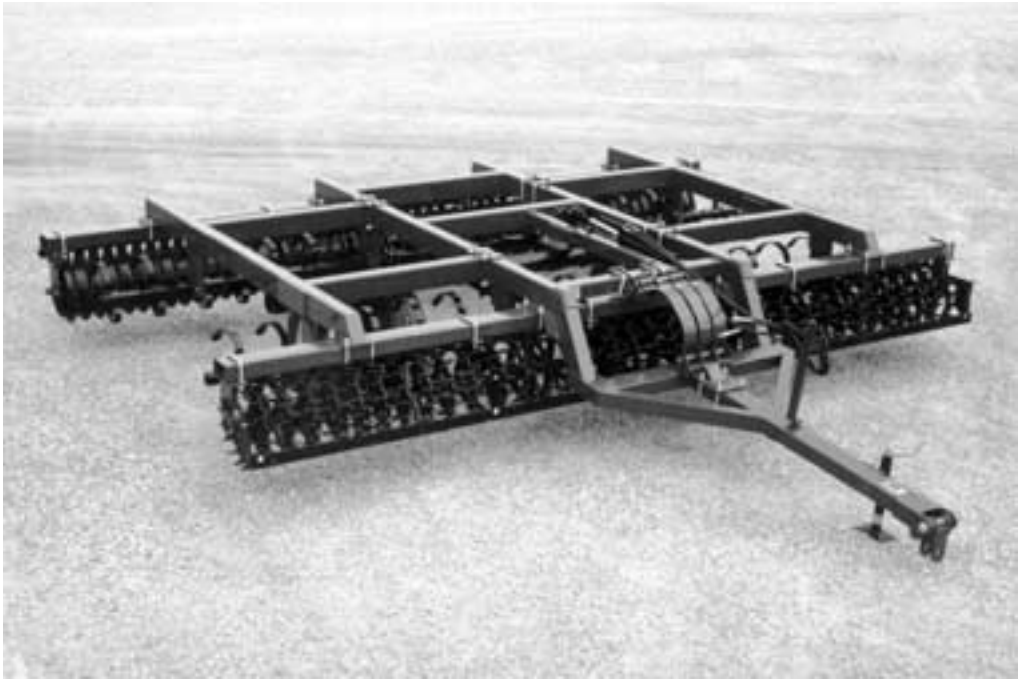
MODEL CM30 SERIES
CULTIMULCHER
PARTS LIST



1900 NORTH STREET
MARYSVILLE, KANSAS 66508
(785) 562-5381

F-341-0203 **02/03**

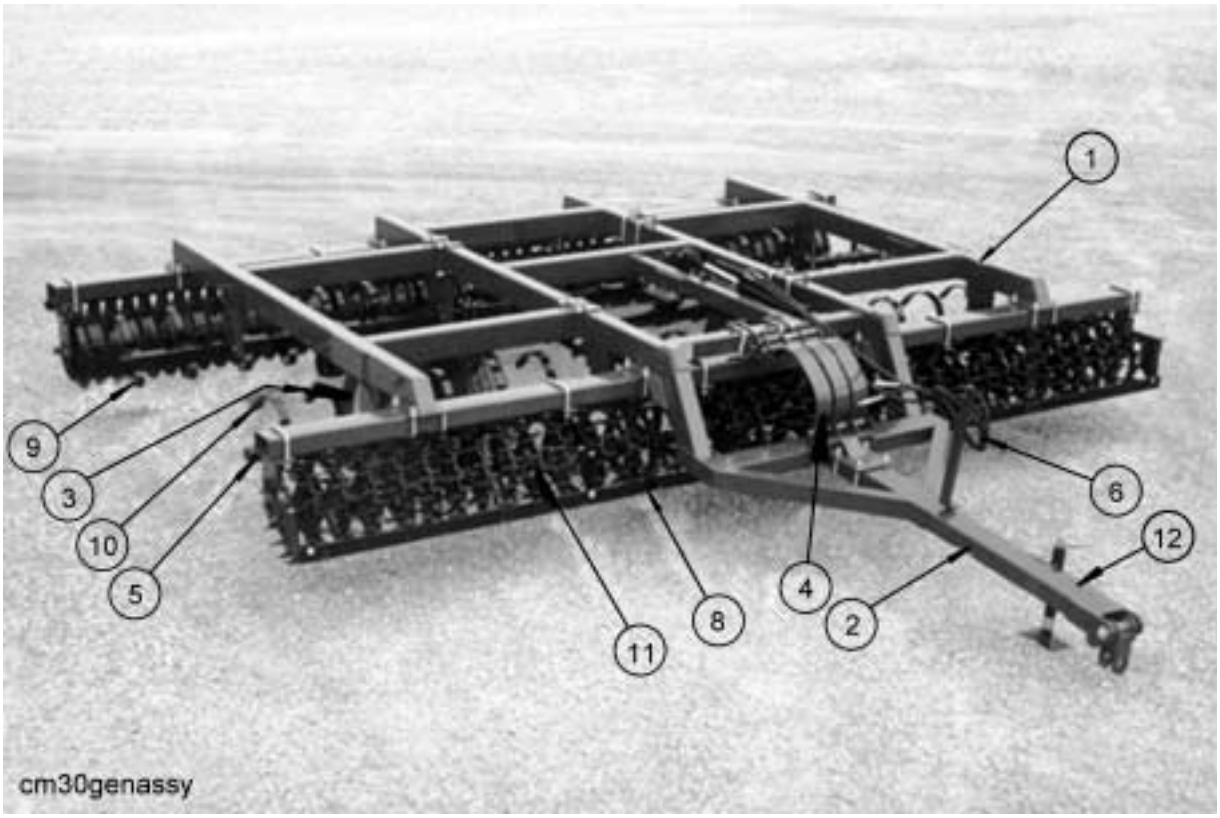


Figure 1-1 General Assembly

GENERAL ASSEMBLY

ITEM	PAGE NO.	DESCRIPTION	QTY.
1	1-2 - 1-7	MAIN FRAME ASSEMBLIES	
2	1-8 - 1-11	TONGUE ASSEMBLIES	
3	1-12	HUB AND SPINDLE ASSEMBLY	
4	1-13 - 1-15	LEVELER SPRING ASSEMBLIES	
5	1-16	TOOTHBAR ASSEMBLY	
6	1-17 - 1-29	HYDRAULIC ASSEMBLIES	
7	1-30 - 1-31	ELECTRICAL ASSEMBLY (NOT SHOWN)	
8	1-32 - 1-33	LAND LEVELER ASSEMBLIES	
9	1-34	SCRAPER ASSEMBLY	
10	1-35	GROUND TOOL ASSEMBLIES	
11	1-36 - 1-49	ROLLER GANG ASSEMBLIES	
12	1-50 - 1-51	DECAL INSTALLATION	

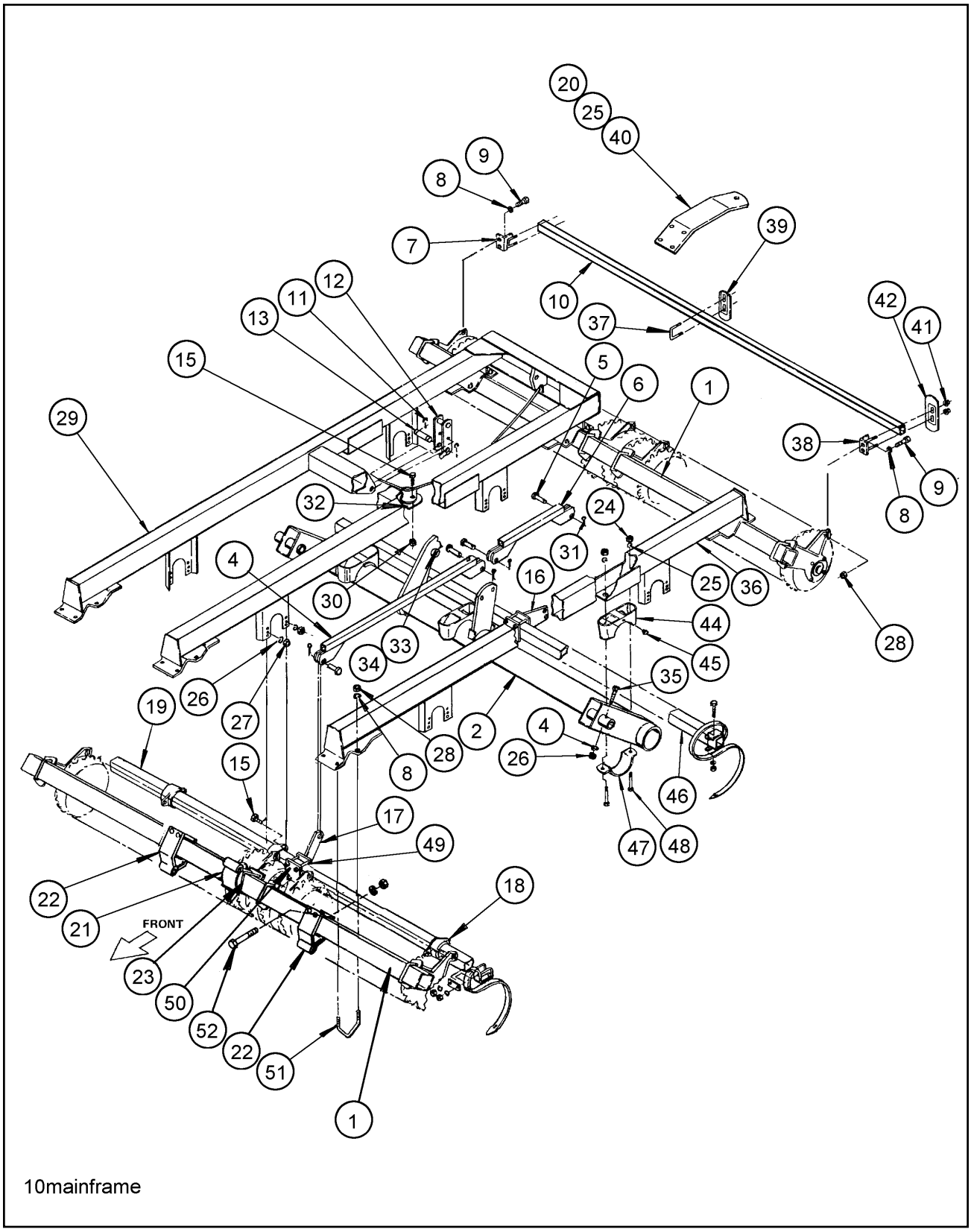


Figure 1-2 Main Frame Assembly (10' Model)

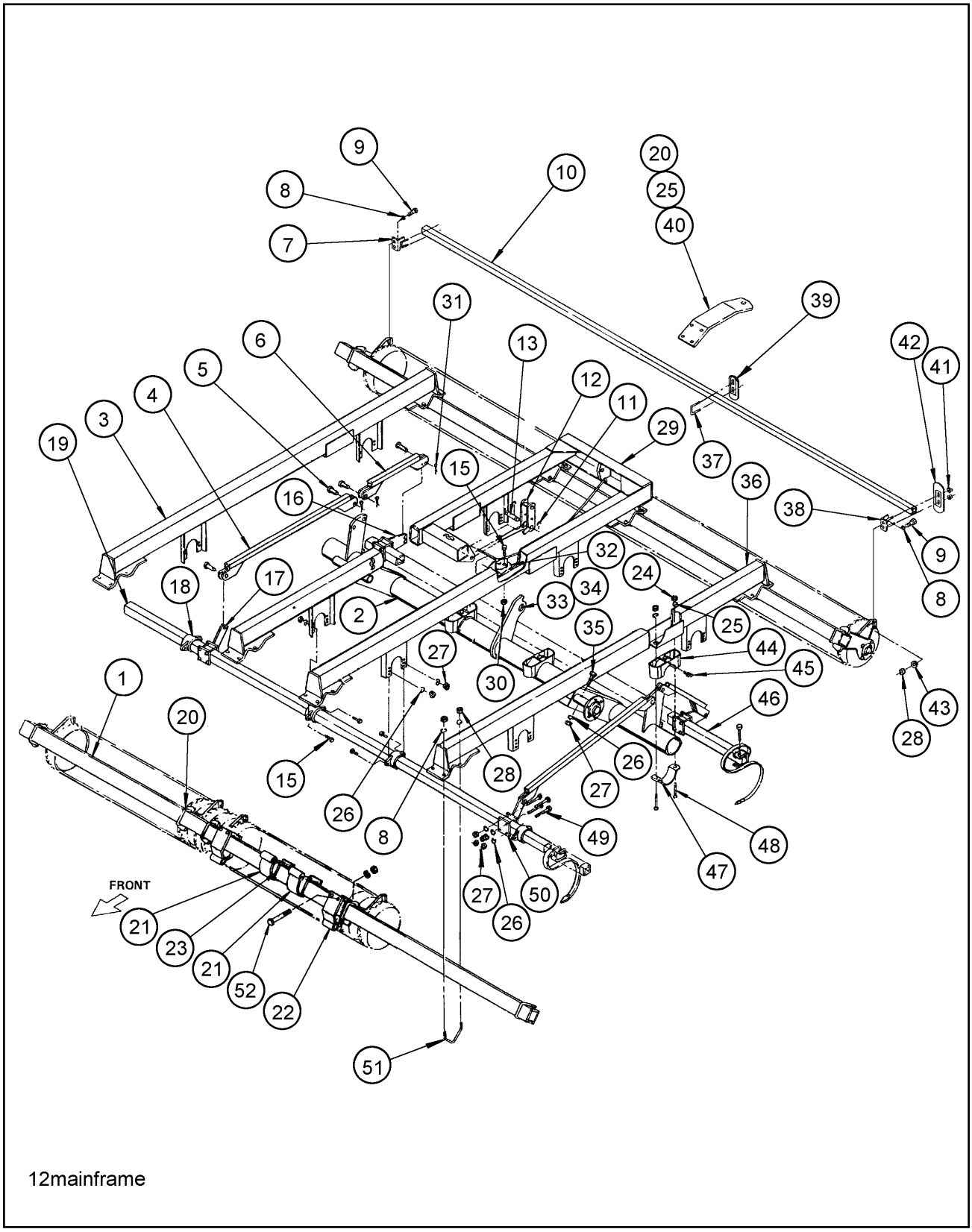


Figure 1-3 Main Frame Assembly (12' - 15' Model)

MAIN FRAME ASSEMBLY (10’ - 15’ MODELS)

ITEM	PART NO.	DESCRIPTION
1	40-0114	GANG TUBE (10’)
	40-0079	GANG TUBE (12’)
	40-0080	GANG TUBE (13’)
	40-0082	GANG TUBE (14’)
	40-0083	GANG TUBE (15’)
2	41-1109	AXLE (10’)
	41-1009	AXLE (12’ - 15’)
3	41-1013	OUTRIGGER, RIGHT
4	41-1002	FRONT LINK ASSEMBLY
5	W933037-4	PIN, CLEVIS 3/4 X 2
6	41-1003	REAR LINK ASSEMBLY
7	41-1129	SCRAPER MOUNTING, RH
8	1-861-010034-15	WASHER, SPLIT LOCK 5/8
9	1-654-010059-04	SCREW, HEX HEAD CAP 5/8-11 X 1-3/4
10	1D66124-14	SCRAPER BAR 10’
	1D66124-16	SCRAPER BAR 12’
	1D66124-17	SCRAPER BAR 13’
	1D66124-18	SCRAPER BAR 14’
	1D66124-19	SCRAPER BAR 15’
11	1R41044	KLIP RING
12	41-1083-T	TRANSPORT LOCK ASSEMBLY
13	7759-3-M	PIN, PIVOT
15	1-654-010055-03	SCREW, HEX HEAD CAP 1/2-13 X 1-1/2 GR5
16	41-1149	LEVER ASSEMBLY, REAR
17	41-1005	LEVER ASSEMBLY, FRONT
18	41-0069-D	RETAINER, TOOTH BAR
19	1D66139-8	TOOTH BAR, FRONT (10’)
	1D66139-10	TOOTH BAR, FRONT (12’)
	1D66139-13	TOOTH BAR, FRONT (13’ - 14’)
	1D66139-15	TOOTH BAR, FRONT (15’)
20	41-0062	U-BOLT
21	41-0025-T	MOUNTING LEVELER
22	1A64289-T	PULL STRAP
23	41-0063	U-BOLT
24	1-512-010007-12	NUT, HEX 3/4
25	1-861-010034-17	WASHER, SPLIT LOCK 3/4
26	1-861-010034-13	WASHER, SPLIT LOCK 1/2
27	1-512-010007-09	NUT, HEX 1/2
28	1-512-010007-11	NUT, HEX 5/8
29	41-1007	CENTER FRAME ASSEMBLY
30	1-512-010005-09	NUT, HEX LOCK 1/2-13
31	W932045-4	PIN, COTTER 1/4 X 1-1/4”
32	41-1022-T	CONTROL ROD ASSEMBLY
33	366554	SPRING BUSHING
34	366555	SPRING BUSHING
35	1-654-010055-09	SCREW, HEX HEAD CAP 1/2-13 X 3 GR5
36	41-1010	OUTRIGGER, LEFT
37	43-0135	U-BOLT 3/8 X 1
38	41-1128	SCRAPER MOUNTING, LH
39	43-0017	SCRAPER, MODIFIED

MAIN FRAME ASSEMBLY (10’ - 15’ MODELS)

ITEM	PART NO.	DESCRIPTION
40	41-1127-T	HITCH, REAR
41	1-510-010001	NUT, FLANGE LOCK 3/8
42	43-0051	PLATE, SCRAPER
43	1-861-010032-18	WASHER, FLAT 5/8
44	41-0081	BEARING W/ SIDE HOLE
45	22769	GREASE ZERK 1/4-28
46	1D66139-9	TOOTH BAR, REAR (10’)
	1D66139-11	TOOTH BAR, REAR (12’ - 13’)
	1D66139-14	TOOTH BAR, REAR (14’ - 15’)
47	34-0065-D	STRAP, AXLE
48	1-654-010061-16	SCREW, HEX HEAD CAP 3/4-10 X 5-1/2
49	1-654-010055-14	SCREW, HEX HEAD CAP 1/2-13 X 4-1/2
50	43-0036-D	BASE, LINK
51	41-0042	BOLT, GANG TUBE
52	100855	SCREW, HEX HEAD CAP 3/4-10 X 6-1/2

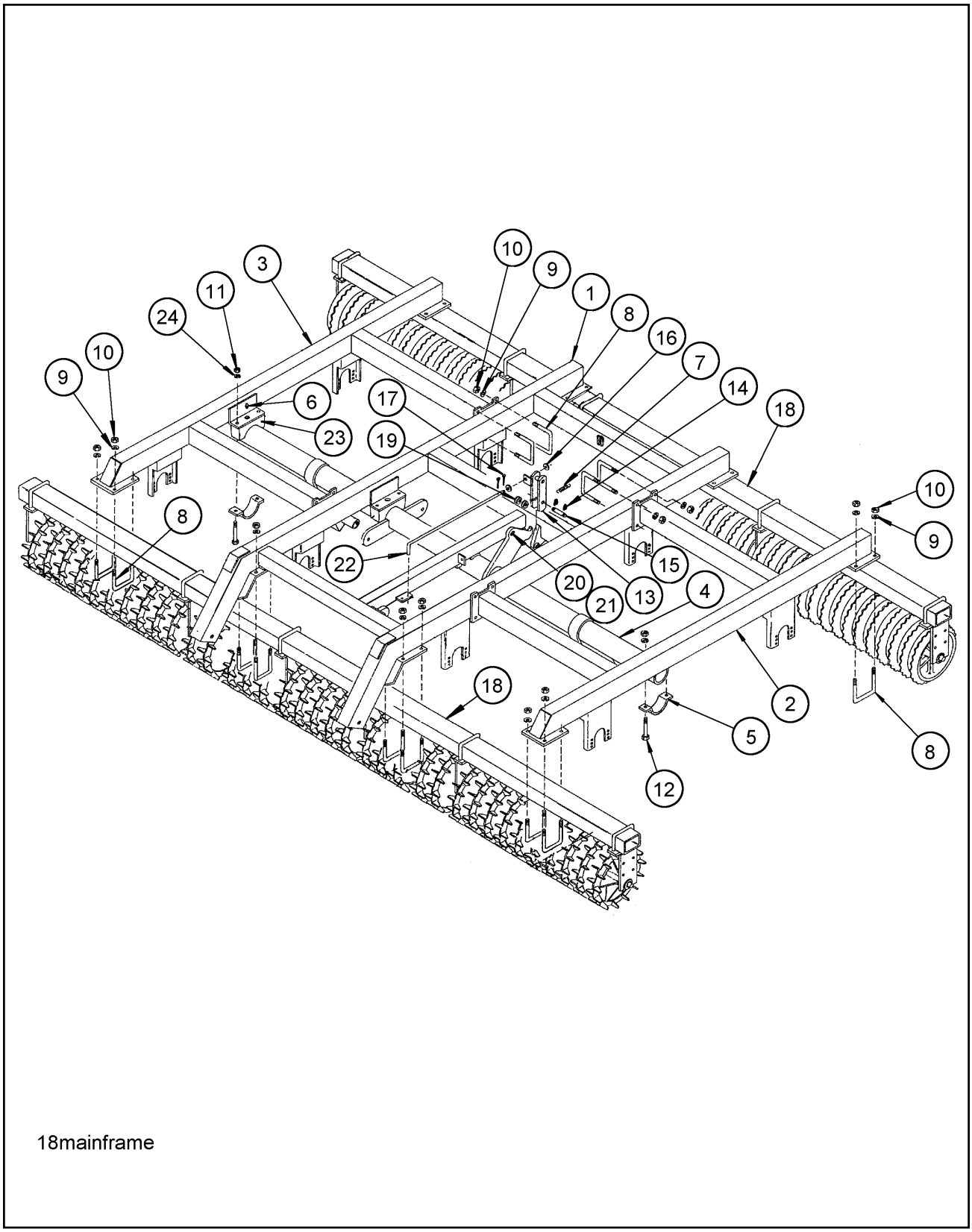


Figure 1-4 Main Frame Assembly (18’ Model)

MAIN FRAME ASSEMBLY (18’ MODEL)

ITEM	PART NO.	DESCRIPTION
1	1A64050	MAIN FRAME
2	1A64051	AUXILIARY FRAME, LH
3	1A64052	AUXILIARY FRAME, RH
4	1A64053	AXLE WELDMENT
5	34-0065-D	AXLE STRAP
6	22769	GREASE FITTING
7	43-0133	ACTUATOR SPRING
8	43-0136	U-BOLT, 7/8
9	1-861-010034-19	WASHER, SPLIT LOCK 7/8
10	1-512-010007-13	NUT, HEX 7/8
11	1-512-010007-12	NUT, HEX 3/4
12	W908409-4	SCREW, HEX HEAD CAP 3/4-10 X 6
13	43-1041-T	TRANSPORT LOCK
14	1R41044	KLIP RING
15	7759-3-M	PIN, PIVOT
16	1-861-010032-11	WASHER, FLAT 3/8
17	101386	PIN, COTTER 1/8 X 1
18	1D67864	GANG TUBE
19	1-861-010032-25	WASHER, FLAT 1”
20	366554	SPRING BUSHING
21	366555	SPRING BUSHING
22	43-0118-T	ACTUATOR ROD
23	34-0027	BEARING W/ TOP HOLE
24	1-861-010034-17	WASHER, SPLIT LOCK 3/4

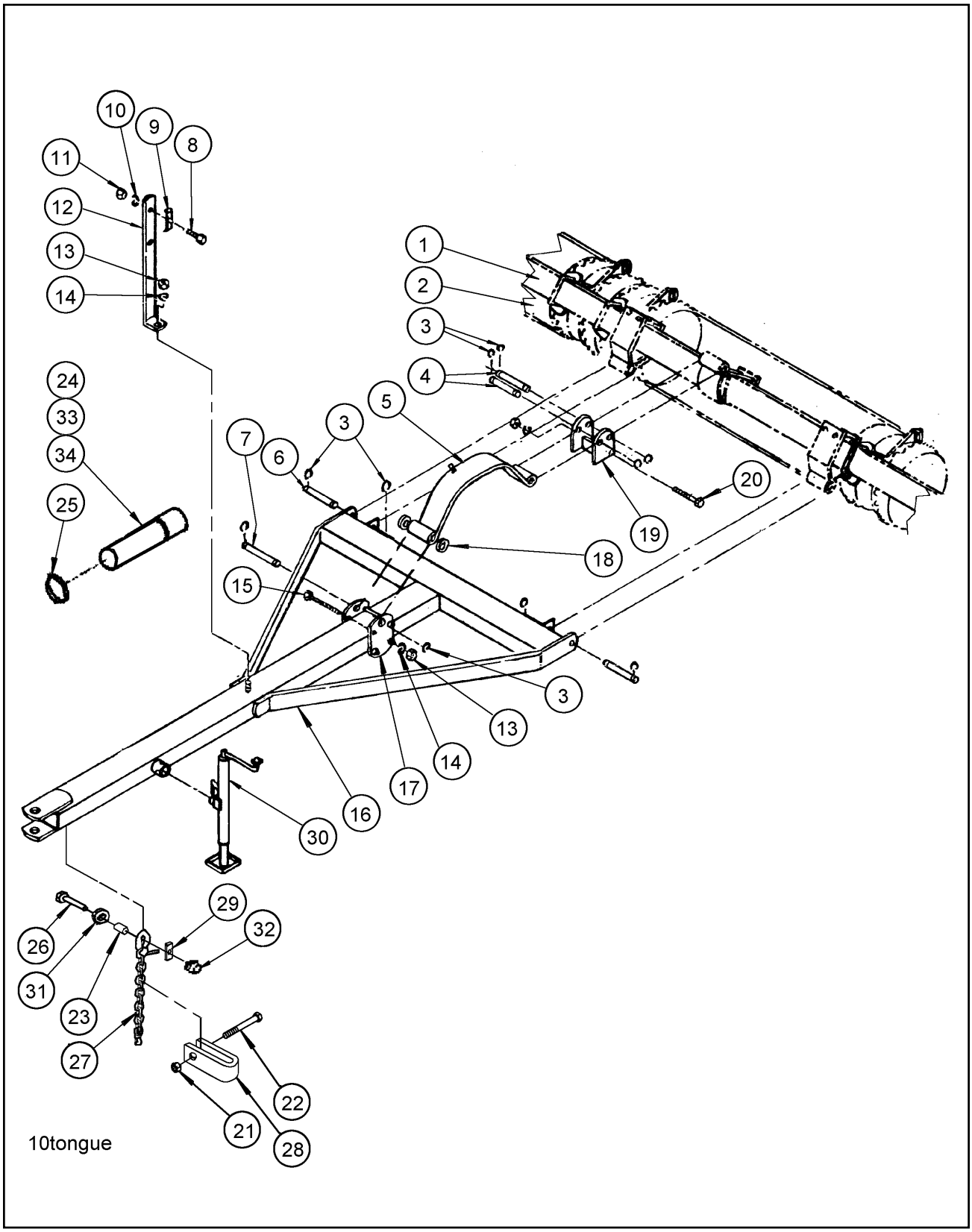


Figure 1-5 Tongue Assembly (10’ - 15’ Models)

TONGUE ASSEMBLY (10’ - 15’ MODELS)

ITEM	PART NO.	DESCRIPTION
1	-----	GANG TUBE
2	-----	ROLLER ASSEMBLY
3	1R41044	KLIP RING
4	7759-5-M	PIVOT PIN
5	41-0036-T	LEVELER SPRING
6	7759-7-M	PIVOT PIN
7	7759-2-M	PIVOT, LOWER LEVELER
8	1-654-010055-07	SCREW, HEX HEAD CAP 1/2-13 X 2-1/2
9	22-0038-T	HOLDER, HOSE
10	1-861-010034-13	WASHER, SPLIT LOCK 1/2
11	1-512-010007-09	NUT, HEX 1/2-13
12	41-0047-T	SUPPORT HOSE
13	1-512-010005-13	NUT, HEX LOCK 5/8-11
14	1-861-010034-15	WASHER, SPLIT LOCK 5/8
15	113064	SCREW, HEX HEAD CAP 5/8-11 X 7 GR5
16	1A5807	TONGUE WELDMENT
17	41-0039-T	SLIDE, LEVELER
18	1-861-010032-25	WASHER, FLAT 1”
19	43-1085-T	SHEAR PLATE ASSEMBLY
20	1-654-010055-16	SCREW, HEX HEAD CAP 1/2-13 X 5-1/2 GR5
21	1-512-010007-11	NUT, HEX 5/8-11
22	1-654-010059-11	SCREW, HEX HEAD CAP 5/8-11 X 3-1/2 GR5
23	100677	BUSHING
24	1-116-010019	BOX, MANUAL STORAGE
25	105-0093	HOSE CLAMP 4-1/2
26	114029	SCREW, HEX HEAD CAP 3/4-10 X 4 GR8
27	2-174-010063	CHAIN, AG SAFETY
28	H148558C1-D	CLEVIS, TRANSPORT/CHAIN BLOCK
29	2-565-011987	PLATE, SAFETY CHAIN
30	400731	JACK ASSEMBLY AND PIN
31	1-861-010032-21	WASHER, FLAT 1/2
32	1-512-010005-15	NUT, HEX LOCK 3/4-10
33	F-240	MANUAL, CM30 OPERATOR’S
34	F-241	MANUAL, CM30 PARTS LIST

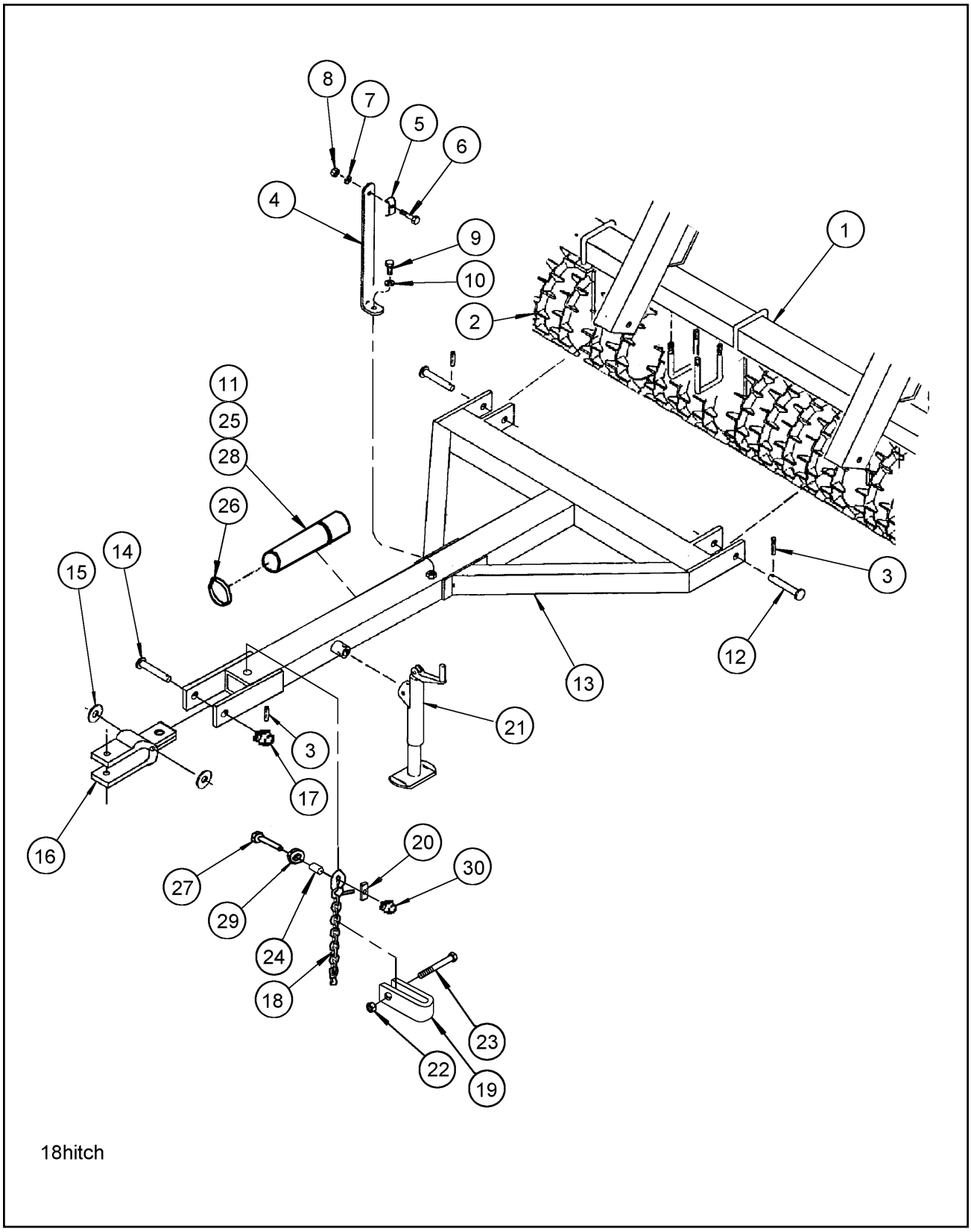


Figure 1-6 Tongue Assembly (18’ Model)

TONGUE ASSEMBLY (18’ MODEL)

ITEM	PART NO.	DESCRIPTION
1	-----	GANG TUBE
2	-----	ROLLER ASSEMBLY
3	1-647-010004257	SPRING PIN 3/8 X 2-1/2
4	43-0151-T	HOSE SUPPORT BRACKET
5	22-0038-T	HOSE CLAMP
6	1-654-010055-07	SCREW, HEX HEAD CAP 1/2-13 X 2-1/2
7	1-861-010034-13	WASHER, SPLIT LOCK 1/2
8	1-512-010007-09	NUT, HEX 1/2
9	W908397-4	SCREW, HEX HEAD CAP 3/4-10 X 1 GR5
10	1-861-010034-17	WASHER, SPLIT LOCK 3/4
11	F-240-____	MANUAL, CM30 OPERATOR’S
12	43-1007-T	HITCH PIN
13	1A65410	PULL TONGUE ASSEMBLY
14	1A65412-M	BOLT WELD
15	7381-206-T	SPACER
16	366780-T	CLEVIS SWIVEL
17	1-516-010001-27	NUT, HEX SLOT 1-1/2-6
18	2-174-010063	CHAIN, AG SAFETY
19	H148558C1-D	CLEVIS, TRANSPORT/CHAIN BLOCK
20	2-565-011987	PLATE, SAFETY CHAIN
21	400731	JACK ASSEMBLY AND PIN
22	1-512-010007-11	NUT, HEX 5/8-11
23	1-654-010059-11	SCREW, HEX HEAD CAP 5/8-11 X 3-1/2
24	100677	BUSHING
25	1-116-010019	BOX, MANUAL STORAGE
26	105-0093	HOSE CLAMP 4-1/2
27	114029	SCREW, HEX HEAD CAP 3/4-10 X 4 GR8
28	F-241-___	MANUAL, CM30 PARTS LIST
29	1-861-010032-21	WASHER, FLAT 3/4W
30	1-512-010005-15	NUT, HEX LOCK 3/4-10

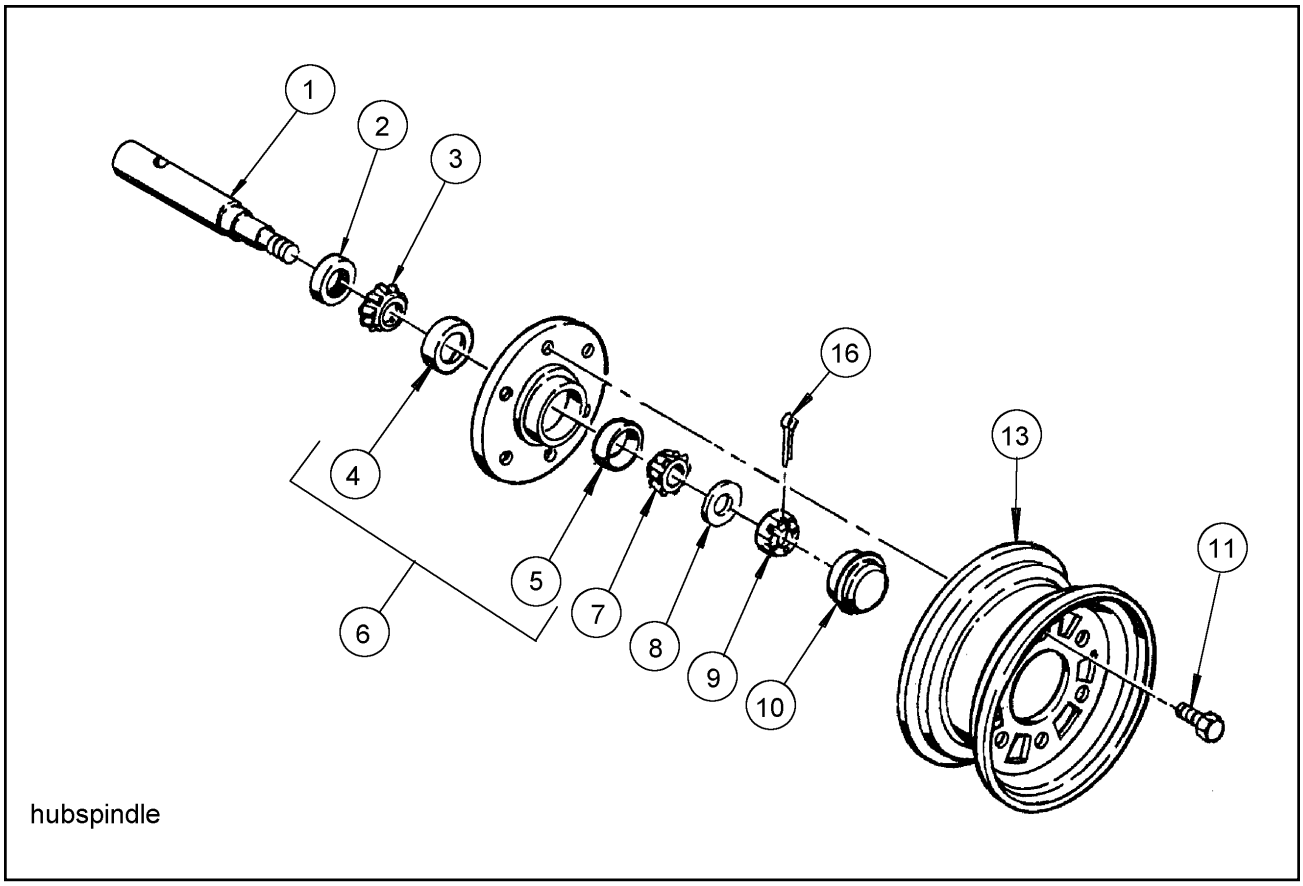


Figure 1-7 Hub and Spindle Assembly

HUB AND SPINDLE ASSEMBLY

ITEM	PART NO.	DESCRIPTION
1	1D66111	SPINDLE 2 X 11-1/4 (10'-15')
	1D66112	SPINDLE 2 X 11-5/8 (18')
2	7044-59	SEAL
3	W983569	CONE, REAR
4	7446-10	CUP, REAR
5	7446-7	CUP, FRONT
6	1A573	HUB ASSEMBLY (W/ CUPS)
7	7445-11	CONE, FRONT
8	7602-14	WASHER, FLAT 3/4
9	3/4-16HSN	NUT, HEX SLOT 3/4-16
10	1D4419	CAP
11	70345406	BOLT, HUB
12	1A65709	WHEEL AND TIRE ASSEMBLY (INCL. ITEMS 13-15)
13	PA68447	RIM, 15 X 8 HEAVY
14	BD6104	TIRE, TUBELESS 9.51-15SL 6 PLY (NOT SHOWN)
15	7636-1	VALVE, RIM (NOT SHOWN)
16	W932018-4	PIN, COTTER 1/8 X 1-1/4

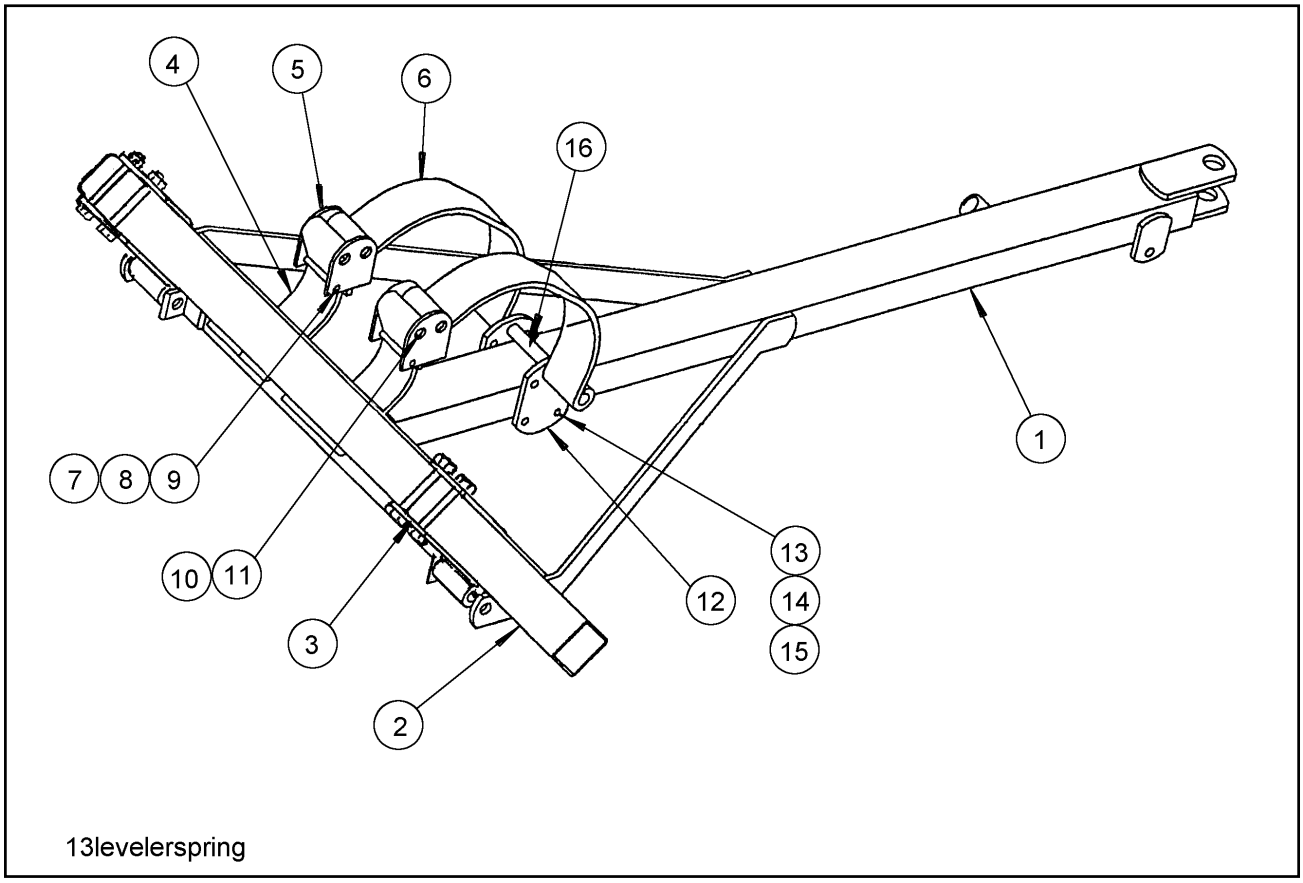
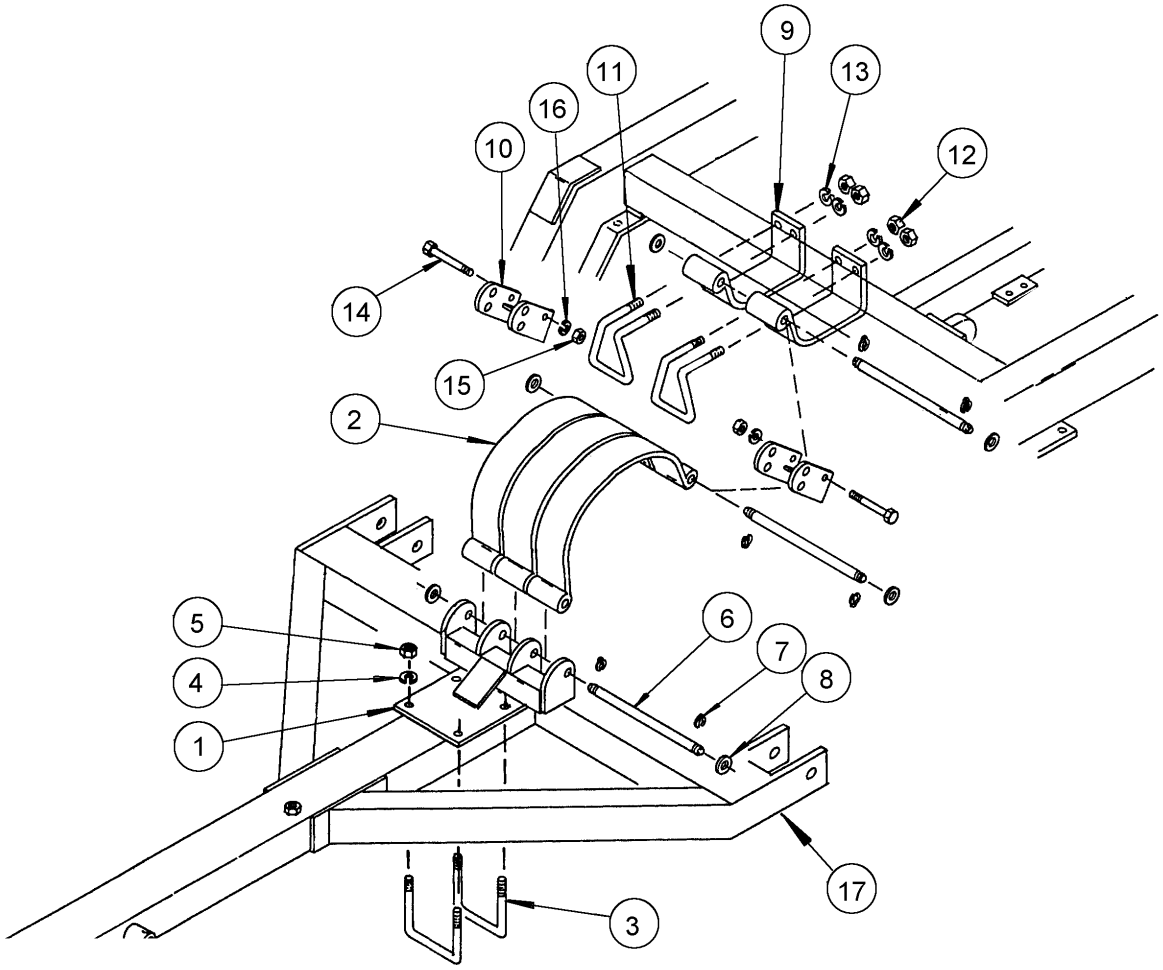


Figure 1-8 Leveler Spring Assembly (13' - 15' Models)

LEVELER SPRING ASSEMBLY (13' - 15' MODELS)

ITEM	PART NO.	DESCRIPTION
1	1A5807	TONGUE ASSEMBLY
2	-----	GANG TUBE
3	1A64289-T	PULL STRAP
4	41-0025-T	TRANSPORT LEVELER MOUNTING
5	43-1085-T	SHEAR PLATE
6	41-0036-T	LEVELER SPRING
7	1-654-010055-16	SCREW, HEX HEAD CAP 1/2-13 X 5-1/2
8	1-512-010007-09	NUT, HEX 1/2-13
9	1-861-010034-13	WASHER, SPLIT LOCK 1/2
10	7759-5-M	PIVOT PIN
11	1R41044	KLIP RING
12	41-0039-T	LEVELER SLIDE
13	113064	SCREW, HEX HEAD CAP 5/8-11 X 7
14	1-861-010034-15	WASHER, SPLIT LOCK 5/8
15	1-512-010007-11	NUT, HEX 5/8-11
16	7759-2-M	ANCHOR PIN



18transleveler

Figure 1-9 Leveler Spring Assembly (18’ Model)

LEVELER SPRING ASSEMBLY (18’ MODEL)

ITEM	PART NO.	DESCRIPTION
1	43-1084-T	ANCHOR MOUNT
2	41-0036-T	LEVELER SPRING
3	43-0136	U-BOLT 7/8
4	1-861-010034-19	WASHER, SPLIT LOCK 7/8
5	1-512-010007-13	NUT, HEX 7/8
6	43-0176-M	ANCHOR PIN
7	1R41044	KLIP RING
8	1-861-010032-25	WASHER, FLAT 1”
9	41-0025-T	TRANSPORT LEVELER MOUNTING
10	43-1085-T	SHEAR PLATE
11	41-0063	U-BOLT 3/4
12	1-861-010034-17	WASHER, SPLIT LOCK 3/4
13	1-512-010007-12	NUT, HEX 3/4
14	1-654-010055-16	SCREW, HEX HEAD CAP 1/2-13 X 5-1/2
15	1-512-010007-09	NUT, HEX 1/2-13
16	1-861-010034-13	WASHER, SPLIT LOCK 1/2
17	1A65410	TONGUE ASSEMBLY

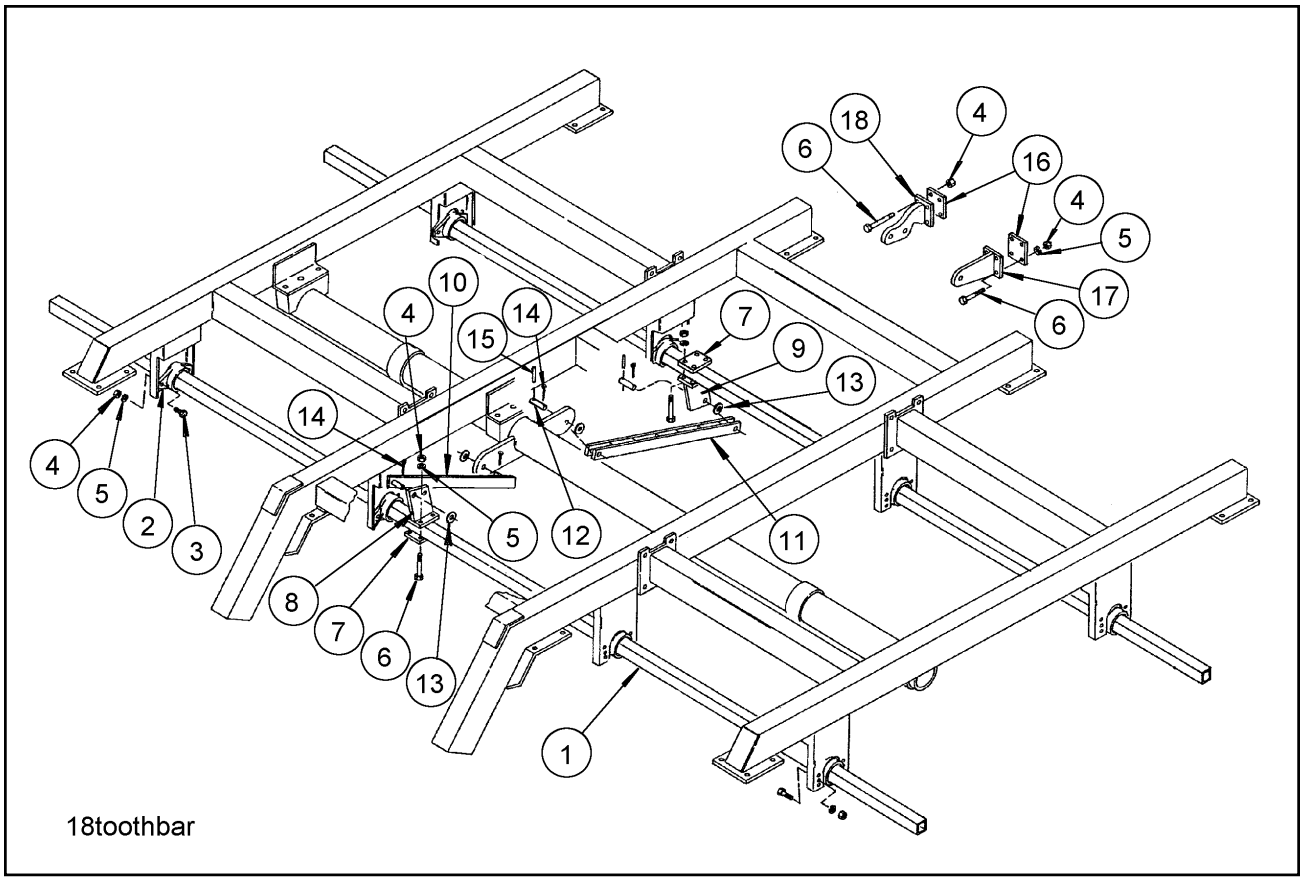


Figure 1-10 Toothbar Assembly (18' Model)

TOOTHBAR ASSEMBLY (18' MODEL)

ITEM	PART NO.	DESCRIPTION
1	1D67863	TOOTH BAR
2	41-0069-D	RETAINER
3	1-654-010055-03	SCREW, HEX HEAD CAP 1/2-13 X 1-1/2
4	1-512-010007-09	NUT, HEX 1/2
5	1-861-010034-13	WASHER, SPLIT LOCK 1/2
6	1-654-010055-14	SCREW, HEX HEAD CAP 1/2-13 X 4-1/2
7	43-0036-D	BASE, C TINE
8	43-1088	FRONT LINK BRACKET, C TINE
9	43-1089	REAR LINK BRACKET, C TINE
10	43-1045-D	FRONT LINK ASSEMBLY
11	43-1073-D	REAR LINK ASSEMBLY
12	43-0232-M	LINKAGE PIN
13	1-861-010032-25	WASHER, FLAT 1"
14	1-557-010362-63	PIN, COTTER 1/4 X 2
15	1-647-010004257	PIN, SPRING 3/8 X 2-1/2
16	43-0036-D	BASE LINK BRACKET
17	43-1104	TOOTHBAR LEVER, REAR
18	43-1105	TOOTHBAR LEVER, FRONT

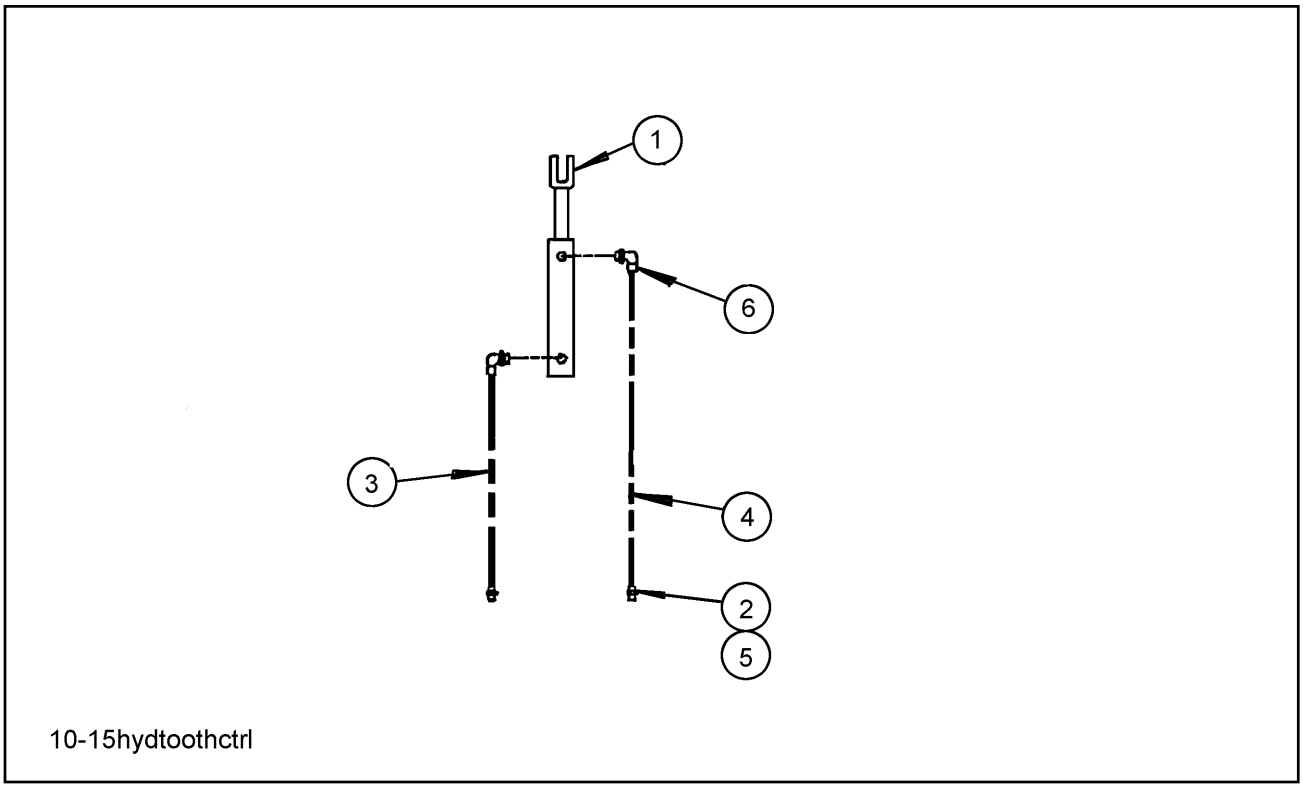


Figure 1-11 Hydraulic Linkage Assembly (10' - 15' Models)

HYDRAULIC LINKAGE ASSEMBLY (10 - 15' MODELS)

ITEM	PART NO.	DESCRIPTION	QTY.
1	364548	HYDRAULIC CYLINDER 3 X 8 (SEE PAGE 1-22)	1
2	8010-4	COUPLER, MALE 1/2	2
3	7760-222	HOSE, HYD 3/8 X 222	1
4	7760-248	HOSE, HYD 3/8 X 248	1
5	2021-8-8S	ADAPTER	2
6	W939736	90^{o} ELBOW	2

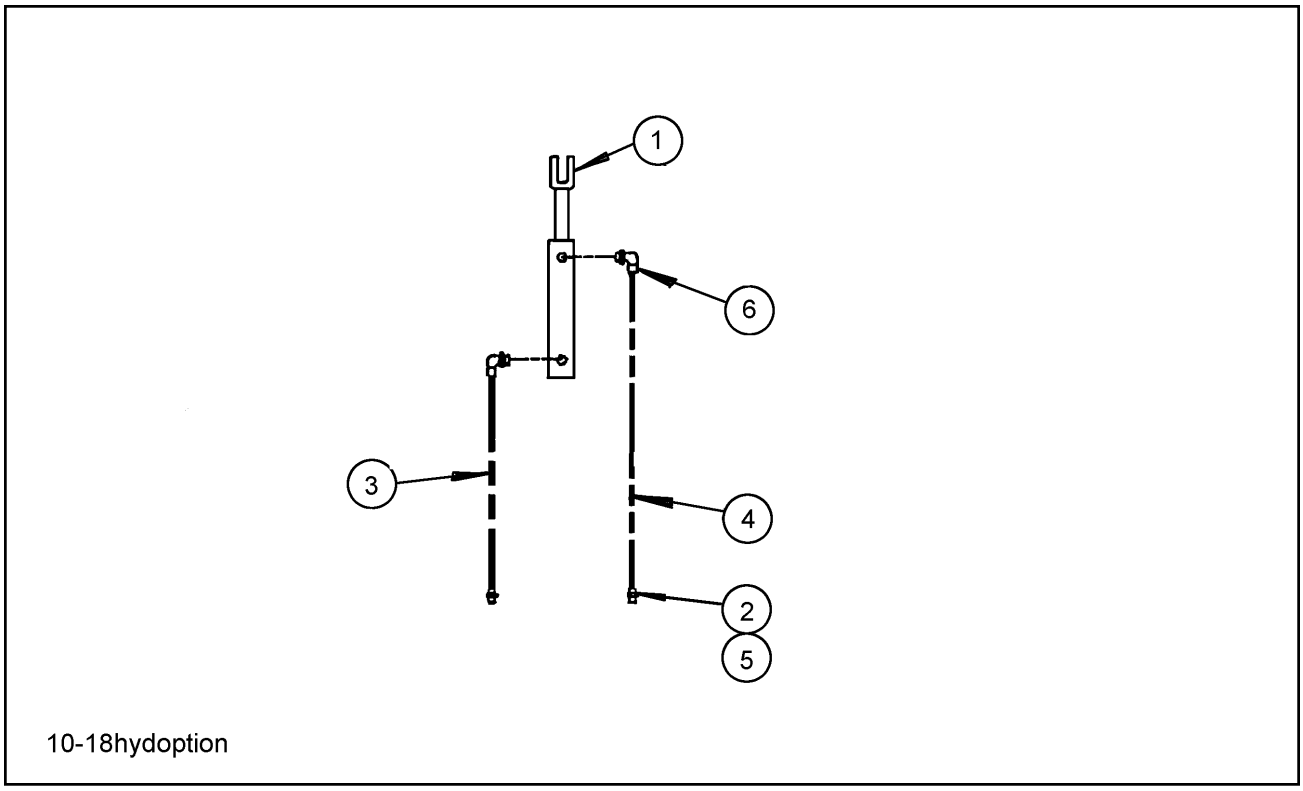
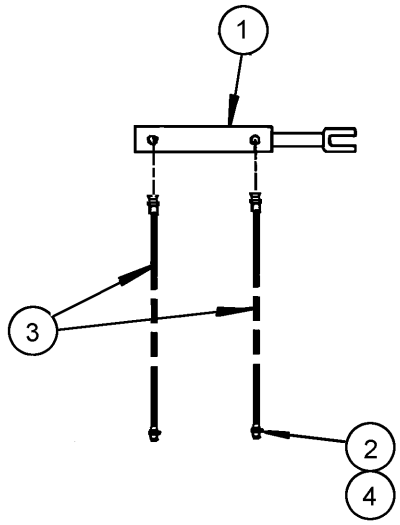


Figure 1-12 Hydraulic Option (10'-18' Models)

HYDRAULIC OPTION (10' - 18' MODELS)

ITEM	PART NO.	DESCRIPTION	QTY.
1	1A64157	HYDRAULIC CYLINDER 3-1/2 X 16 (SEE PAGE 1-23)	1
2	8010-4	COUPLER, MALE 1/2	2
3	364497	HOSE, HYD 3/8 X 250	1
4	7760-258	HOSE, HYD 3/8 X 258	1
5	2021-8-8S	ADAPTER	2
6	W939736	90^{o} ELBOW	2
7	105874	TIE STRAP PLASTIC (NOT SHOWN)	AR



10-18hyddepthstopoption

Figure 1-13 Hydraulic Depth Stop Option (10’-18’ Models)

HYDRAULIC DEPTH STOP OPTION (10’-18’ MODELS)

ITEM	PART NO.	DESCRIPTION	QTY.
1	1A63878	HYDRAULIC CYLINDER 3-1/2 X 16 (SEE PG 1-25 - 1-27)	1
2	8010-4	COUPLER, MALE 1/2	2
3	7760-186	HOSE, HYD 3/8 X 186	2
4	2021-8-8S	ADAPTER	2
5	105874	TIE STRAP PLASTIC (NOT SHOWN)	AR

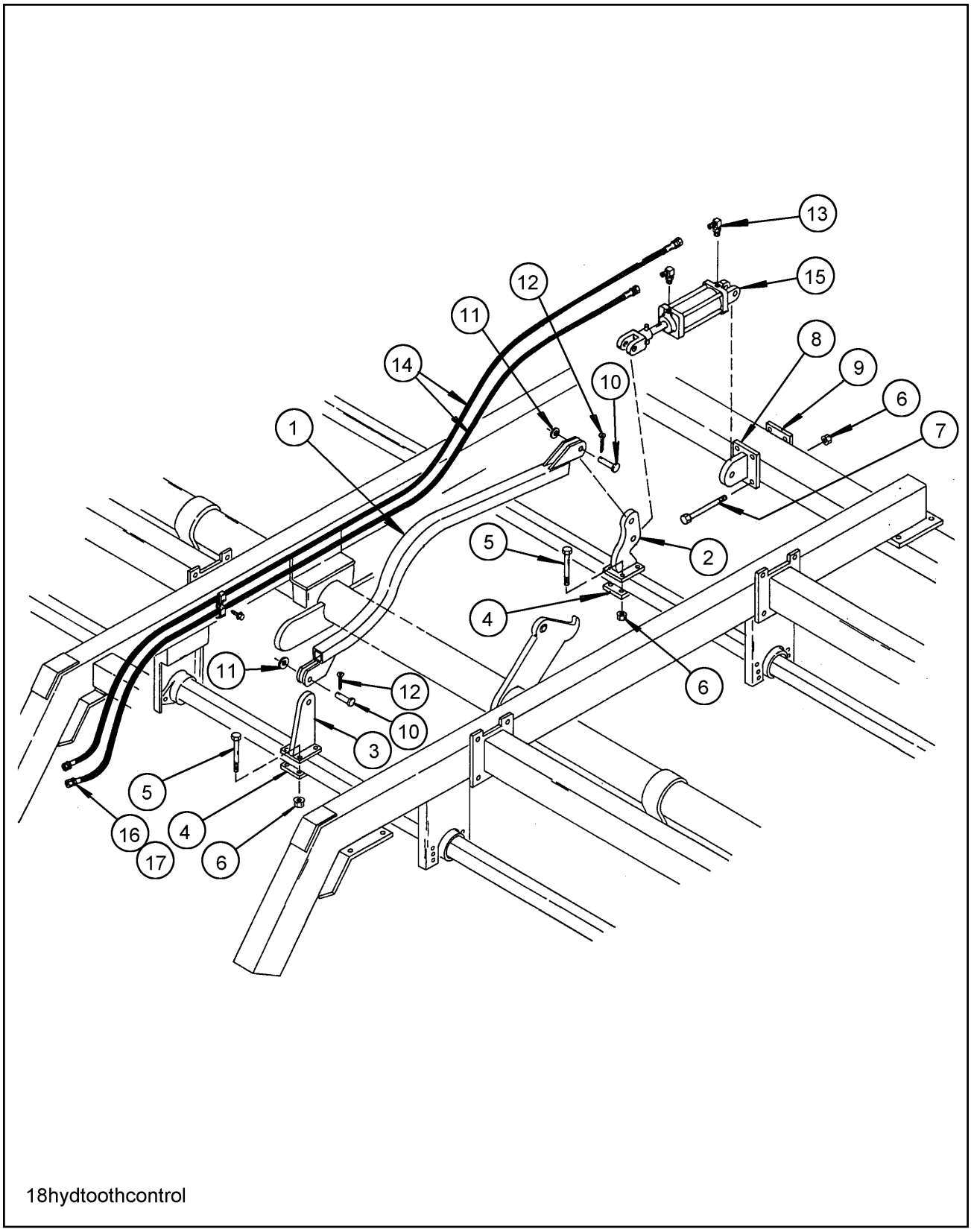


Figure 1-14 Hydraulic Tooth Control Assembly (18’ Model)

HYDRAULIC TOOTH CONTROL ASSEMBLY (18’ MODEL)

ITEM	PART NO.	DESCRIPTION
1	43-1123	TOOTH BAR LINK
2	43-1104	TOOTH BAR LEVER, REAR
3	43-1105	TOOTH BAR LEVER, FRONT
4	43-0218-D	PLATE, LEVER
5	1-654-010055-16	SCREW, HEX HEAD CAP 1/2-13 X 5-1/2
6	W915919-4	NUT, WHIZ FLANGE LOCK 1/2
7	W908234-4	SCREW, HEX HEAD CAP 1/2-13 X 7-1/2
8	43-1184	CYLINDER ANCHOR MOUNT
9	43-0281-D	PLATE, CYLINDER ANCHOR
10	W933039-4	PIN, CLEVIS 3/4 X 2-1/2
11	1-861-010032-20	WASHER, FLAT 3/4
12	W932018-4	PIN, COTTER 1/8 X 1-1/4
13	W939736	ELBOW, 90
14	7760-270	HOSE, 3/8 X 270
15	1A63733	CYLINDER, HYD 3-3/4 X 8 (SEE PAGE 1-29)
16	8010-4	COUPLER, MALE 1/2
17	2021-8-8S	ADAPTER

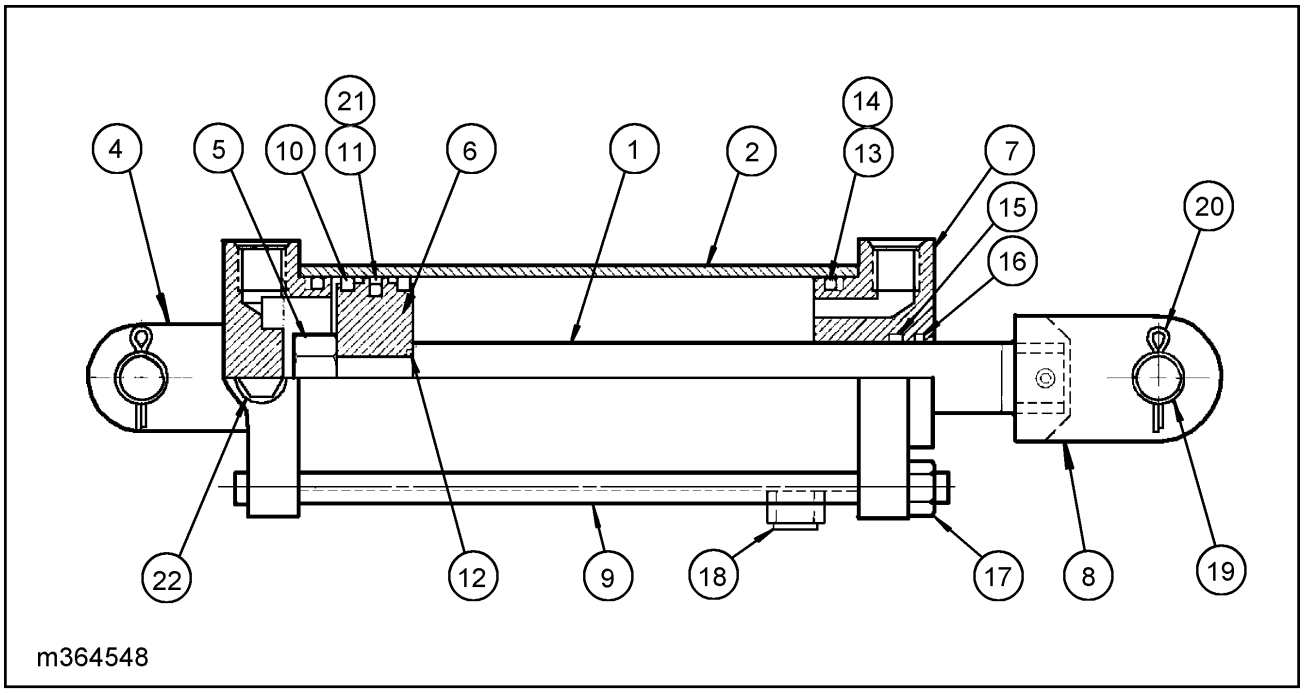


Figure 1-15 3 X 8 Hydraulic Cylinder Assembly

3 X 8 HYDRAULIC CYLINDER

ITEM	PART NO.	DESCRIPTION
	364548	CYLINDER, HYDRAULIC 3 X 8
1	1R61457	PISTON ROD
2	1R61896	TUBE ASSEMBLY
4	1R61437	BUTT
5	22944	NUT, LOCK
6	1R61897	PISTON
7	1R61712	GLAND
8	1R61453	CLEVIS ASSEMBLY
9	1R61713	TIE ROD
*10	1R61898	BEARING RING
*11	1R61899	TEFLON SEAL
*12	7049-23	O-RING
*13	7049-34	O-RING
*14	7593-6	WASHER, BACKUP
*15	1R61459	U-CUP
*16	1R61456	WIPER
17	17330	NUT
18	1R61685	PLUG W/ O-RING
19	1R61430	PIN, CLEVIS
20	22643	COTTER PIN
*21	1R61900	O-RING
22	22913	PLUG W/ O-RING
	1R61901	SEAL KIT

* ITEMS INCLUDED IN SEAL KIT

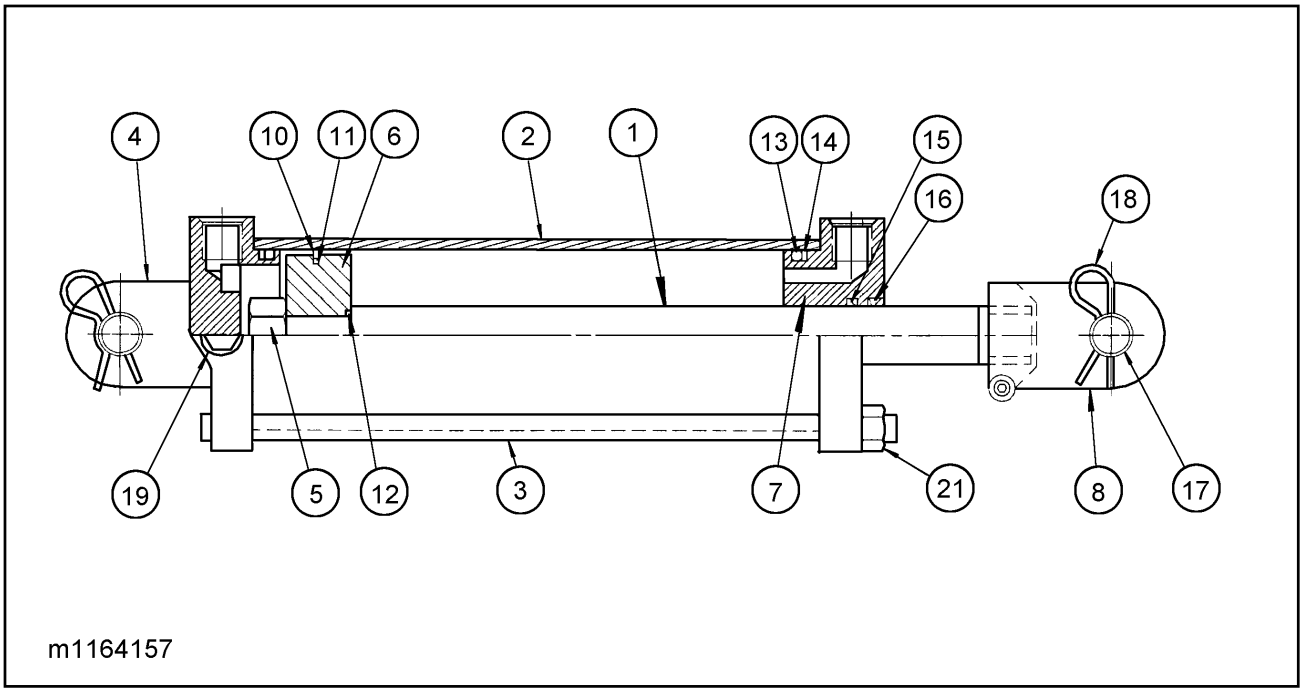


Figure 1-16 3-1/2 X 16 Hydraulic Cylinder Assembly

3-1/2 X 16 HYDRAULIC CYLINDER

ITEM	PART NO.	DESCRIPTION
	1A64157	CYLINDER, HYDRAULIC 3-1/2 x 16
1	1R61446	PISTON ROD
2	1R61447	TUBE ASSEMBLY
3	1R61518	TIEROD
4	1R61914	BUTT
5	22944	NUT, LOCK
6	1R61441	PISTON
7	1R61449	GLAND
8	1R61707	CLEVIS ASSEMBLY
*10	1R61442	SEAL
*11	7049-68	O-RING
*12	7049-23	O-RING
*13	7049-16	O-RING
*14	7593-26	WASHER, BACKUP
*15	1R61445	U-CUP
*16	1R61444	WIPER
17	1R61706	PIN, CLEVIS 1-1/4
18	7712-2	CLIP, HAIRPIN
19	22913	PLUG
21	15388	NUT
	1R61440	SEAL KIT

* ITEMS INCLUDED IN SEAL KIT

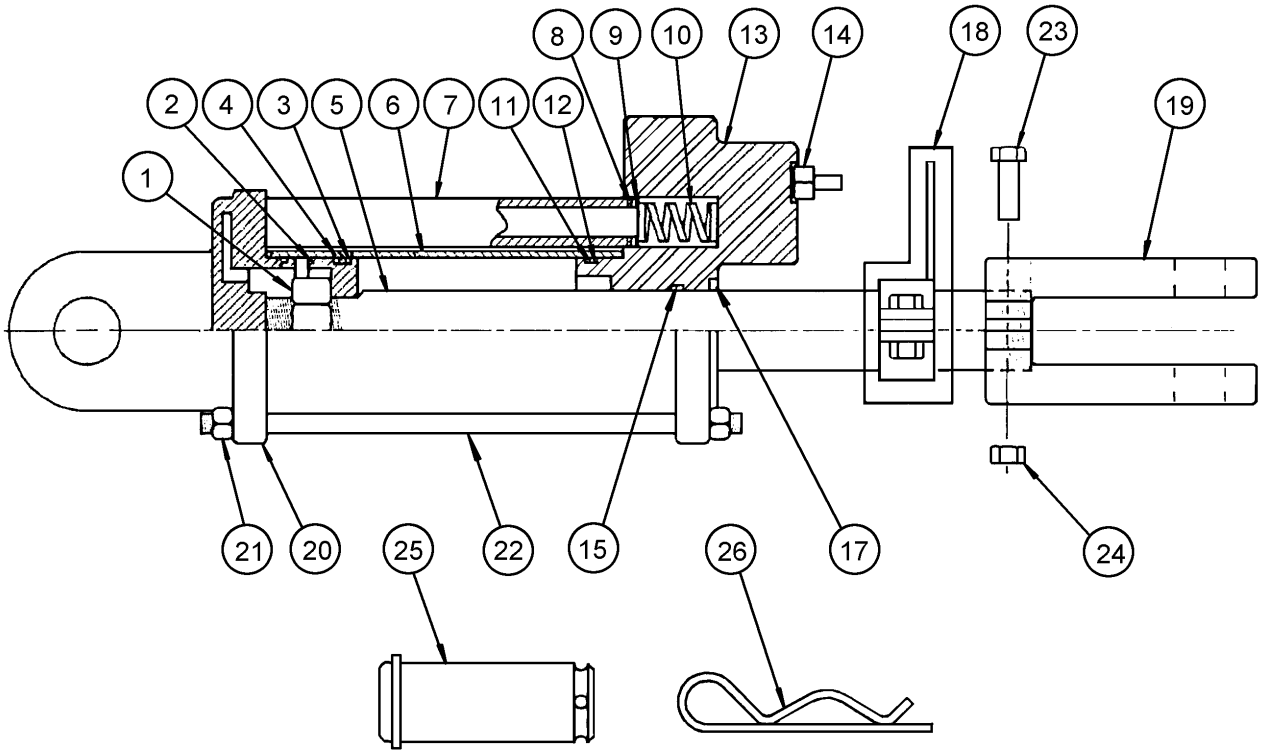


Figure 1-17 3-1/2 X 16 Hydraulic Cylinder Assembly

3-1/2 X 16 HYDRAULIC CYLINDER W/ DEPTH STOP

ITEM	PART NO.	DESCRIPTION
	1A63878	CYLINDER, HYDRAULIC 3-1/2 x 16 (MANUFACTURED BY CROSS)
1	22027	PISTON NUT
2	1R40809	PISTON
*3	7049-46	O-RING
*4	7593-13	WASHER, BACKUP
5	1R40802	ROD
6	1R61170	TUBE
7	1R61187	FEED TUBE
*8	7593-22	WASHER, BACKUP
*9	7049-25	O-RING
10	1R61181	SPRING
*11	7049-16	O-RING
*12	7593-26	WASHER, BACKUP
13	1R61183	HEAD
14	1R61180	CARTRIDGE ASSEMBLY
*15	1R61955	U-CUP
*17	7044-106	WIPER
18	1R61177	ACTUATOR ASSEMBLY
19	1R40898	CLEVIS ROD ASSEMBLY
20	1R61178	BASE
21	15619	TIEROD NUT
22	1R61171	TIEROD
23	22602	CLEVIS CAPSCREW
24	15387	CLEVIS NUT
25	1R40823	CLEVIS PIN
26	7203-8	CLIP PIN
27	22657	PLUG (NOT SHOWN)
	1R61165	SEAL KIT

* ITEMS INCLUDED IN SEAL KIT

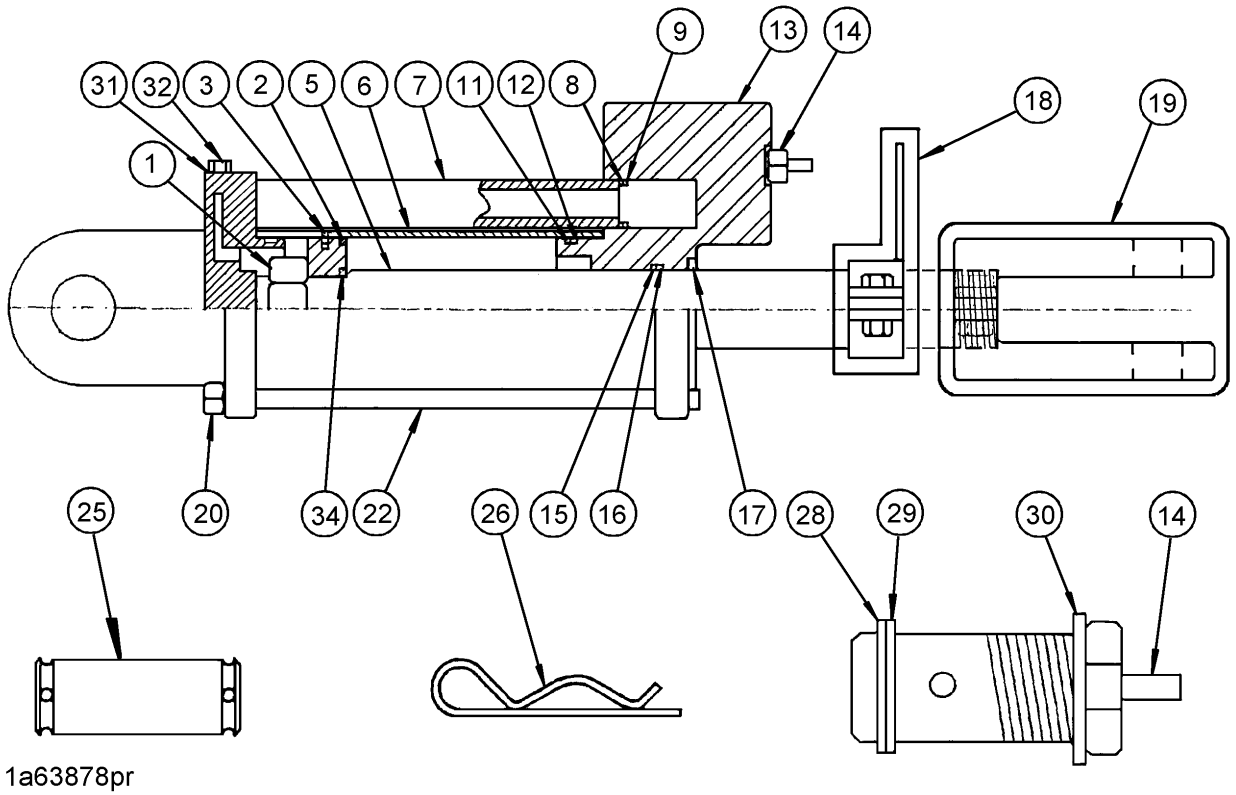


Figure 1-18 3-1/2 X 16 Hydraulic Cylinder Assembly

3-1/2 X 16 HYDRAULIC CYLINDER W/ DEPTH STOP

ITEM	PART NO.	DESCRIPTION
	1A63878	CYLINDER, HYDRAULIC 3-1/2 x 16 (MANUFACTURED BY PRINCE)
1	1R60164	PISTON NUT
2	43-0251	PISTON
*3	1R61120	TEFLON SEAL ASSEMBLY
5	1R41454	ROD
6	43-0244	TUBE
7	43-0246	FEED TUBE
*8	7593-22	WASHER, BACKUP
*9	7049-25	O-RING
*11	7049-5	O-RING
*12	7593-32	WASHER, BACKUP
13	43-0252	HEAD
14	1R61605	CARTRIDGE ASSEMBLY
*15	7049-26	U-CUP
*16	7593-15	WIPER
17	1R40538	ACTUATOR ASSEMBLY
18	1R61604	CLEVIS ROD ASSEMBLY
19	1R61107	BASE
20	43-0253	TIEROD NUT
22	43-0247	TIEROD
25	1R40781	CLEVIS PIN
26	7203-2	CLIP PIN
27	17294	PLUG (NOT SHOWN)
*28	7593-23	WASHER, BACKUP
*29	7049-50	O-RING
*30	7049-48	O-RING
31	1R41455	NYLTITE SEAL
32	1R61188	CAP SCREW
*34	7049-23	O-RING
	1R41014	SEAL KIT

* ITEMS INCLUDED IN SEAL KIT

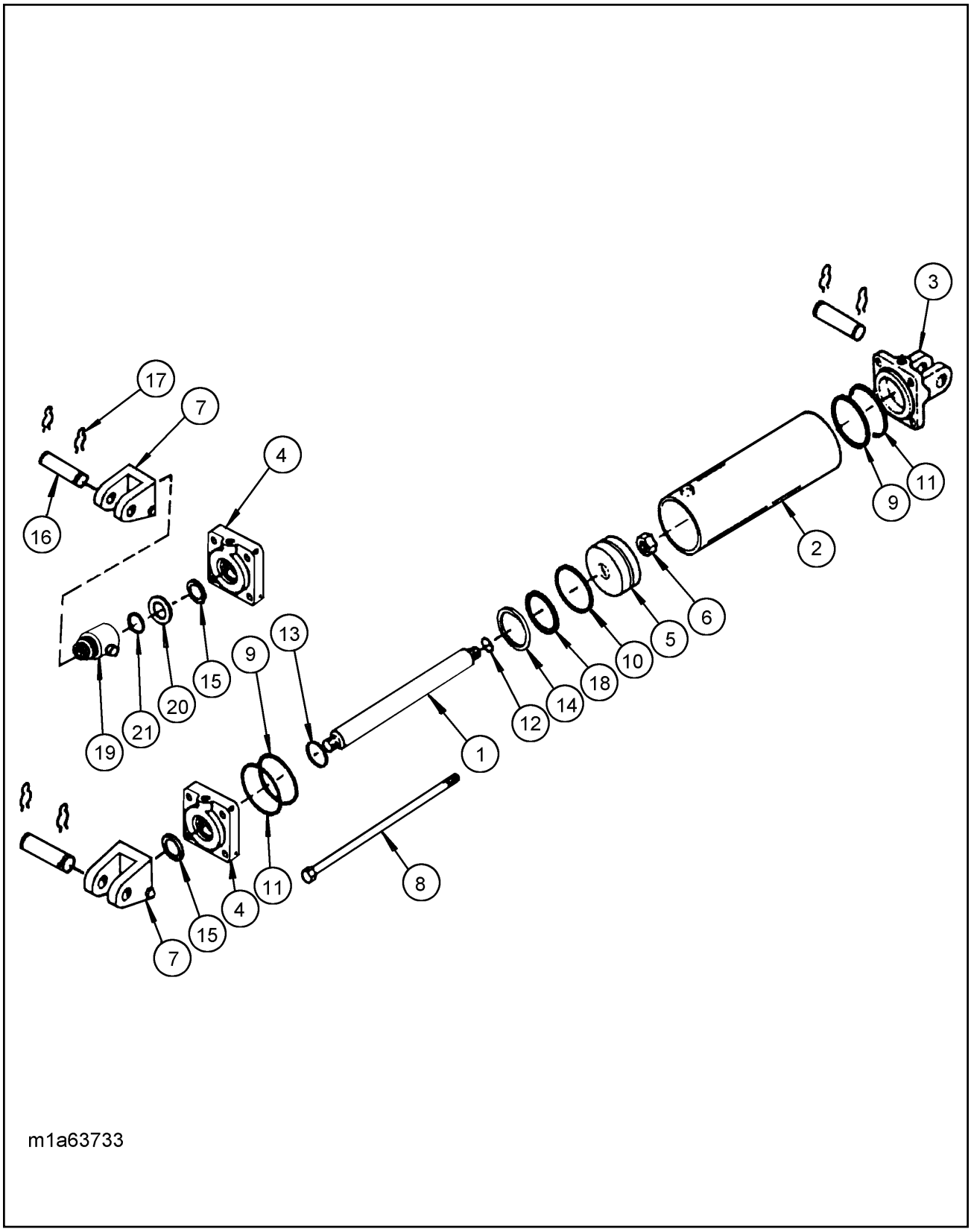


Figure 1-19 3-1/2 X 16 Hydraulic Cylinder Assembly

3-3/4 X 8 HYDRAULIC CYLINDER W/ STROKE CONTROL

ITEM	PART NO.	DESCRIPTION
	1A63733	3-3/4 X 8 HYDRAULIC CYLINDER W/ STROKE CONTROL
	EP6837	HYDRAULIC CYLINDER, 3-3/4 X 8
1	1R61508	PISTON ROD
2	1R61514	TUBE ASSEMBLY
3	1R61513	BUTT
4	1R61511	GLAND
5	1R61512	PISTON
6	22944	LOCK NUT
7	1R61503	CLEVIS ASSEMBLY
8	1R61502	TIE ROD
9	*	O-RING
10	*	BEARING RING
11	*	BACK-UP WASHER
12	*	O-RING
13	*	U-CUP
14	*	SEAL
15	*	WIPER
16	1R61430	CLEVIS PIN
17	7712-2	HAIRPIN CLIP
18	*	O-RING
	1R61497	SEAL KIT
19	1A63732	STROKE CONTROL ASSEMBLY
20	-----	COVER, STROKE CONTROL
21	-----	O-RING, STROKE CONTROL

* ITEMS INCLUDED IN SEAL KIT

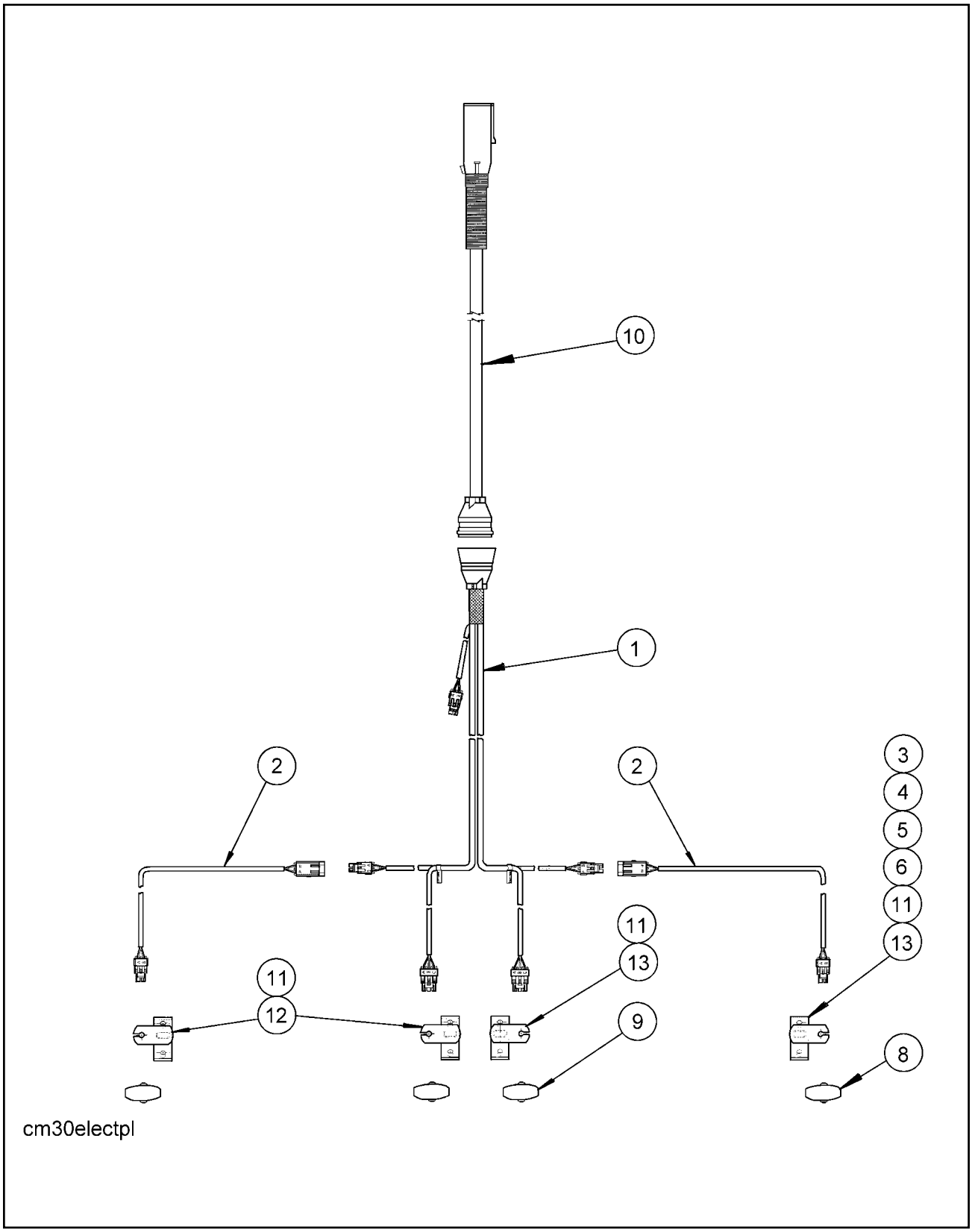


Figure 1-20 Electrical Installation

ELECTRICAL INSTALLATION

ITEM	PART NO.	DESCRIPTION	QTY.
1	N855762	HARNESS, LIGHT	1
2	N855772	EXTENSION, LIGHTING	2
3	1-512-010007-09	NUT, HEX 1/2-13	8
4	1-861-010032-14	WASHER, FLAT 1/2	8
5	1-861-010034-13	WASHER, SPLIT LOCK 1/2	8
6	366320	U-BOLT (10’ - 15’ MODELS)	4
	1D67440	U-BOLT (18’ MODEL)	4
7	105874	TIE, STRAP PLASTIC (NOT SHOWN)	AR
8	364593	LAMP ASSEMBLY, AMBER	2
9	364594	LAMP ASSEMBLY, RED	2
10	N855933	HARNESS, 25’ MAIN (10’ - 15’ MODELS)	1
	364604	HARNESS, 38’ MAIN (18’ MODEL)	1
11	364925	WELDMENT, LIGHT STAND (18’ MODEL)	4
12	364927	STAND, LIGHT LH (10’ - 15’ MODELS)	2
13	364928	STAND, LIGHT, RH (10’ - 15’ MODELS)	2

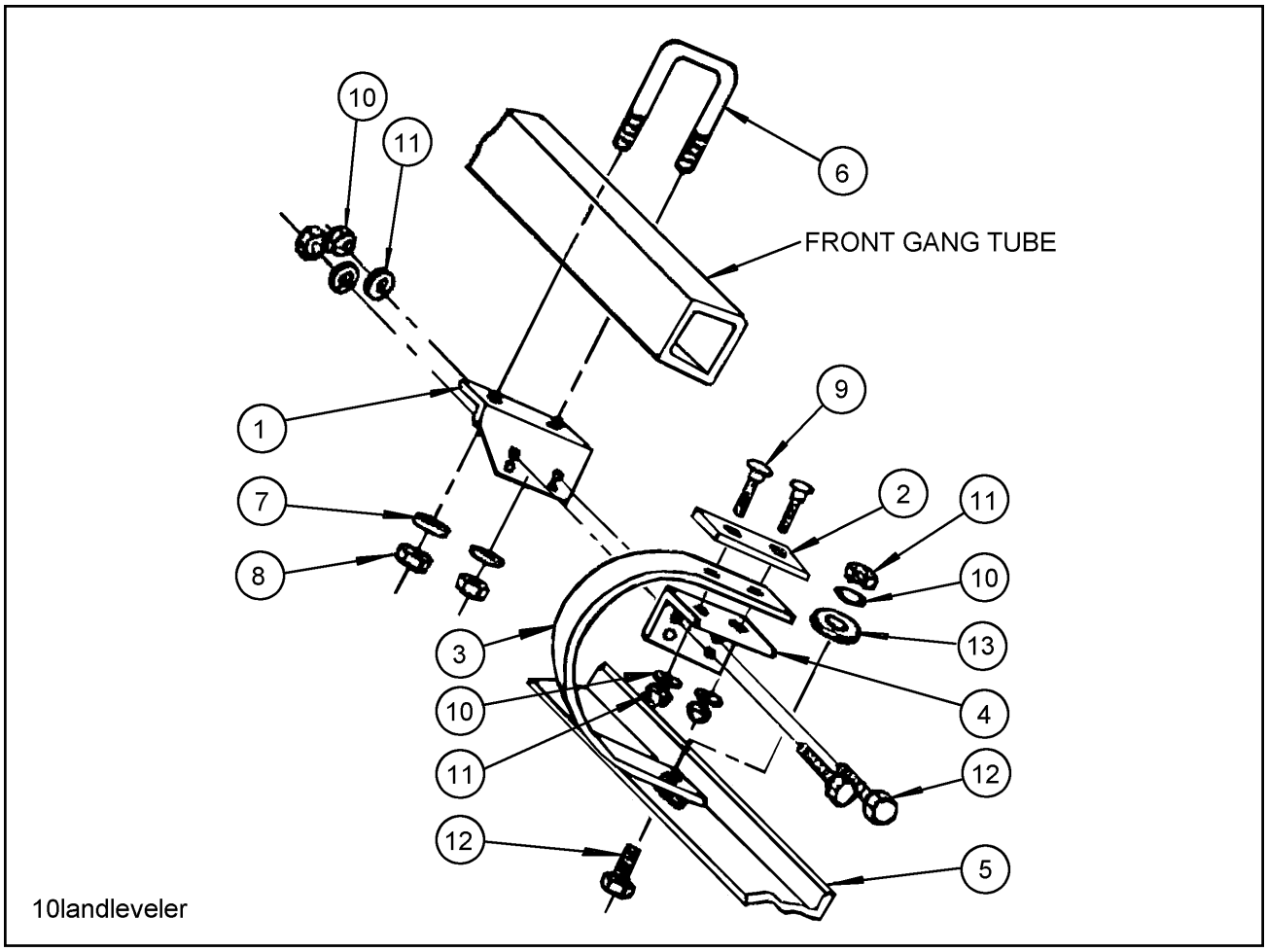


Figure 1-21 Land Leveler (10' - 15' Models)

LAND LEVELER (10' - 15' MODELS)

ITEM	PART NO.	DESCRIPTION
1	41-1106	MOUNTING ANGLE, LL
2	41-0099	STRAP, LL
3	41-0106	MOUNTING SPRING, LL
4	41-0101	ADJUST ANGLE, LL
5	41-0120	10' LEVELER ANGLE
	41-0102	12' LEVELER ANGLE
	41-0103	13' LEVELER ANGLE
	41-0104	14' LEVELER ANGLE
	41-0105	15' LEVELER ANGLE
6	41-0062	SQUARE U-BOLT
7	1-861-010034-17	WASHER, SPLIT LOCK 3/4-10
8	1-512-010007-12	NUT, HEX 3/4-10
9	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2
10	1-861-010034-13	WASHER, SPLIT LOCK 1/2
11	1-512-010007-09	NUT, HEX 1/2-13
12	1-654-010055-03	SCREW, HEX HEAD CAP 1/2-13 X 1-1/2
13	1-861-010032-15	WASHER, FLAT 1/2

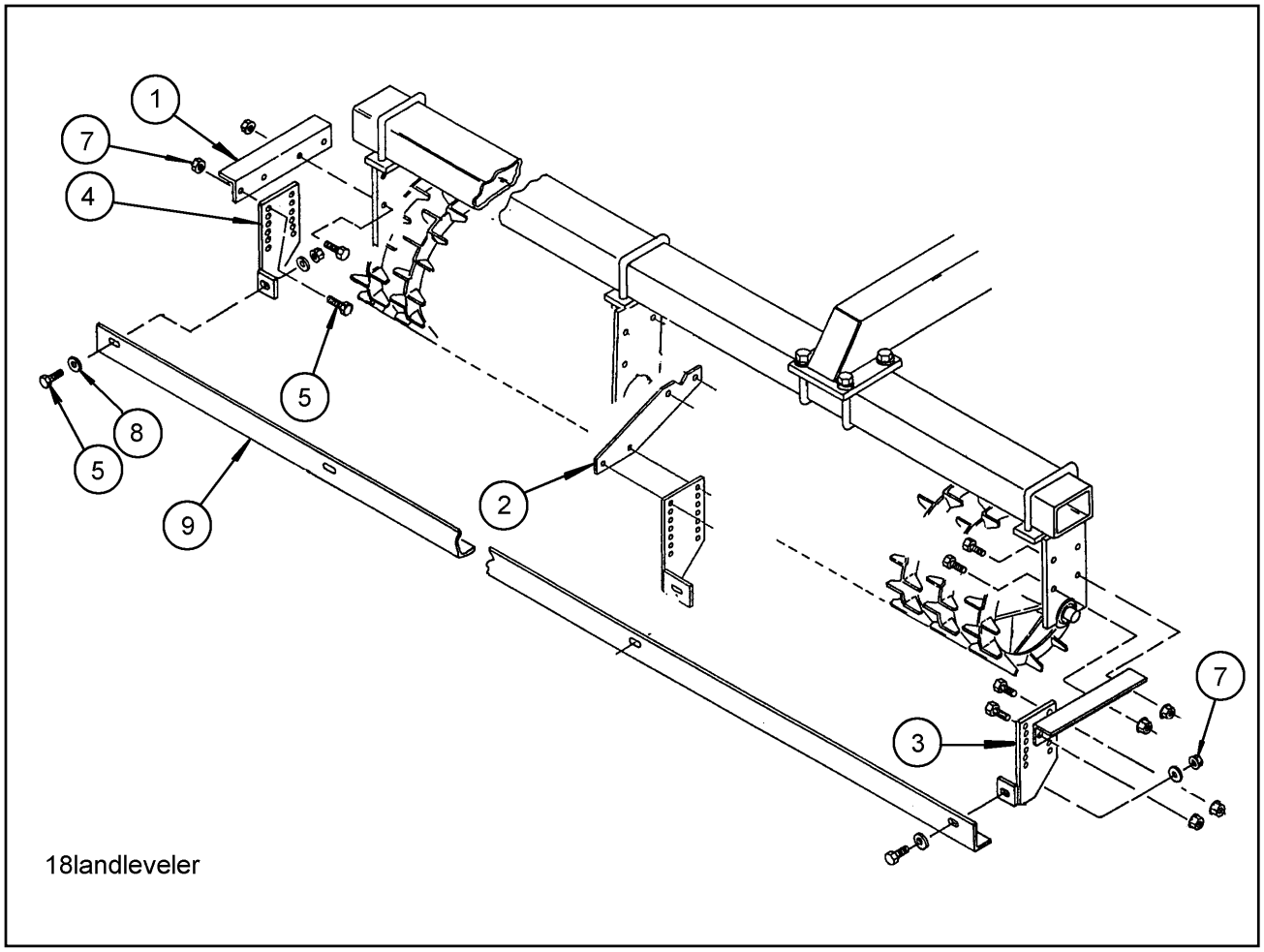


Figure 1-22 Land Leveler (18' Model)

LAND LEVELER (18' MODEL)

ITEM	PART NO.	DESCRIPTION
1	43-0196	MOUNTING ANGLE, SIDE
2	43-0197	MOUNTING PLATE
3	1A64054	BRACKET, ADJUSTING LH
4	1A64055	BRACKET, ADJUSTING RH
5	1-654-010055-03	SCREW, HEX HEAD CAP 1/2-13 X 1-1/2
7	W915919-4	WHIZ NUT, 1/2
8	1-861-010032-15	WASHER, FLAT 1/2
9	1D67861	LAND LEVELER ANGLE

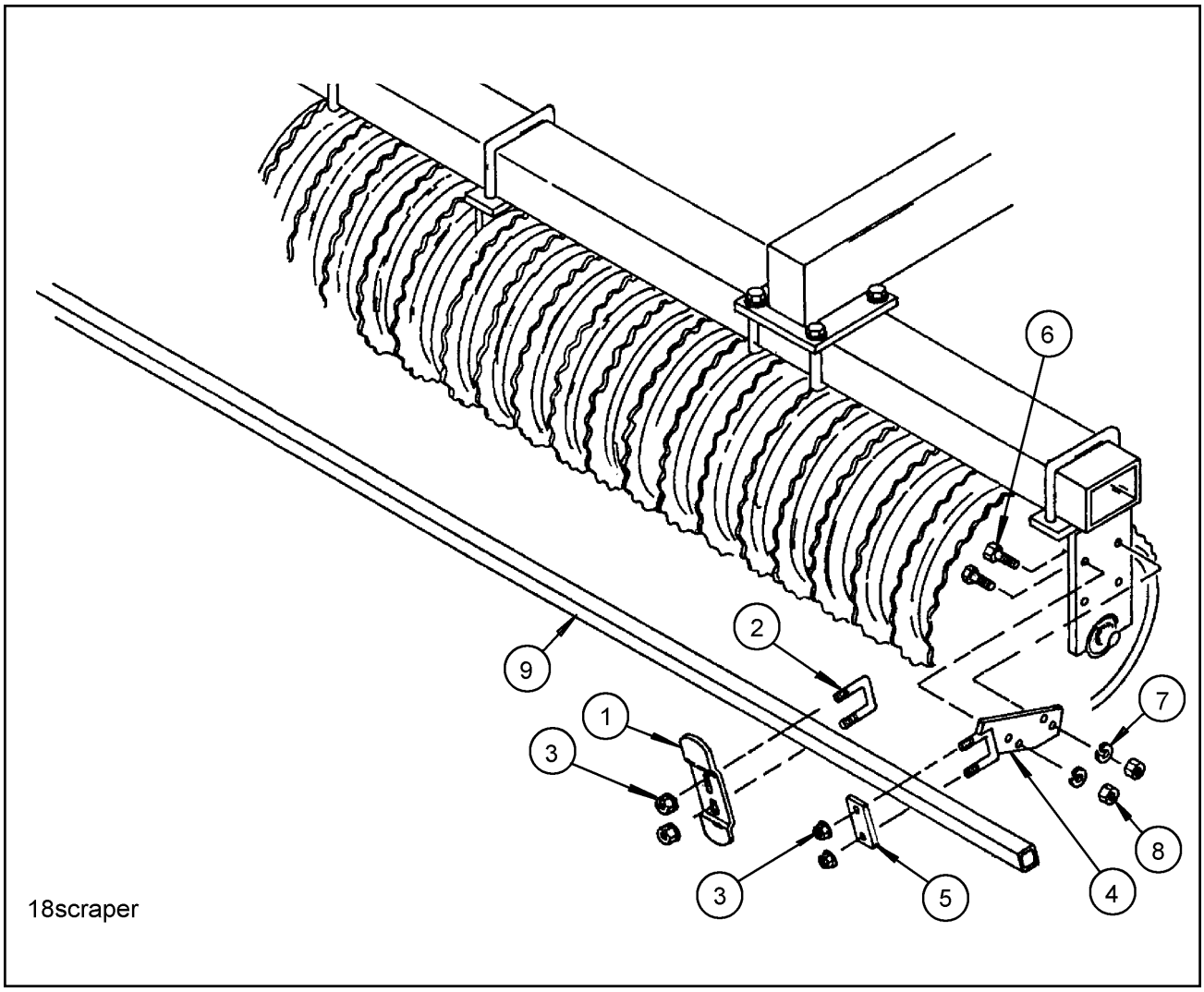


Figure 1-23 Scraper (18’ Model)

SCRAPER (18’ MODEL)

ITEM	PART NO.	DESCRIPTION
1	43-0051	SCRAPER
2	43-0135	U-BOLT
3	1-510-010001	NUT, HEX FLANGE 3/8
4	43-1152	SCRAPER SUPPORT BRACKET
5	43-0050	TAB, SCRAPER
6	1-654-010055-03	SCREW, HEX HEAD CAP 1/2-13 X 1-1/2
7	1-861-010034-13	WASHER, SPLIT LOCK 1/2
8	1-512-010007-09	NUT, HEX 1/2
9	1D67862	SCRAPER BAR

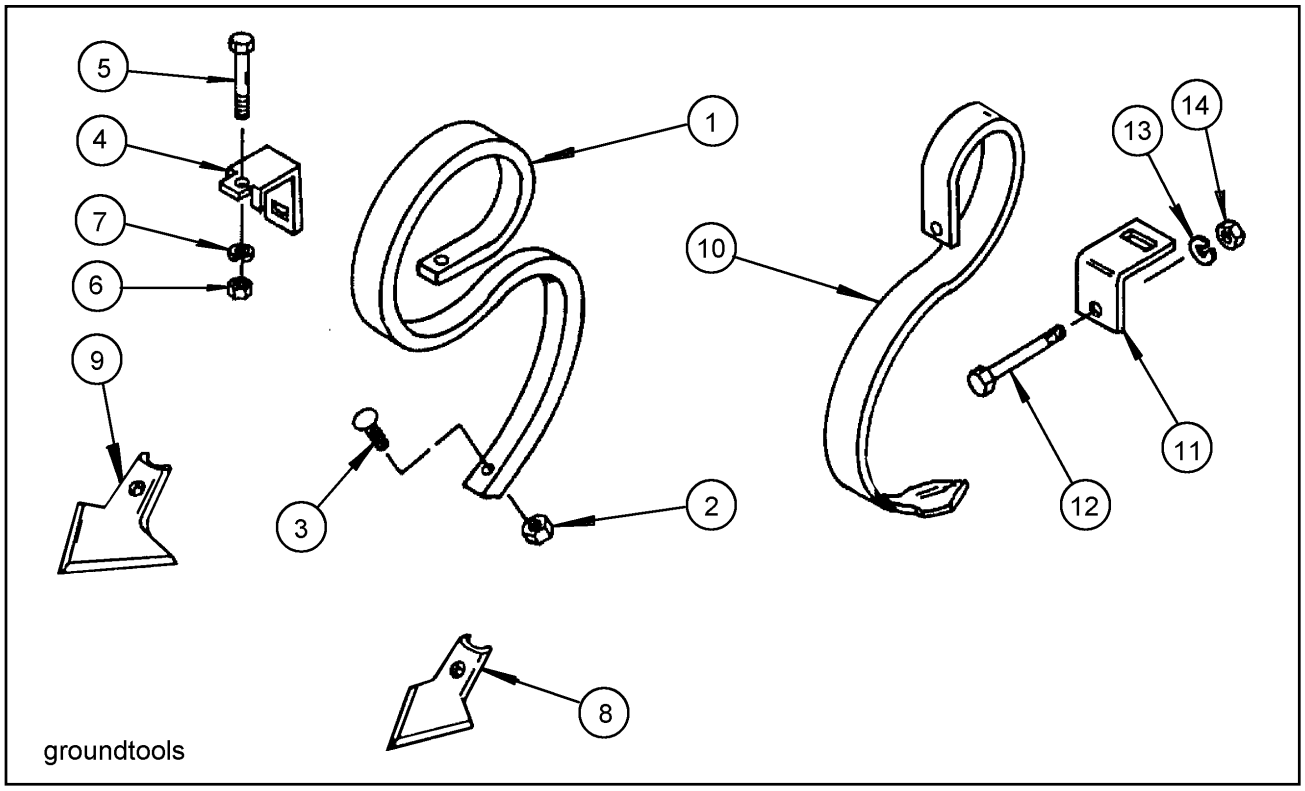


Figure 1-24 Ground Tool Assemblies

GROUND TOOL ASSEMBLIES

ITEM	PART NO.	DESCRIPTION
1	41-0076-D	S-TINE
2	1-512-010007-07	NUT, HEX 3/8-16
3	EP1982	PLOW BOLT 3/8-16 X 1-1/2
4	41-0077	TOOTH CLAMP
5	W908353-4	BOLT, 7/16-14 X 4
6	1-512-010007-08	NUT, HEX 7/16
7	1-861-010034-12	WASHER, SPLIT LOCK 7/16
8	38-0061-D	SHOVEL, 2-1/2”
9	38-0063	SHOVEL, 7”
10	1D66195	C LOOP TINE
11	1D66194	CLAMP, C LOOP TINE
12	1-654-010055-13	SCREW, HEX HEAD CAP 1/2-13 X 4
13	1-861-010034-13	WASHER, SPLIT LOCK 1/2
14	1-512-010007-09	NUT, HEX 1/2-13

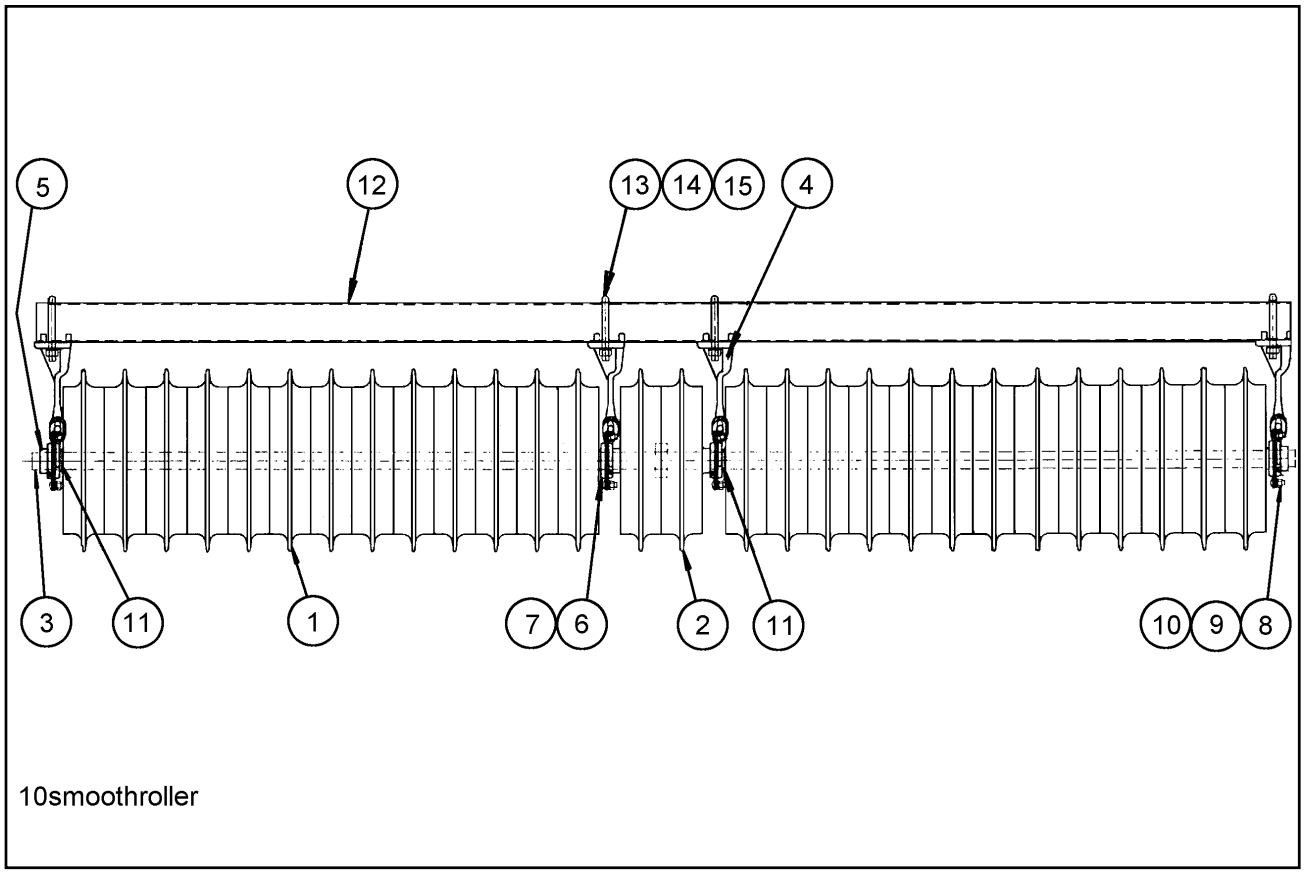


Figure 1-25 10’ Smooth Roller Gang Assembly

10’ SMOOTH ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	41-0017-D	17” SMOOTH ROLLER	
	41-0019-D	19” SMOOTH ROLLER	
2	21-0017-D	17” SMOOTH ROLLER SHORT HUB	
	21-0019-D	19” SMOOTH ROLLER SHORT HUB	
3	41-1121	AXLE WELD	
4	41-0058-T	ROLLER HANGER	
5	7745-37	BEARING W/ LOCK COLLAR	
6	EP6577	FLANGE W/ ZERK	
7	EP6578	FLANGE	
8	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
9	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
10	1-512-010007-09	NUT, 1/2-13	
11	1D27206	WASHER	
12	41-0114	GANG TUBE (10’)	
13	41-0062	U-BOLT	
14	1-861-010034-17	WASHER, SPLIT LOCK 3/4	
15	1-512-010007-12	NUT, HEX 3/4-10	

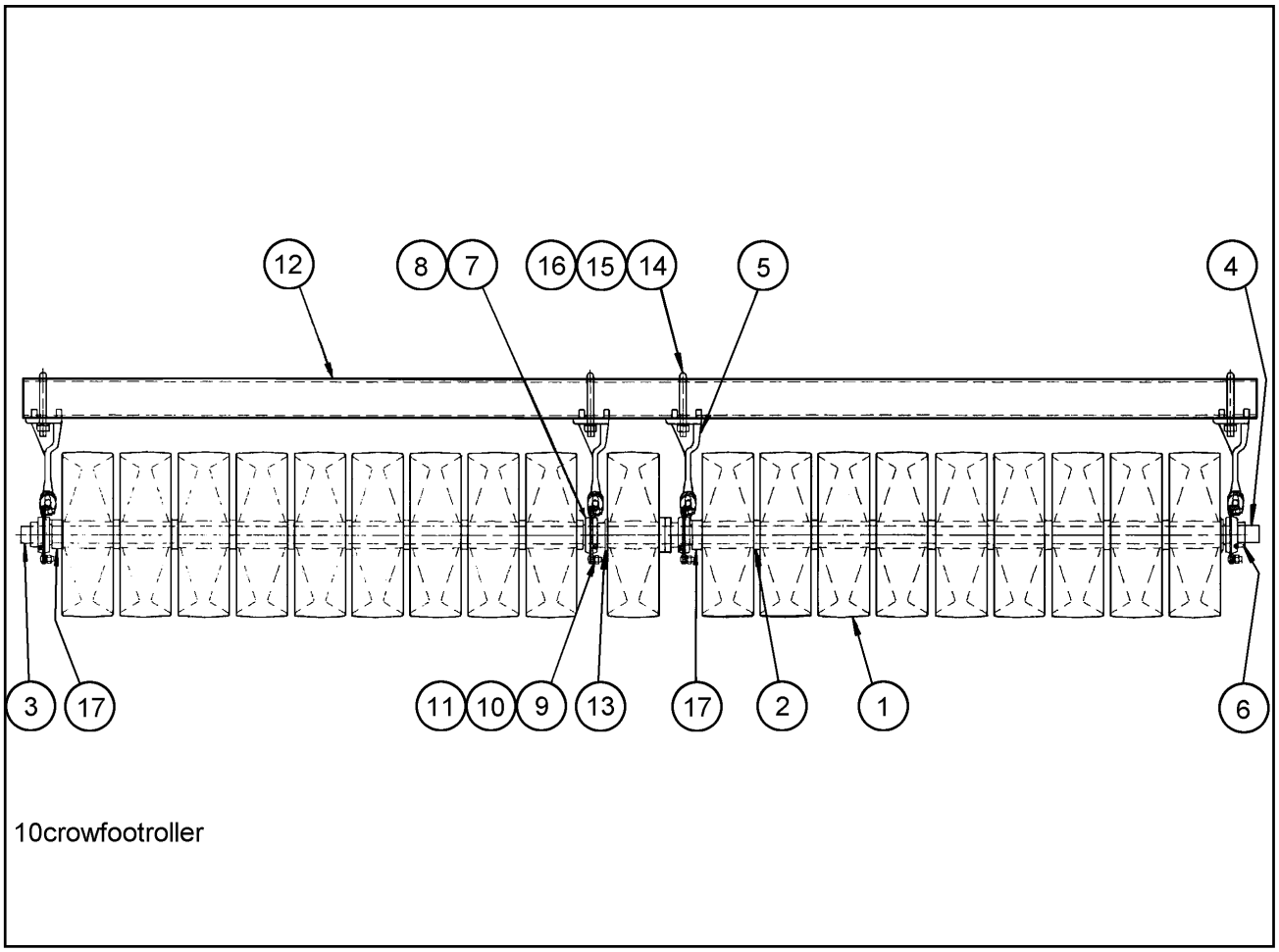


Figure 1-26 10’ Crowfoot Roller Gang Assembly

10’ CROWFOOT ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	21-0117-D	17” CROWFOOT WHEEL	
	21-0120-D	20” CROWFOOT WHEEL	
2	41-1066	SPACER, 11/16”	
3	41-1066	AXLE WELD LH	
4	41-1017	AXLE WELD RH	
5	41-0058-T	ROLLER HANGER	
6	7745-37	BEARING W/ LOCK COLLAR	
7	EP6577	FLANGE W/ ZERK	
8	EP6578	FLANGE	
9	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
10	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
11	1-512-010007-09	NUT, 1/2-13	
12	40-0114	GANG TUBE (10’)	
13	1R40939	SPACER, 9/32”	
14	41-0062	U-BOLT	
15	1-512-010007-12	NUT, HEX 3/4-10	
16	1-861-010034-17	WASHER, SPLIT LOCK 3/4	
17	1B706-D	SPACER, 1”	

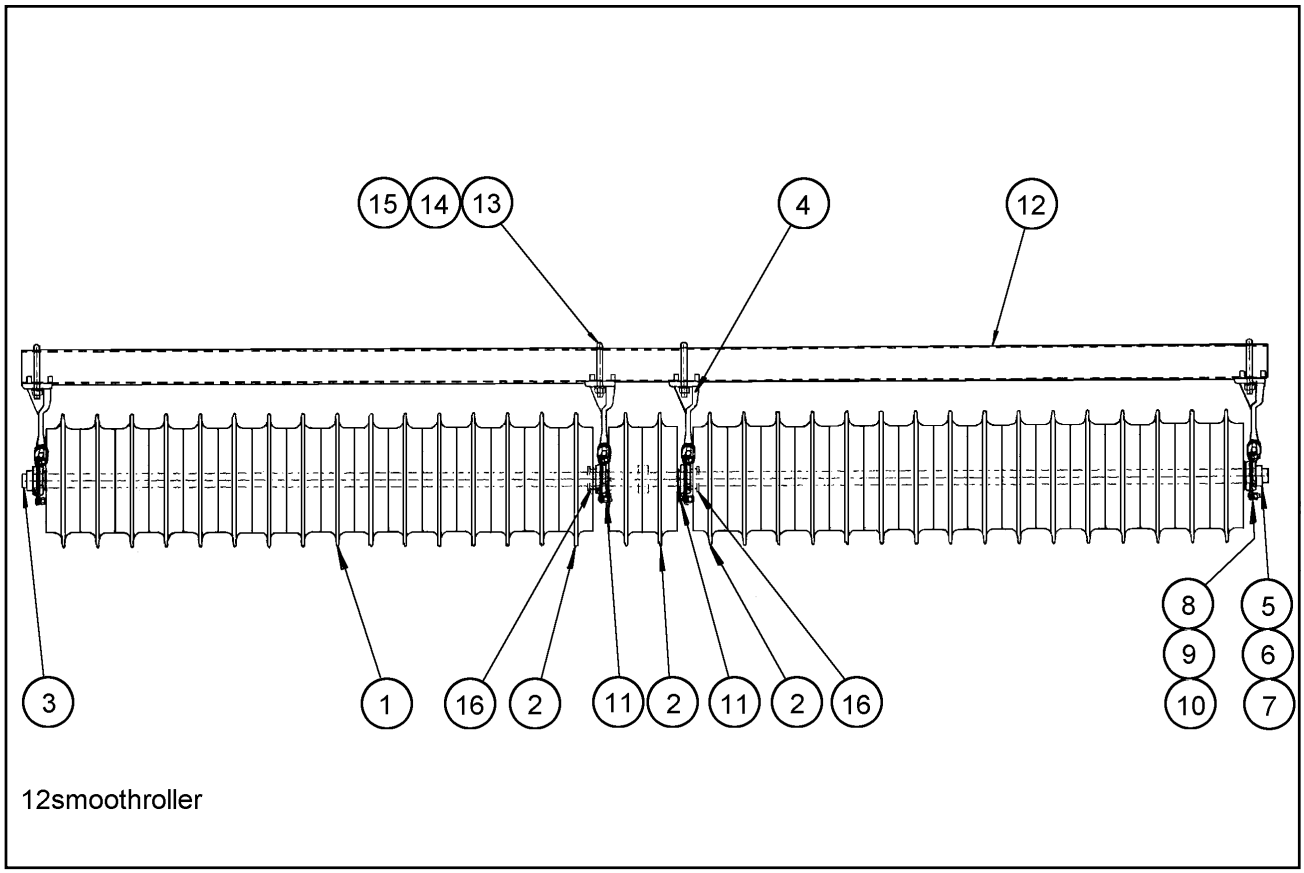


Figure 1-27 12' Smooth Roller Gang Assembly

12' SMOOTH ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	41-0017-D	17" SMOOTH ROLLER	
	41-0019-D	19" SMOOTH ROLLER	
2	21-0017-D	17" SMOOTH ROLLER SHORT HUB	
	21-0019-D	19" SMOOTH ROLLER SHORT HUB	
3	1A64062	AXLE WELD	
4	41-0058-T	ROLLER HANGER	
5	7745-37	BEARING W/ LOCK COLLAR	
6	EP6577	FLANGE W/ ZERK	
7	EP6578	FLANGE	
8	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
9	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
10	1-512-010007-09	NUT, 1/2-13	
11	1D27206	WASHER	
12	40-0079	GANG TUBE (12')	
13	41-0062	U-BOLT	
14	1-861-010034-17	WASHER, SPLIT LOCK 3/4	
15	1-512-010007-12	NUT, HEX 3/4-10	
16	1R40939	SPACER, 9/32"	

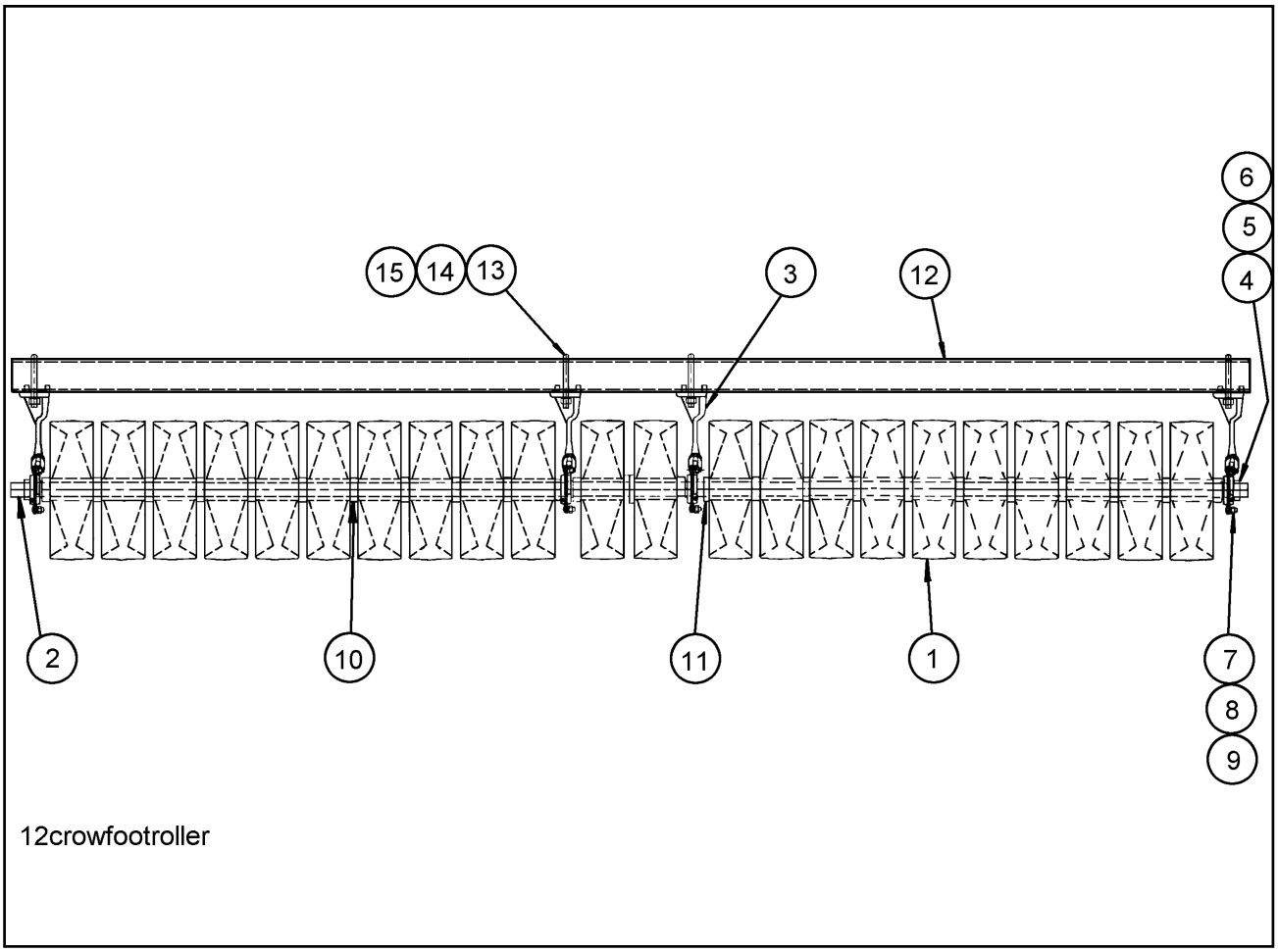


Figure 1-28 12’ Crowfoot Roller Gang Assembly

12’ CROWFOOT ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	21-0117-D	17” CROWFOOT WHEEL	
	21-0120-D	20” CROWFOOT WHEEL	
2	1A64062	AXLE WELD	
3	41-0058-T	ROLLER HANGER	
4	7745-37	BEARING W/ LOCK COLLAR	
5	EP6577	FLANGE W/ ZERK	
6	EP6578	FLANGE	
7	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
8	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
9	1-512-010007-09	NUT, 1/2-13	
10	1B706-D	SPACER, 1”	
11	41-0073-D	SPACER, 11/16”	
12	40-0079	GANG TUBE (12’)	
13	41-0062	U-BOLT	
14	1-512-010007-12	NUT, HEX 3/4-10	
15	1-861-010034-17	WASHER, SPLIT LOCK 3/4	

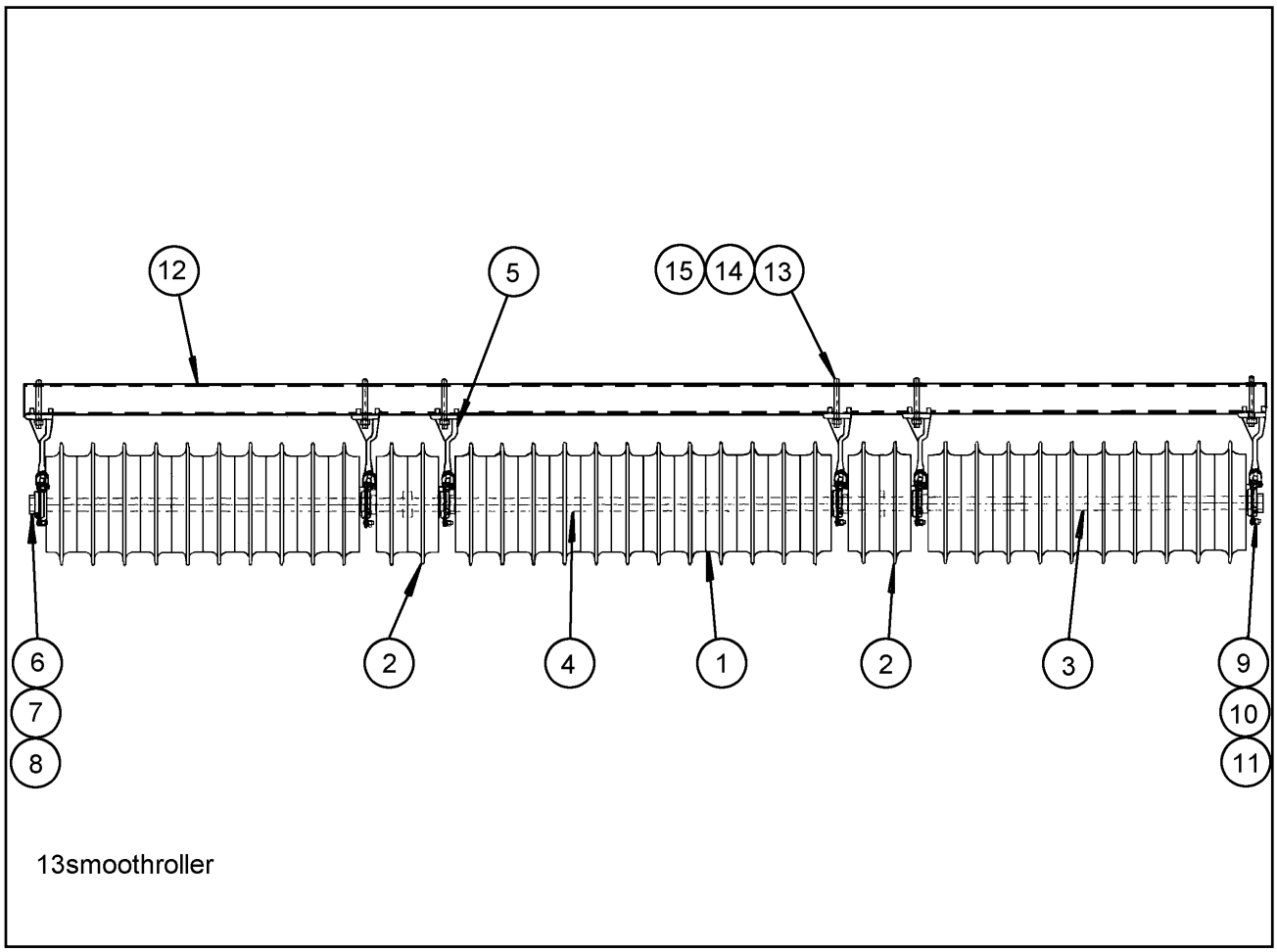


Figure 1-29 13' Smooth Roller Gang Assembly

13' SMOOTH ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	41-0017-D	17" SMOOTH ROLLER	
	41-0019-D	19" SMOOTH ROLLER	
2	21-0017-D	17" SMOOTH ROLLER SHORT HUB	
	21-0019-D	19" SMOOTH ROLLER SHORT HUB	
3	43-1011	AXLE WELD	
4	41-1017	AXLE WELD	
5	41-0058-T	ROLLER HANGER	
6	EP6577	FLANGE W/ ZERK	
7	EP6578	FLANGE	
8	7745-37	BEARING W/ LOCK COLLAR	
9	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
10	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
11	1-512-010007-09	NUT, 1/2-13	
12	40-0800	GANG TUBE (13')	
13	41-0062	U-BOLT	
14	1-861-010034-17	WASHER, SPLIT LOCK 3/4	
15	1-512-010007-12	NUT, HEX 3/4-10	

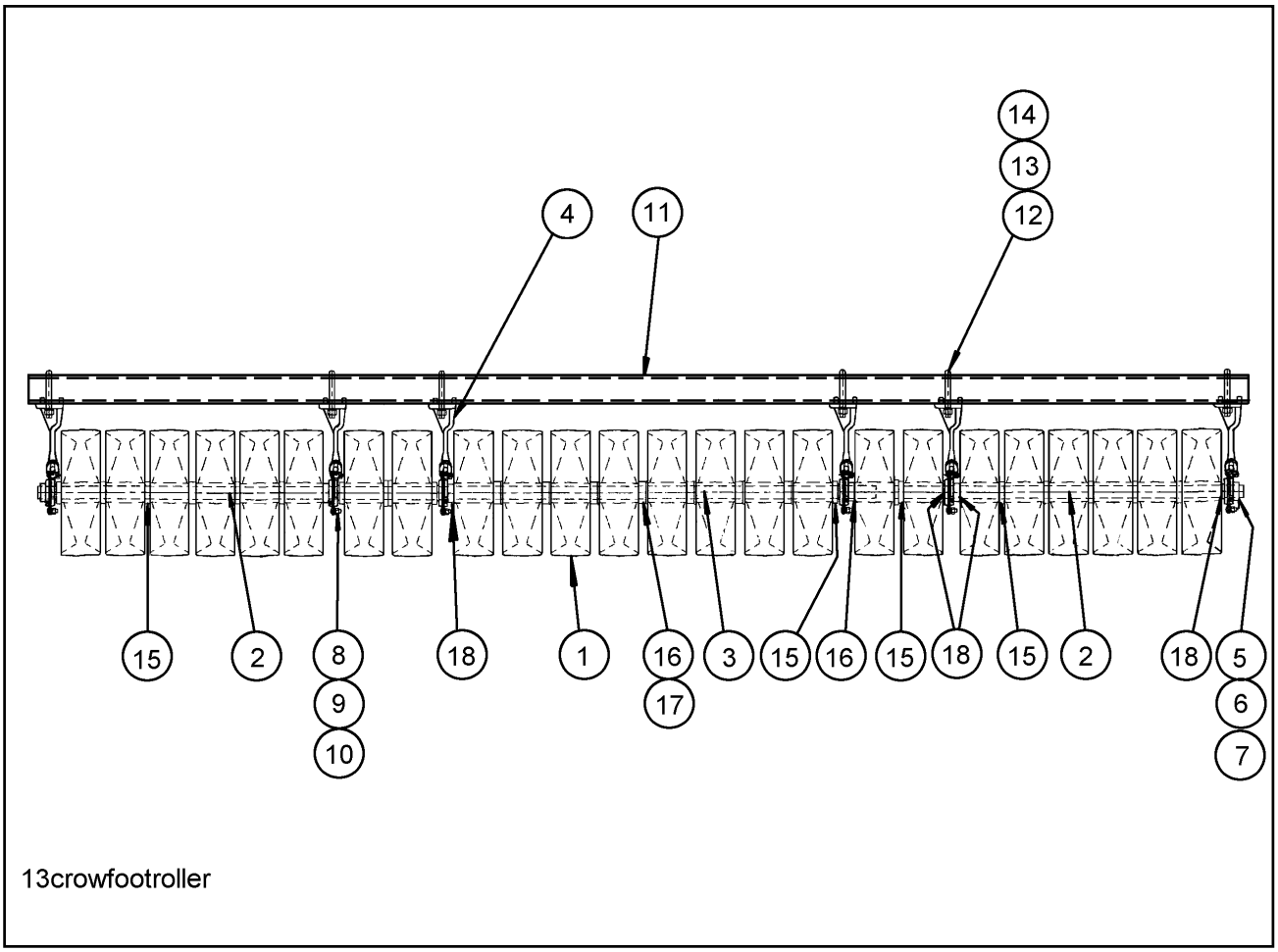


Figure 1-30 13' Crowfoot Roller Gang Assembly

13' CROWFOOT ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	21-0117-D	17" CROWFOOT WHEEL	
	21-0120-D	20" CROWFOOT WHEEL	
2	41-1084	AXLE WELD	
3	41-1066	AXLE WELD	
4	41-0058-T	ROLLER HANGER	
5	7745-37	BEARING W/ LOCK COLLAR	
6	EP6577	FLANGE W/ ZERK	
7	EP6578	FLANGE	
8	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
9	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
10	1-512-010007-09	NUT, 1/2-13	
11	41-0080	GANG TUBE (13')	
12	41-0062	U-BOLT	
13	1-512-010007-12	NUT, HEX 3/4-10	
14	1-861-010034-17	WASHER, SPLIT LOCK 3/4	
15	41-0073-D	SPACER, 11/16"	
16	1B706-D	SPACER, 1"	
17	1R40939	SPACER, 9/32" (USED ON 17" MODELS ONLY)	
18	1D27206	WASHER	

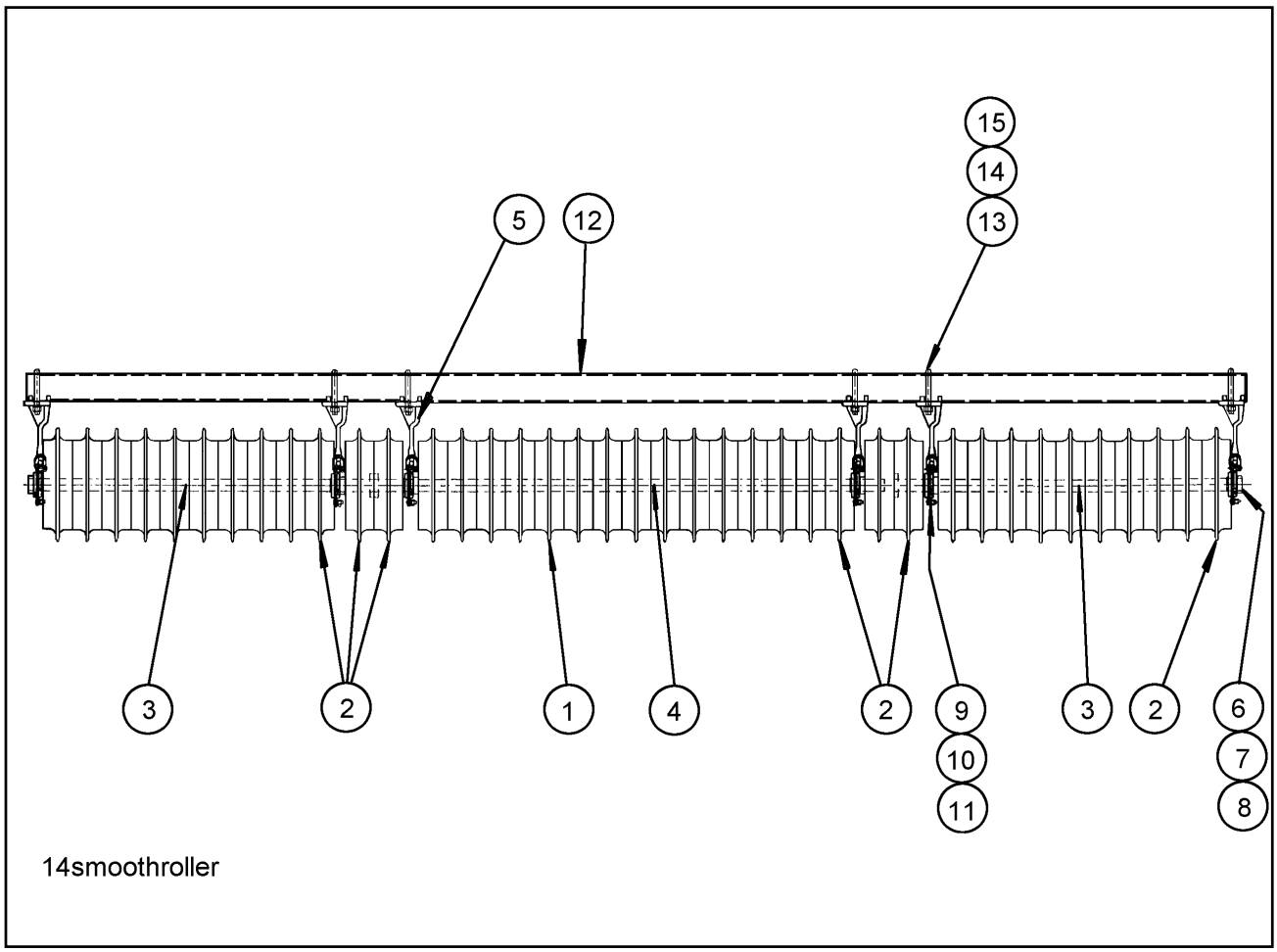


Figure 1-31 14' Smooth Roller Gang Assembly

14' SMOOTH ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	41-0017-D	17" SMOOTH ROLLER	
	41-0019-D	19" SMOOTH ROLLER	
2	21-0017-D	17" SMOOTH ROLLER SHORT HUB	
	21-0019-D	19" SMOOTH ROLLER SHORT HUB	
3	43-1014	AXLE WELD	
4	41-1019	AXLE WELD	
5	41-0058-T	ROLLER HANGER	
6	EP6577	FLANGE W/ ZERK	
7	EP6578	FLANGE	
8	7745-37	BEARING W/ LOCK COLLAR	
9	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
10	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
11	1-512-010007-09	NUT, 1/2-13	
12	41-0082	GANG TUBE (14')	
13	41-0062	U-BOLT	
14	1-861-010034-17	WASHER, SPLIT LOCK 3/4	
15	1-512-010007-12	NUT, HEX 3/4-10	

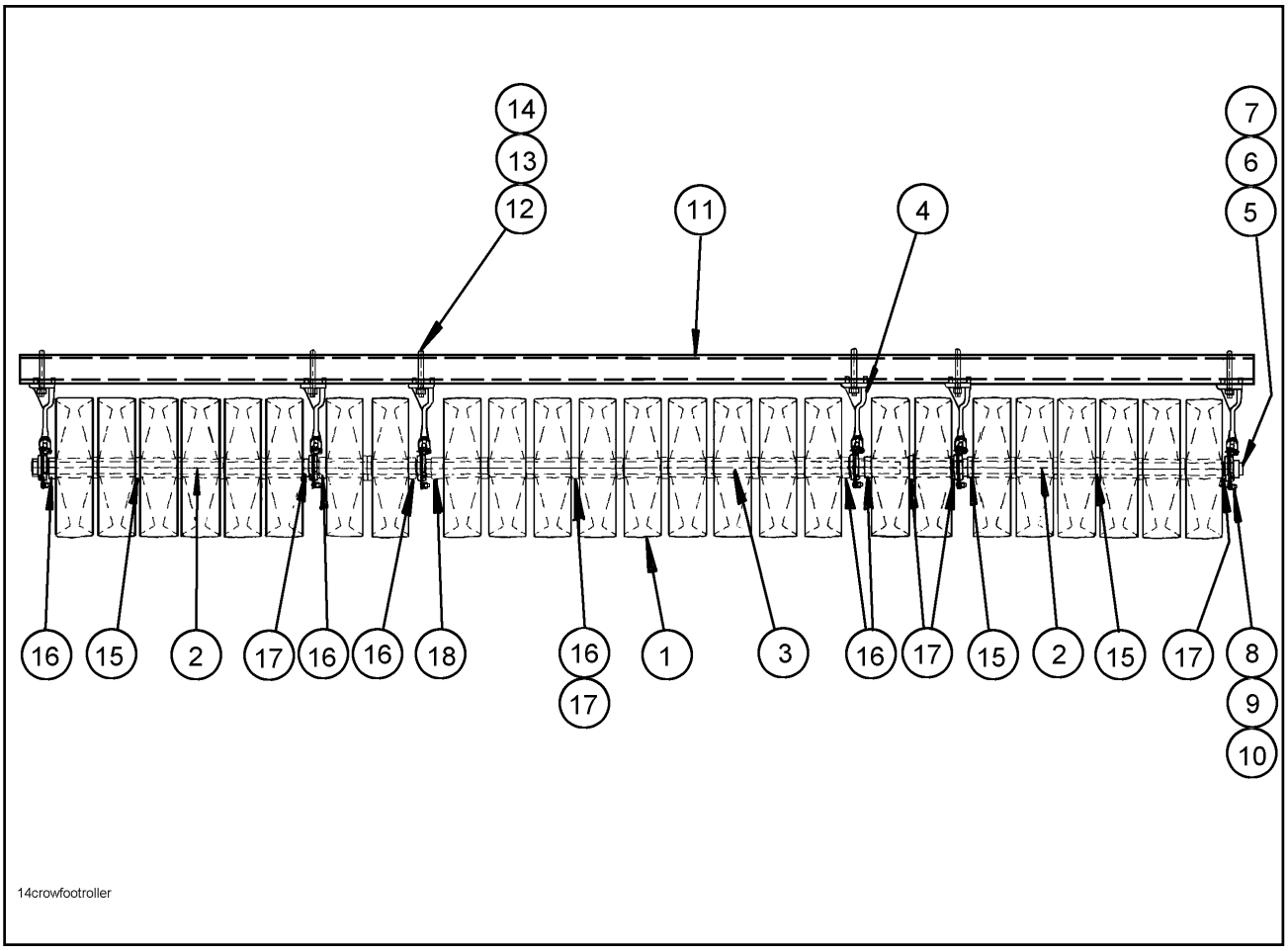


Figure 1-32 14' Crowfoot Roller Gang Assembly

14' CROWFOOT ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	21-0117-D	17" CROWFOOT WHEEL	
	21-0120-D	20" CROWFOOT WHEEL	
2	41-1084	AXLE WELD	
3	1A64062	AXLE WELD	
4	41-0058-T	ROLLER HANGER	
5	EP6577	FLANGE W/ ZERK	
6	EP6578	FLANGE	
7	7745-37	BEARING W/ LOCK COLLAR	
8	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
9	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
10	1-512-010007-09	NUT, 1/2-13	
11	41-0082	GANG TUBE (14')	
12	41-0062	U-BOLT	
13	1-512-010007-12	NUT, HEX 3/4-10	
14	1-861-010034-17	WASHER, SPLIT LOCK 3/4	
15	41-0073-D	SPACER, 11/16"	
16	1B706-D	SPACER, 1"	
17	1D27206	WASHER	
18	1D67546-D	SPACER, 1-3/4	

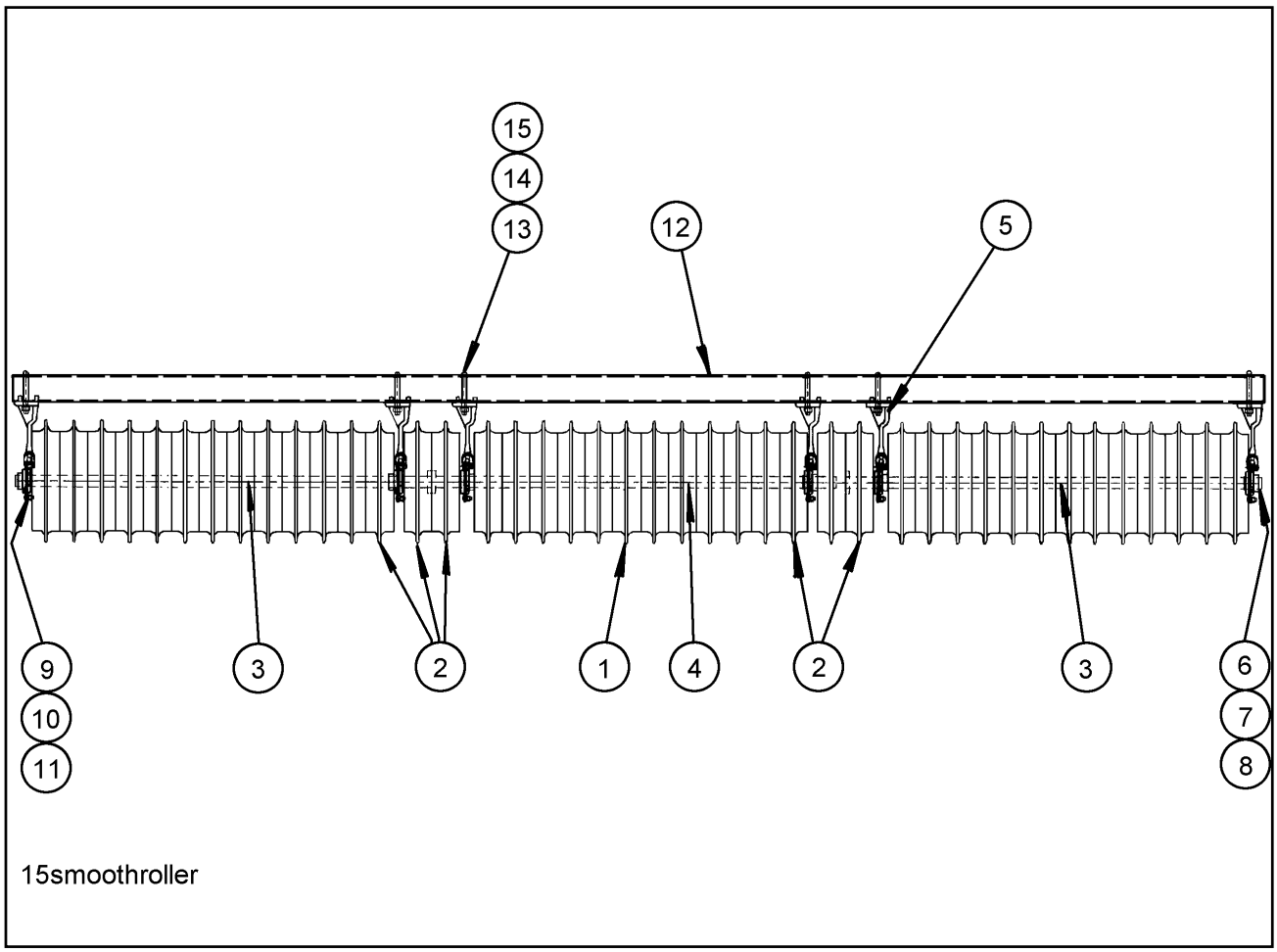


Figure 1-33 15' Smooth Roller Gang Assembly

15' SMOOTH ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	41-0017-D	17" SMOOTH ROLLER	
	41-0019-D	19" SMOOTH ROLLER	
2	21-0017-D	17" SMOOTH ROLLER SHORT HUB	
	21-0019-D	19" SMOOTH ROLLER SHORT HUB	
3	43-1016	AXLE WELD	
4	41-1017	AXLE WELD	
5	41-0058-T	ROLLER HANGER	
6	EP6577	FLANGE W/ ZERK	
7	EP6578	FLANGE	
8	7745-37	BEARING W/ LOCK COLLAR	
9	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
10	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
11	1-512-010007-09	NUT, 1/2-13	
12	41-0083	GANG TUBE (15')	
13	41-0062	U-BOLT	
14	1-861-010034-17	WASHER, SPLIT LOCK 3/4	
15	1-512-010007-12	NUT, HEX 3/4-10	

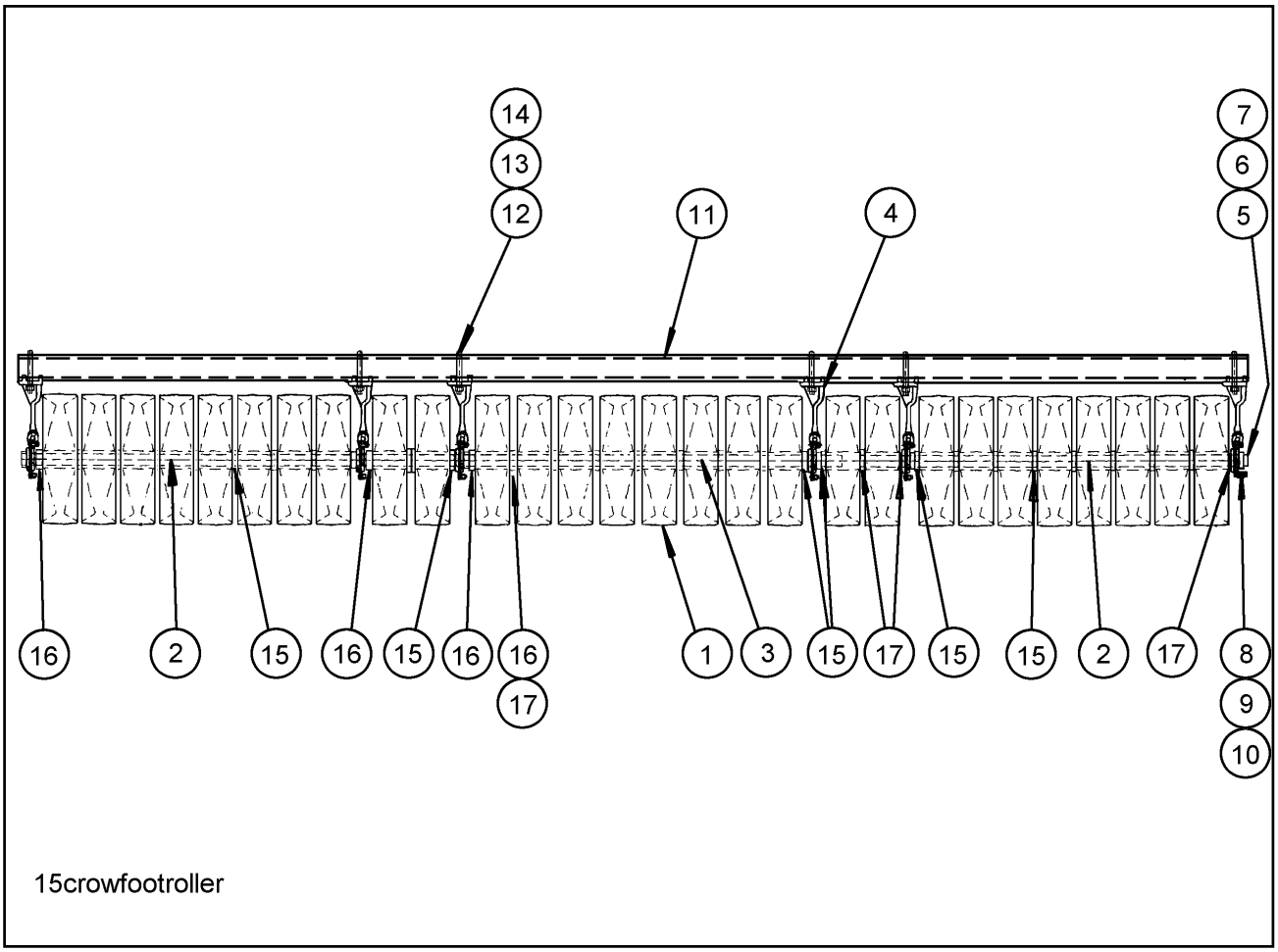


Figure 1-34 15' Crowfoot Roller Gang Assembly

15' CROWFOOT ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	21-0117-D	17" CROWFOOT WHEEL	
	21-0120-D	20" CROWFOOT WHEEL	
2	41-1085	AXLE WELD	
3	41-1066	AXLE WELD	
4	41-0058-T	ROLLER HANGER	
5	EP6577	FLANGE W/ ZERK	
6	EP6578	FLANGE	
7	7745-37	BEARING W/ LOCK COLLAR	
8	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
9	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
10	1-512-010007-09	NUT, 1/2-13	
11	41-0083	GANG TUBE (13')	
12	41-0062	U-BOLT	
13	1-512-010007-12	NUT, HEX 3/4-10	
14	1-861-010034-17	WASHER, SPLIT LOCK 3/4	
15	41-0073-D	SPACER, 11/16"	
16	1B706-D	SPACER, 1"	
17	1D27206	WASHER	

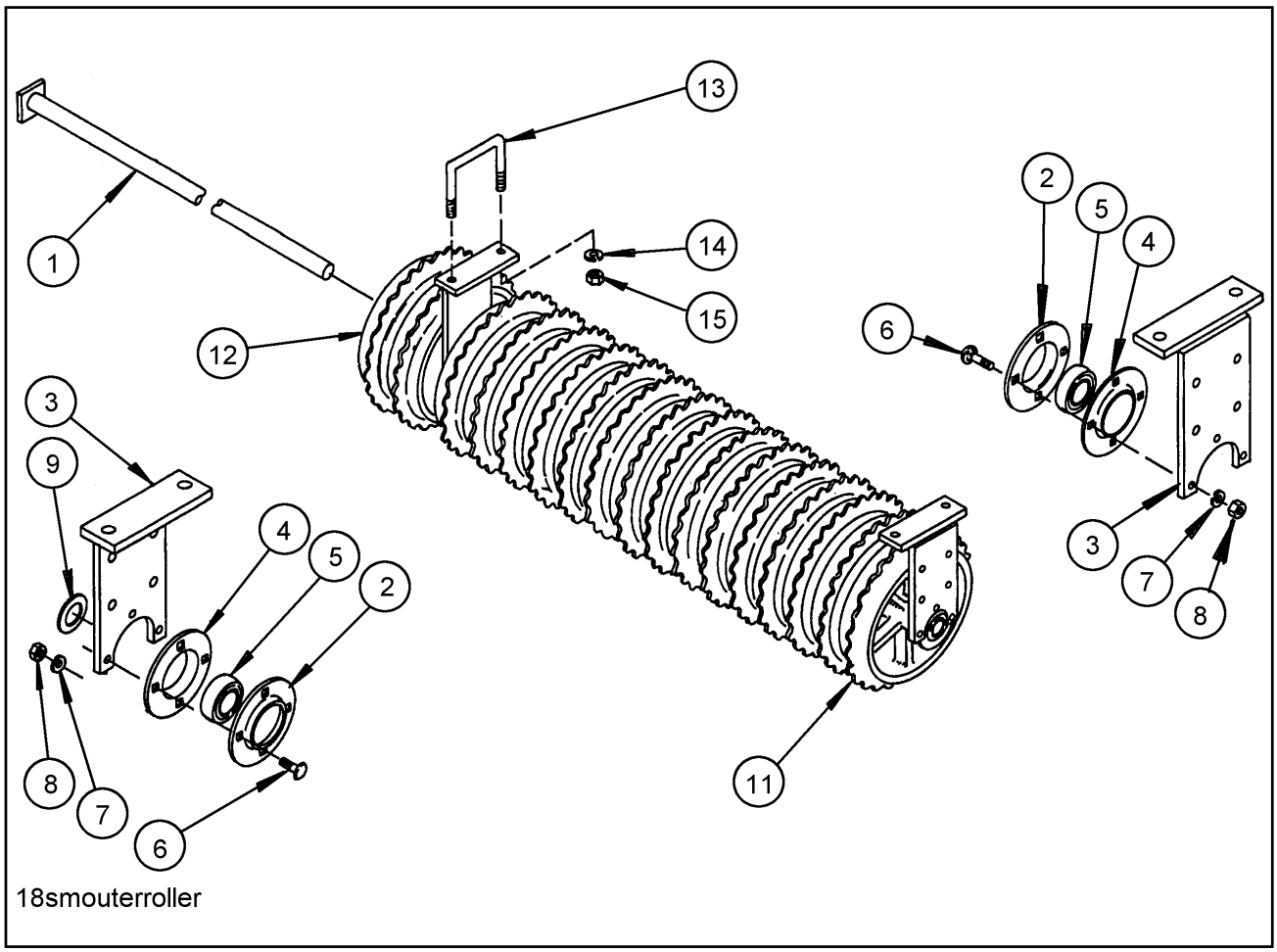


Figure 1-35 18' Smooth Outside Roller Gang Assembly

18' SMOOTH OUTSIDE ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	1A64062	AXLE ASSEMBLY	
2	EP6577	FLANGE W/ ZERK	
3	43-1012-T	BEARING BRACKET	
4	EP6578	FLANGE	
5	7745-37	BEARING W/ LOCK COLLAR	
6	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
7	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
8	1-512-010007-09	NUT, 1/2-13	
9	1D27206	WASHER	
11	41-0017-D	17" SMOOTH ROLLER	
	41-0019-D	19" SMOOTH ROLLER	
12	21-0017-D	17" SMOOTH ROLLER SHORT HUB	
	21-0019-D	19" SMOOTH ROLLER SHORT HUB	
13	43-0136	U-BOLT, 7/8"	
14	1-861-010034-19	WASHER, SPLIT LOCK 7/8	
15	1-512-010007-13	NUT, HEX 7/8-9	

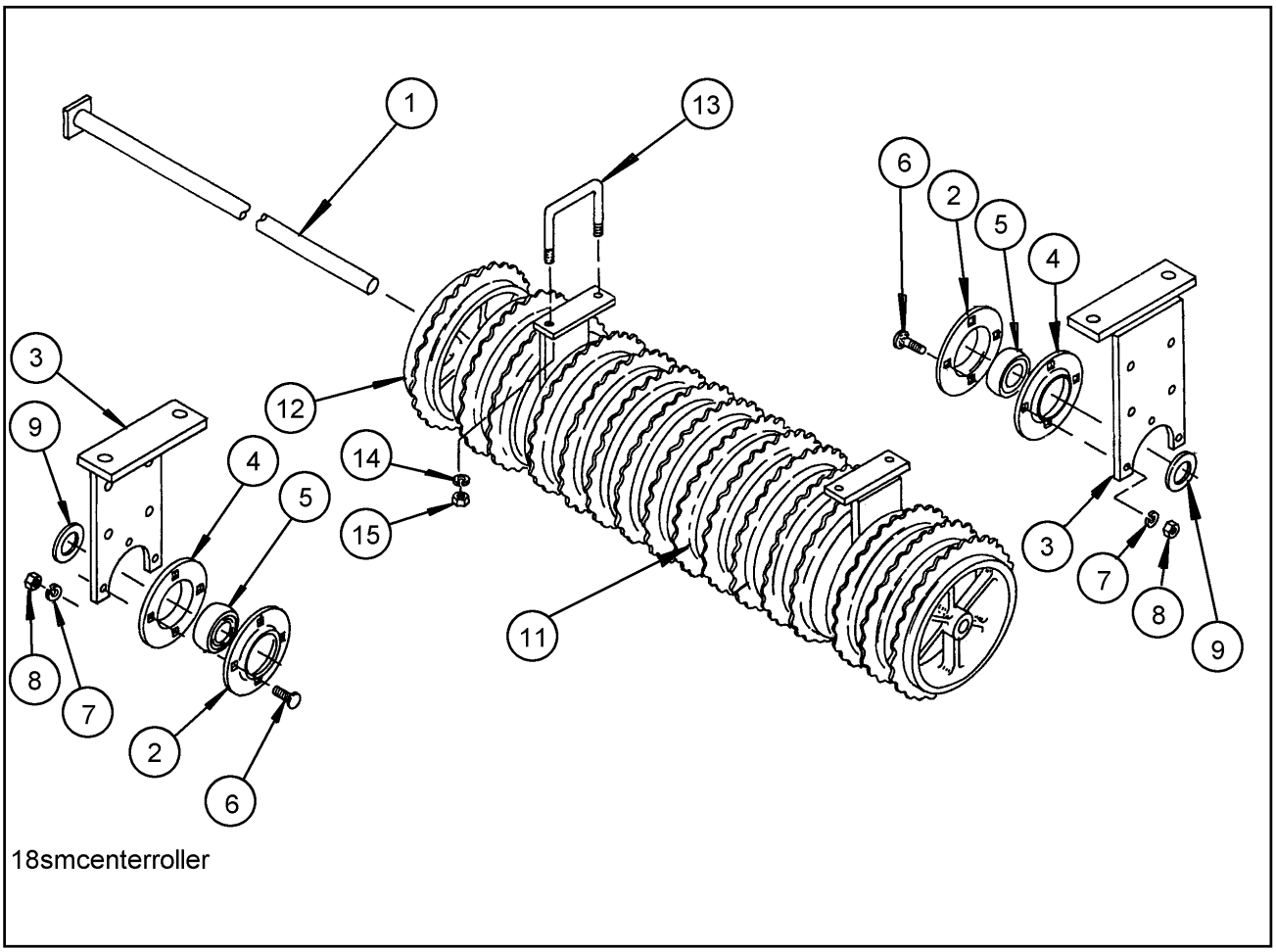


Figure 1-36 18’ Smooth Center Roller Gang Assembly

18’ SMOOTH CENTER ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	1A64064	AXLE ASSEMBLY	
2	EP6577	FLANGE W/ ZERK	
3	43-1012-T	BEARING BRACKET	
4	EP6578	FLANGE	
5	7745-37	BEARING W/ LOCK COLLAR	
6	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
7	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
8	1-512-010007-09	NUT, 1/2-13	
9	1D27206	WASHER	
11	41-0017-D	17” SMOOTH ROLLER	
	41-0019-D	19” SMOOTH ROLLER	
12	21-0017-D	17” SMOOTH ROLLER SHORT HUB	
	21-0019-D	19” SMOOTH ROLLER SHORT HUB	
13	43-0136	U-BOLT, 7/8”	
14	1-861-010034-19	WASHER, SPLIT LOCK 7/8	
15	1-512-010007-13	NUT, HEX 7/8-9	

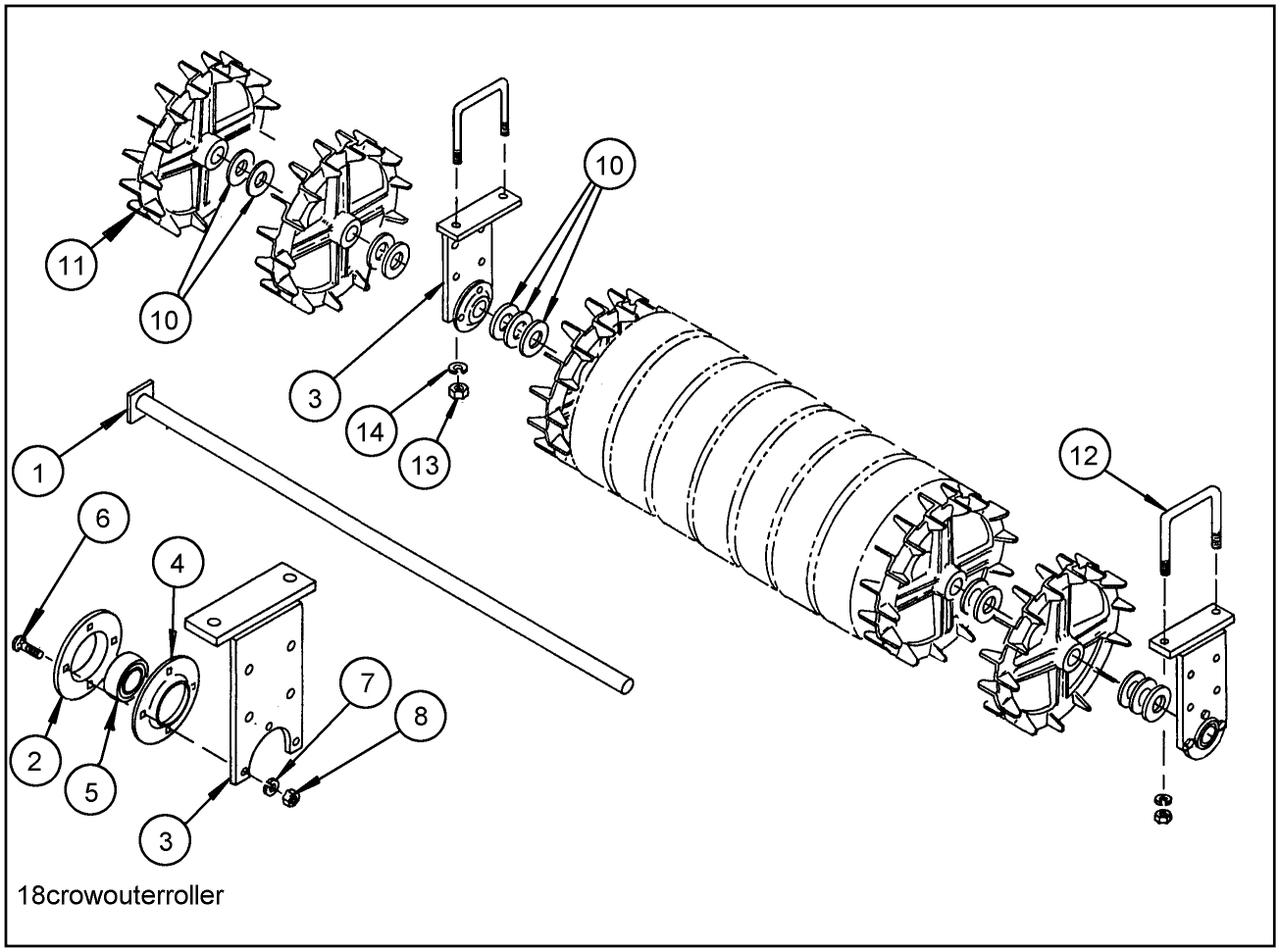


Figure 1-37 18' Crowfoot Outside Roller Gang Assembly

18' CROWFOOT OUTSIDE ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	1A64062	AXLE ASSEMBLY	
2	EP6577	FLANGE W/ ZERK	
3	43-1012-T	BEARING BRACKET	
4	EP6578	FLANGE	
5	7745-37	BEARING W/ LOCK COLLAR	
6	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
7	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
8	1-512-010007-09	NUT, 1/2-13	
10	1R40939	SPACER 5/16	
11	21-0117-D	17" CROWFOOT WHEEL	
	21-0120-D	20" CROWFOOT WHEEL	
12	43-0136	U-BOLT, 7/8"	
13	1-861-010034-19	WASHER, SPLIT LOCK 7/8	
14	1-512-010007-13	NUT, HEX 7/8-9	

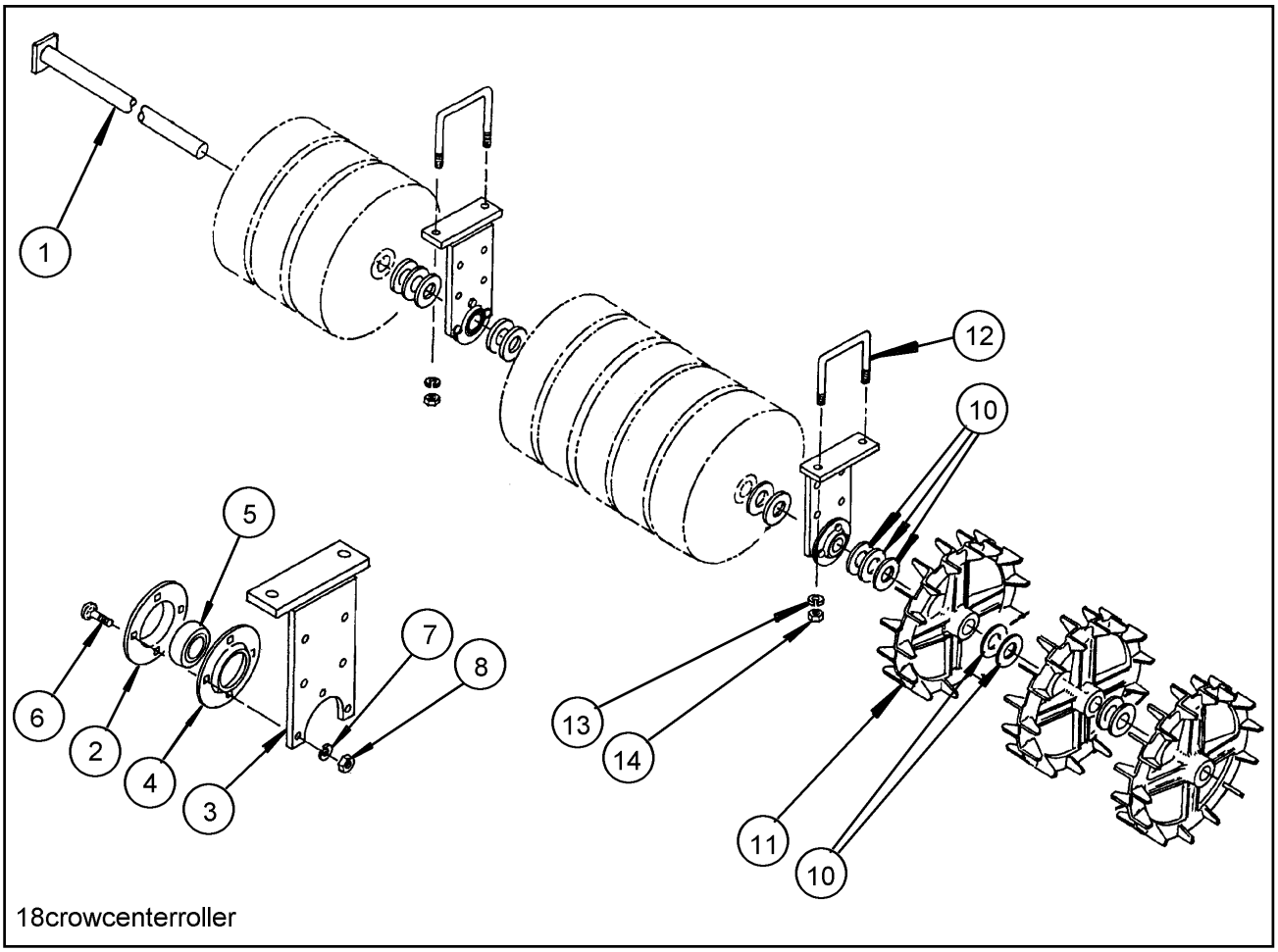


Figure 1-38 18' Crowfoot Center Roller Gang Assembly

18' CROWFOOT CENTER ROLLER GANG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1	1A64068	AXLE ASSEMBLY	
2	EP6577	FLANGE W/ ZERK	
3	43-1012-T	BEARING BRACKET	
4	EP6578	FLANGE	
5	7745-37	BEARING W/ LOCK COLLAR	
6	1-654-010070-03	SCREW, RD HEAD SQ NECK 1/2-13 X 1-1/2	
7	1-861-010034-13	WASHER, SPLIT LOCK 1/2	
8	1-512-010007-09	NUT, 1/2-13	
10	1R40939	SPACER 5/16	
11	21-0117-D	17" CROWFOOT WHEEL	
	21-0120-D	20" CROWFOOT WHEEL	
12	43-0136	U-BOLT, 7/8"	
13	1-861-010034-19	WASHER, SPLIT LOCK 7/8	
14	1-512-010007-13	NUT, HEX 7/8-9	

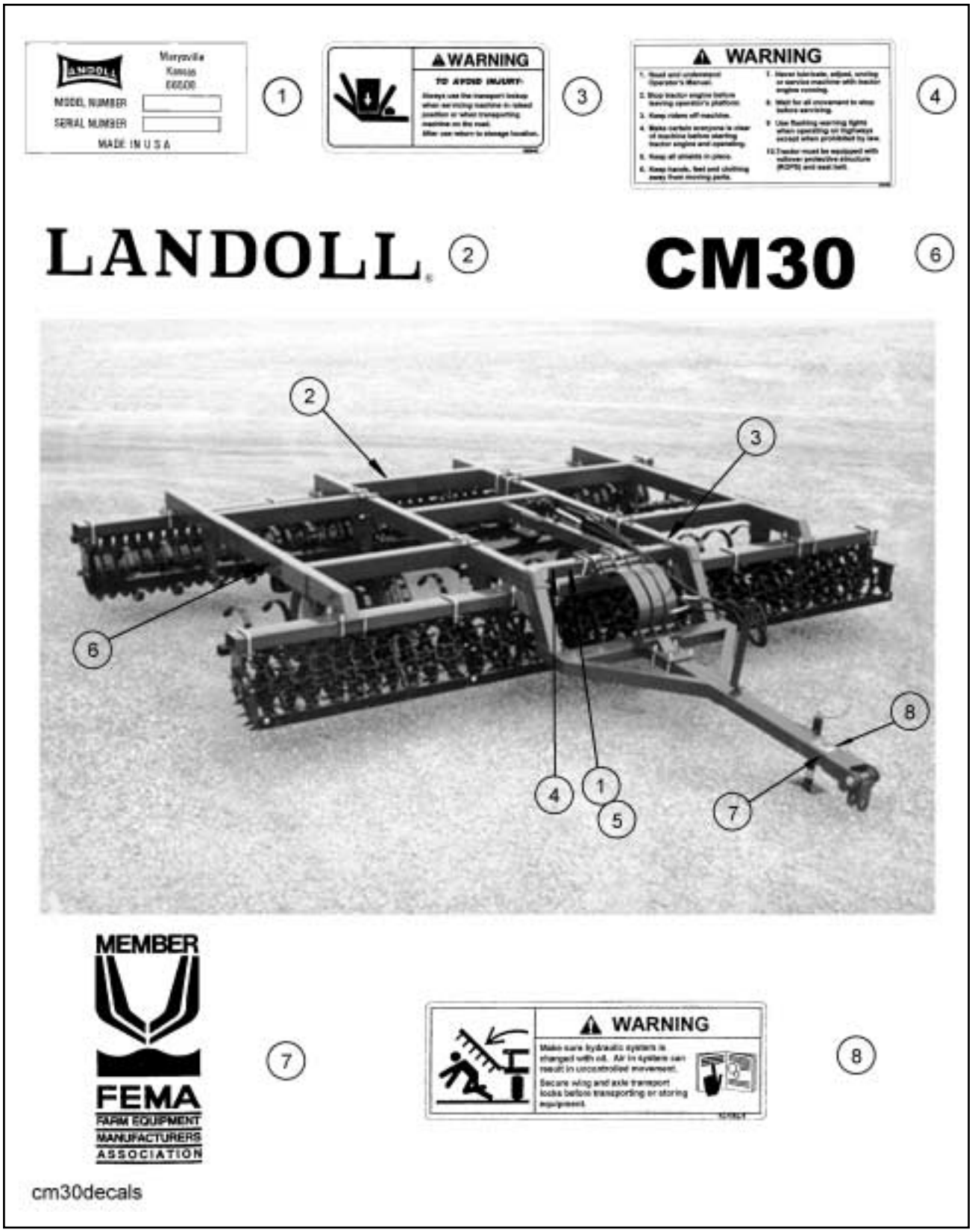


Figure 1-39 Decal Installation

DECAL INSTALLATION

ITEM	PART NO.	DESCRIPTION	QTY.
1	1-573-010006	PLATE, NAME	
2	2-573-010196	DECAL, LANDOLL BLACK	
3	360942	DECAL, WARNING	
4	364866	DECAL, WARNING	
5	10036	FASTENER, SERIAL NO. PLATE	
6	114294	DECAL, MODEL CM30	
7	2-573-010198	DECAL, MEMBER FEMA	
8	364864	DECAL, WARNING	

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