped onto machines with earlier serial numbers, or onto model 227's. Call the factory for more details.


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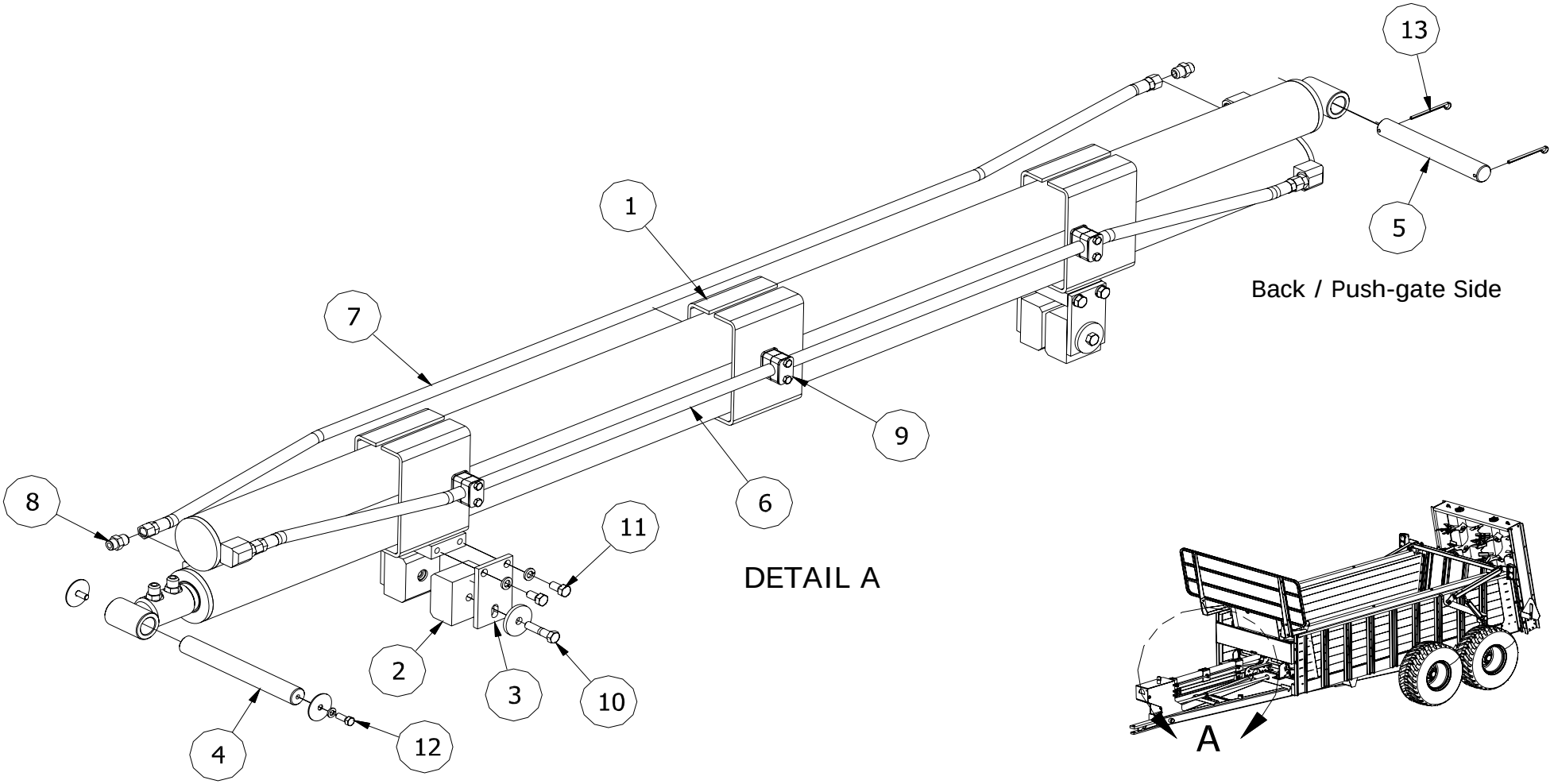
key	Qty	Description		Part Number
1	1	Push-off Cylinder (including keys 2 and 3)		20038
2	4	Cylinder Slide		75082
3	4	Standoff for cylinder slide		77854
4	1	Cylinder Pin at Tower		77068
5	1	Cylinder Pin at Push-Gate		77701
6	1	External conductor tube		DISCONTINUED
7	AR	Bolts	1/2 x 2 1/2 (4), Special Washer - 79010 (4), Locknut (4)	
8	AR	Bolts	1/2 x 1 1/4 (8), Lockwasher (8)	
9	AR	Bolts	3/8 x 1 (2), Lockwasher (2), Special Washer - 79030 (2)	
10	2	Cotter Pin 3/16 X 2		79012



DETAIL A

key	Qty	Description	Part Number
1	1	Push-off Cylinder (includes keys 1, 2, 3, 6, 7, 8, 9 and hardware)	20183
2	4	Cylinder Slide	75082
3	4	Standoff for cylinder slide	77854
4	1	Cylinder Pin at Tower	77068
5	1	Cylinder Pin at Push-Gate	77701
6	1	External Conductor Tube, Left	DISCONTINUED
7	1	External Conductor Tube, Right	DISCONTINUED
8	4	Straight Fitting	471313
9	6	Hose Clip (2 Required)	77610
10	AR	Bolts	1/2 x 2 1/2 (4), Special Washer - 79010 (4), Locknut (4)
11	AR	Bolts	1/2 x 1 1/4 (8), Lockwasher (8)
12	AR	Bolts	3/8 x 1 (2), Lockwasher (2), Special Washer - 79030 (2)
13	2	Cotter Pin 3/16 X 2	79012

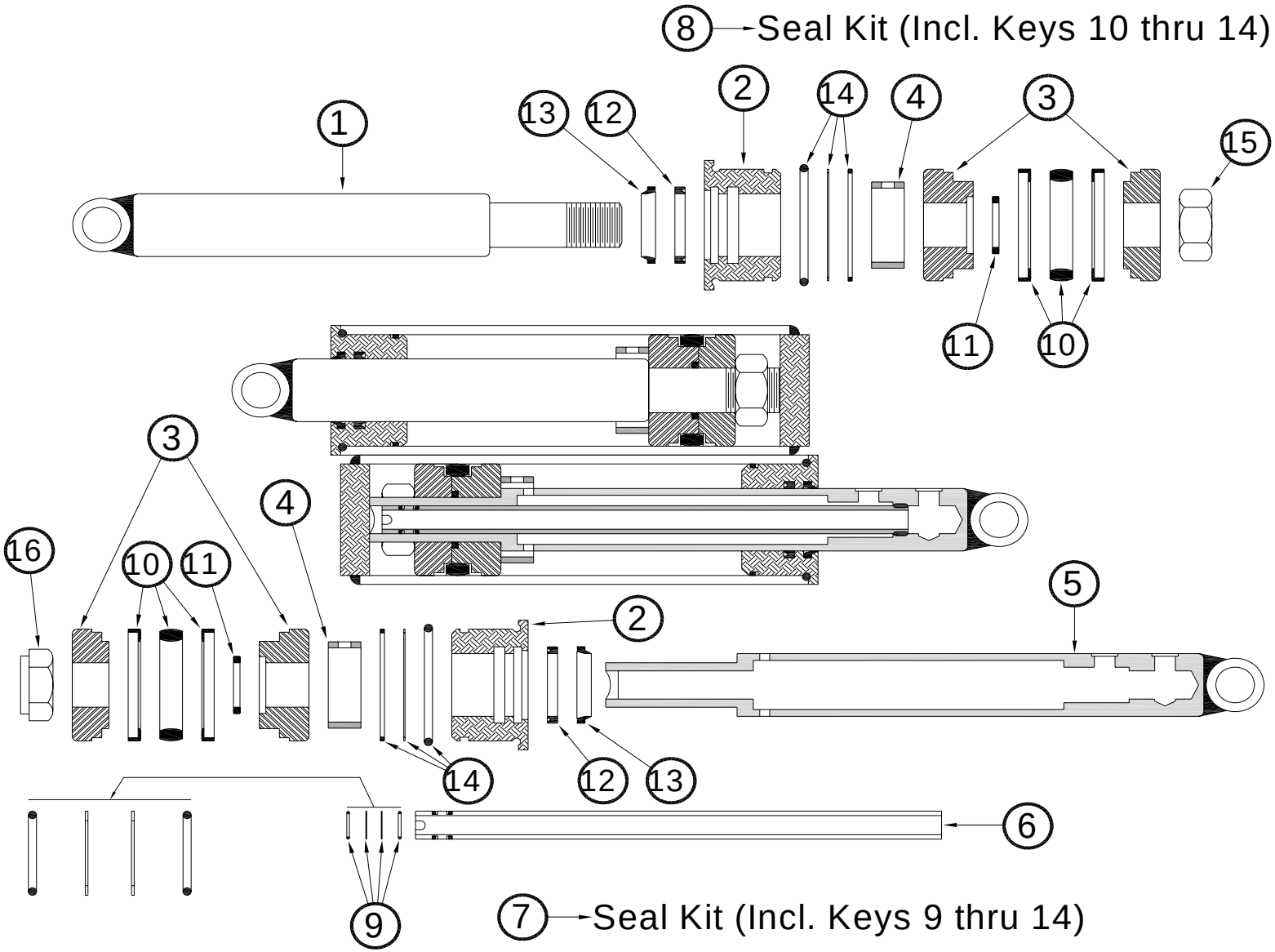
(1) Very early cylinders had a tube clamp assembly as in drawing. Later Cylinders use P-Clips. Parts for the tube clamp assemblies are not available. Drill and use P-clips.


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Back / Push-gate Side
Front / Cylinder Tower Side

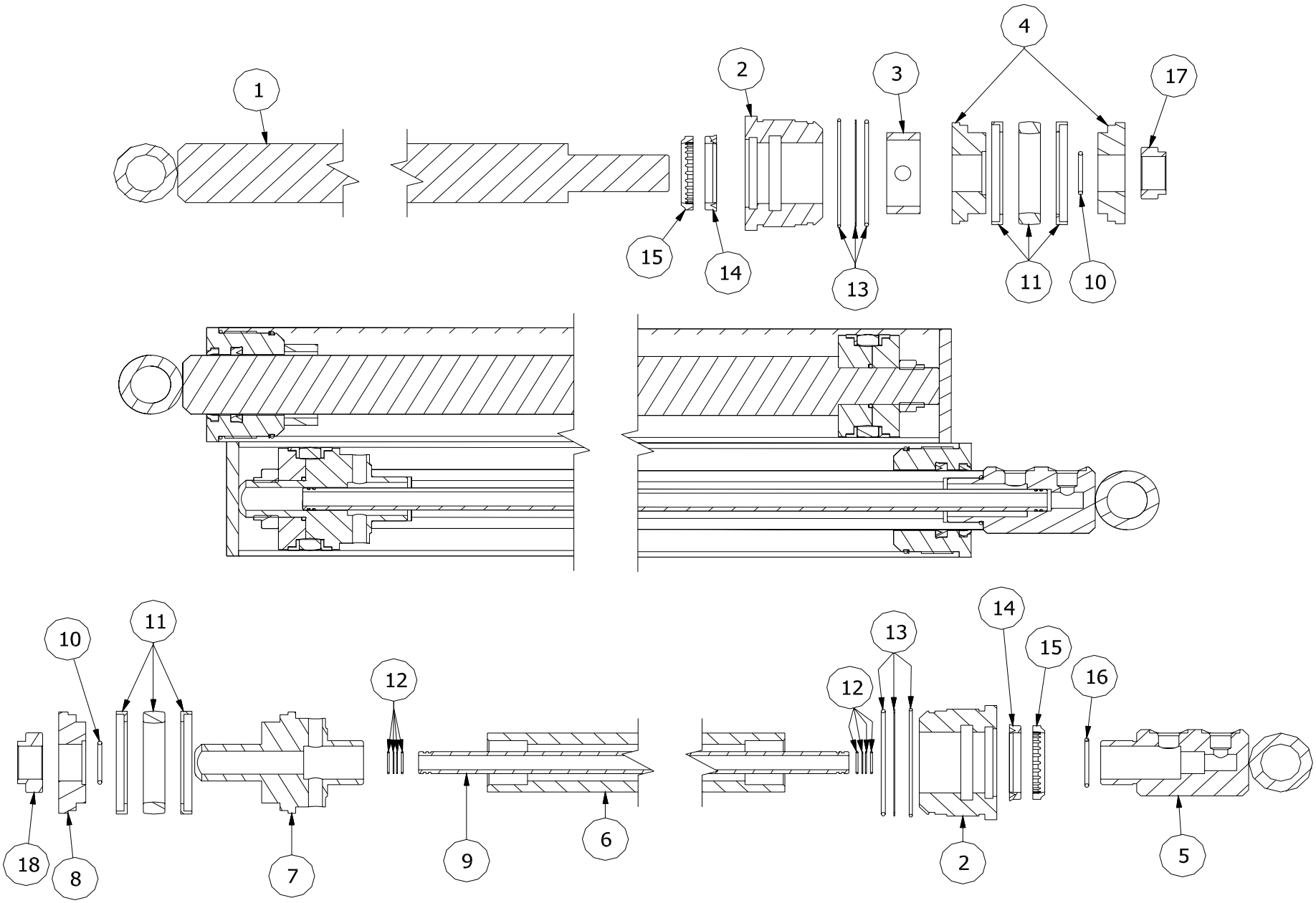
DETAIL A

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key	Qty	Description	Part Number
1		Solid Rod	DISCONTINUED
2		Gland	77079
3		Piston	77029
4		Spacer	77032
5		Hollow Rod	DISCONTINUED
6		Internal Conductor Tube	DISCONTINUED
7		Seal Kit, Hollow Rod	77044
8		Seal Kit, Solid Rod - No Longer Available, use 77044	N/A
9		O-Rings & Backups for internal cor	- Included in key 7. Not available seperately
10		Piston Seals	
11		O-Ring	
12		Rod Seal	
13		Rod Wiper	
14		O-Ring & Backup for Gland Seal	
15		Nut for solid rod	77034
16		Nut for hollow rod	77035


8 Seal Kit (Incl. Keys 10 thru 14)
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7 Seal Kit (Incl. Keys 9 thru 14)

Key	Qty	Description	Part Number
1	1	Solid Rod	DISCONTINUED
2	2	Gland	77079
3	1	Spacer	77032
4	1	Piston	77029
		Hollow Rod (includes keys 5, 6, 7, 8, 9)	DISCONTINUED
		Hollow Rod Assembly, Complete (includes keys 2, 5, 6, 7, 8, 9, and seal kit)	DISCONTINUED
5	1	Manifold	DISCONTINUED
6	1	Chrome Rod	DISCONTINUED
7	1	Piston Half, Rod Side	DISCONTINUED
8	1	Piston Half, Cap Side	DISCONTINUED
9	1	Internal Conductor Tube	DISCONTINUED
	2	Cylinder Seal Kit (1 Per Cylinder, 2 Required Total)	77044
10		O-Ring	Included in Seal Kit, Not available seperately
11		Piston Seals	
12		O-Rings & Backups for Internal Co	
13		O-Ring & Backup for Gland	
14		Rod Seal	
15		Rod Wiper	
16		O-Ring	
17	1	Nut for Solid Rod	77034
18	1	Nut for Hollow Rod	77035


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Key	Qty	Description	Part Number
1	-	T-Fitting, 3/8 NPT male branch x #6 JIC male run	77168
2	-	L-Fitting, 3/8 NPT male x # 6 JIC	77169
3	-	T-Fitting, #8 SAE male branch x #6 JIC male run	77216
4	-	L-Fitting, #8 SAE male x #6 JIC male	77680
5	-	Straight Fitting, #8 SAE male x #6 SAE female	DISC
6	-	T-Fitting, #6 SAE male branch x #6 JIC male run	77530
7	-	L-Fitting, #6 SAE male x #6 JIC male	471450

Supply problems forced the use of non-standard cylinders. This page and the following show what those cylinder arrangements should look like. Hoses and valves remain the same as shown on page 4.1, changes apply only to the endgate cylinders and fittings.

2 1/2 x 16 Cylinders with 3/8 NPT Ports

Replace with 77154 and new fittings from page 4.1

If replacing fittings be sure to seal with loctite 592 pipe sealant or equivalent high pressure (3000psi min.) pipe sealant

2 1/2 x 16 Cylinders with #8 SAE Ports

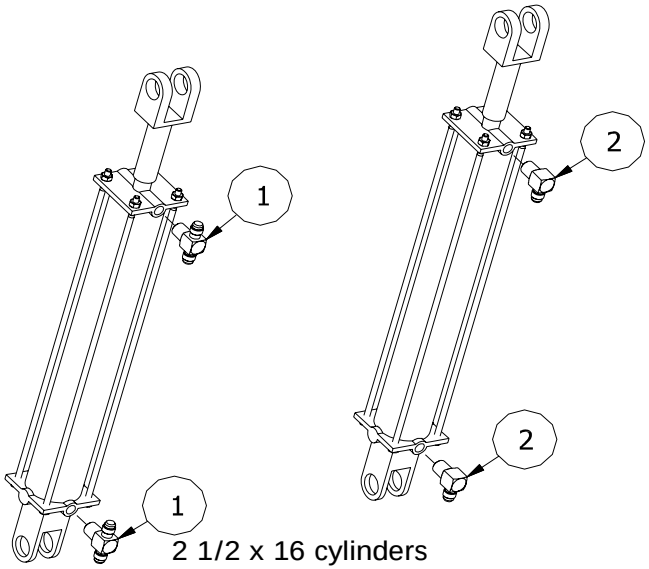
Replace with 77154 and new fittings from page 4.1

2 1/2 x 16 Cylinders with #8 SAE Ports

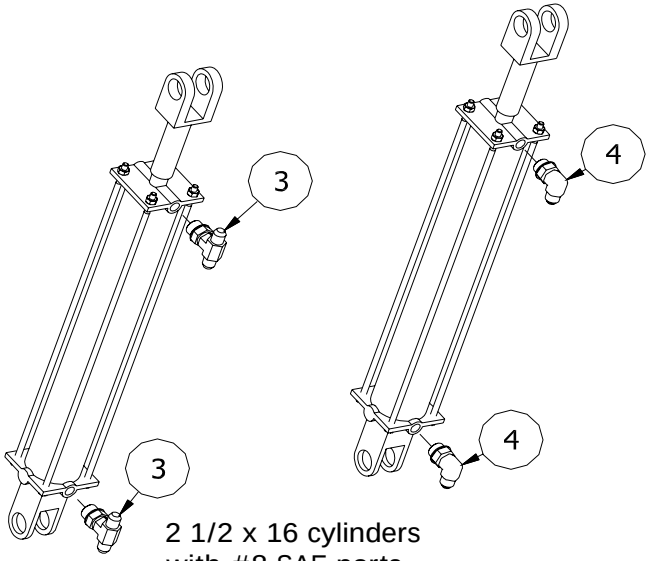
Replace with 77154, Discard fitting key 7 and re-use fittings 5 and 6.

2 1/2 x 16 Cylinders with #6 SAE Ports

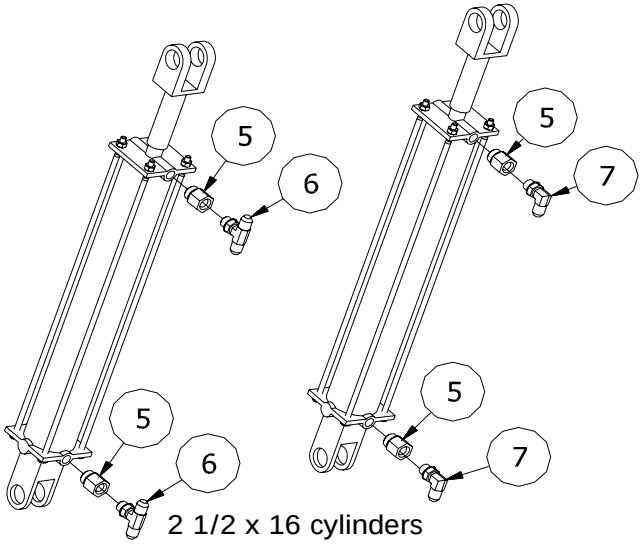
This is the standard arrangement. Replace with 77154 as showing on page 4.1 (Serial range 5290 - 5386)



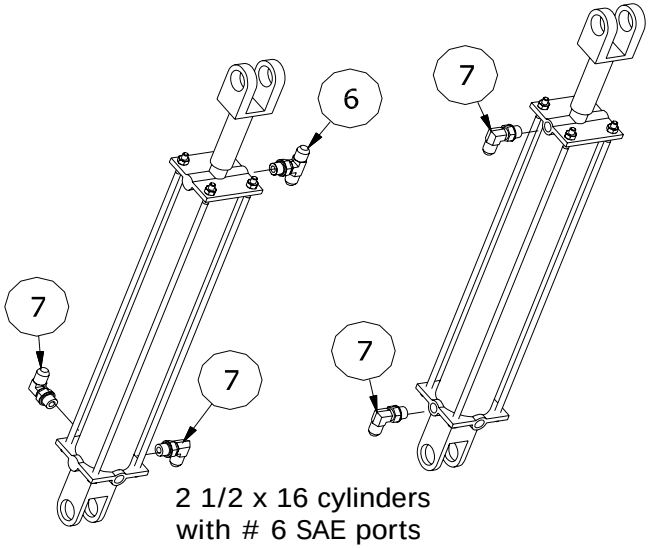
2 1/2 x 16 cylinders
with 3/8 NPT ports



2 1/2 x 16 cylinders
with #8 SAE ports



2 1/2 x 16 cylinders
with #8 SAE ports

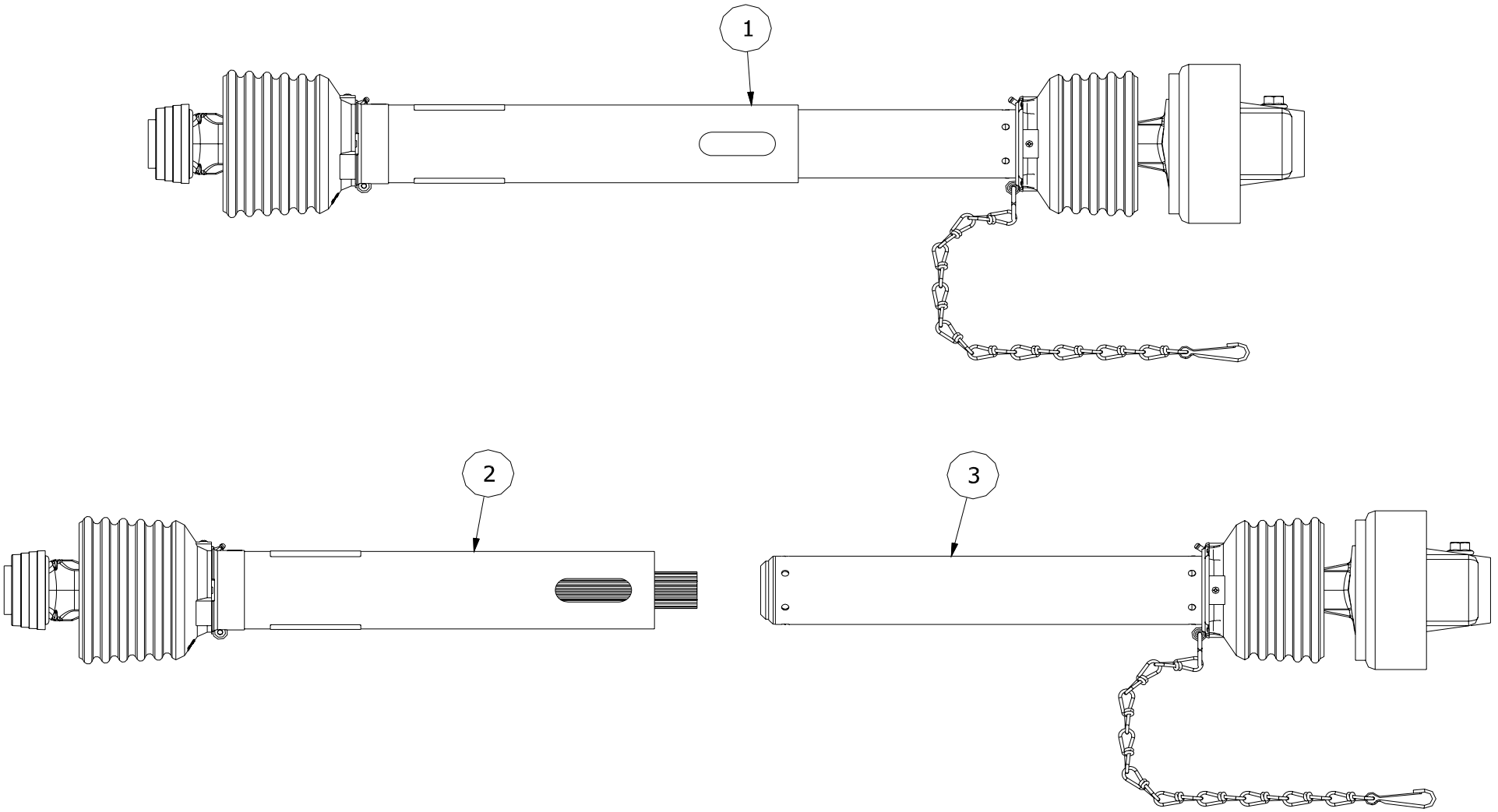


2 1/2 x 16 cylinders
with # 6 SAE ports
(Standard)

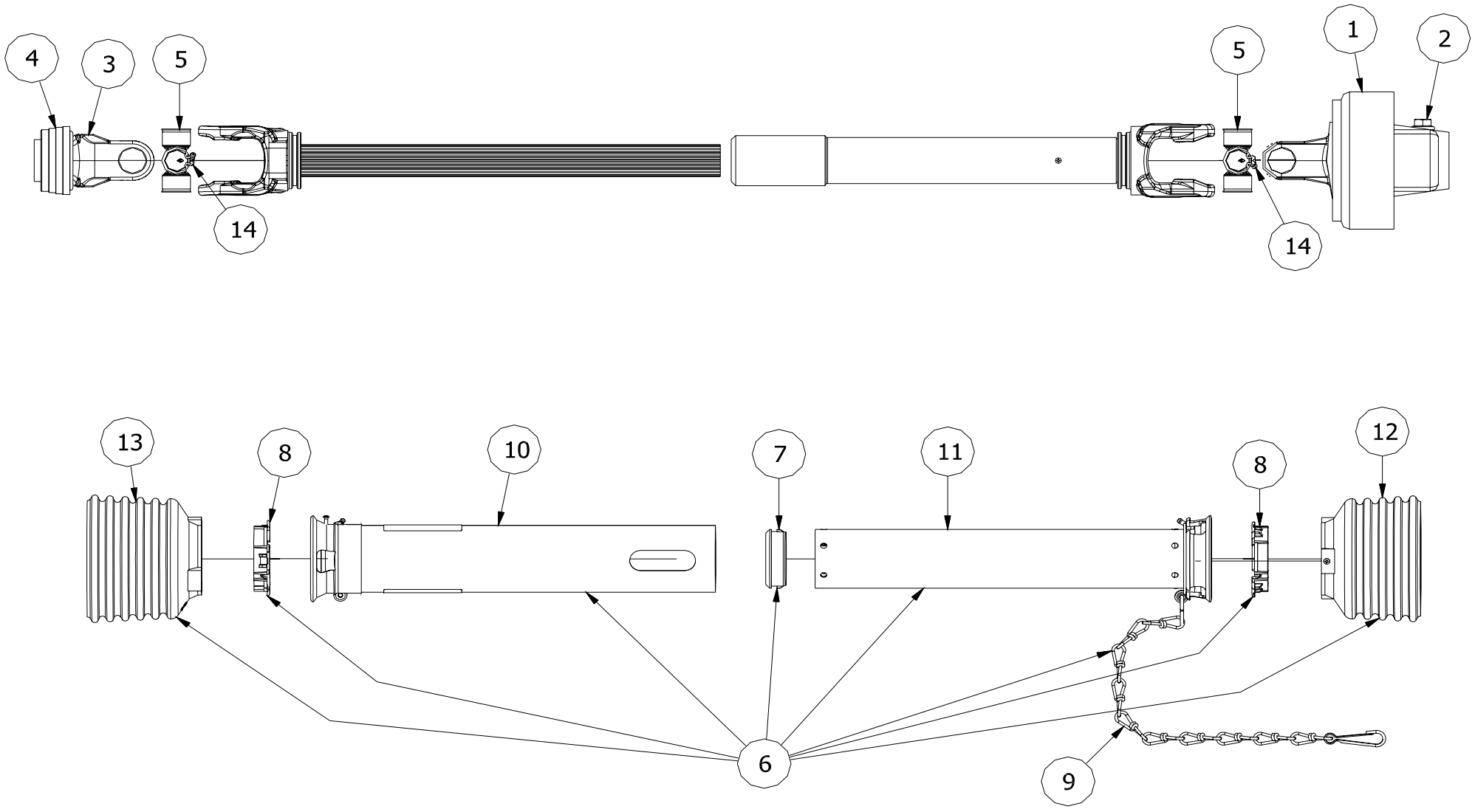
SPREADER BOARDS - SOLD AS KIT - 1315-1014 5.1

PTO shaft assemblies	6.1
PTO shaft breakdown	6.3

key	Qty	Description	1000 RPM	
			1 3/8-21	1 3/4-20
1	1	Complete Shaft	76089	76091
2	1	Tractor half shaft	76058	76059
3	1	Implement half shaft	N/A	

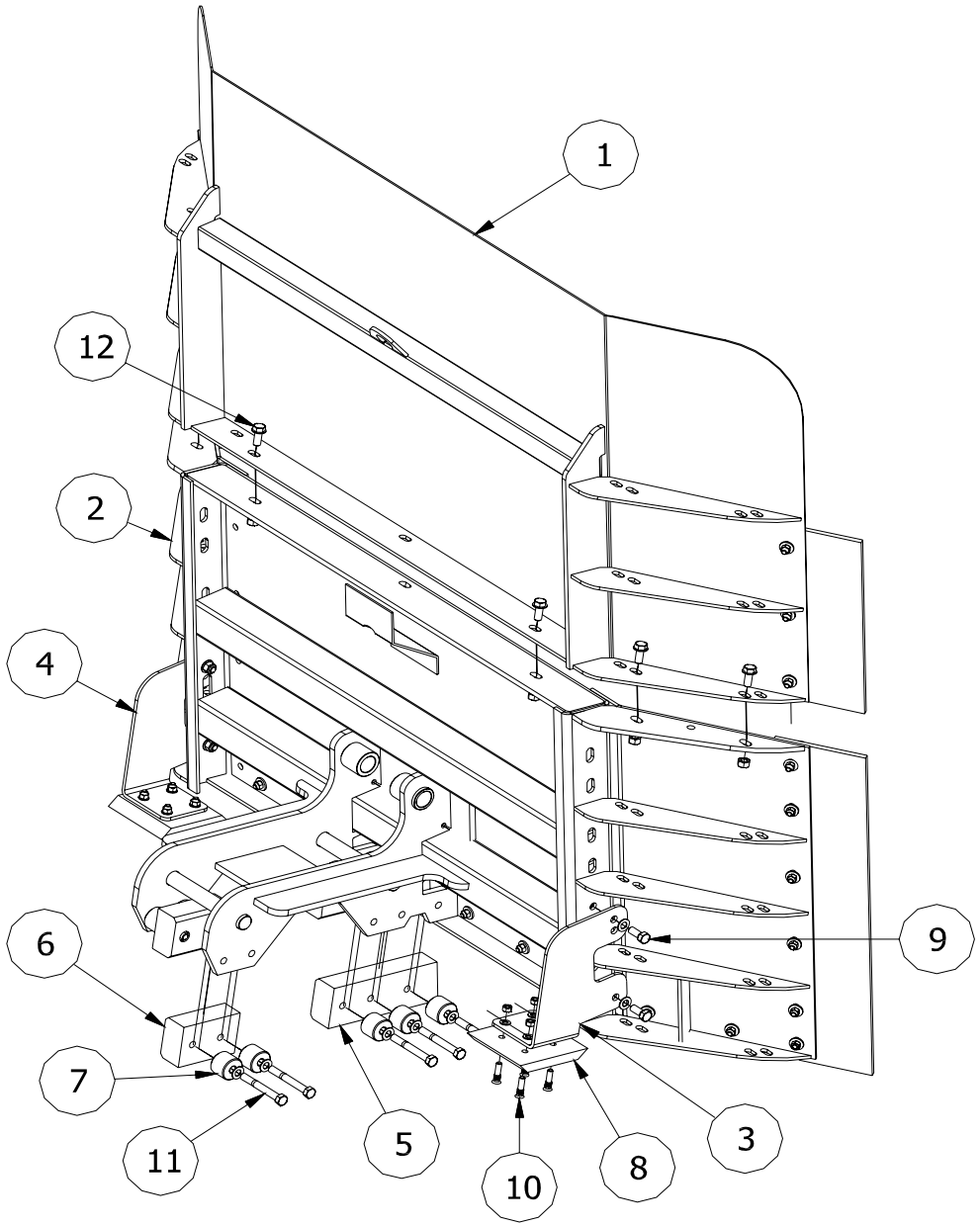

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key	Qty	Description	1000 RPM	
			1 3/8-21	1 3/4-20
1	1	Implement End Yoke	N/A	
2	1	Locking pin for yoke	76111	
3	1	Tractor End Yoke	76450.1	76580.1
4	1	Repair kit, slide collar, tractor end yoke	76440.2	76580.2
5	2	Cross kit for all Waltershied Shafts	76440.5	
6	1	Replacement shield with bearings and safety chains	76113	
7	1	Support bearing for inner shield	76440.04	
8	2	Shield bearing	76440.05	
9	1	Safety Chain, for all PTO shafts	76440.06	
10	1	Outer Shield Tube	76044.02	
11	1	Inner Shield Tube	76044.03	
12	1	Shield Cone - Implement end	76112	
13	1	Shield Cone - Tractor end	76440.01	
14	2	Grease Zerk, for cross and bearing kit	76440.11	

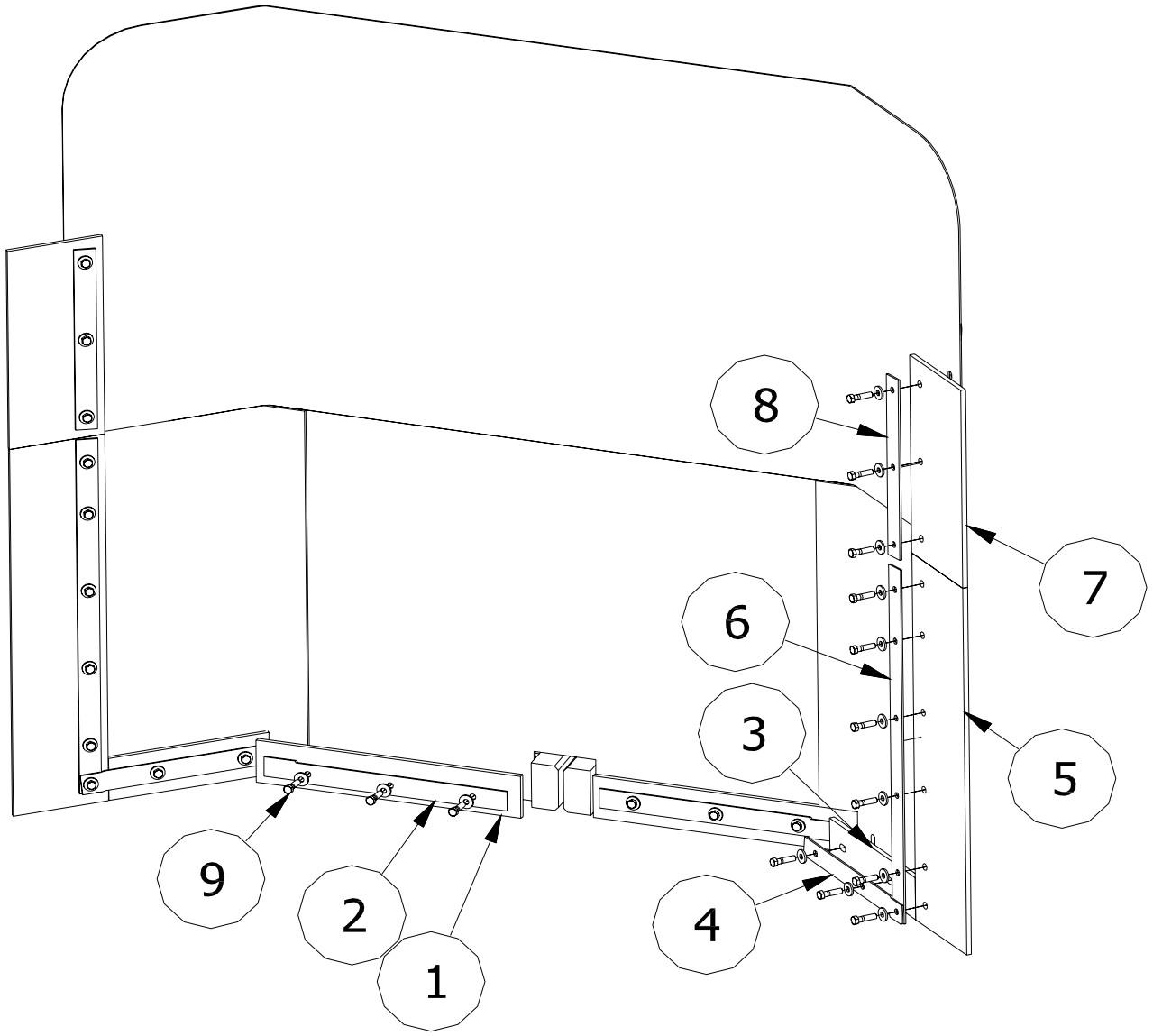

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Push-gate assembly	7.1
Push-gate seals	7.3
Slide rail	7.5

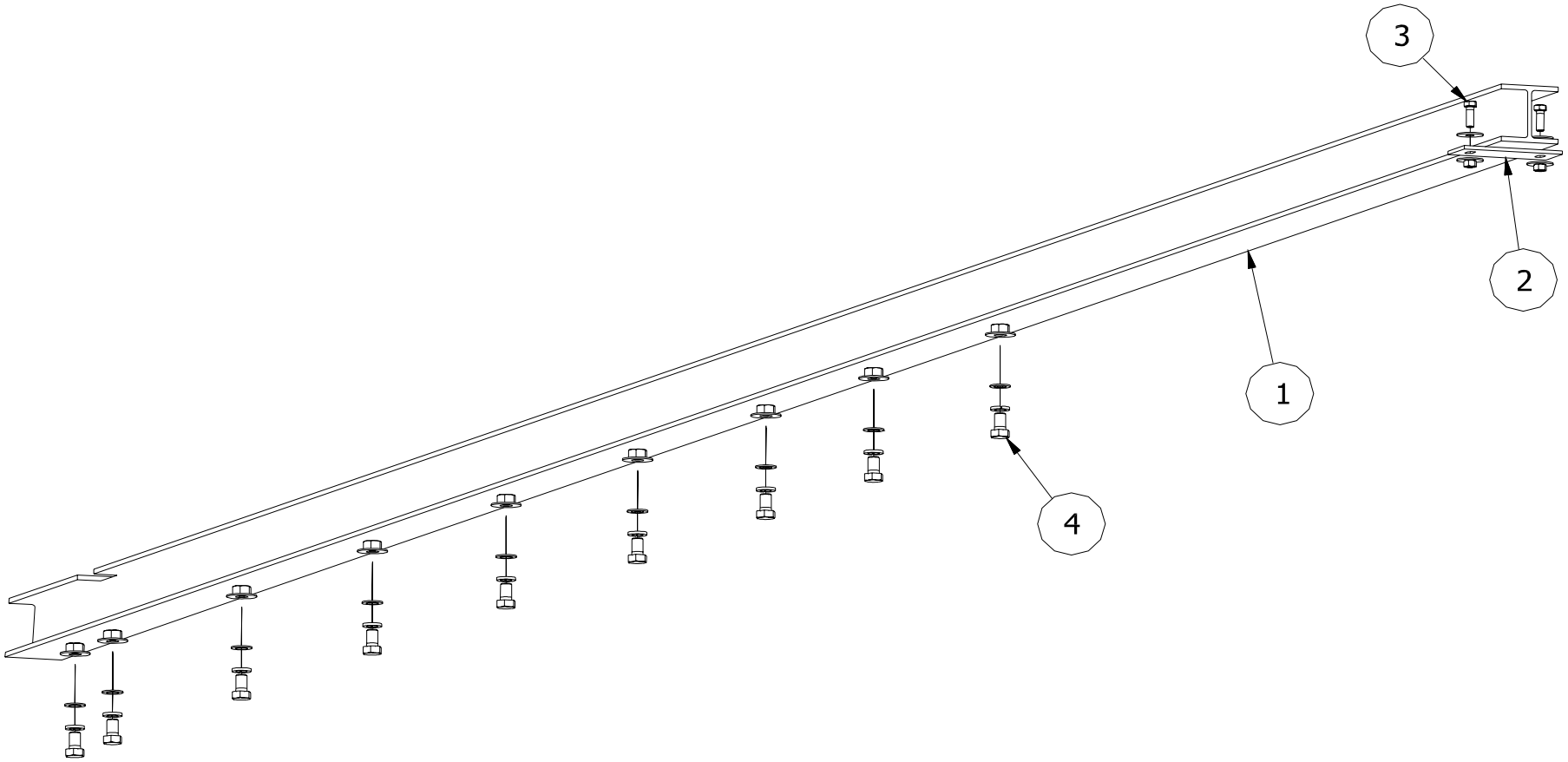
key	Qty	Description		Part Number
1	1	Push-gate extension weldment		20049
2	1	push-gate base weldment		20051
3	1	Push-gate leveling device (left)		75202L
4	1	Push-gate leveling device (right)		75202R
5	1	Rear sled bearing, Left *Not Shown		75103
5	1	Rear sled bearing, Right		75102
6	2	Front sled bearing		75081
7	10	Sled bearing spacer		75112
8	2	Bearing plate for leveling device		75204
9	AR	Bolts	1/2 x 1 1/2 (4), SAE washer (8), Locknut (4)	
10	AR	Bolts	79005(4), 79344 (4), 3/8 Locknut (4)	
11	AR	Bolts	1/2 x 4(10), SAE washer (10), Lockwasher (10)	
12	AR	Bolts	1/2 x 1 1/2 (6), USS washer (12), Locknut (6)	
		Complete Push-gate Assembly (Keys 1 to 11)		20297
		Sled Bearing Kit, Includes keys 5, 6 and 11		20078


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key	Qty	Description	Part Number
1	2	Rubber Seal	78761
2	6	SPECIAL WASHER	1399-1030
3	2	Rubber Seal	78762
4	6	SPECIAL WASHER	1399-1030
5	2	Rubber Seal	78760
6	12	SPECIAL WASHER	1399-1030
7	2	Rubber Seal	78763
8	6	SPECIAL WASHER	1399-1030
9	AR	Bolts — 3/8 x 1 1/2, Special Washer (79344), SAE Washer, Locknut	
		Push-gate Seal Kit (Includes keys 1 to 9)	20071

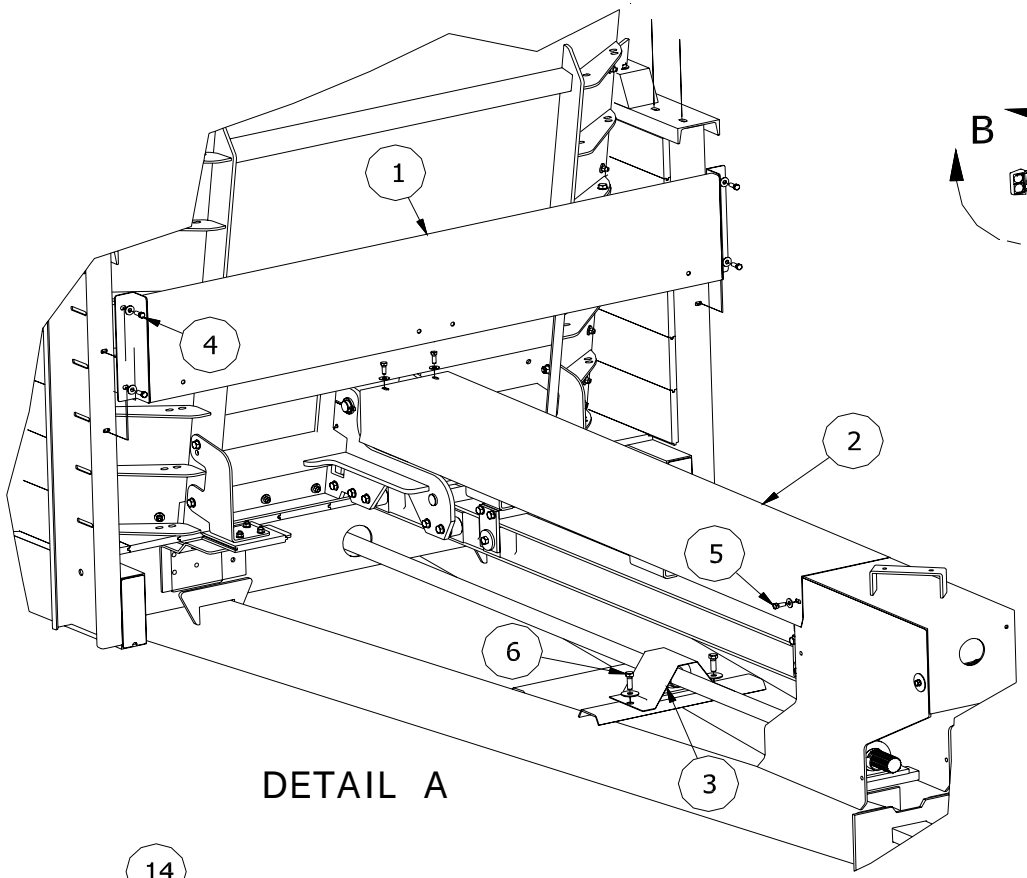

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key	Qty	Description	Part Number
1	1	Beam for slide rail	70494
2	1	Mounting plate for slide rail	70590
3	AR	Bolts	1/2 x 1 1/2 (2), USS Washer (4), Locknut (2)
4	AR	Bolts	3/4 x 1 1/4 (9), SAE Washer (9), Lockwasher (9), USS Washer (9)

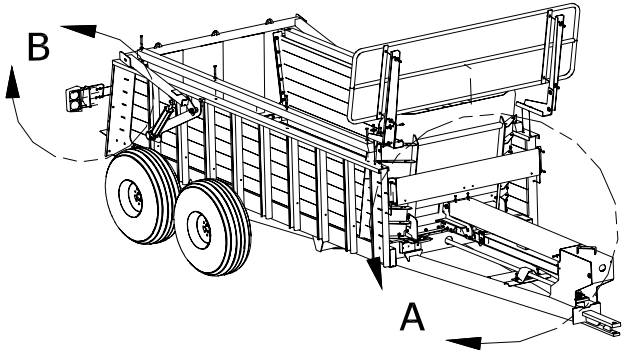

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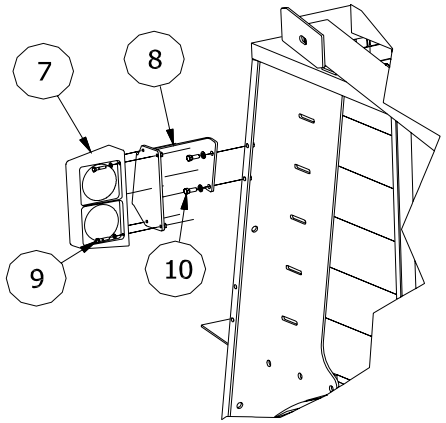
Shields, SMV sign, jack, and lights, SN 5000-5178	8.1
Shields, SMV sign, jack, and lights, SN 5179-on	8.3
Stone Guard, Wood Rail	8.5

key	Qty	Description	Part Number
1	1	Front Panel	20167
2	1	Cylinder Cover	70430
3	1	Bearing Cover at A-Frame	70306
4	AR	Bolts	3/8 x 1 (4), USS Washer (8), Locknut (4)
5	AR	Bolts	3/8 x 1 (4), USS Washer (8), Locknut (4)
6	AR	Bolts	1/2 x 1 1/2 (2), USS Washer (4), Locknut (2)
7	opt	Light Set, Includes lights and wiring harness	201137
8	opt	Mounting brackets for lights (Right), Includes Hardware (keys 9, 10)	70433R
8	opt	Mounting brackets for lights (Left), Includes Hardware (keys 9, 10)	70433L
9	AR	Bolts	1/4 x 1 1/4 (8), SAE Washer (16), Locknut (8)
10	AR	Bolts	3/8 x 1 1/4 (4), SAE Washer (8), Locknut (4)
11	1	Slow moving vehicle sign assembly, Includes keys 12, and 13	88002
12	1	Mounting bracket for slow moving vehicle sign	70278
13	AR	Bolts	3/8 x 1 1/4 (2), SAE Washer (4), Locknut (2)
14	1	Jack	445046

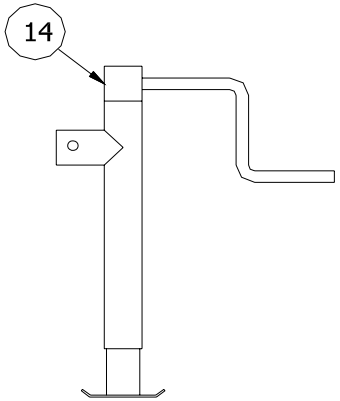


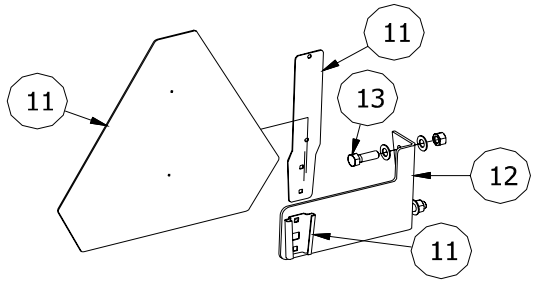
DETAIL A





DETAIL B

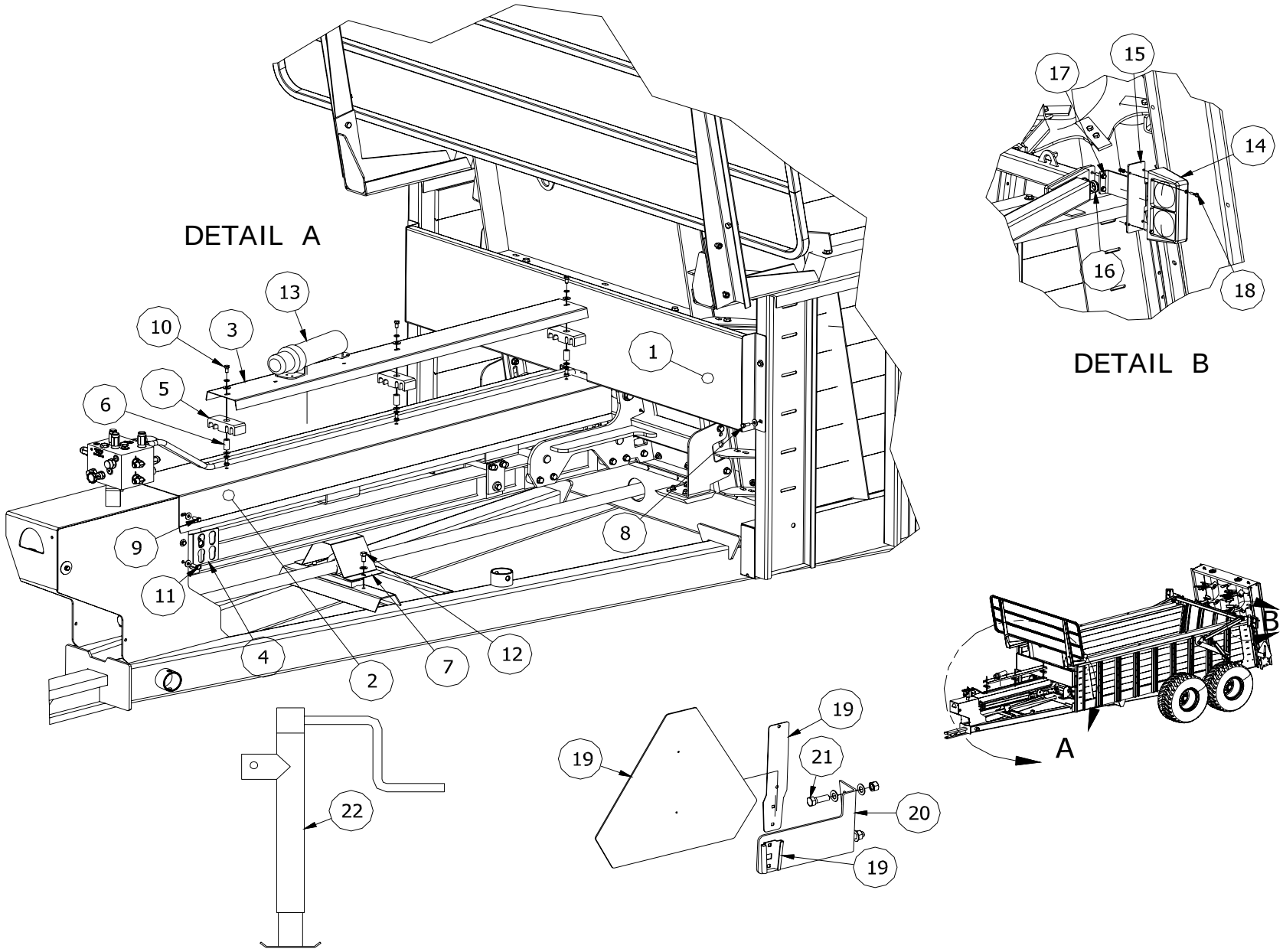




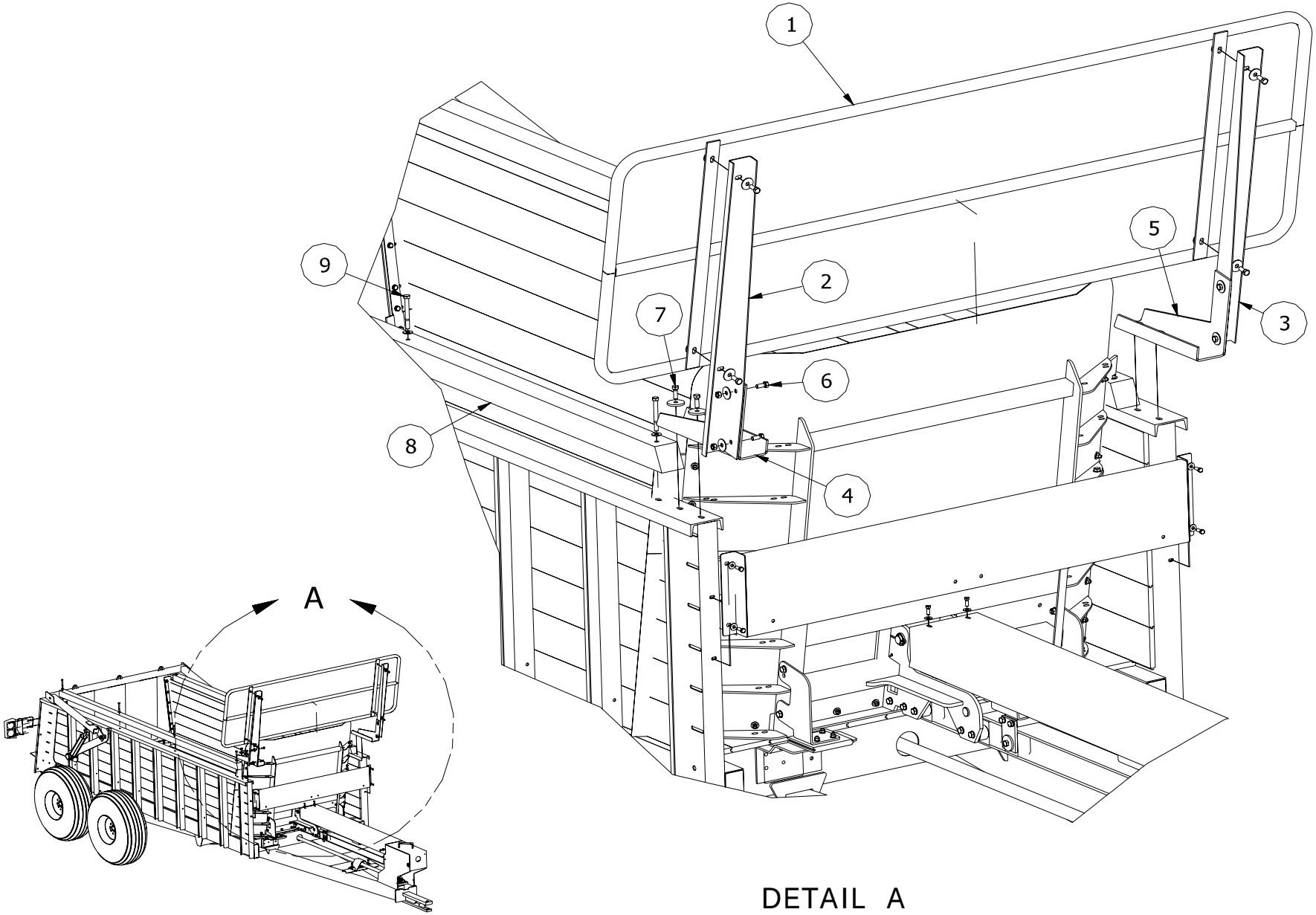
SMV SIGN AND MOUNTING

key	Qty	Description		Part Number
1	1	Front Panel		20167
2	1	Cylinder Cover		70577
3	1	Hose Cover		70574
4	1	Hose Storage Bracket		70594
5	3	Hose Guide		N/A
6	3	Standoff for hose guide		70575
7	1	Bearing Cover at A-Frame		70578
8	AR	Bolts	3/8 x 1 (4), SAE washer (8), Locknut (4)	
9	AR	Bolts	3/8 x 1 (4), SAE washer (8), Locknut (4)	
10	AR	Bolts	3/8 x 3/4 (6), SAE washer (6), Lockwasher (6)	
11	AR	Bolts	3/8 x 1 (2), SAE washer (4), Locknut (2)	
12	AR	Bolts	1/2 x 1 1/2 (2), SAE washer (4), Locknut (2)	
13	1	Operators Manual Holder		480146
14	Opt	Lights, Includes lights, and wiring harness only		79842
15	Opt	Mounting bracket for lights, Includes keys 16 and 17	Serial 5179-5245[1]	79433L, 79433R
			Serial 5247-on	70478
16	Opt	Grommet		79864
17	AR	Bolts	3/8 x 1 1/2 (2), SAE Washer (4), Locknut (2)	
18	AR	Bolts	1/4 x 1 1/4 (8), SAE Washer (16), Locknut (8)	
19	1	Slow moving vehicle sign assembly, Includes keys 19, 20 and all hardware		88002
20	1	Mounting bracket for slow moving vehicle sign		70278
21	AR	Bolts	3/8 x 1 (2), SAE Washer (4), Locknut (2)	
22	1	Jack		445046

(1) Light brackets for this range not shown. See page 8.1 and 8.2 for graphical representation of lights only.

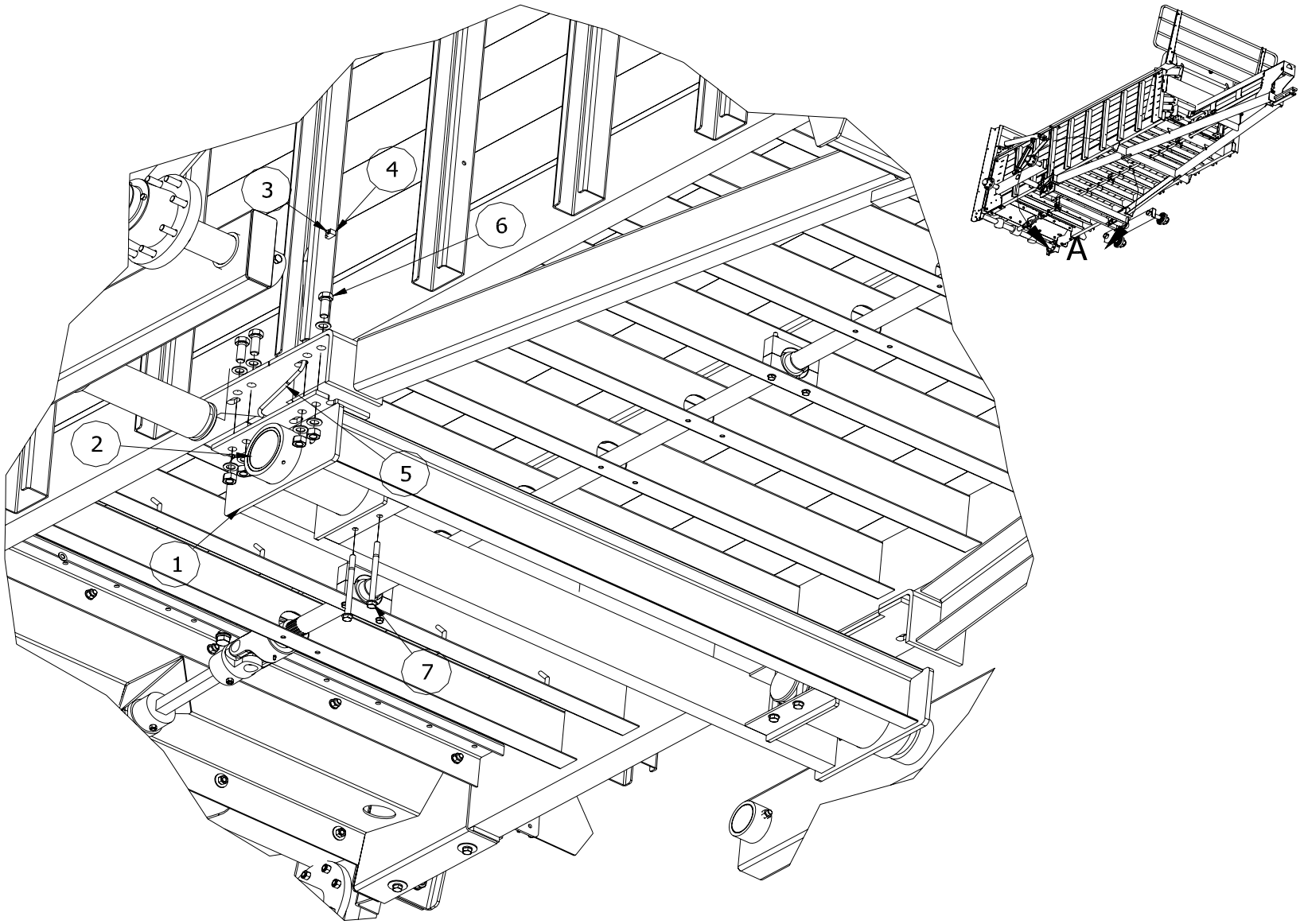

DETAIL A
DETAIL B
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key	Qty	Description	Part Number
1	1	Stone Guard	20165
2	1	Upright for Stone Guard, Right	70439R
3	1	Upright for Stone Guard, Left	70439L
4	1	Mount for Stone Guard, Right	70435R
5	1	Mount for Stone Guard, Left	70435L
6	AR	Bolts	1/2 x 1 1/4 (8), USS Washer (16), Locknut (8)
7	AR	Bolts	1/2 x 1 1/2 (4), Spcl Washer-79010 (4), USS Washer (4), Locknut (4)
8	2	Wood Rail	78049
9	AR	Bolts	1/2 x 4 1/2 (8), USS Washer (16), Locknut (8)


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DETAIL A

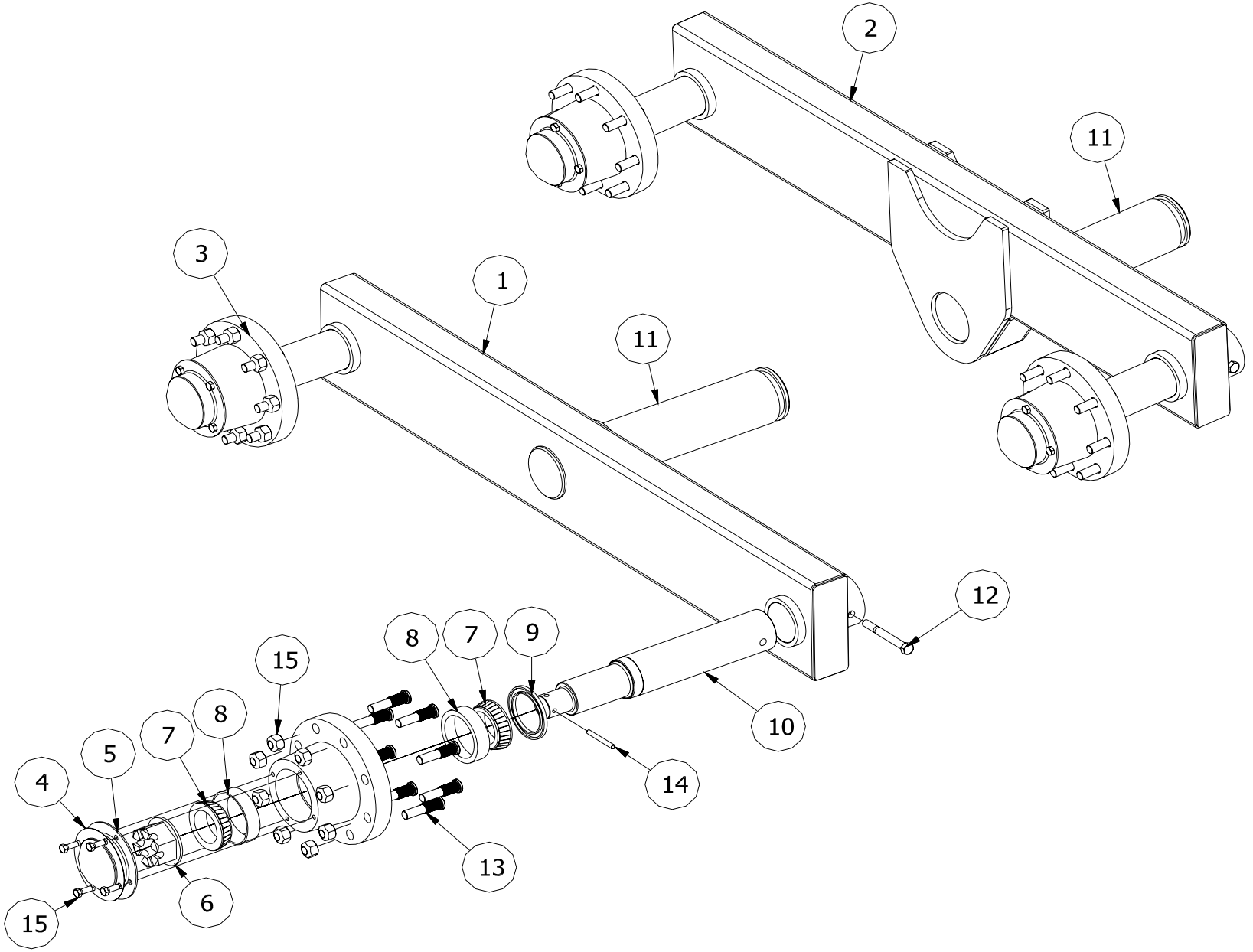
Axles	9.1
Spindles and Hubs	9.3
Wheels	9.5

key	Qty	Description	Part Number
1	1	Axle Frame	20063
2	4	Tandem Bushing	1399-1017
3	2	L-Fitting for grease hose	77510
4	2	Grease Fitting	79810
5	2	Grease Hose	9913-1086-036
6	AR	Bolts	3/4 x 2 1/2 (8), SAE Washer (16), Locknut (8)
7	AR	Bolts	1/2 x 7 (4), SAE Washer (8), Locknut (4)



DETAIL A

key	Qty	Description	Part Number
1	2	Tandem Axle (Standard)	20065
2	Opt	Tandem Axle, 6" Drop, (Right)	20066R
		Tandem Axle, 6" Drop, (Left)	20066L
		Tandem Axle, 6" Drop, Long Spindle, (Right)	20067R
		Tandem Axle, 6" Drop, Long Spindle, (Left)	20067L
3	4	Complete Hub (Bearings, Seals, Bolts, Cap)	429003
4	4	Dust cap	422132
5	4	Gasket	422133
6	4	Spindle nut	500130
7	8	Inner and Outer Bearing Cone	428001
8	8	Inner and Outer Bearing Cup	428002
9	4	Seal	422168
10	4	12k Spindle	72033
	opt	12k Spindle, Long	72034
11	2	Tandem Spindle	72086
12	AR	Bolts	1/2 x 4 1/2 (4), Locknut (4)
13	AR	Press-in Wheel bolts	422119
14	4	Spring Pin	5/16 x 2 3/4
		Bearing Kit, 12k Hub, Includes keys 7 to 9	20077
15	32	Wheel Nut	422118


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Please Contact Hydra-Spread About Wheel and Tire Packages and for Replacements.