

HIGHLINE MFG.
INC.

1999

BALE MOVER 500

Assembly-Operator Parts Manual

interoffice memo

Date: 1/26/99

To: Sam - Purchasing, Shan - Production, Kelly - Customer Service, Phil - Sales, Michael - Marketing

Cc: Mario Piche - Engineering Manager, Shane Tulik - Project Engineer

From: Brad Woroniuk, Engineering

RE: 1999 Balemover Release

Priority: Urgent

Here are the option kits as follows for the 1999 Balemover Machines for both Highline and Vermeer:

Product	Option Kit	
5BM(99)	45254	Highline
	45255	Vermeer
	40164	Light Kit
7BM(99)	45256	Highline
	45257	Vermeer
	40164	Light Kit
14BM(99)	45258	Highline
	45259	Vermeer
	40169	Light Kit

The Eco's which are in effect to update the 5BM, 7BM, and 14BM, 1999 models are as follows:

#000286

#000287

#000309

#000311

#000293

BJW/BJW

Confidential

1/26/99

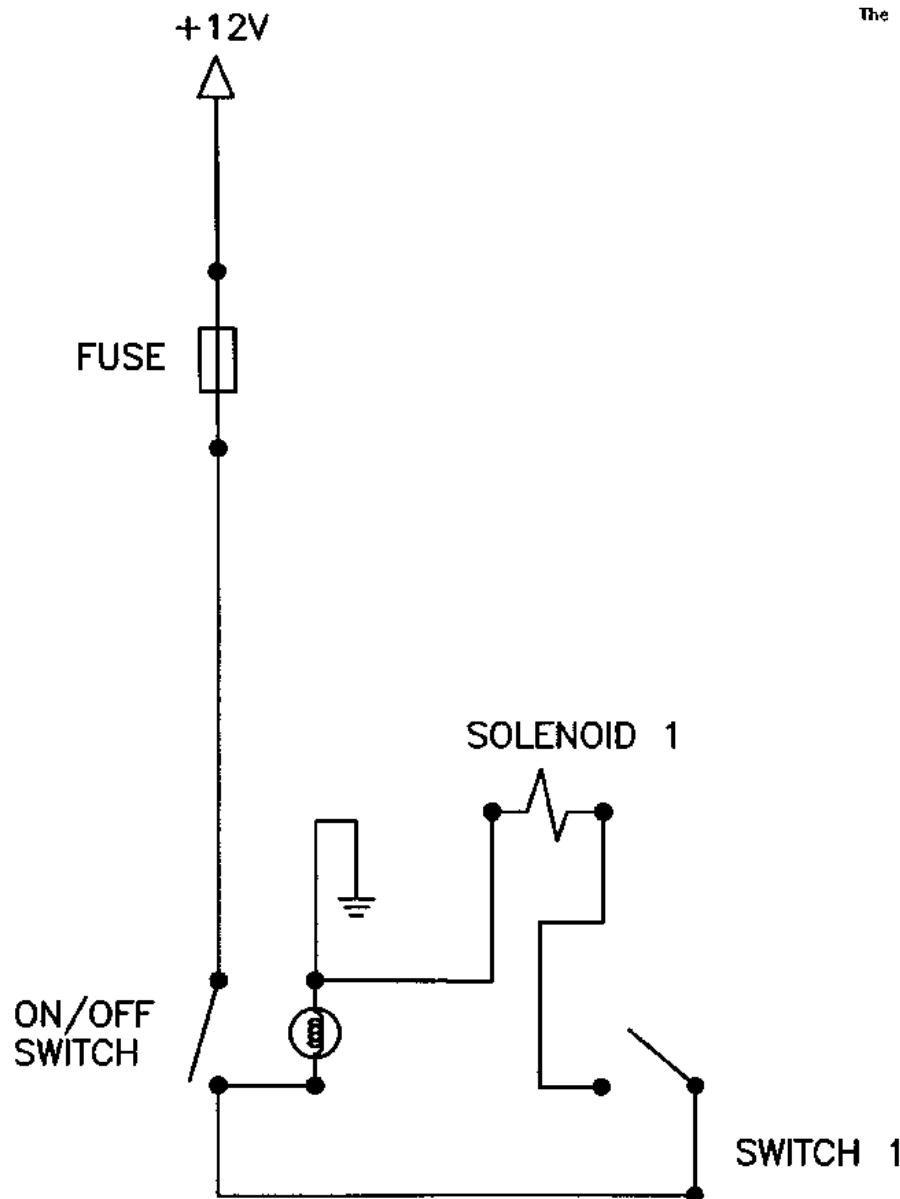
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Lester, B. 1/26/99

NOTES:

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The equipment shown is protected by patents.

Default Tolerances:
 1. LINEAR DIMS. $\pm .005$
 $\frac{3}{16}$ - $\pm .010$
 $\frac{3}{8}$ - $\pm .015$
 FRACTIONAL = $\pm 1/16$
 2. ANGLES $\pm 1/2^\circ$
 3. CONCENTRICITY .010 DIA
 4. HATCHING PITCH 1/8" MIN
 5. HATCHING INTERNAL RADIUS .010
 6. BREAK SHARP CORNERS
 DIMS ARE IN INCHES
 THIRD ANGLE PROJECTION



REVISIONS			
LTR	DESCRIPTION	DATE	CHANGED BY
A	INITIAL RELEASE	20 JAN 99	BJW
B			
C			
D			
E			
F			

Engineering: SJT			Date:
Drawn By: BJW			20 JAN 99
Prop: 1 of 1	Size: A	MATERIAL	
Scale: NTS			

Model:		5BM/7BM	
Description:		CONTROL BOX SCHEMATIC	
HIGHLINE MFG INC.		Proj. No: 40102	Rev: A

NOTES:

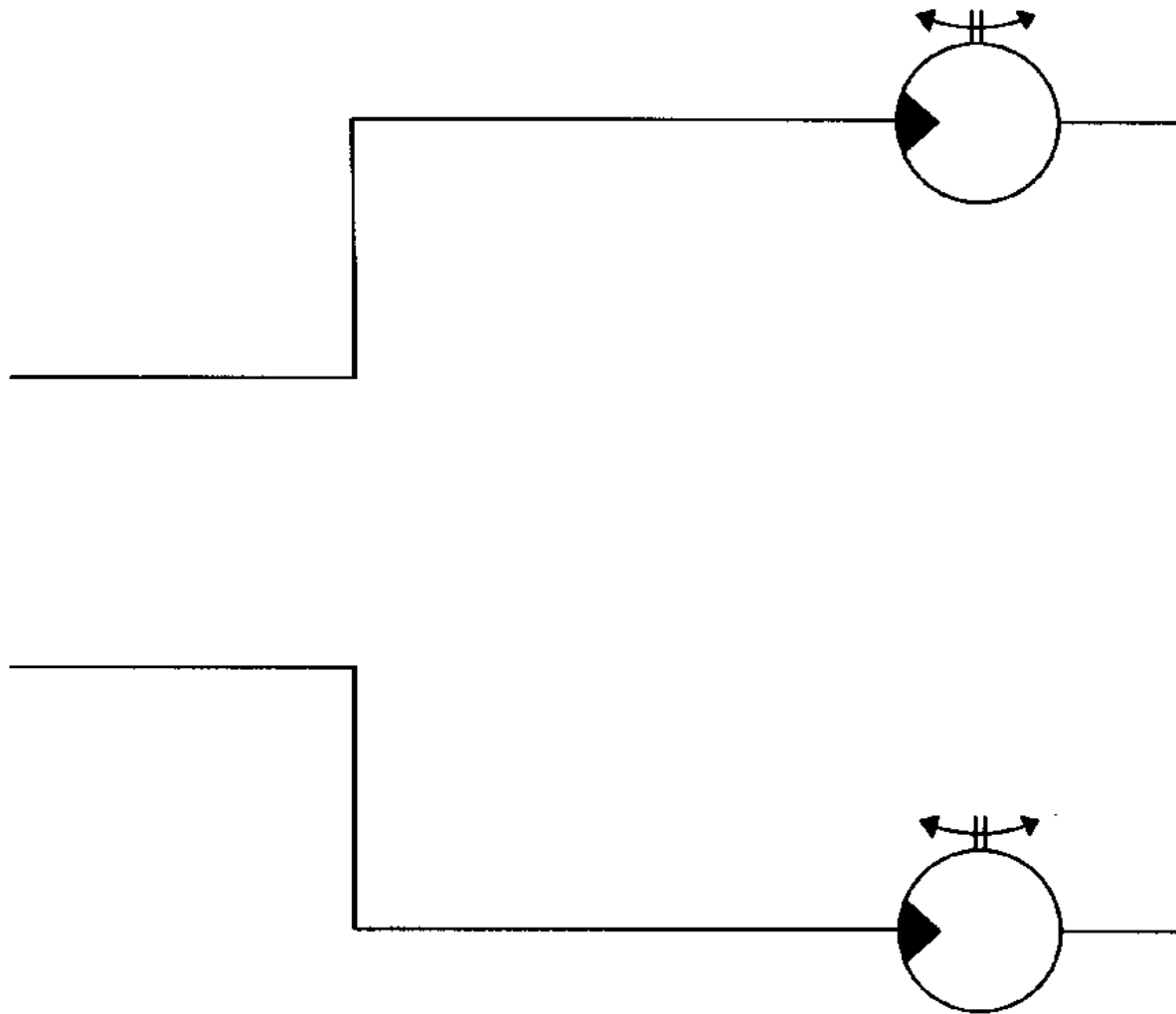
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Default Tolerances:

1. LINEAR TRANS. $x = 2.050$
 $y = 1.125$
 $z = 2.105$
FRACTIONAL $w = 1/16$
2. ANGLES $\pm 1/2^\circ$
3. CONCENTRICITY .010 TIR
4. MACHINE FINISH 125 MICRO INCH RMS
5. BREAK INTERNAL RACE .015
6. BREAK SHARP CORNERS

CMG ARE IN INCHES



REVISIONS			
LTR	DESCRIPTION	DATE	CHANGED BY
A	INITIAL RELEASE	15 JAN 99	BJW
B			
C			
D			
E			
F			

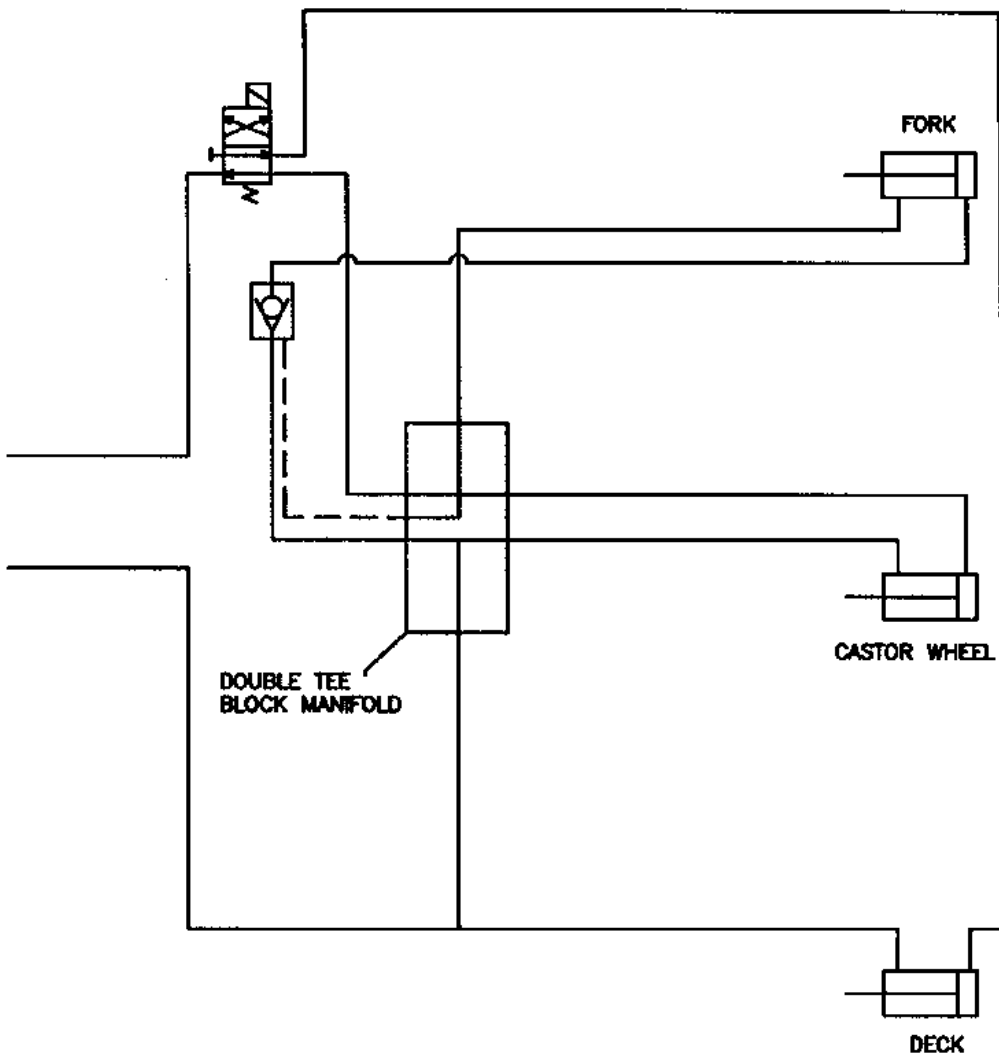
		<u>Date:</u>	
Engineering: SJT			
Drawn By: BJW		15 JAN 99	
<u>Page:</u> 1 of 1	<u>Size:</u> A	MATL	
<u>Scale:</u> NTS			

Model: 5BM 7BM			
Description: MOTOR HYDRAULIC SCHEMATIC			
HIGHLINE	MFG INC	Draw No: 40096	Rev: A

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<u>Default Tolerances:</u>	
1. LINEAR DIMS. $\pm .005$	$\frac{.005}{.001} = \pm .005$ FRACTIONAL = $\pm 1/16"$
2. ANGLES $\pm 1/2^\circ$	
3. CENTER DRIFT $\pm .010$ IN	
4. MACHINE FINISH 125 MICRO INCH RMS	5. MACHINE INTERNAL RADIUS .015
6. BREAK SHARP CORNERS	
DIMS ARE IN INCHES	
SHARP ANGLE PROJECTION	



REVISIONS				Date:		Model:	
LTR	DESCRIPTION	DATE	CHANGED BY				
A	INITIAL RELEASE	15 JAN 98	BJW	Engineering: SJT		5BM 7BM	
B				Drawn By: 8JW		Description:	
C				15 JAN 99		HYDRAULIC CYLINDER SCHEMATIC	
D				Page:	Size:	MATERIAL	
E				1 of 1	A		
F				Scale: NTS			
						HIGHLINE MFG INC.	Draw No: 40138 Rev: A

5 Bale Mover (99) Packing List

QTY	PART NO.	DESCRIPTION
21	31016	Bolt, Hex, 1/2x1-1/2, UNC, GR5, ZP
1	31070	Bolt, Hex, 1/2x2, UNC, GR5, ZP
8	31020	Bolt, Hex, 1/2x2-3/4, UNC, GR5, ZP
28	31173	Nut, Nylock, 1/2, UNC, ZP
10	31236	Washer, Flat, 1/2, ZP
32		Tire Bolts, 9/16 x 1-3/4
1	31031	Bolt, Hex, 1/4x2-1/2, UNC, GR5, ZP
10	31033	Bolt, Hex, 1/4x3/4, UNC, GR5, ZP
6	31174	Nut, Nylock, 1/4, UNC, ZP
4	31237	Washer, Flat, 1/4, ZP
4	31041	Bolt, Hex, 3/4x3, UNC, GR5, ZP
4	31175	Nut, Nylock, 3/4, UNC, ZP
8	31238	Washer, Flat, 3/4, ZP
3	31177	Nut, Nylock, 5/16, UNC, ZP
3	31239	Washer, Flat, 5/16, ZP
2	31176	Nut, Nylock, 3/8, UNC, ZP
2	30269	Bolt, U, 5/8x6x4-3/8
8	31051	Bolt, Hex, 5/8x1-1/2, UNC, GR5, ZP
7	31052	Bolt, Hex, 5/8x2, UNC, GR5, ZP
18	31053	Bolt, Hex, 5/8x1-3/4, UNC, GR5, ZP
37	31178	Nut, Nylock, 5/8, UNC, ZP
2	31240	Washer, Flat, 5/8, ZP
2	31241	Washer, Flat, 7/16, ZP
2	31038	Bolt, Hex, 1x7-1/2, UNC, GR5, ZP
1	31039	Bolt, Hex, 1x9, UNC, GR5, ZP
3	31172	Nut, Nylock, 1, UNC, ZP
2	31243	Washer, Lock, 1, ZP
2	32071	Washer, Flat, 1-1/4 ID x 1-7/8 OD

Hardwares
(Nuts and Bolts)

5 Bale Mover (99) Packing List

QTY	PART NO.	DESCRIPTION
4		Cylinder Pin
4		Pin Cotter (for hydraulic cylinder)
6	31182	Pin, Cotter, 1/4x2-1/2
1	91608	Pin, Hair, 1/8x2-1/2
2	30197	Pin, Spring, 3/16x1-1/2
3	30207	Zerk, 1/4-28, GF641, Straight
1	E4835	Bushing, OD 1-1/4 x ID 1 x 1-3/8
1	E4836	Bushing, OD 1-1/4 x ID 1 x 2-1/4
1	30217	Chain, Transport
2	30559	Clamp, Rope, Wire, 1/16
8	31593	Clip, Automotive, 1/4, GR5, ZP
1	E4810	Housing, Guard, BM, Left
1	E4802	Housing, Guard, BM, Right
1	30206	Hyd, Hose, Holder, 1/2
1	E2852	Spacer, Wheel, Castor, Top
1	E2853	Spacer, Wheel, Castor, Bottom
2	E4803	Plate, Face, Guard
1	40103	Box, Control
1	92061	Bumper, Rubber
2	91508	Chain, 37ft
2	E4639	Chain, 21ft
2	92024	Drv, Bushing, 2232400-24
2	92023	Drv, Sprocket, 60, 7 tooth, 1-1/2
1	92078	Harness, Extension
1	92095	Jack, 500LBX15
1	92028	Sign, Slow Moving
1	E3764	Tether, Cable, Shield, Small

*Hardwares
continued on...*

*Hardwares
(misc. parts 1)*

*Hardwares
(misc. parts 2)*

5 Bale Mover (99) Packing List

QTY	PART NO.	DESCRIPTION
2	40085	Arm,Divider,Bale
1	45236	Arm,Pivot,Right
1	40149	Arm,Slide,Pivot,Right
1	40483	Arm,Support,Wheel,Castor (needs 1 amber Vermeer docal)
1	40140	Bracket,Cylinder
1	45022	Bracket,Sign,SMV
1	40088	Bumper,Bale
1	45016	Divider,Bale
1	40151	Fork,Right
1	40152	Fork,Right,1/4 Turn
1	45234	Frame,5BM
1	45130	Frame,Rear (Crossmember on frame)
1	45010	Hitch,A-Frame,Left
1	45011	Hitch,A-Frame,Right
1	40485	Hitch,Crossmember
1	40142	Hitch,Tongue,Double
2	40118	Mount,Bumper,Bale
1	40008	Pin,arm,Pivot
1	45025	Pin,Arm,Pivot,Wheel,Castor
2	40010	Pin,Arm,Side,Pivot
2	40003	Pin,Hitch
2	40121	Pin,Sprocket,Rear
1	40019	Pin,Transport
1	45240	Pocket,Axle,Middle
1	40479	Rail,Left
1	40480	Rail,Right

WELDED PARTS

5 Bale Mover (99) Packing List

QTY	PART NO.	DESCRIPTION
2	45241	Susp,Axle,Assembly
1	40115	Tightener,Motor,Left
1	40116	Tightener,Motor,Right
1	70063	Fork, Wheel, Castor
4	40122	Tire,Complete
1	91031	Susp, Tire, Comp, 16.5x6.5-8, 4HLE
1	40176	Wheel,Castor

WELDED PARTS
continued on...

5 Bale Mover (99) Packing List

QTY	PART NO.	DESCRIPTION
1	E4726	Block, Tee, Hyd
2	92063	Drv, Sprocket, 60, 10 tooth, 1-1/4
3	30210	Hyd, Clamp, Hose, 1/2
1	90120	Hyd, Cyl, 3.5x13, 1.5, 8FP
1	90118	Hyd, Cyl, 3x10, 1.25, 8FP
1	90117	Hyd, Cyl, 3x8, 1.25, 8FP
2	30204	Hyd, Fit, Adapter, 10MB-8MJ
1	30581	Hyd, Fit, Adapter, 6FJX-6MB
1	32033	Hyd, Fit, Adapter, 8MJ-6MB
1	30479	Hyd, Fit, Adapter, 4MB-6MJ
1	32056	Hyd, Fit, Elbow, 4MB-6MJ90
2	32079	Hyd, Fit, Elbow, 6MB-8MJ90
3	30211	Hyd, Fit, Elbow, 8MB-8MJ90
1	30580	Hyd, Fit, Elbow, 8MP-6MJ90
4	30212	Hyd, Fit, Elbow, 8MP-8MJ90
4	30209	Hyd, Fit, Pioneer, Male, 8FP
1	30200	Hyd, Fit, Plug, 8MB
1	30313	Hyd, Fit, Tee, 8MJ-8MJ-8MJ
1	32035	Hyd, Fit, Tee, 8MPR-8MJ
2	31271	Hyd, Valve, Check, Pilot, POC1-10
1	92089	Hyd, Valve, Solenoid
1	30205	Hyd, Hose, 1/2x57, 8FJ90TL
2	90310	Hyd, Hose, 1/2x96, 10MB-8MP
1	30584	Hyd, Hose, 3/8x10, 6FJ-8FJ90TS
2	90301	Hyd, Hose, 3/8x120, 8MP-8FJX
1	32963	Hyd, Hose, 3/8x15, 8FJX, 2000psi
1	30198	Hyd, Hose, 3/8x18, 6FJX-6MP

**Hydraulic &
Accessories**

5 Bale Mover (99) Packing List

Initials	QTY	PART NO.	DESCRIPTION
	2	90313	Hyd, Hose, 3/8x18, 8FJX-8FJX
	1	32055	Hyd, Hose, 3/8x19, 6MP-8FJX
	1	90305	Hyd, Hose, 3/8x30.5, 6MP-8FJX
	3	30201	Hyd, Hose, 3/8x44, 8FJX-6MP
	1	90308	Hyd, Hose, 3/8x50, 8FJX-6MP
	2	92066	Hyd, Motor, 32.7, 177 rpm, 2000 psi

**Hydraulic &
Accessories
continued on...**

	8	31535	Bolt, Hex, 1/4x1-1/2, UNC, GR5, ZP
	8	31174	Nut, Nylock, 1/4, UNC, ZP
	4	31061	Bolt, U, 1/2x3x7
	8	31173	Nut, Nylock, 1/2, UNC
	7	31613	Tie, Cable, Nylon, Blck, 11-1/2, 40
	1	30526	Elec, Light, Red & Amber, Left
	1	30527	Elec, Light, Red & Amber, Right
	1	40161	Mount, Light, BM, Right
	1	40162	Mount, Light, BM, Left
	4	31649	Elec, Clamp, Cable, 1/2
	2	31650	Elec, Clamp, Cable, 3/4
	1	40163	Elec, Harness, Lights, 5 & 7 BM
	2	31648	Gromit, Rubber, 1-3/8, 3/4, 1-1/16
	6	30294	Screw, Tek, 1/4x1

Light Kit (40164)

Note (1): For Highline Units

**Put these in
Crate for Highline**

Note (2): For Vermeer Units

**Put these on
Vermeer Frame**

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Warranty

HIGHLINE Mfg. Inc. warrants its products to the original owner for a period of two years from date of purchase, subject to the following provisions:

- 1st year Warranty covers Parts & Labor
- 2nd year Warranty covers Parts Only
- Warranty registration must be submitted to HIGHLINE Mfg. Inc. within 30 days of purchase.
- Highline Mfg. Inc. is not liable for any damages to this equipment resulting from use of this equipment that is inconsistent with this manual and such is not covered under this warranty.
- Warranty will be void, and Highline Mfg. Inc. will not be liable in any way, if the equipment is used for any other purpose than the intended agricultural application.
- All warranty service must be handled through an authorized HIGHLINE Mfg. Inc. dealer. At the time of requesting warranty service, the purchaser must present evidence of the delivery date of the equipment. The purchaser shall pay any premium for requested overtime, any charge for making service calls, and any charges incurred in transporting the equipment to and from the location of the warranty service. Freight costs associated with warranty repairs are not reimbursable.
- Any labor subject to warranty must be authorized by a HIGHLINE Mfg. Inc. Representative, before work is started.
- Warranty will be void if any component of this equipment is altered or modified in any way, unless written permission is given by HIGHLINE Mfg. Inc.
- Equipment used for rental, custom work, industrial or construction use will not be warranted by Highline Mfg. Inc.
- HIGHLINE Mfg. Inc. will not assume any responsibility for any damage occurring to equipment which this equipment may be attached.
- Warranty terms and conditions are subject to provincial and state legislation.
- Warranty is limited to the Purchase price paid for the equipment, up to the Manufacturers suggested retail price. ***ANY LIABILITY RESULTING FROM THE WORKMANSHIP OF THIS EQUIPMENT*** is limited to the purchased price paid. Highline Mfg. Inc. assumes no responsibility whatsoever for liability resulting from the misuse or improper operation and maintenance of this equipment.

President's Message

The 500 Bale Mover, a proven name in the bale handling field is manufactured by **HIGHLINE Mfg Inc.** The 500 Bale Mover was designed to work in the most difficult of bale handling situations. A little time and effort spent in proper maintenance will assure the performance and durability of your bale mover.

This operator manual has been prepared to provide information necessary for the safe and efficient operation of your bale mover. In it you will find safety procedures, maintenance routines and detailed parts diagrams.

In order to maintain high standards, changes or improvements are made from time to time. **HIGHLINE Mfg Inc.** reserves the right to make those changes and add improvements when practical to do so without incurring any obligation to make such changes and improvements on machines sold previously.

Should the need arise, this manual will assist you in acquiring replacement parts. Should your dealer not have the parts you require in stock, the dealer will be happy to order them for you. If you should find that you require information not covered in this manual, feel free to consult **HIGHLINE Mfg Inc.** or your local dealer.

HIGHLINE Mfg Inc. thanks and congratulates you for selecting a 500 Bale Mover as the machine for your bale handling needs.



Raymond Bussiere
President

Safety Precautions

CAREFUL OPERATION IS THE BEST INSURANCE AGAINST AN ACCIDENT

- Always disengage PTO and hydraulic motors before dismounting tractor.
- Keep yourself and others clear of rotating parts to prevent injury.
- Never allow anyone to stand near the bale mover while loading or unloading bales.
- Never attempt to manually remove bales from rails while hydraulic motors are engaged. Disconnect hydraulic motors before cleaning the bale mover.
- Remove transport locks before lowering forks. To remove transport locks, raise forks to slacken transport chain and remove transport pin. **DO NOT** lower forks when transport locks are in position otherwise severe damage **WILL** occur.
- Relieve pressure in hydraulic lines before disconnecting lines or performing maintenance on the hydraulic system.

1.0 Pre-Delivery & Installation Instructions

1.1 General Description of 500 Bale Mover

The 500 Bale Mover is 8' wide and a length of 32'7". One set of hydraulic lines is required for engaging hydraulic motors, and one set of hydraulic lines is required for operation of forks and deck cylinder. The 500 Bale Mover may either load or unload bales for easy transport and organization of bales.

1.2 Pre-Delivery Check List

The following is a list of parts required if the 500 Bale Mover has not been assembled prior to delivery. If any parts are not included contact your authorized Highline dealer or **HIGHLINE Mfg Inc.**

2.0 Operating Instructions

2.1 Pre-Start Instructions

Transport chains need to be removed before operation of the forks. To remove transport chains, raise forks slightly and remove transport pins. DO NOT lower forks when transport chains are in position otherwise severe damage WILL occur.

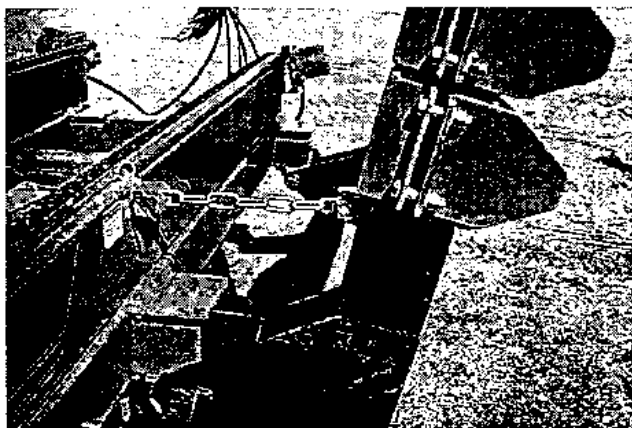


Figure 1. Locks in Transport Position

2.3 Transporting Instructions

To ensure safe transport of the 500 Bale Mover, forks should be in the transport position with the transport chains in place. To put transport chains in place, raise the forks until the transport pin can be put in place safely. Lower forks to take the slack up in the transport chains.

2.4 Bale Size Adjustment

The bale size is adjustable through the fork adjusting plate. By moving the forks (Figure 2) to adjust for the correct size of bale.

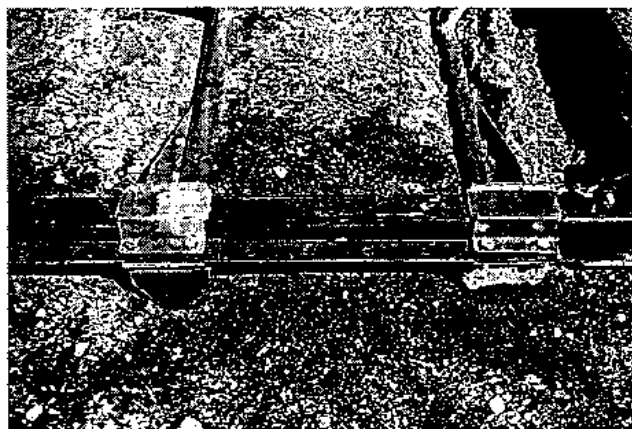


Figure 2. Fork Adjusting

2.5 Field Instructions

For proper operation, the 500 Bale Mover should run at a field speed of 3-4 mph (4.8-6.5 km/h). When picking bales, a full stop is not required. Bales are picked and placed on the bed continuously by lifting the bale into position and moving the preceding bales back to fit the new bale on.

3.0 Maintenance Instructions

To ensure long operating life of your 500 Bale Mover, follow this maintenance procedure.

- Periodically check tire air pressure to maintain equal tire pressure. The operating tire pressure should be 90 psi
- Periodically check all bolts for tightness.
- Periodically check chain tightner. The chain should be just off the bottom of the rail
- Grease the following points as described.

3.1 Grease Locations



Figure 3. Pivot Arm Grease Location

Grease No	Description	Frequency
1	Arm, Pivot, Right	Daily

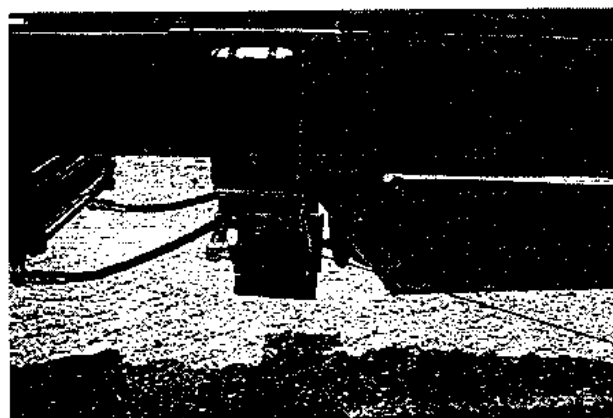
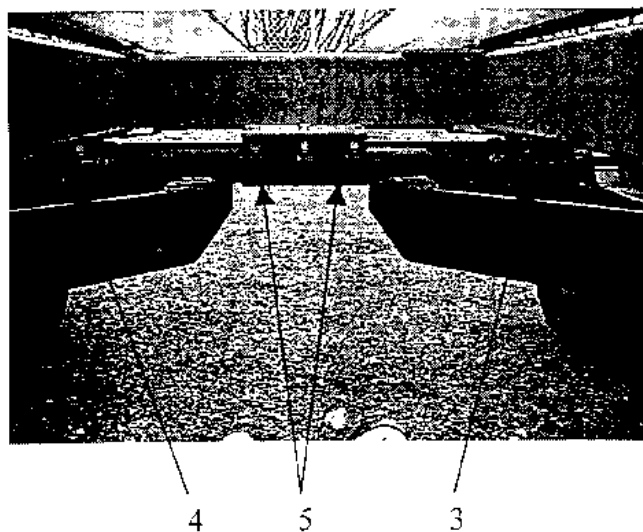


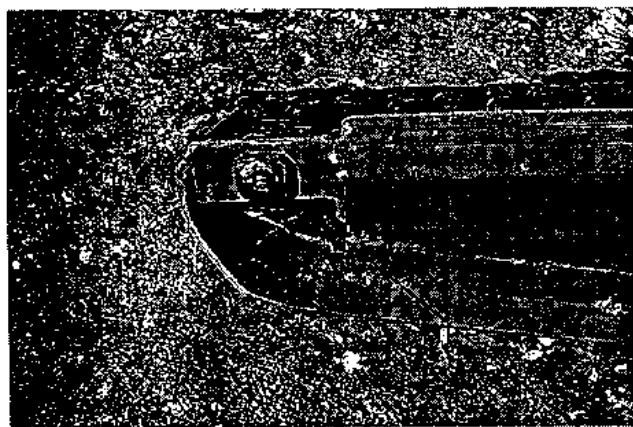
Figure 4. Pivot Slide Arm Grease Location

Grease No	Description	Frequency
2	Arm, Slide, Pivot, Right	Daily



Grease No	Description	Frequency
3	Pocket, Beam Walking, Left,	Weekly
4	Pocket, Beam Walking, Right	Weekly
5	Pocket, Beam Walking, Middle	Weekly

Figure 5. Oscillating Tandem Grease Location



Grease No	Description	Frequency
6	Pin, Sprocket, Rear, Left,	Weekly
7	Pin, Sprocket, Rear, Right,	Weekly

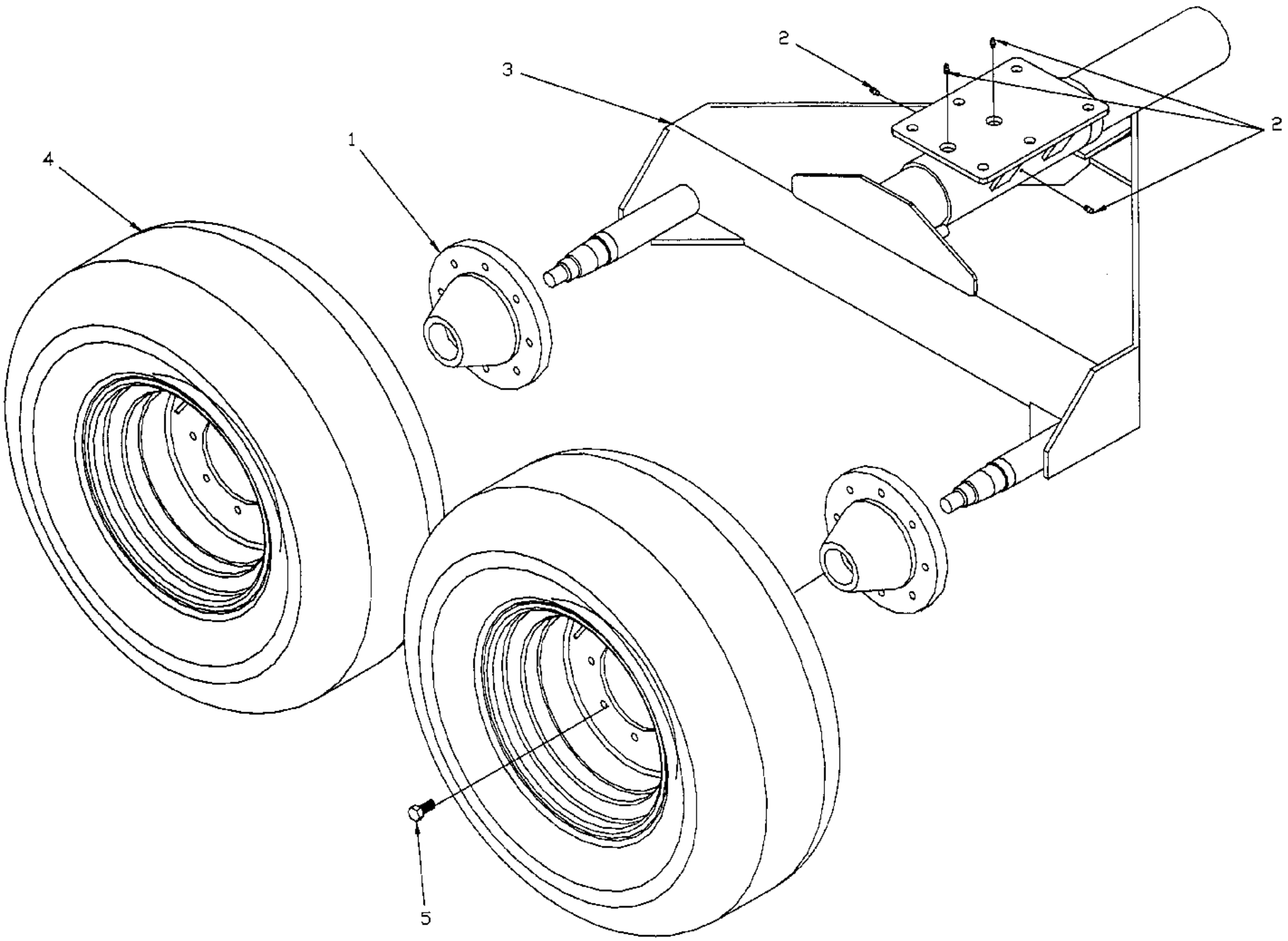
Figure 6. Rear Sprocket Pin

4.0 Parts Information

4.1 Tandem

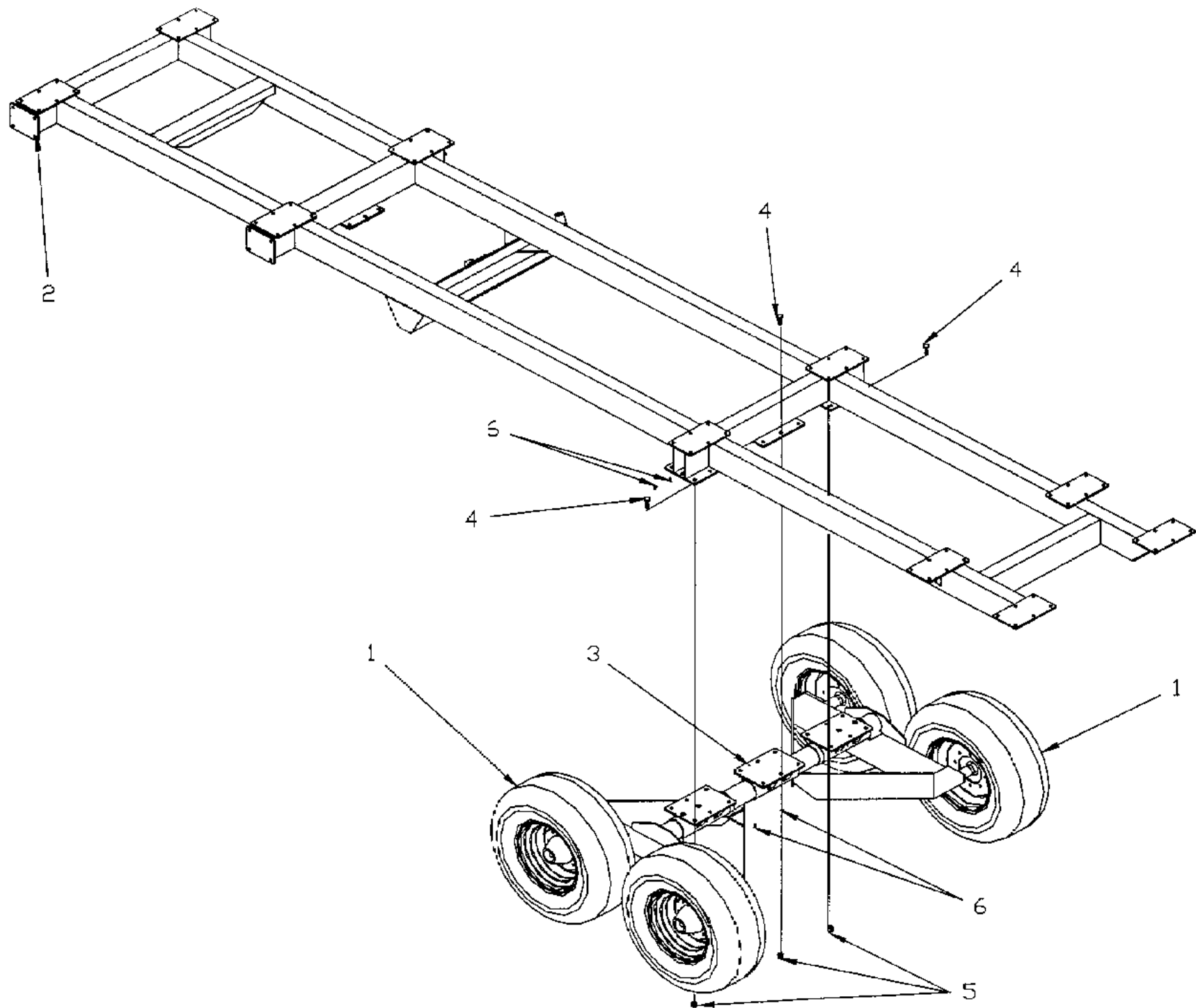
Item	Part No.	Description	Quantity
1	30102	Hub, 8 Bolt, 5000 lbs, EM5500	4
2	30207	Zerk, Grease, 1/4-28	4
3	45239	Beam, Walking, Main	2
4	40122	Assembly, Wheel, Complete	4
5	91061	Bolt, Wheel, 9/16"	32

Part No.	Description
30100	Tire, 11L-15FI, 12 Ply
30104	Rim, 15 x 8 x 8, 1.5 Off, 6000#
31270	Stem, Valve



4.2 Subframe

Item	Part No.	Description	Quantity
1		Assembled Tandems	2
2	45234	Subframe, 5BM	1
3	45240	Pocket, Beam, Walking, Middle	1
4	31053	Bolt, 5/8" x 1 3/4", Pltd.	18
5	31178	Nut, Nylock, 5/8"	18
6	30207	Zerk, Grease, 1/4	6



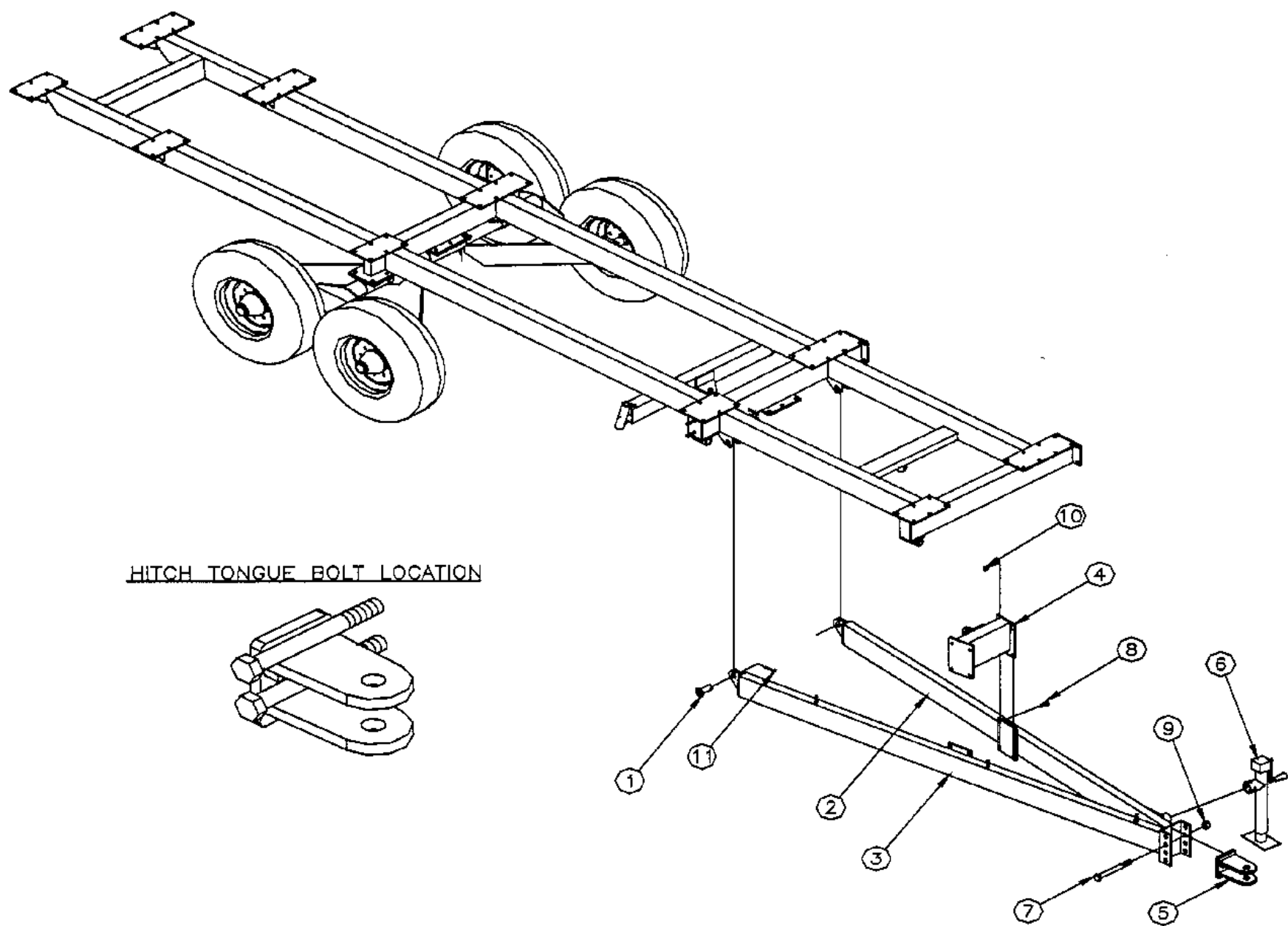
4.3 Hitch

Item	Part No.	Description	Quantity
1	40003	Pin, Hitch, Subframe	2
2	45010	Hitch, A-Frame, Left	1
3	45011	Hitch, A-Frame, Right	1
4	40485	Crossmember, Hitch	1
5	40142	Hitch, Tongue, Double	1
6	92095	Jack, Sidewind, 5000 lbs x 15"	1
7	31038	Bolt, 1" x 7 1/2", Pltd	2
8	31016	Bolt, 1/2" x 1 1/2", Pltd.	8
9	31172	Nut, Nylock, 1"	2
10	31173	Nut, Nylock, 1/2"	8
11	31182	Cotterpin, 1/4" x 2 1/2"	2

NOTE:

Place hitch crossmember in place leaving bolts loose.

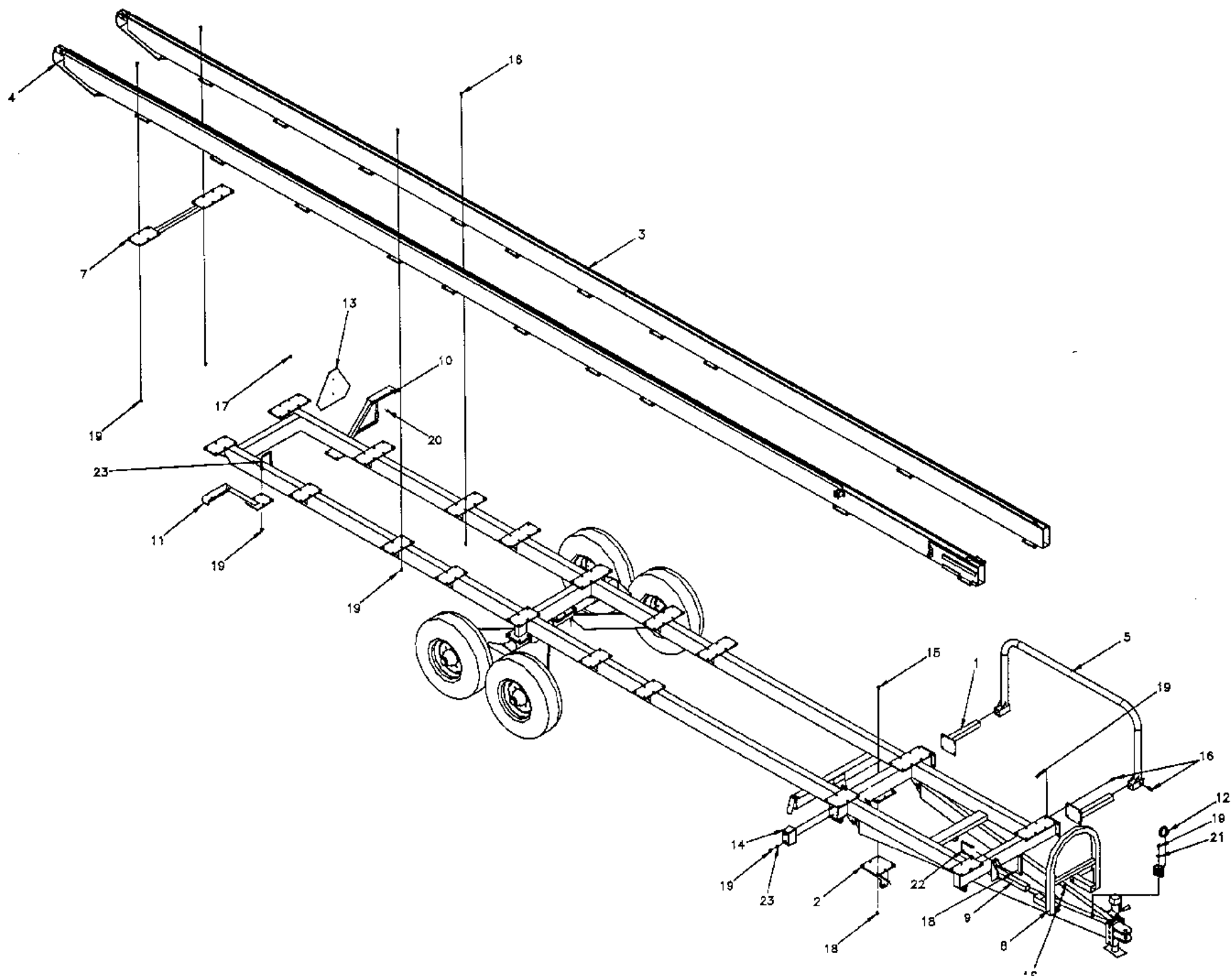
Insert double tongue hitch and tighten making sure angles are flush.



4.4 Rail and Crossmember Subframe

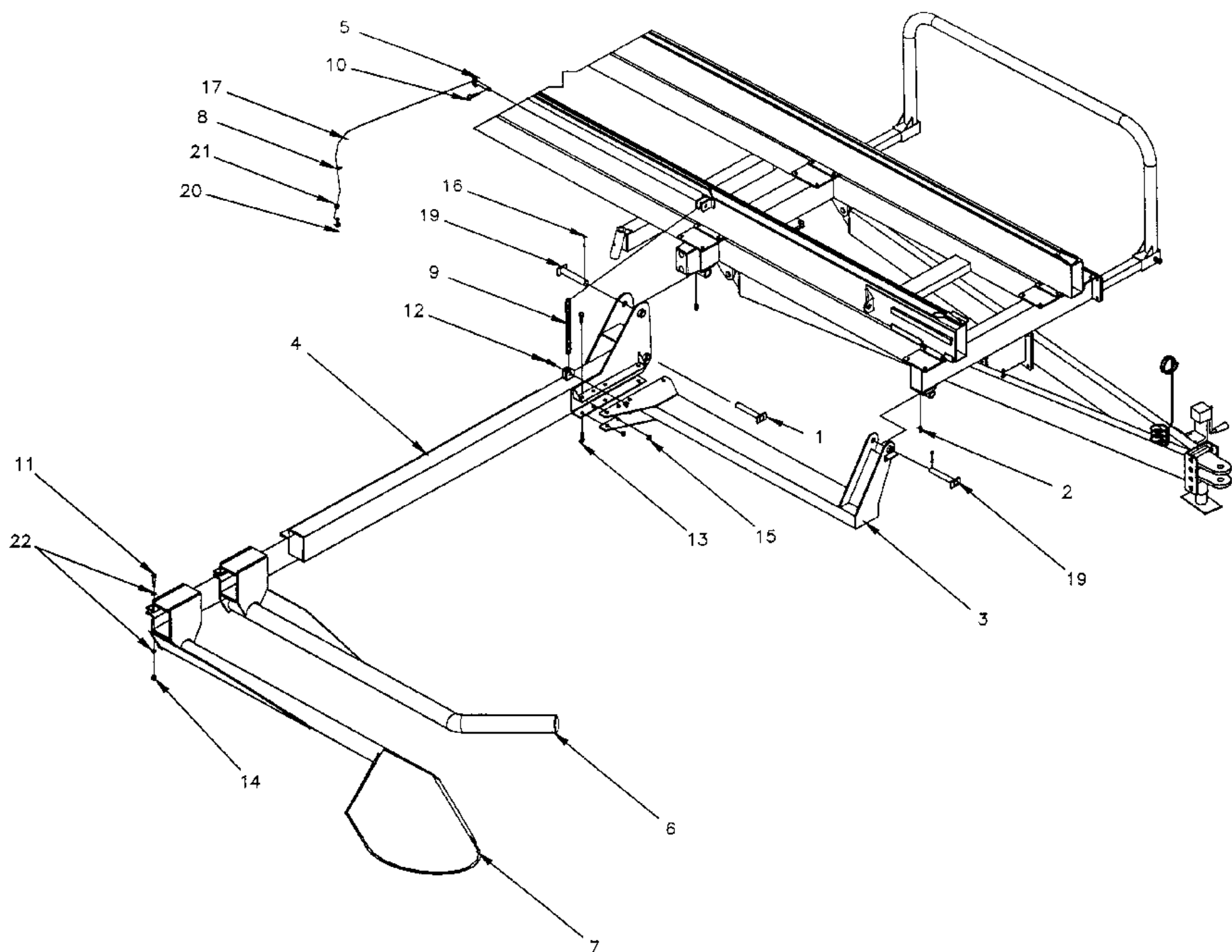
Item	Part No.	Description	Quantity
1	40085	Arm, Divider, Bale	2
2	40140	Bracket, Cylinder	1
3	40479	Rail, Left, 5BM	1
4	40480	Rail, Right, 5BM	1
5	45016	Divider, Bale	1
6	31061	Bolt, U, 1/2 x 3 x 7	4
7	45130	Crossmember, Widened	1
8	40088	Bumper, Front	1
9	40118	Mount, Bumper	2
10	40162	Mount. Light, BM, Left	1
11	40161	Mount. Light, BM, Right	1
12	30206	Holder, Hose, Hydraulic, 1/2"	1
13	92028	Sign, Vehicle, Moving, Slow	1
14	92061	Bumper, Rubber	1
15	31052	Bolt, 5/8" x 2", Pltd.	6
16	31016	Bolt, 1/2" x 1 1/2", Pltd.	60
17	31033	Bolt, 1/4" x 3/4, Pltd.	2
18	31178	Nut, Nylock, 5/8"	10
19	31173	Nut, Nylock, 1/2"	67
20	31174	Nut, Nylock, 1/4"	2
21	31236	Washer, Flat, 1/2", Pltd	1
22	30269	Bolt, U, 5/8 x 6x 4-3/8	2
23	31241	Washer, Flat, 7/16	2

Note: Install all rails on subframe leaving bolts loose.
 Install deck cylinder in the fully closed position between the hitch and deck lug.
 Lift hitch until front of the bale mover is fully supported then tighten all bolts



4.5 Forks

Item	Part No.	Description	Quantity
1	40008	Pin, Arm, Pivot	1
2	30207	Zerk, Grease, 1/4-28	2
3	45236	Arm, Pivot, Right	1
4	40149	Arm, Slide, Pivot, Right	1
5	40019	Pin, Lock, Safety	1
6	40151	Fork, Right	1
7	40152	Fork, Right, 1/4 Turn	1
8	31236	Washer, Flat, 1/2	1
9	30217	Chain, Transport, Bale Mover	1
10	91608	Hairpin, 1/8" x 2 1/2"	1
11	31041	Bolt, 3/4" x 3", Pltd.	4
12	31052	Bolt, 5/8" x 2", Pltd.	1
13	31051	Bolt, 5/8" x 1 1/2", Pltd	8
14	31175	Nut, Nylock, 3/4"	4
15	31178	Nut, Nylock, 5/8"	9
16	31182	Cotterpin, 1/4" x 2 1/2"	3
17	E3764	Tether	1
18	40166	Pin, Arm, Pivot, 1"	1
19	40010	Pin, Arm, Side, Pivot, 1 1/4"	2
20	31333	Bolt, Hex, 1/2 x 2	1
21	31173	Nut, Nylock, 1/2	1
22	31238	Washer, Flat, 3/4"	8



4.6 Chain Tightner and Chain

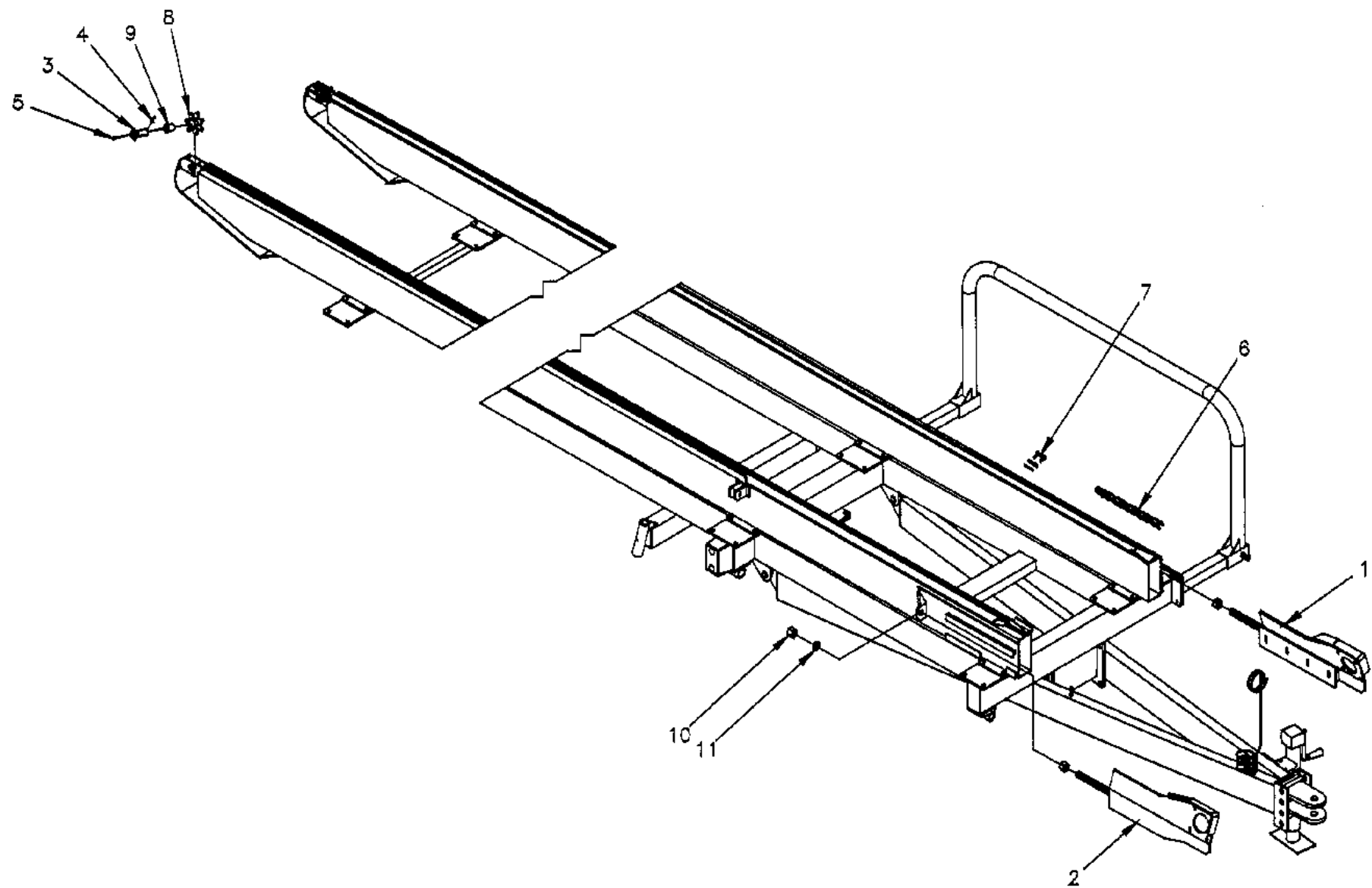
Item	Part No.	Description	Quantity
1	40115	Slide, Mount, Motor, Left	1
2	40116	Slide, Mount, Motor, Right	1
3	40121	Pin, Sprocket, Rear	2
4	30197	Pin, Roll, 3/16" x 1 1/2"	2
5	30207	Zerk, Grease, 1/4"-28	2
6a	E4639	CHAIN,21FT	2
6b	91508	CHAIN,37FT	2
7	91510	Link, Connecting, C2062	2
8	92023	Sprocket, Rear	2
9	92024	Bushing, Brass	2
10	31159	Nut, Acme, 1" – 5 RH	4
11	31243	Washer, Lock, 1", Pltd.	2
	91517	C2062h Chain per foot	N/A

Note:

Chain is fed from the front of the machine.

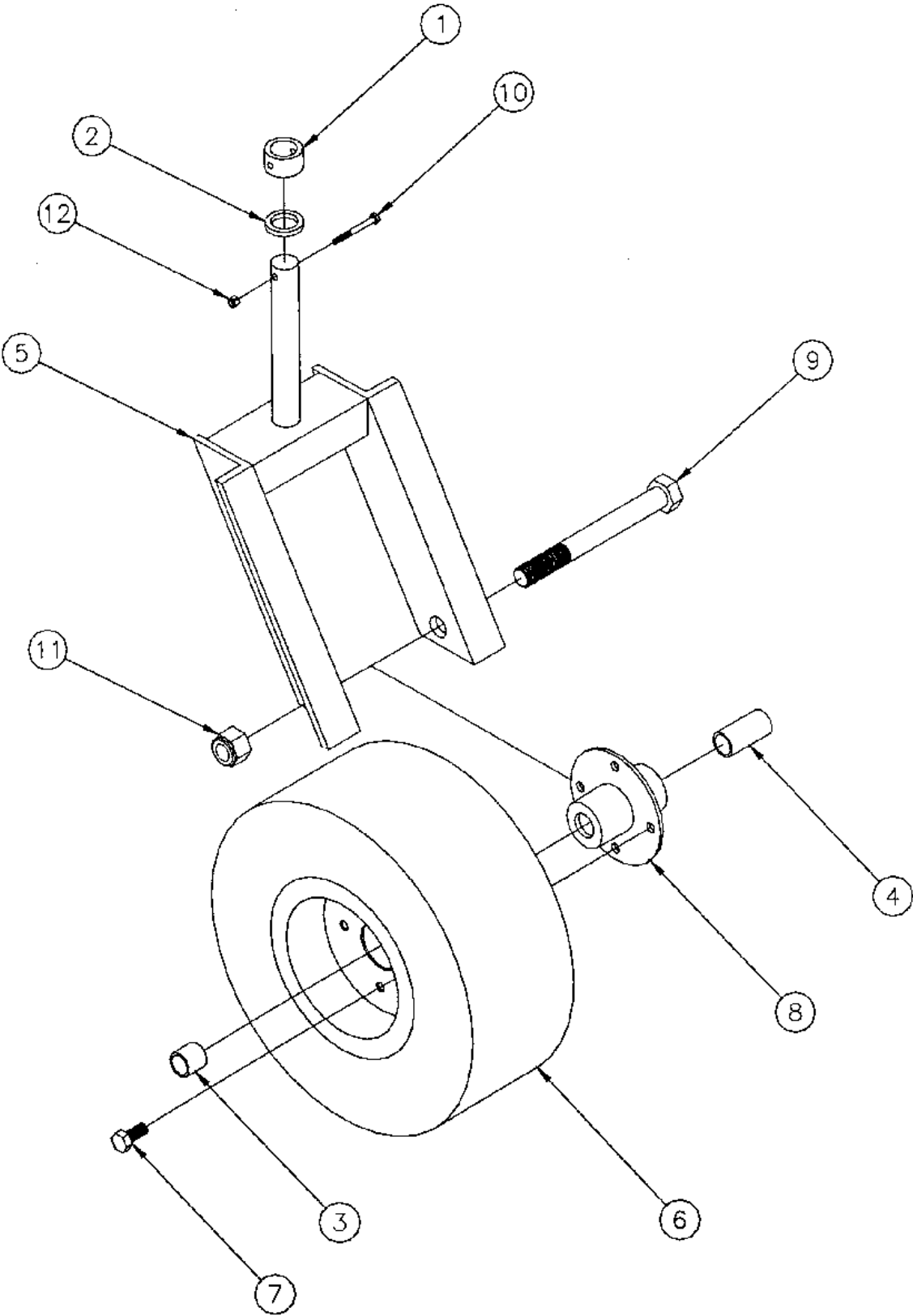
This is accomplished by feeding a piece of wire from the front through the tube and pulling the chain through.

This can be accomplished by one person, but two people would make the operation easier.



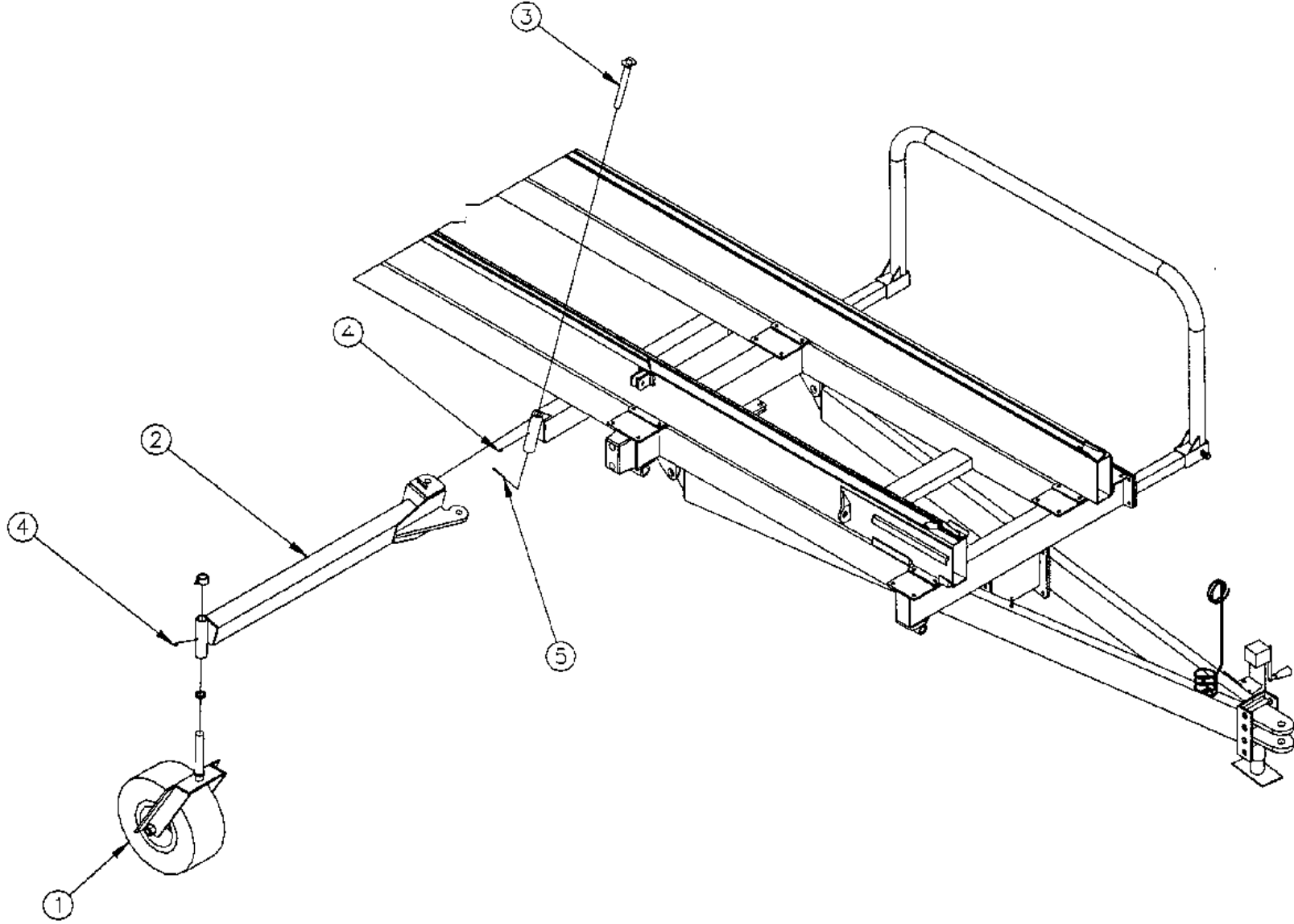
4.7 Castor Wheel

Item	Part No.	Description	Quantity
1	E2852	Holder, Pivot, Wheel, Land	1
2	E2853	Holder, Wheel, Land	1
3	E4835	Bushing, Wheel, Castor	1
4	E4836	Bushing, Wheel, Castor	1
5	70063	Fork, Wheel, Land	1
6	91031	Tire, Castor, c/w Rim, 4-Bolt	1
7	91060	Bolt, Wheel, 1/2"	4
8	91073	Hub, Castor, 4-Bolt, Complete	1
9	31039	Bolt, 1" x 9", Pltd.	1
10	31031	Bolt, 1/4" x 2 1/2", Pltd	1
11	31172	Nut, Nylock, 1"	1
12	31174	Nut, Nylock, 1/4"	1
	40176	Castor Wheel Complete	



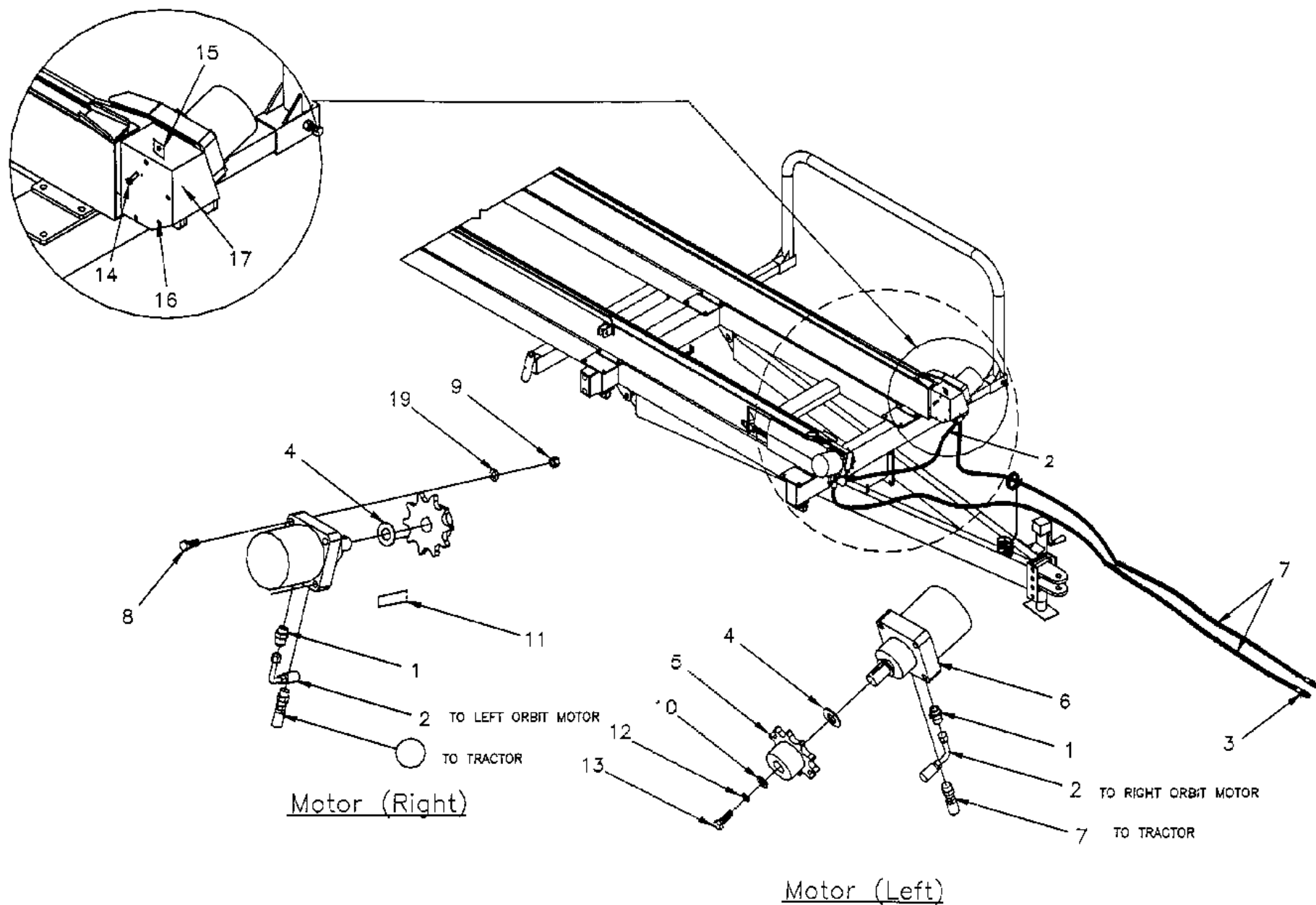
4.8 Castor Wheel Support

Item	Part No.	Description	Quantity
1	40176	Wheel, Castor	1
2	40483	Arm, Support	1
3	45025	Pin, Wheel, Support	1
4	30207	Zerk, Grease, 1/4"-28	2
5	31182	Cotterpin, 1/4" x 2 1/2"	1



4.9 Motor Hydraulics

Item	Part No.	Description	Quantity
1	30204	Fitting, Hyd, 10MB-8MJ	2
2	30205	Hose, 1/2" x 57', 8FJ90TL	1
3	30209	Tip, Male, Pioneer, 1/2"	2
4	32071	Washer, Motor, 1 1/4" ID x 1 7/8" OD	2
5	92063	Sprocket, Motor	2
6	92066	Motor, Hydraulic	2
7	90310	Hose, 1/2" x 96", 10MBX-8MP	2
8	31020	Bolt, 1/2" x 2 3/4", Pltd.	8
9	31173	Nut, Nylock, 1/2"	8
10	31240	Washer, Flat, 5/8", Pltd.	2
11	32654	Key, 5/16 x 1-1/2, Hardened	2
12	31218	Washer, Lock, 5/8	2
13	31181	Bolt, Hex, 5/8 x 1-1/2	2
14	31033	Bolt, Hex, 1/4 x 3/4	8
15	31593	Clip, Automotive, 1/4	8
16	E4803	Plate, Face, Guard	2
17	E4810	Housing, Guard, BM, Left	1
18	E4802	Housing, Guard, BM, Right	1
19	31236	Washer, Flat, 1/2	8

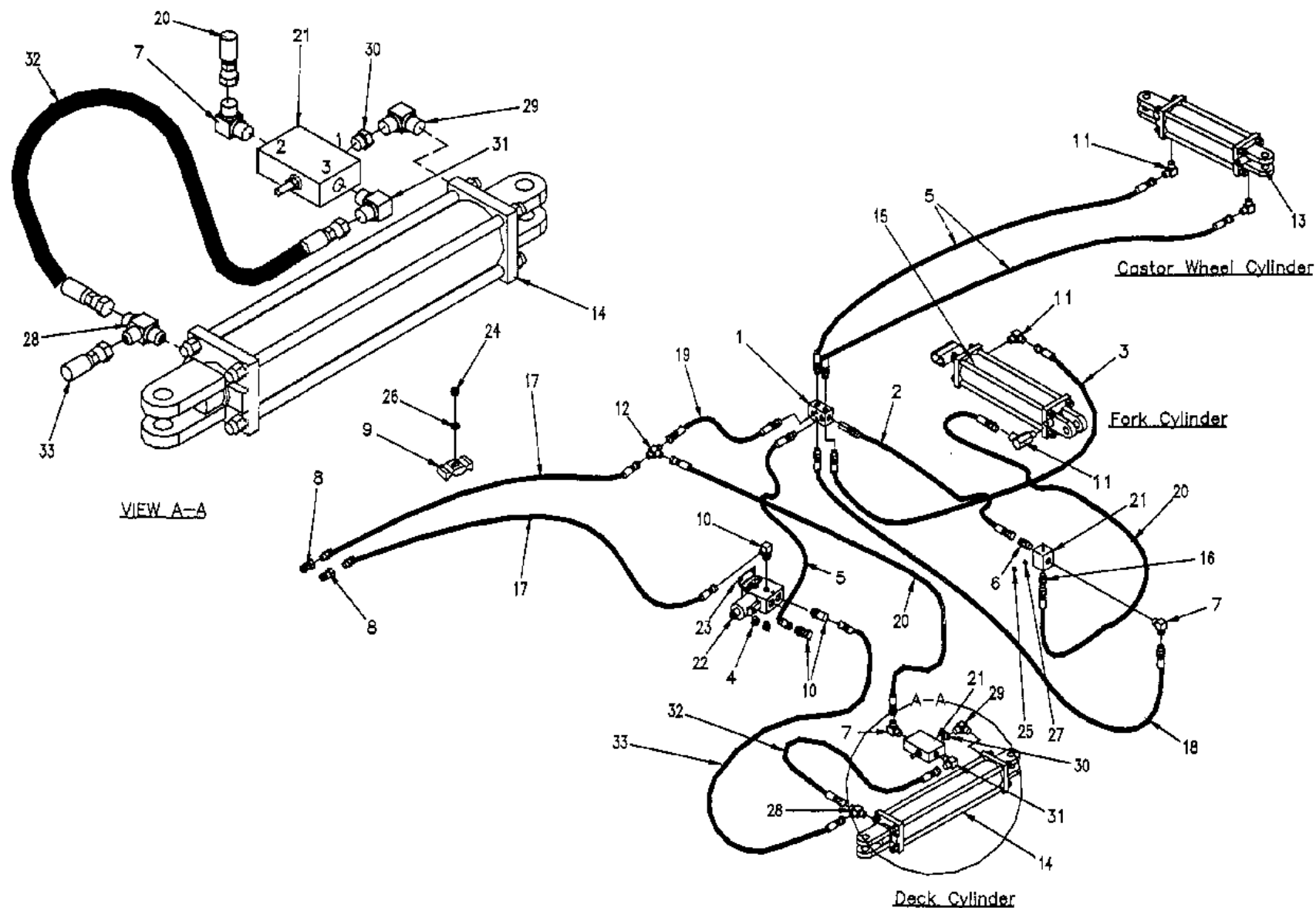


5.0 Cylinder Hydraulics

Item	Part No.	Description	Quantity
1	E4726	Tee, Double, Hydraulic	1
2	30198	Hose, 3/8" x 18", 6FJX-6MP	1
3	32055	Hose, 3/8" x 19", 6MP-8FJX	1
4	30200	Fitting, Plug, 8MB	1
5	30201	Hose, 3/8" x 44", 8FJX-6MP	3
6	30479	Fitting, Hyd, 4MB-6MJ	1
7	32079	Fitting, Hyd, 6MB-8MJ90	2
8	30209	Tip, Male, Pioneer, 1/2"	2
9	30210	Clamp, Line, Oil	3
10	30211	Fitting, 8MB-8MJ90	3
11	30212	Fitting, 8MP-8MJ90	4
12	30313	Fitting, 8MJT	1
13	90117	Cylinder, 3" x 8", 1 1/4" Rod	1
14	90118	Cylinder, 3" x 10", 1 1/4" Rod	1
15	90120	Cylinder, 3 1/2" x 13", 1 1/2" Rod	1
16	32033	Fitting, Hyd, 8MJ-6MB	1
17	90301	Hose, 3/8" x 120", 8MP-8FJX	2
18	90305	Hose, 3/8" x 30 1/2", 6MP-8FJX	1
19	90308	Hose, 3/8" x 50", 8FJX -6MP	1
20	90313	Hose, 3/8" x 18", 8FJX-8FJX	2
21	31271	Valve, Check, Pilot	2
22	92089	Valve	1
23	31176	Nut, Nylock, 3/8"	2
24	31177	Nut, Nylock, 5/16"	3
25	31174	Nut, Nylock, 1/4"	4
26	31239	Washer, Flat, 5/16", Pltd.	3
27	31237	Washer, Flat, 1/4", Pltd.	2
28	32035	Fitting, Tee, 8MPR-8MJ	1
29	30580	Fitting, Elbow, 8MP-6MJ90	1
30	30581	Fitting, Adapter, 6FJX-6MB	1
31	32056	Fitting, Elbow, 4MB-6MJ90	1
32	32963	Hose, 3/8" x 15", 8FJX	1
33	30584	Hose, 3/8" x 15", 8FJX-8FJXTL	1

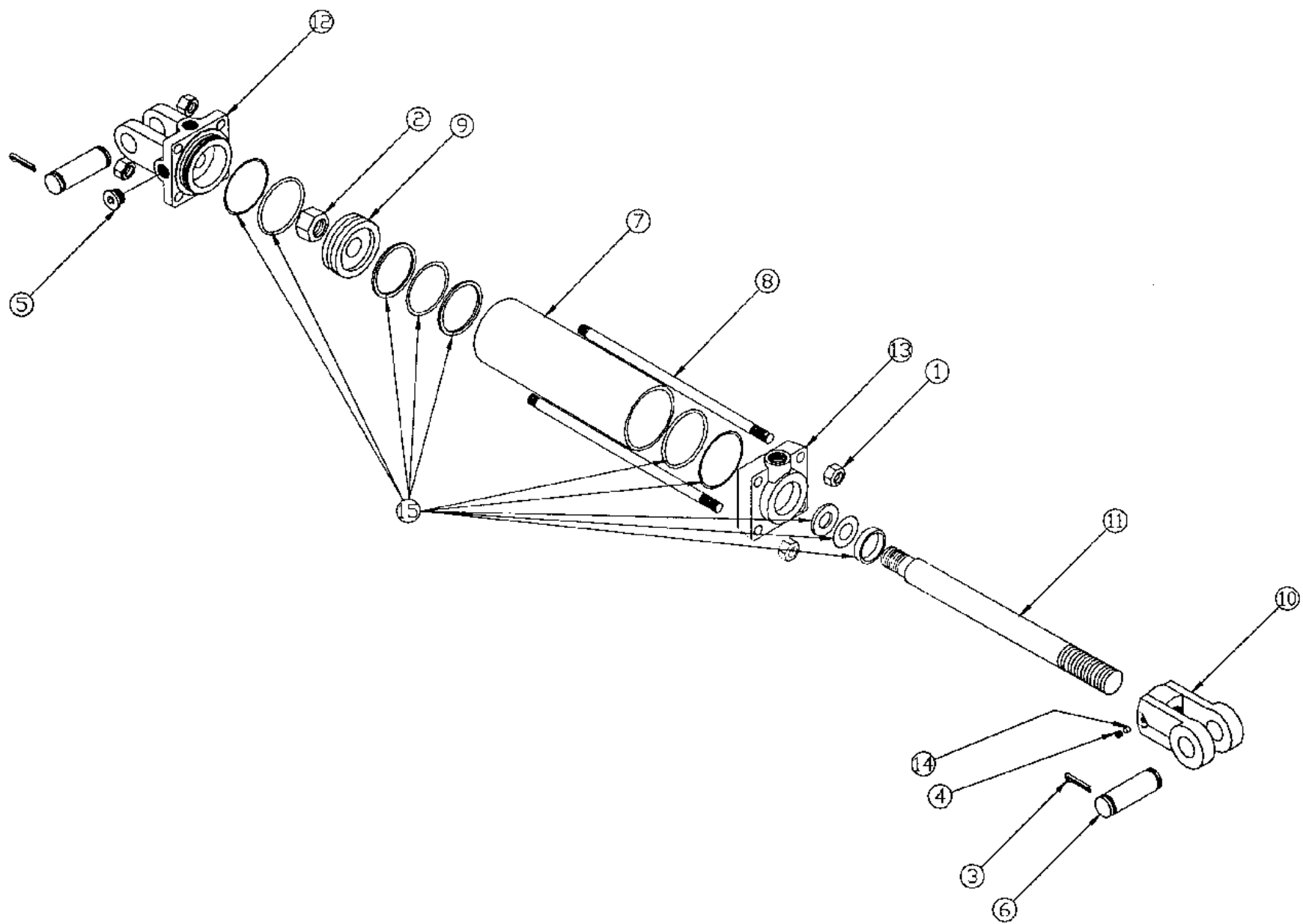
5.0 Cylinder Hydraulics

Item	Part No.	Description	Quantity
1	E4726	Tee, Double, Hydraulic	1
2	30198	Hose, 3/8" x 18", 6FJX-6MP	1
3	32055	Hose, 3/8" x 19", 6MP-8FJX	1
4	30200	Fitting, Plug, 8MB	1
5	30201	Hose, 3/8" x 44", 8FJX-6MP	3
6	30479	Fitting, Hyd, 4MB-6MJ	1
7	32079	Fitting, Hyd, 6MB-8MJ90	2
8	30209	Tip, Male, Pioneer, 1/2"	2
9	30210	Clamp, Line, Oil	3
10	30211	Fitting, 8MB-8MJ90	3
11	30212	Fitting, 8MP-8MJ90	4
12	30313	Fitting, 8MJT	1
13	90117	Cylinder, 3" x 8", 1 1/4" Rod	1
14	90118	Cylinder, 3" x 10", 1 1/4" Rod	1
15	90120	Cylinder, 3 1/2" x 13", 1 1/2" Rod	1
16	32033	Fitting, Hyd, 8MJ-6MB	1
17	90301	Hose, 3/8" x 120", 8MP-8FJX	2
18	90305	Hose, 3/8" x 30 1/2", 6MP-8FJX	1
19	90308	Hose, 3/8" x 50", 8FJX -6MP	1
20	90313	Hose, 3/8" x 18", 8FJX-8FJX	2
21	31271	Valve, Check, Pilot	2
22	92089	Valve	1
23	31176	Nut, Nylock, 3/8"	2
24	31177	Nut, Nylock, 5/16"	3
25	31174	Nut, Nylock, 1/4"	4
26	31239	Washer, Flat, 5/16", Pltd.	3
27	31237	Washer, Flat, 1/4", Pltd.	2
28	32035	Fitting, Tee, 8MPR-8MJ	1
29	30580	Fitting, Elbow, 8MP-6MJ90	1
30	30581	Fitting, Adapter, 6FJX-6MB	1
31	32056	Fitting, Elbow, 4MB-6MJ90	1
32	30584	Hose, 3/8" x 15", 6FJX-8FJXTL	1
33	32963	Hose, 3/8" x 15", 8FJX	1



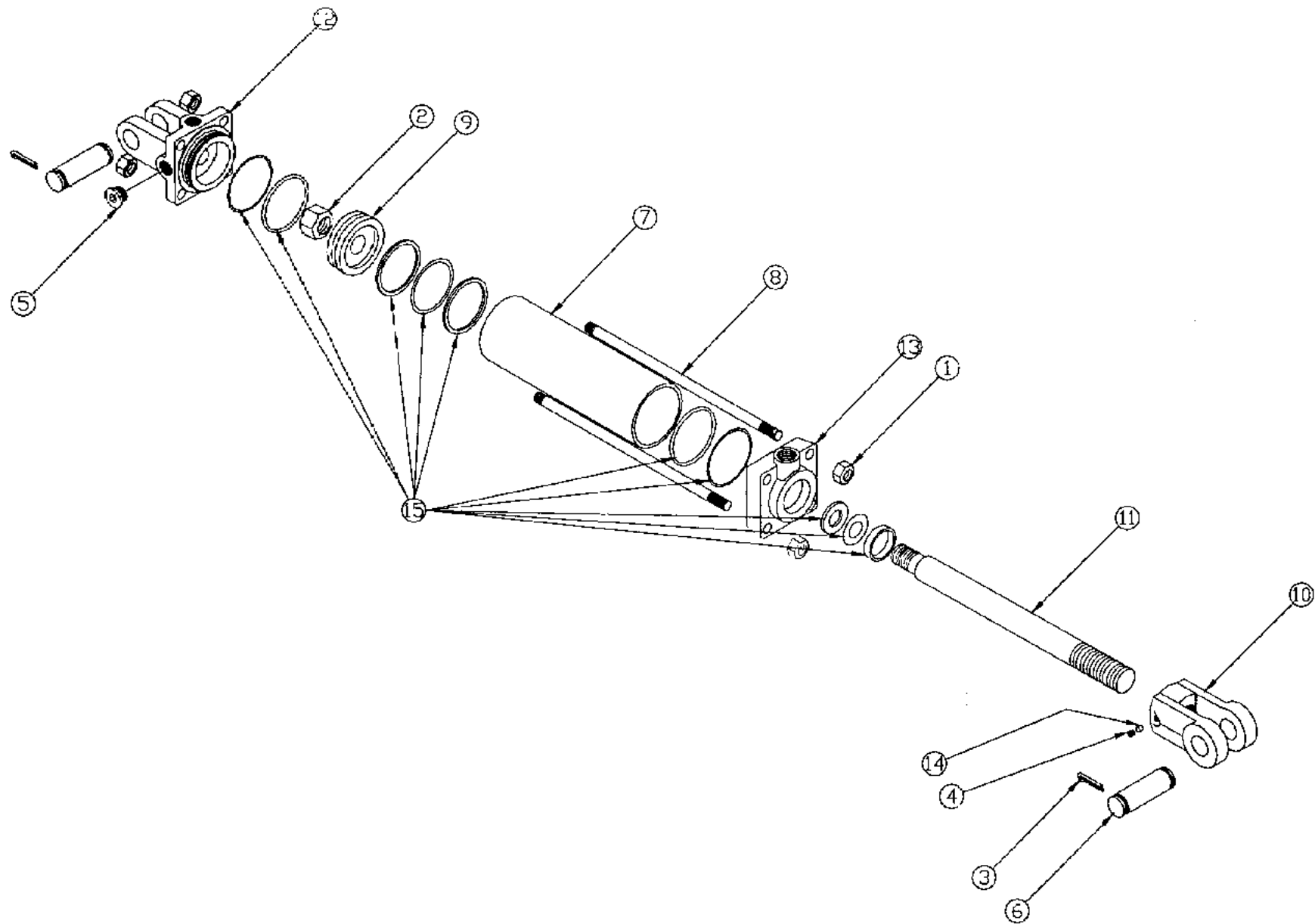
5.1 3 x 8, 1 1/4 Rod

Item	Part No.	Description	Quantity
1	30235	Nut, Hex, 1/2" UNC Grade 5	8
2	30237	Nut, Hex, 1"-14 UNS Grd 5 Phosphate	1
3	30238	Cotterpin, Hammerlock, 3/16" x 1 1/2"	4
4	30239	Screw, Set, Sckt, 3/8"UNC x 1/2" Knur	1
5	30240	Fitting, Plug, 1/2"-14 NPTF Dry Seal	1
6	30241	Pin, 1" Dia, H5552	2
7	30243	Tube, Cyl., 3" x 8", H6138	1
8	30247	Rod, Tie, 1/2" x 8", H6678	4
9	30250	Piston, 3" Dia, H6880	1
10	30253	Rod, Clevis, 1 1/4", 1" Pin	1
11	30254	Rod, 1 1/4" x 8"	1
12	30256	Cap, Clevis, 3" NPTF	1
13	30257	Cap, Rod, 3" x 1 1/4" NPTF	1
14	30261	Lock, Thread, Nylon	1
15	30262	Kit, Repair, 3" Cyl.	1



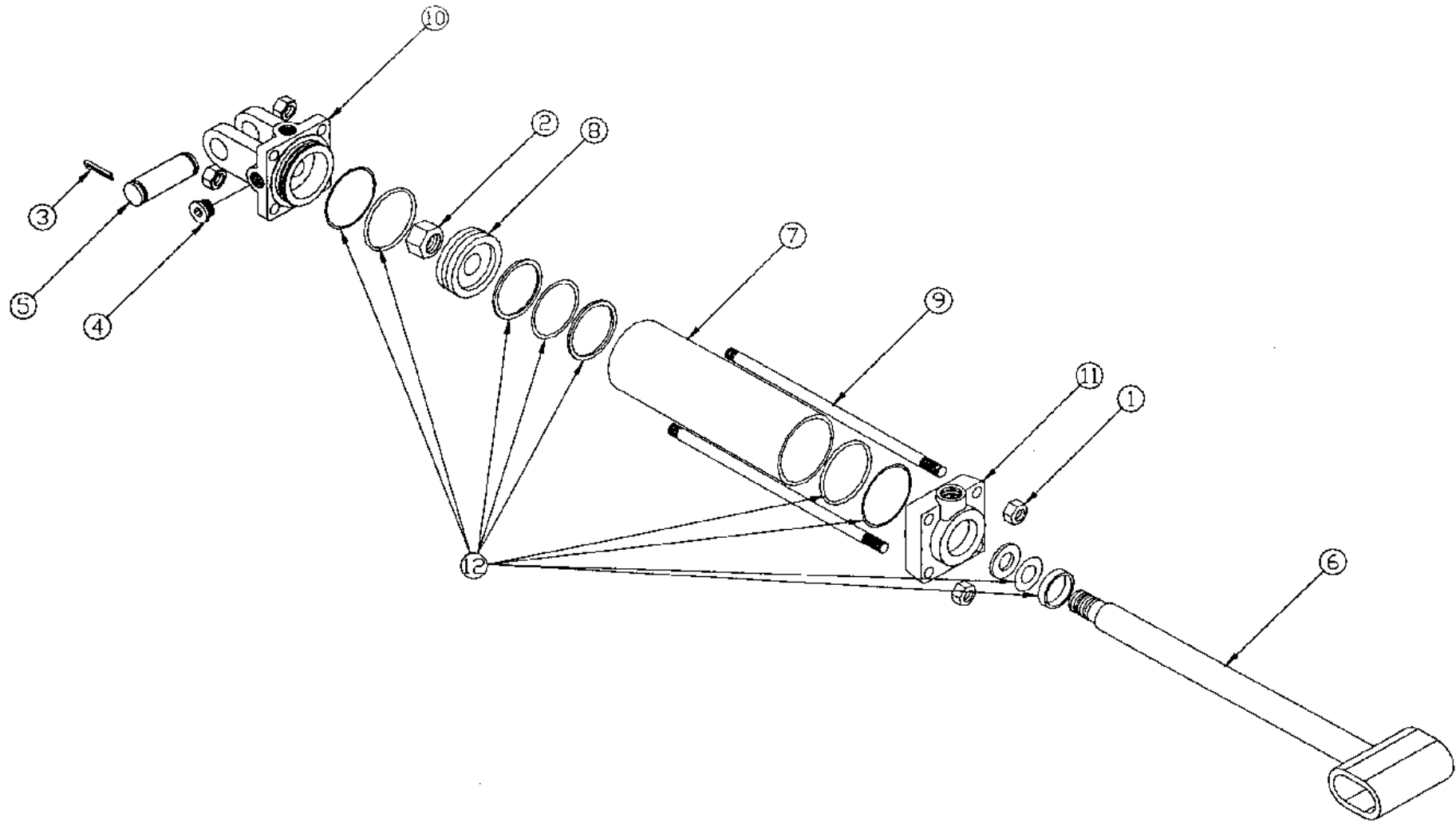
5.2 3 X 10, 1 1/4 Rod

Item	Part No.	Description	Quantity
1	30235	Nut, Hex, 1/2" UNC Grade 5	8
2	30237	Nut, Hex, 1"-14 UNS Grd 5 Phosphate	1
3	30238	Cotterpin, Hammerlock, 3/16" x 1 1/2"	4
4	30239	Screw, Set, Sckt, 3/8"UNC x 1/2" Knur	1
5	30240	Fitting, Plug, 1/2"-14 NPTF Dry Seal	1
6	30241	Pin, 1" Dia, H5552	2
7	30244	Tube, Cyl., 3" x 10", H6140	1
8	30248	Rod, Tie, 1/2" x 8", H6680	4
9	30250	Piston, 3" Dia, H6880	1
10	30253	Rod, Clevis, 1 1/4", 1" Pin	1
11	30260	Rod, 1 1/4" x 10"	1
12	30256	Cap, Clevis, 3" NPTF	1
13	30257	Cap, Rod, 3" x 1 1/4" NPTF	1
14	30261	Lock, Thread, Nylon	1
15	30262	Kit, Repair, 3" Cyl.	1



5.3 3 1/2 x 13, 1 1/2 Rod

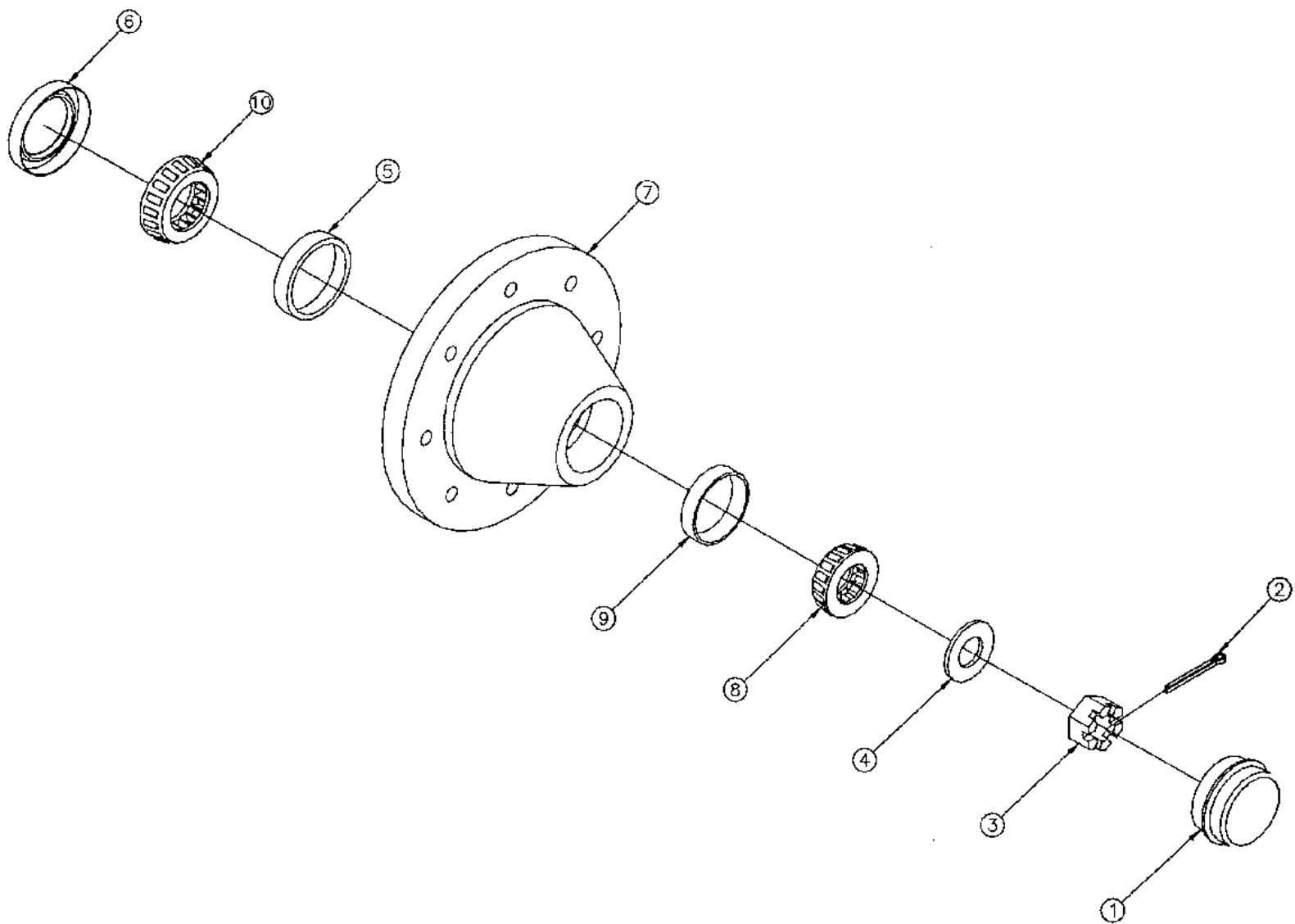
Item	Part No.	Description	Quantity
1	30236	Nut, Hex, 5/8" UNC Grade 5	8
2	30237	Nut, Hex, 1"-14 UNS Grd 5 Phosphate	1
3	30238	Cotterpin, Hammerlock, 3/16" x 1 1/2"	2
4	30240	Fitting, Plug, 1/2"-14 NPTF Dry Seal	1
5	30241	Pin, 1" Dia, H5552	1
6	30242	Rod, 1 1/2" x 13", Weldment	1
7	30245	Tube, Cyl., 3 1/2" x 13", H6203	1
8	30251	Piston, 3 1/2" Dia, H6888	1
9	30255	Rod, Tie, 5/8" x 13", Special	4
10	30258	Cap, Clevis, 3 1/2" NPTF	1
11	30259	Cap, Rod, 3 1/2" x 1 1/2" NPTF	1
12	30263	Kit, Repair, 3 1/2" Cyl.	1



5.4 Tandem Wheel

Item	Part No.	Description	Quantity
1	30220	Cap, Dust	1
2	30221	Cotterpin, 3/16" x 1 3/4"	1
3	30222	Nut, Slotted, 1 1/4"	1
4	30223	Washer, Flat, 1" SAE	1
5	30226	Race, Inner	1
6	30228	Seal, Grease	1
7	30229	Hub, 8-Bolt	1
8	91111	Bearing, Outer	1
9	91131	Race, Outer	1
10	91133	Bearing, Inner	1

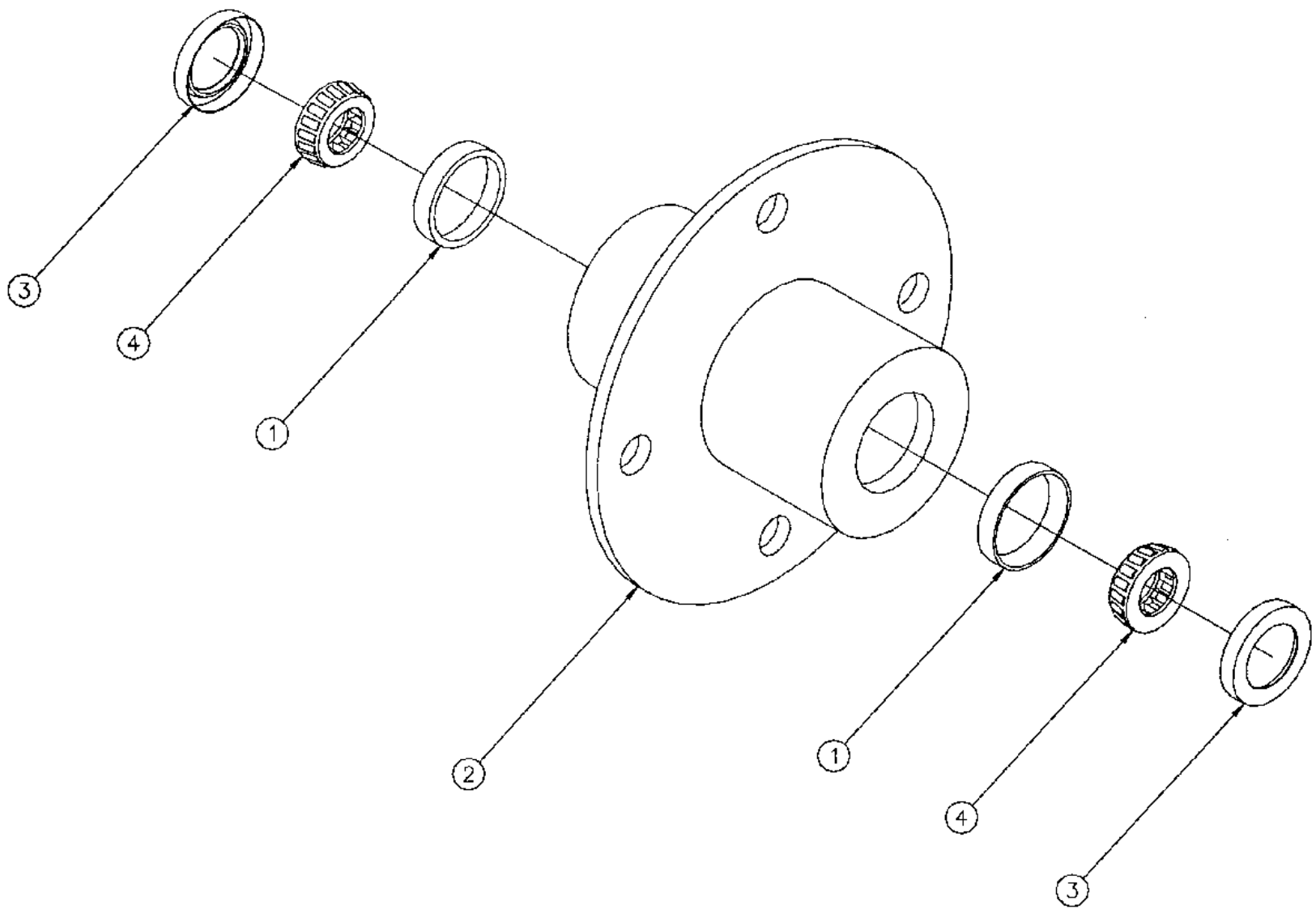
Note: Wheel bearings should be repacked yearly.



5.5 Castor Wheel

Item	Part No.	Description	Quantity
1	30232	Race	2
2	91073	Hub, 4-Bolt	1
3	91093	Seal, Grease	2
4	91113	Bearing	2

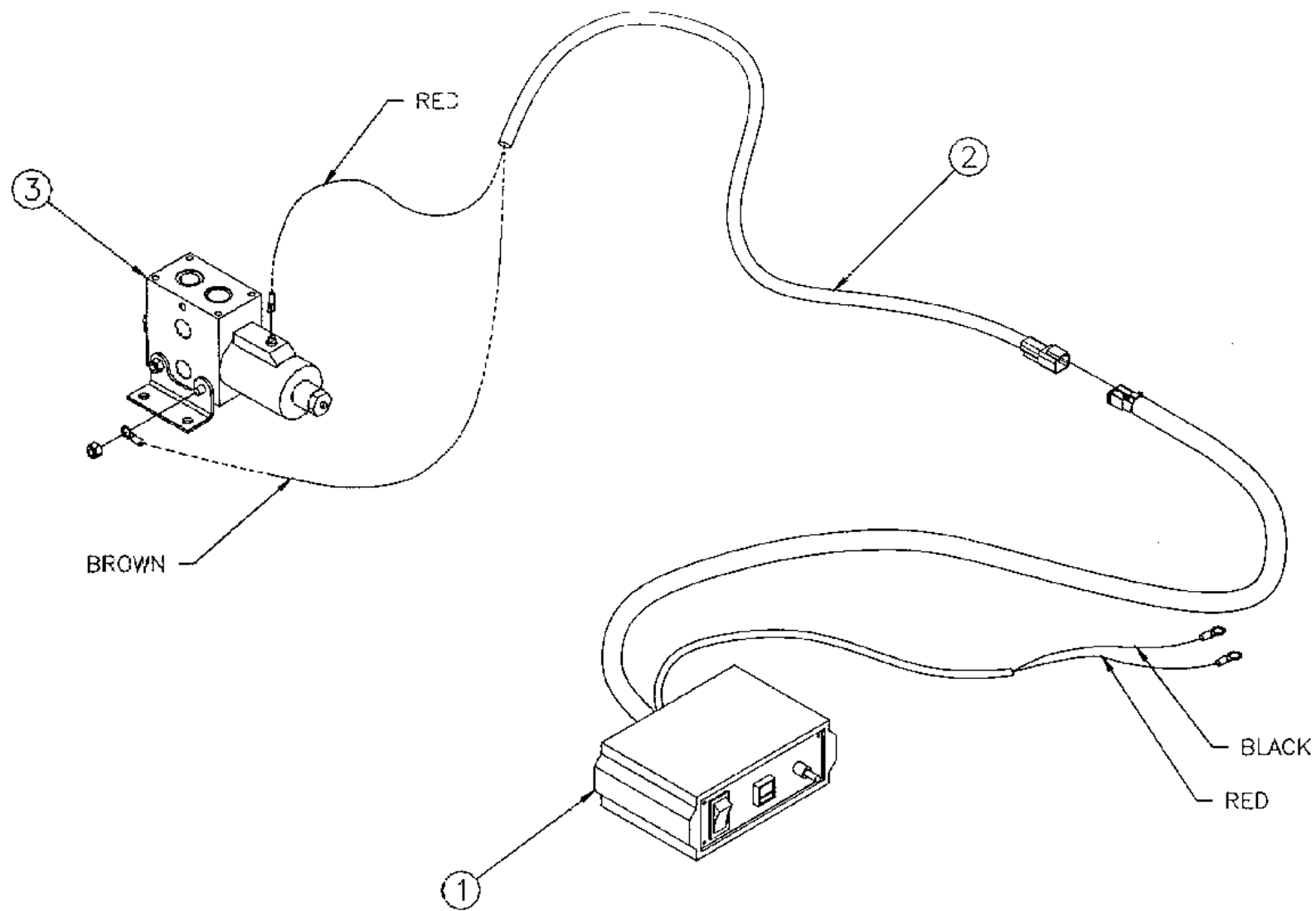
Note: Wheel bearings should be repacked yearly.



5.6 Electrical Schematic

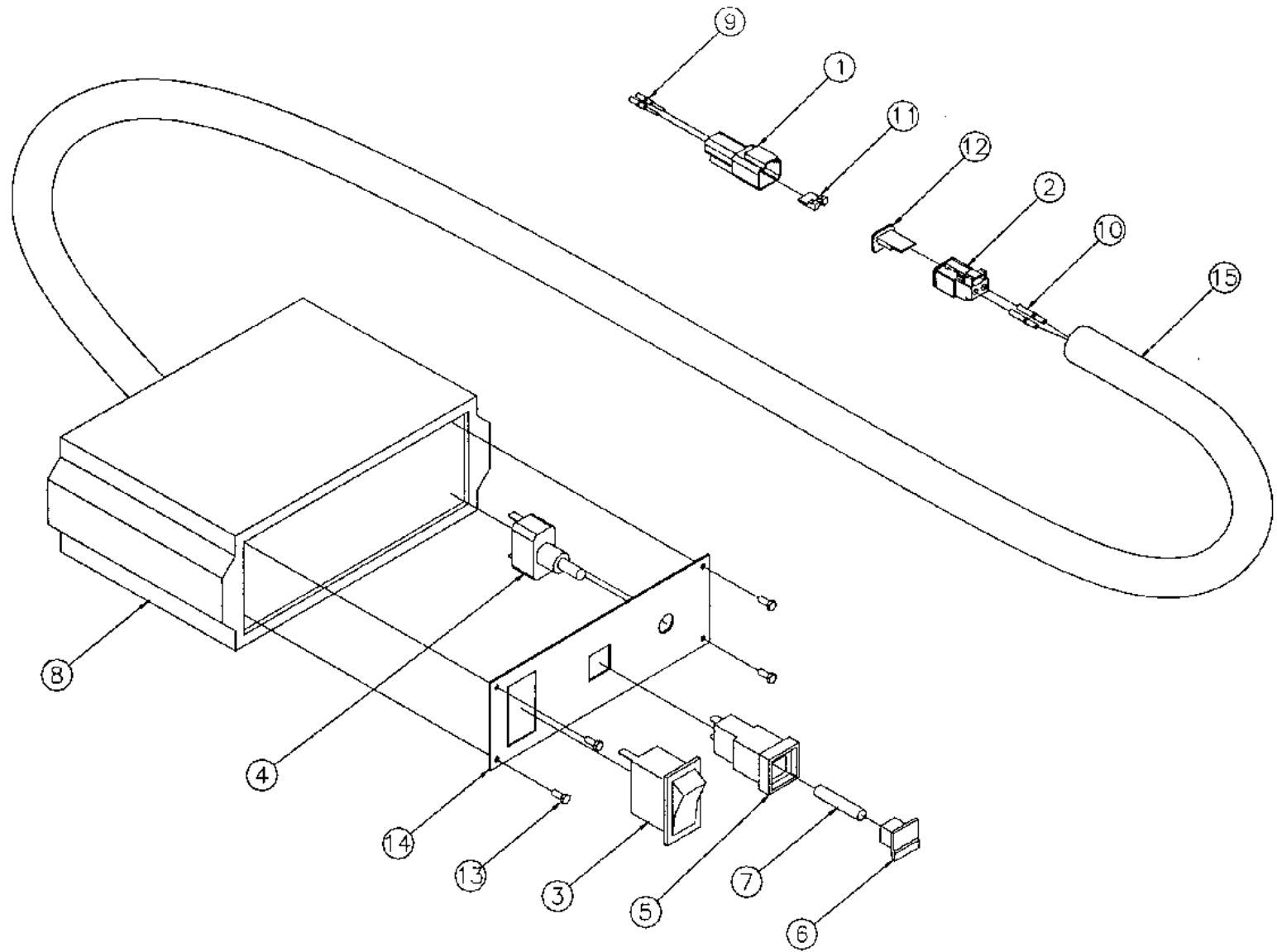
Item	Part No.	Description	Quantity
1	40103	Box, Control, 500BM	1
2	92078	Harness, Extension, 5&7BM	1
3	92089	Valve	1

Note: Black wire from control box to tractor ground
Red wire from control box to tractor ignition accessory.



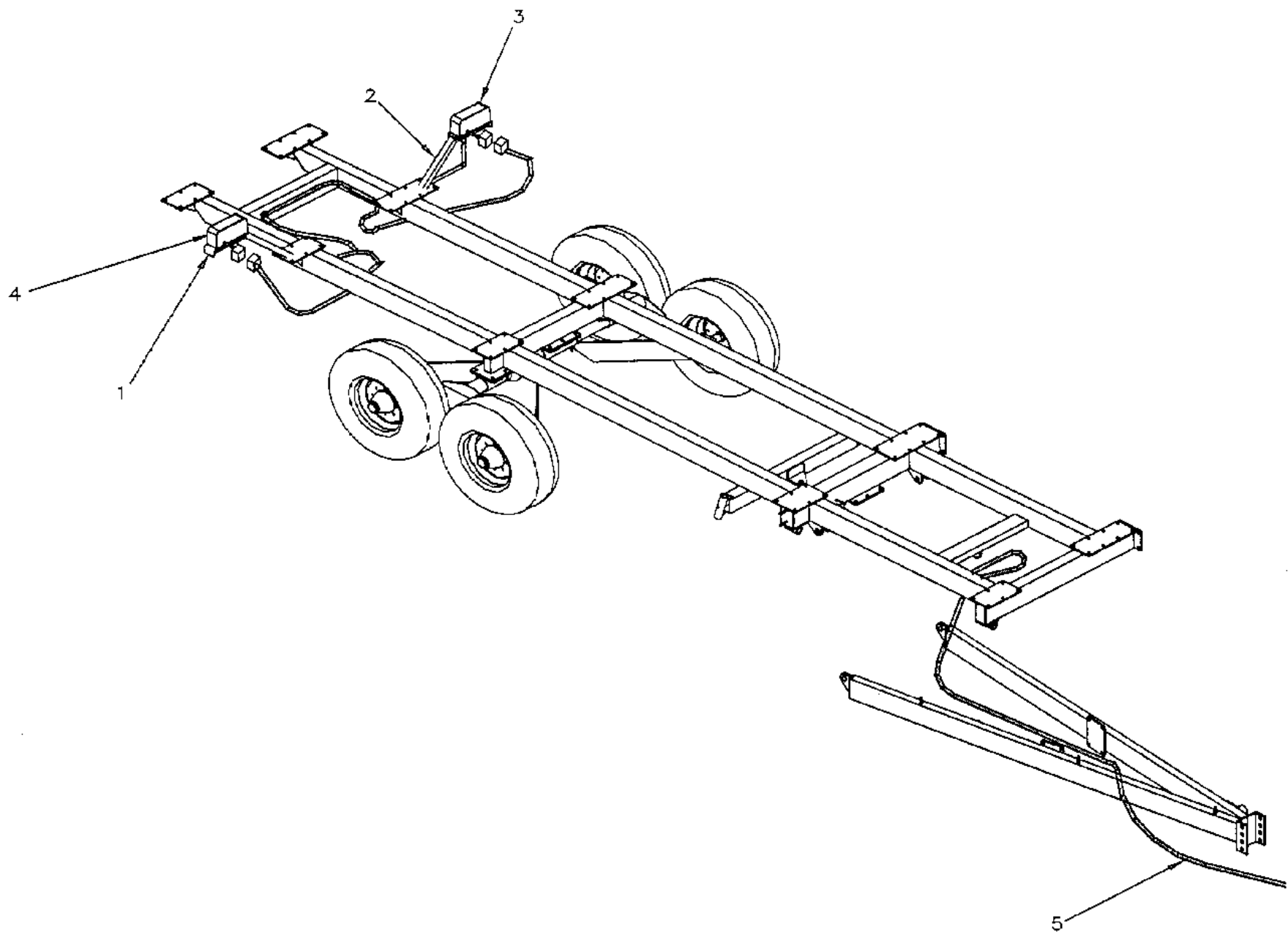
5.7 Control Box and Wiring Harness

Item	Part No.	Description	Quantity
1	92103	Electrical, Plug Male	1
2	92105	Electrical, Plug Female	1
3	92107	Switch, On/Off	1
4	92136	Switch, Toggle	1
5	92138	Fuse, Body	1
6	92139	Fuse, Cap	1
7	92140	Fuse, 20 Amp	1
8	92146	Enclosure, Plastic	1
9	92157	Pin, Male Plug	2
10	92158	Socket, Female Plug	2
11	92159	Wedge, Locking, Male, Plug	1
12	92160	Wedge, Locking, Female Plug	1
13	92164	Screw, Tapping, #4 x 1/4	4
14	92221	Plate, Face, Box, Control	1
15		Wiring, Box, Control, 6 ft	1



5.8 Lights

Item	Part No.	Description	Quantity
1	40161	Mount, Light, Right	1
2	40162	Mount, Light Left	1
3	30526	Elec, Light, Red & Amber, Left	1
4	30527	Elec, Light, Red & Amber, Right	1
5	40163	Elec, Harness, Light, 5 & 7 BM	1



6.0 Specifications

Weight	Approximately 3,850 lbs (8,500 kg)
Total Length	31'7"
Bed Length	27"
Total Width	8'
Bed Width	2'
Total Height	9'2"
Bed Height	3'3"
Ground Clearance	13 1/2"
Maximum Capacity	5 – 5 Ft. Bales
Chain & Sprocket	Heavy Duty ASA 2062, 1 1/2 Pitch
Tires	Goodyear, 11L-15FI, 12 Ply Farm Highway Service
Undercarriage	2 – 2 wheel oscillating tandems
Horsepower Required	60 Horsepower
Hydraulic Outlets	2
Hydraulic Pressure	2500 psi.(17240 KPa)