



P.O. BOX 307
VONDA, Saskatchewan
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TO THE OWNER:

Congratulations on the purchase of your new LAURIER HARROW PACKER BAR.

Constructed of the finest quality materials, your LAURIER HARROW PACKER BAR is engineered and designed to do normal harrowing and packing operations effectively and efficiently, and to provide you with years of dependable service.

Be sure to read the instructions in this manual for adjusting and operating your LAURIER HARROW PACKER BAR. A few moments to acquaint yourself with the LAURIER HARROW PACKER BAR and its maintenance requirements will save you precious time in the field and protect your machinery investment. Should you in time, need replacement parts, please consult the parts list in this manual, and contact your LAURIER DEALER.

HIGH LINE MFG. INC.

It is the policy of HIGH LINE MFG. INC. to improve its products whenever it is possible and practical. We reserve the right to make changes or add improvements, at any time, without incurring any obligation to make such changes on machines previously sold.

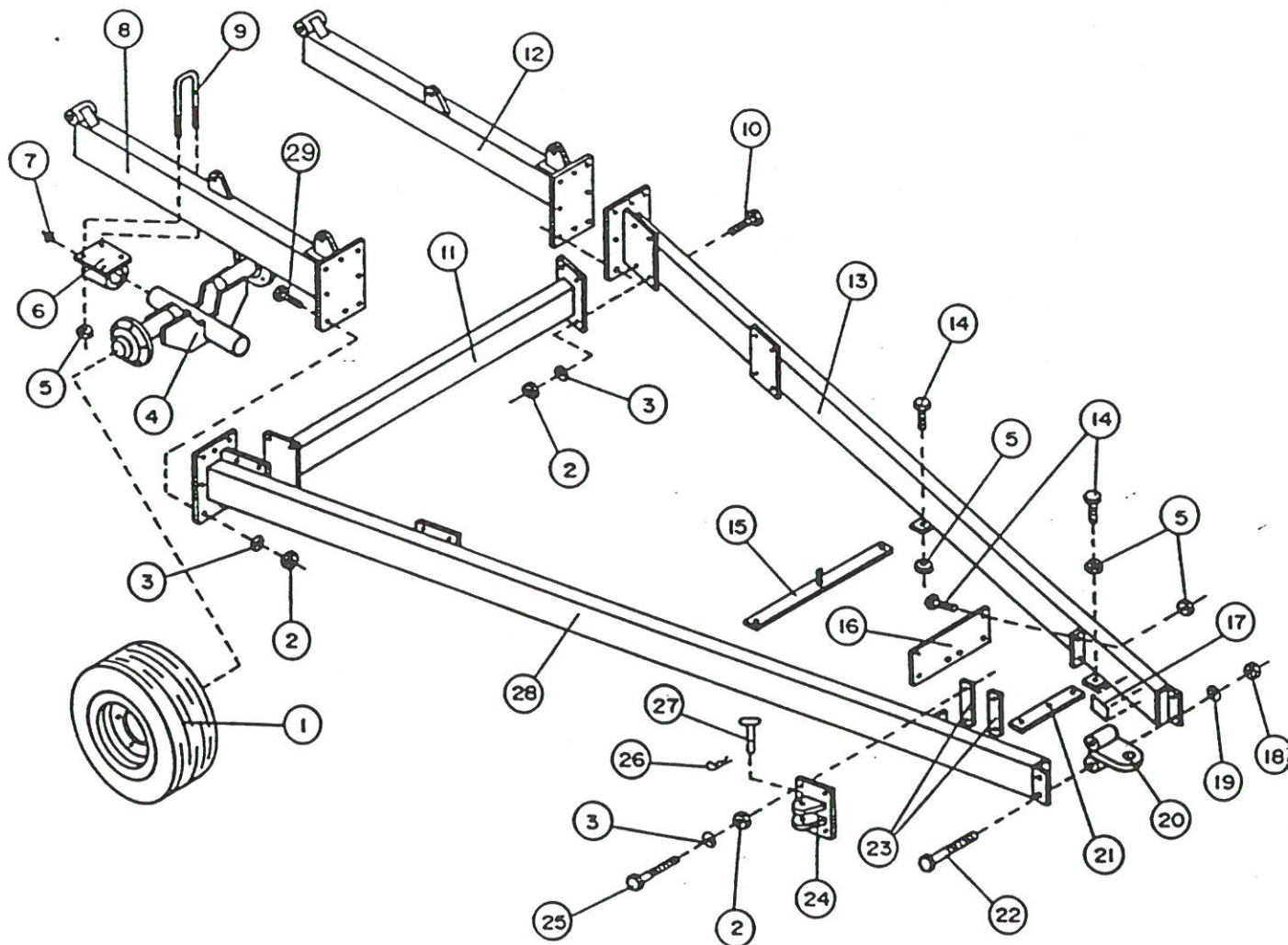
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20 ft. A-Frame Hitch

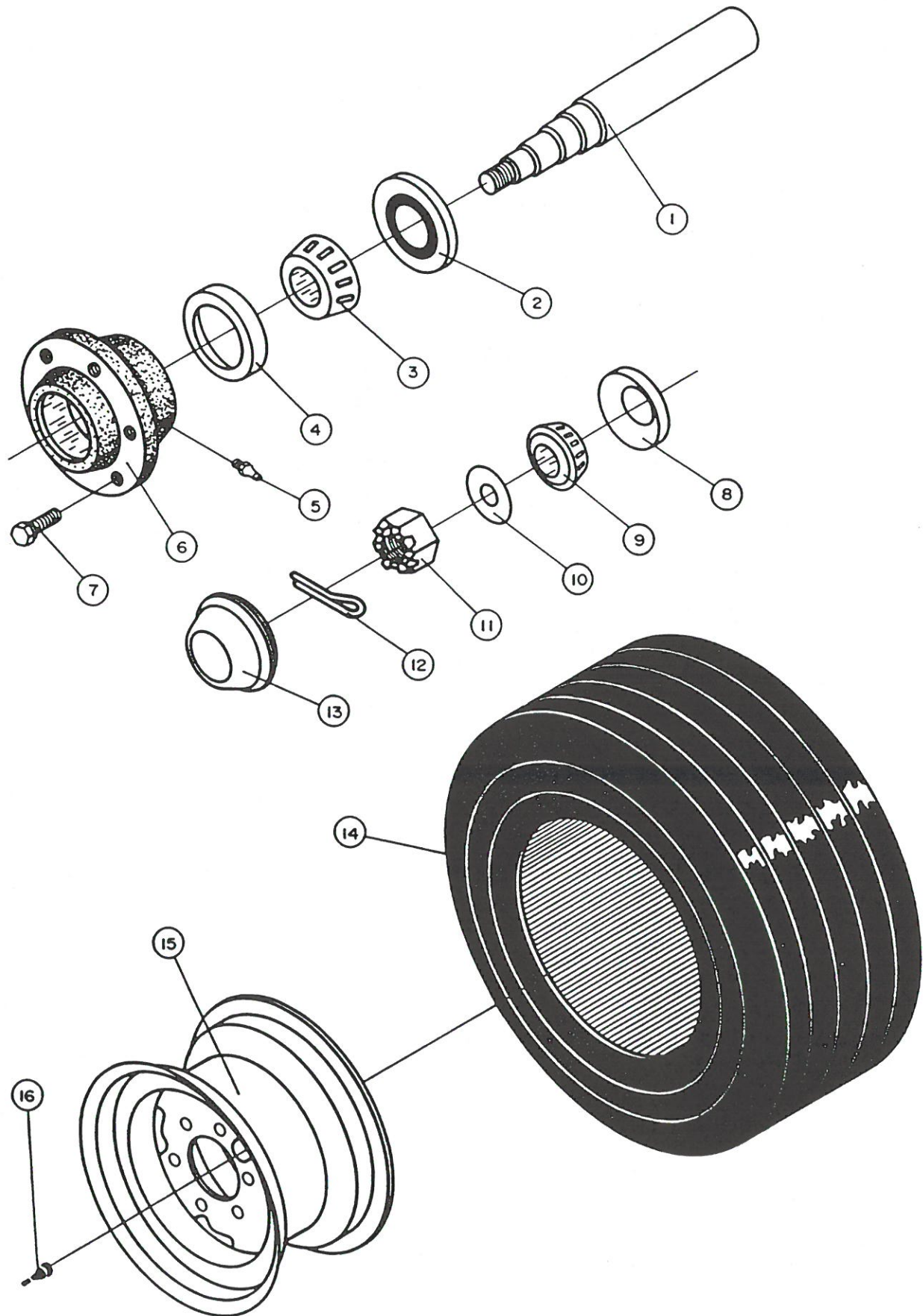
NOTE: LEFT AND RIGHT DETERMINED WHEN FACING REAR OF MACHINE.
DO NOT TIGHTEN BOLTS UNTIL ALL PARTS ARE IN PLACE.

- A. BOLT LEFT AND RIGHT HITCHES (#13, #28) TO RIGHT AND LEFT HITCH TUBE (#8, #12) WITH $5/8"$ x $1\ 3/4"$ BOLTS.
- B. BOLT CROSS MEMBER (#11) TO LEFT AND RIGHT HITCHES WITH $5/8"$ x $1\ 3/4"$ BOLTS.
- C. BOLT CROSS ANGLE (#15) AND TENSION SPRING PLATE (#21) TO LEFT AND RIGHT HITCHES WITH $1/2"$ x $1\ 1/2"$ BOLTS.
- D. BOLT ON ITEMS (#16, 23, 24, 25, 26 and 27) ONLY IF NO AUTO FOLD IS USED, OTHERWISE FOLLOW AUTO FOLD DIRECTIONS.
- E. INSTALL BOLT ON DRAW HITCH (#20) TO LEFT AND RIGHT HITCHES WITH $1"$ x $7\ 1/2"$ BOLTS.
- F. INSTALL WHEELS TO OSCILLATING AXLES (#4). SECURE WHEELS WITH WHEEL BOLTS.
- G. BOLT OSCILLATING AXLE TO LEFT AND RIGHT HITCH TUBES, 23" FROM PIVOT HINGE ON HITCH TUBES TO CENTRE OF WHEEL AXLE WITH $1/2"$ U-BOLTS (#9) AND OSCILLATING AXLE POCKETS (#6).



ITEM	PART NUMBER	DESCRIPTION	Nº
1	91027	11L x 6 Ply c/w 8" Wheel Rim	4
2	N5C10P	Nut 5/8"	32
3	W10P	Lockwasher 5/8"	32
4	10017	Oscillating Axle c/w 611 Hub	2
5	LN5C08P	Locknut 1/2"	24
6	10016	Oscillating Axle Pocket	4
7	91700	Grease Nipple 1/8" NPT Straight	4
8	10089	Right A-Frame Hitch Tube	1
9	UB0850146	U-Bolt 1/2" x 3 1/8" x 9 1/8"	8
10	B5C1028P	Bolt 5/8" x 1 3/4"	8
11	10092	Cross Member	1
12	10088	Left A-Frame Hitch Rear	1
13	10090	Left A-Frame Hitch	1
14	B5C0824P	Bolt 1/2" x 1 1/2"	8
15	10093	Cross Angle	1
16	10123	Cross Plate (no auto fold)	1
17	92003	Serial Number Plate	1
18	N5C16P	Nut 1"	2
19	W16P	Lockwasher 1"	2
20	10022	Bolt on Draw Hitch	1
21	10143	Tension Spring Plate	1
22	B5C16120P	Bolt 1" x 7 1/2"	2
23	10069	Cable Bracket Plates (no auto fold)	4
24	10070	Bolt on Cable Bracket (no auto fold)	2
25	B5C1080P	Bolt 5/8" x 5" (no auto fold)	8
26	HP52	Hair Pin Clip 3 1/4" (no auto fold)	2
27	10060	Cable Bracket Pin (no auto fold)	2
28	10091	Right A-Frame Hitch	1
29	B8C1028P	Bolt 5/8" x 1 3/4" Gr8	16

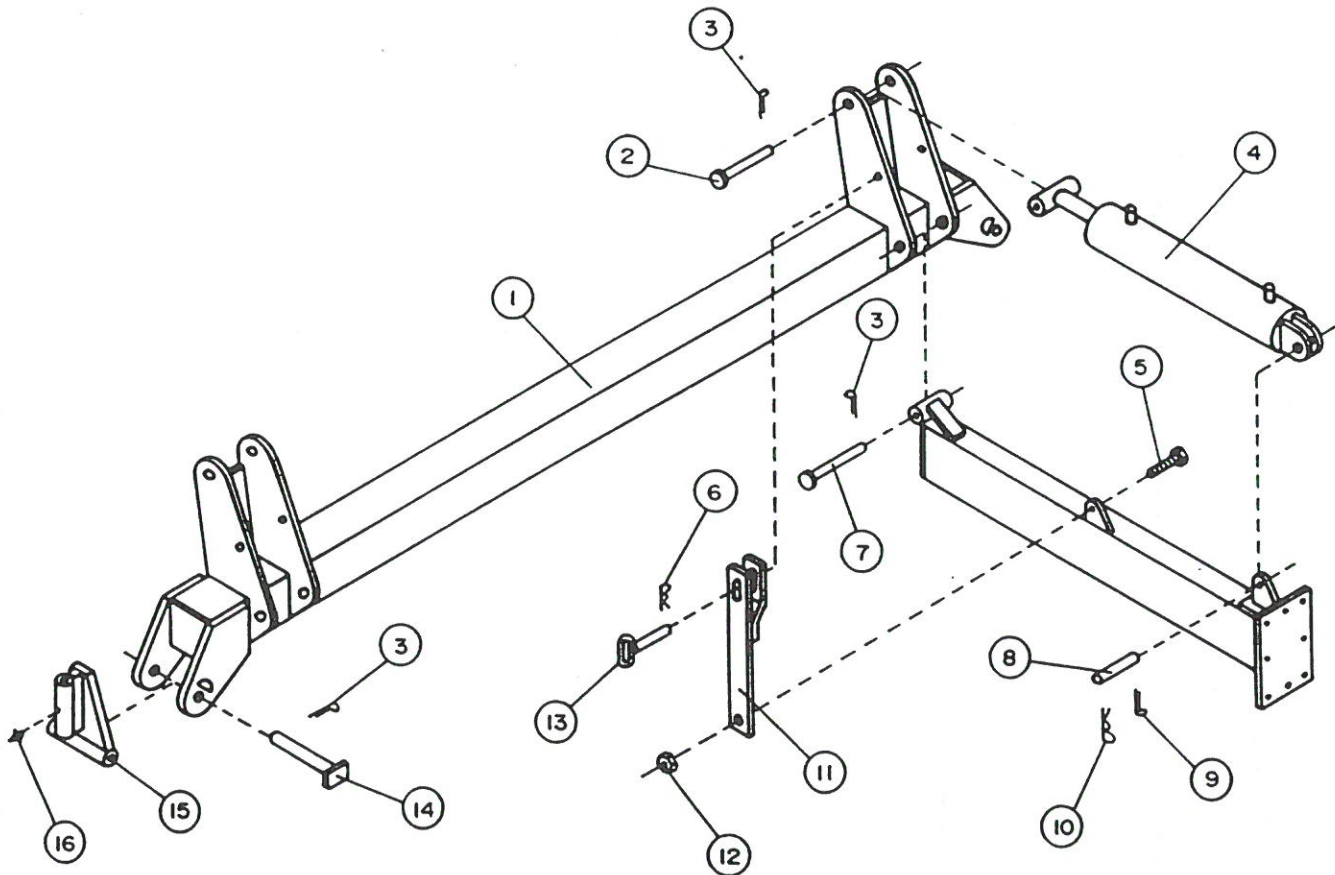
611 Hub and Spindle



ITEM	PART NUMBER	DESCRIPTION	Nº
1	91250	611 Spindle 2" x 10"	1
2	91090	611 Seal	1
3	91170	611 Inner Cone LM 29749	1
4	91150	611 Inner Race LM 29710	1
5	91700	Grease Nipple 1/8" NPT Straight	1
6	91070	611 Hub	1
7	91060	Wheel Bolt 1/2"	6
8	91130	611 Outer Race LM 67010	1
9	91110	611 Outer Cone LM 67048	1
10	91190	Washer Hub	1
11	91210	Castelated Nut	1
12	CP0324	Cotter Pin 3/16" x 1 1/2"	1
13	91230	611 Dustcap	1
14	91001	11L x 6 Ply Tire	1
15	91050	15" x 8" x 6 Wheel Rim	1
16	92005	Valve Stem	1

Center Tube

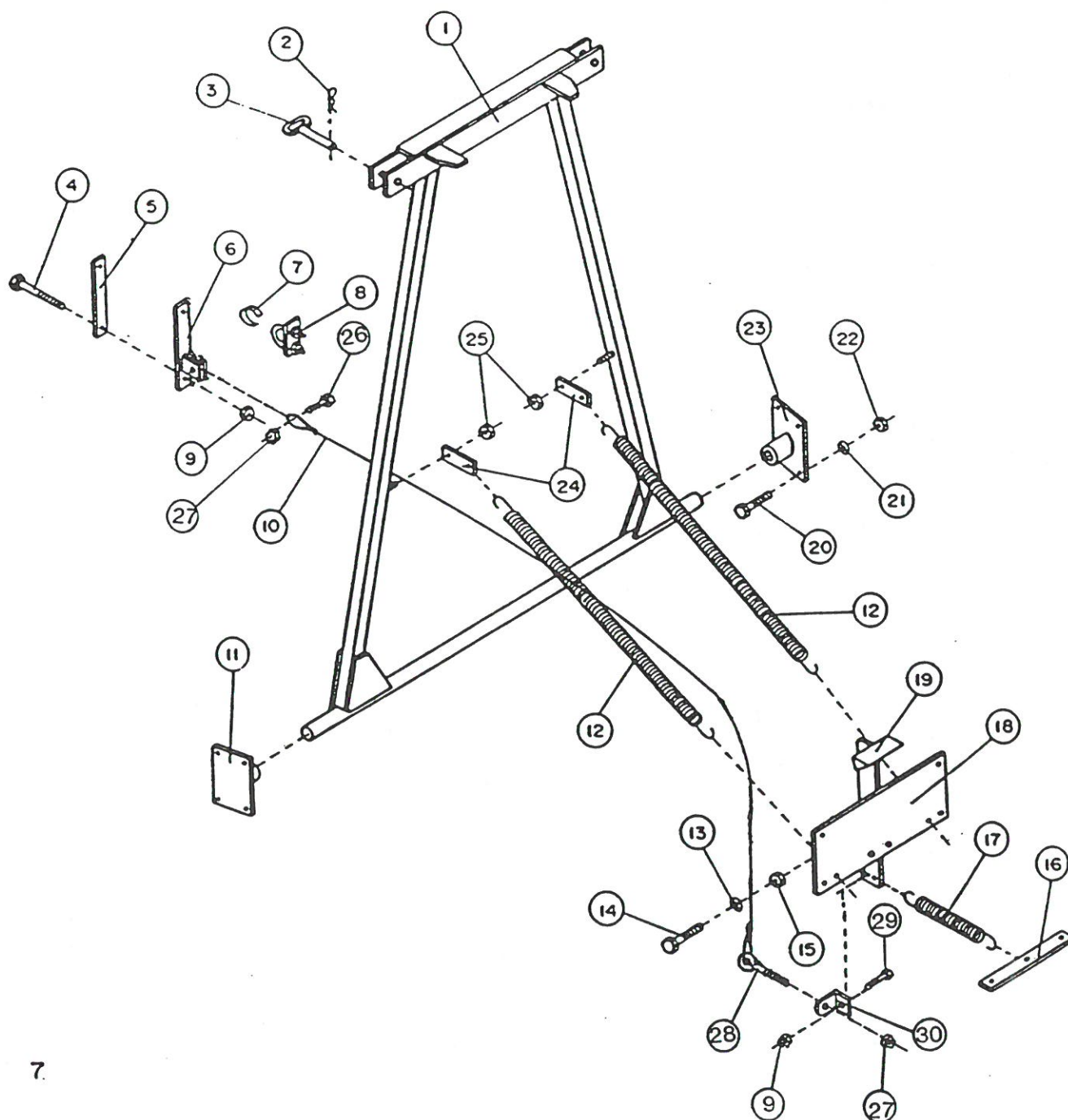
- A. SECURE CENTRE TUBE (#1) TO A-FRAME HITCH TUBES USING PINS (#7) 1 1/4" x 7 1/2".
- B. TIGHTEN ALL BOLTS ON HITCHES.
- C. POSITION CYLINDERS (#4) PORTS UPWARD, WITH TUBE END TO CENTRE TUBE USING PIN (#2) 1" x 5 5/8" USING PIN (#8) 1" x 3 3/4" PIN CYLINDER TO HITCH TUBE.
- D. SECURE LEFT AND RIGHT KNUCKLES (#15) GUSSETS UPWARD USING PIN (#14) 1 1/2" x 10 3/4".
- E. FASTEN CYLINDER LOCK (#11) IN PLACE AND SECURE WITH 3/4" x 2" Gr 8 BOLTS ONLY TO HITCH TUBE. TIGHTEN TO ALLOW LOCK PLATE TO MOVE FREELY.
- F. ASSEMBLE CENTRE TUBE IN WORKING POSITION.



[illegible]

Auto Fold (standard)

- A. PLACE LEFT AND RIGHT AUTO FOLD BRACKETS (#11, #23) ON AUTO FOLD (#1). BOLT BRACKETS ON PLATES ON A-FRAME HITCH WITH 5/8" x 1 3/4" BOLTS.
- B. BOLT AUTO FOLD LOCK ARM (#19) TO AUTO FOLD CROSS PLATE (#18) WITH 3/4" x 2" BOLTS. THEN BOLT CROSS PLATE TO PLATES ON A-FRAME HITCHES WITH 1/2" x 1 1/2" BOLTS.
- C. LOOSELY BOLT AUTO FOLD CABLE BRACKETS (#5, #6) TO CENTRE OF CENTRE TUBE WITH 1/2" x 9 1/2" BOLTS. TIGHTEN AFTER LIFT ARMS ARE IN PLACE.
- D. INSTALL CABLE (#10) TO CABLE BRACKETS AND LOCK ARM.
- E. BOLT SPRING PLATE (#24) TO AUTO FOLD. THEN FASTEN AUTO FOLD SPRINGS (#12) TO SPRING PLATE AND CROSS PLATE.
- F. FASTEN AUTO FOLD TENSION SPRING (#17) TO LOCK ARM AND TENSION SPRING PLATE (#16).



ITEM	PART NUMBER	DESCRIPTION	QTY
1	10141	Auto Fold	1
2	HP52	Hair Pin Clip 3 1/4"	2
3	10060	Cable Bracket Pin	2
4	B5C08152P	Bolt 1/2" x 9 1/2"	2
5	10026	Jack Mount Plate	1
6	20120	Auto Fold Cable Angle	1
7	92015	Thimble (optional)	*
8	92014	Cable Wire Clamp 1/4" (optional)	*
9	LN5C08P	Lock Nut 1/2"	2
10	91817	16'6" Auto Fold Cable	1
11	10095	Right Auto Fold Bracket	1
12	91400	Autofold Springs	2
13	W12P	Lockwasher 3/4"	1
14	B5C1232P	Bolt 3/4" x 2"	1
15	N5C12P	Nut 3/4"	1
16	10143	Tension Spring Plate	1
17	91405	Auto Fold Tension Spring	1
18	10142	Auto Fold Cross Plate	1
19	10145	Auto Fold Lock Arm	1
20	B5C1028P	Bolt 5/8" x 1 3/4"	8
21	W10P	Lockwasher 5/8"	8
22	N5C10P	Nut 5/8"	8
23	10094	Left Auto Fold Bracket	1
24	10059	Spring Plate	2
25	LN5C10P	Locknut 5/8"	2
26	B5C0724P	Bolt 7/16" x 1 1/2"	1
27	LN5C07P	Locknut 7/16"	1
28	EB0788P	Eye Bolt 7/16" x 5 1/2"	1
29	B5C0824P	Bolt 1/2" x 1 1/2"	2
30	20115	Eye Bolt Angle	1
		*As Required	

Wing Tube

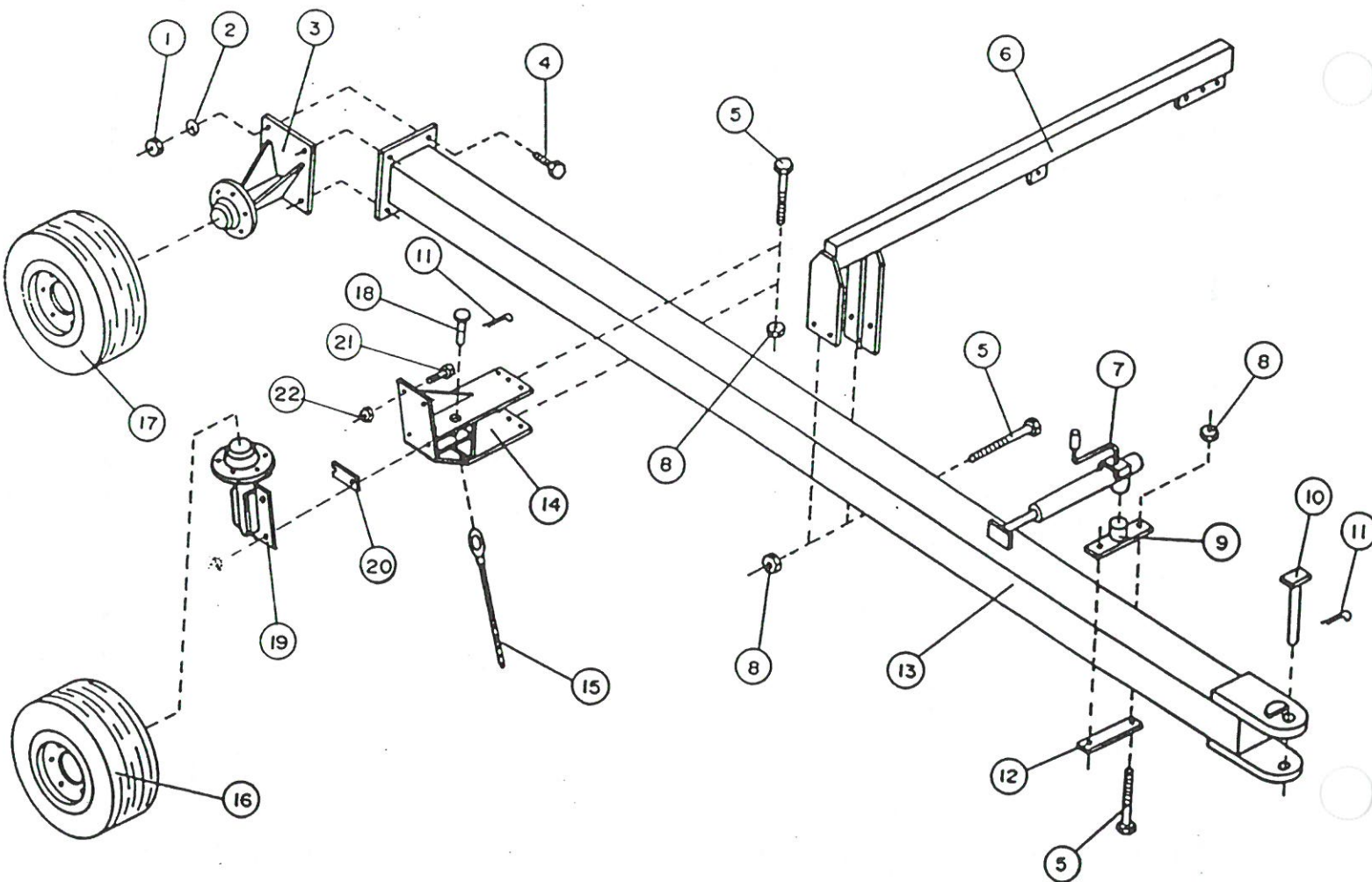
- A. SECURE WING TUBES (#13) PIN STOPS UPWARDS, TO CENTRE TUBE KNUCKLES WITH PINS (#10) 1 1/2" x 10 3/4".
- B. BOLT END WHEELS (#3) TO WING TUBES USING 5/8" x 1 3/4" BOLTS. INSTALL WHEELS (#17).
- C. BOLT TRANSPORT WHEEL BRACKET #14 TO TRANSPORT WHEEL SPINDLE #19 WITH 3/4" x 2 1/4" BOLTS #21.

NOTE:TRANSPORTING HARROW PACKER BAR OVER GREAT DISTANCES, PLACE TRANSPORT WHEEL SPACER #20 ON REAR TWO BOLTS OF TRANSPORT WHEEL BRACKET #14 AS SHOWN BELOW. THIS SPACER IS NOT REQUIRED OVER SHORT DISTANCES OR IN FIELD.

**** SPACER HAS TO BE REMOVED BEFORE PUTTING BAR IN FIELD POSITION.

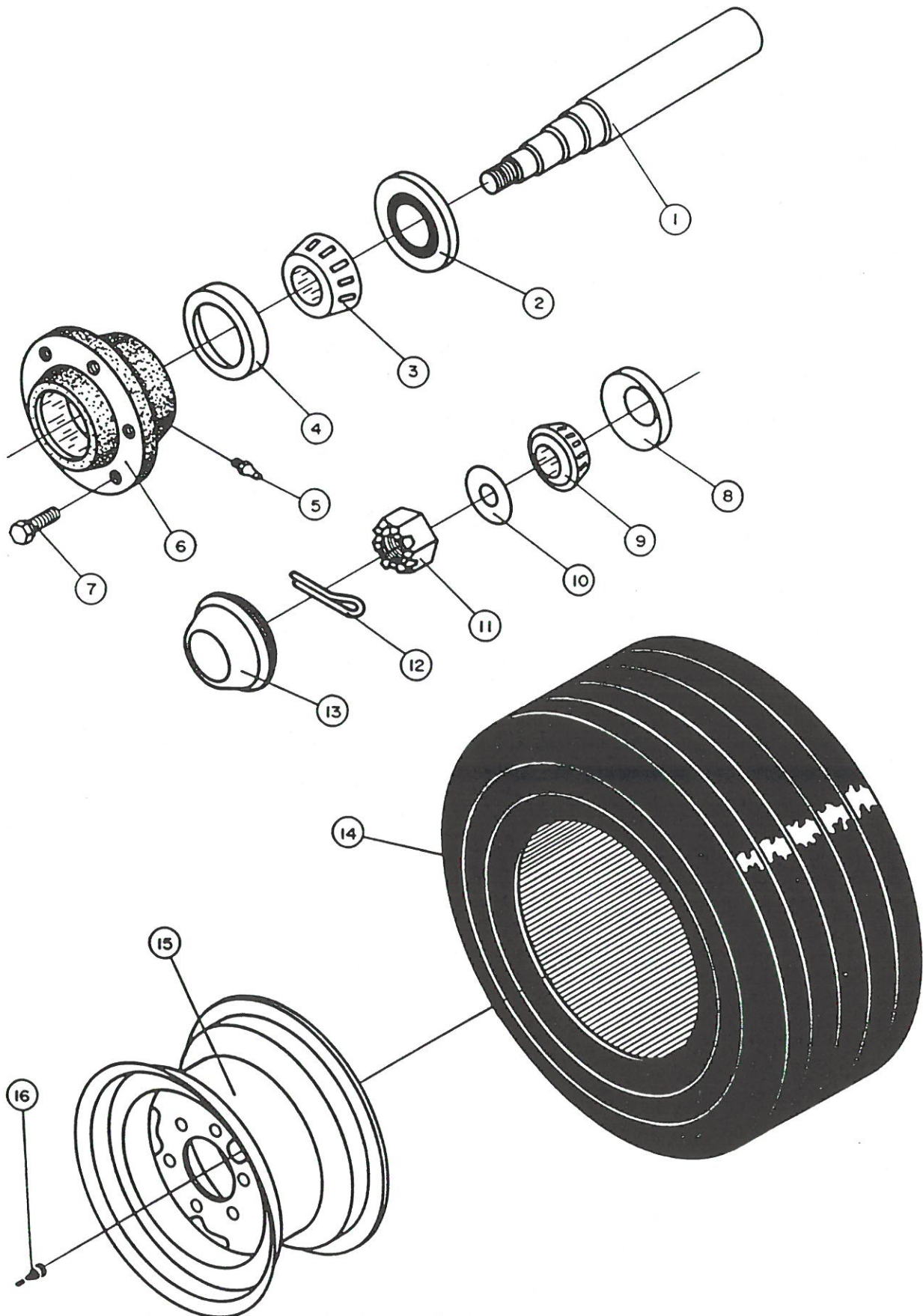
LOOSELY BOLT COMPLETE TRANSPORT WHEEL TO WING TUBES USING 1/2" x 9 1/2" BOLTS. INSTALL WHEEL #16.

- D. BOLT SIDEWIND JACK #7 AND BRACKETS (#9,#12) TO WING TUBE, 23" FROM CENTRE OF PIN HOLE ON WING TUBE TO CENTRE OF JACK USING 1/2" x 9 1/2" BOLTS.
- E. INSTALL ONE END OF CABLE (#15) TO TRANSPORT WHEEL USING PIN (#18) 7/8" x 3 3/4" AND OTHER END OF CABLE TO EITHER AUTO FOLD OR CABLE BRACKETS ON A-FRAME HITCH.
- F. INSTALL LIFT ARM (#6) BY FOLLOWING LIFT ARM SPACING FOUND ON PAGES 27,28 and 29. BOLT LIFT ARMS WITH 1/2" x 9 1/2" BOLTS.



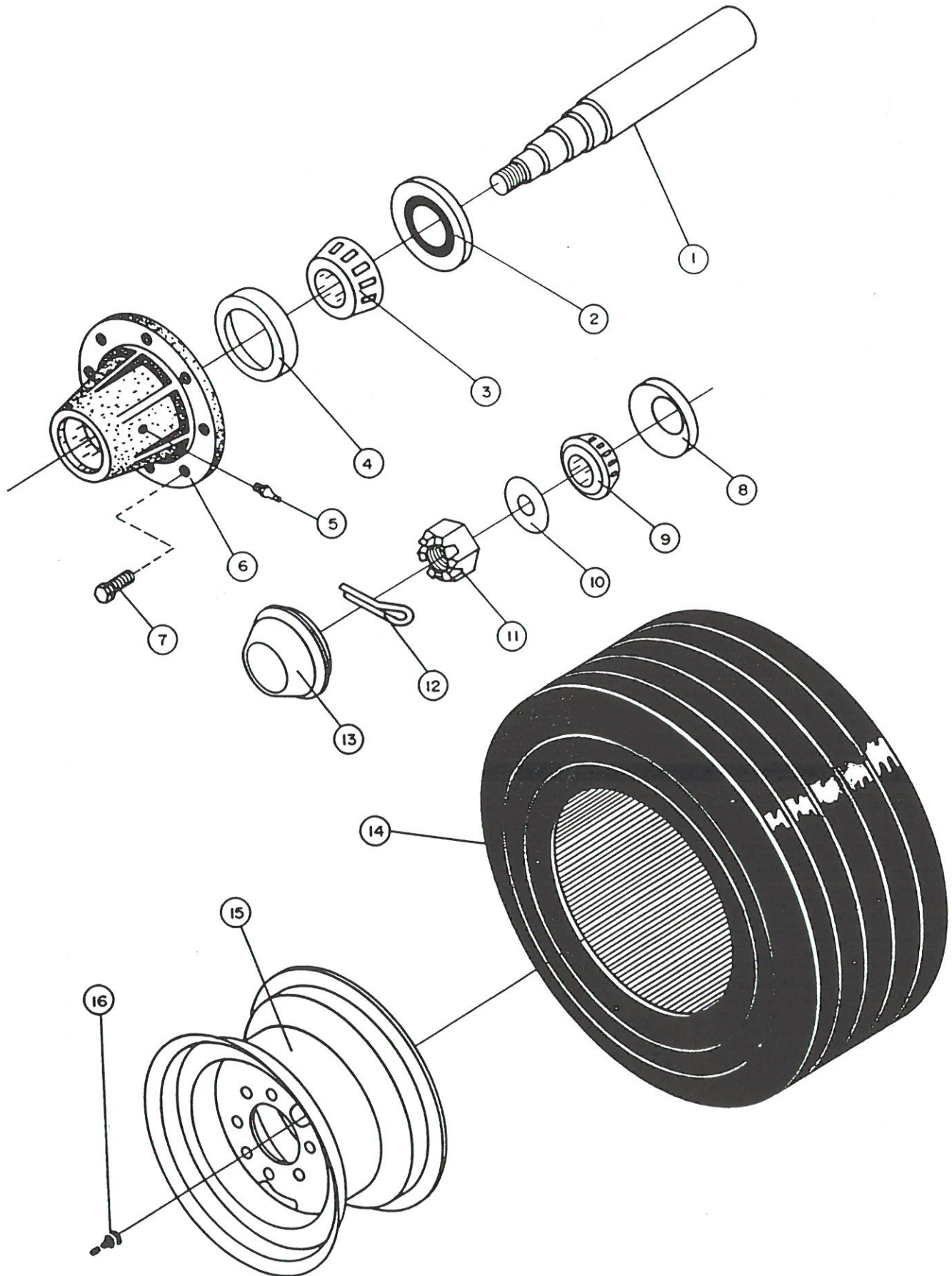
ITEM	PART NUMBER	DESCRIPTION	Nº
1	N5C10P	Nut 5/8"	8
2	W10P	Lockwasher 5/8"	8
3	10103	End Wheel c/w 611 Hub	2
4	B5C1028P	Bolt 5/8" x 1 3/4"	8
5	B5C08152P	Bolt 1/2" x 9 1/2"	*
6	10104	Short Lift Arm	*
	10105	Long Lift Arm	*
7	92022	Stabilizer Jack	2
8	LN5C08P	Locknut 1/2"	*
9	10027	Jack Plate c/w Stub	2
10	10032	Pin Knuckle 1 1/2" x 10 3/4"	2
11	CPO440	Cotter Pin 1/4" x 2 1/2"	2
12	10026	Jack Plate	2
13	10096	8' 10" Wing Tube for 30'	2
	10097	13' 10" Wing Tube for 40'	2
	10098	18' 10" Wing Tube for 50'	2
	10099	23' 10" Wing Tube for 60'	2
	10100	28' 10" Wing Tube for 70'	2
	10147	33' 10" Wing Tube for 80'	2
14	10173	Left Transport Wheel Bracket	1
	10174	Right Transport Wheel Bracket	1
15	91818	22' 4" Cable for 40' & 50'	2
	91819	30' 2" Cable for 60', 70' & 80'	2
16	91027	11L x 6 ply c/w 8" Wheel Rim	*
	91028	11L x 8 ply c/w 8" Wheel Rim (60' only)	*
	91029	12.5L x 10 ply c/w 10" Wheel Rim (70&80')	*
17	91027	11L x 6 ply c/w 8" Wheel Rim	*
18	10170	Pin Transport 7/8" x 4"	2
19	10171	Right Transport Spindle (40, 50, & 60 ft.)	1
	10172	Left Transport Spindle (40, 50 & 60 ft.)	1
	10175	Right Transport Spindle (70 & 80 ft.)	1
	10176	Left Transport Spindle (70 & 80 ft.)	1
20	10177	Transport Wheel Transport Lug	2
21	B5C1236P	Bolt 3/4" x 2 1/4"	8
22	LN5C12P	Locknut 3/4"	8

618 Hub and Spindle



ITEM	PART NUMBER	DESCRIPTION	Nº
1	91251	618 Spindle 2" x 13"	1
2	91091	618 Seal	1
3	91171	618 Inner Cone LM 25580	1
4	91151	618 Inner Race LM 25520	1
5	91700	Grease Nipple 1/8" NPT Straight	1
6	91071	618 Hub	1
7	91061	Wheel Bolt 9/16"	6
8	91131	618 Outer Race LM48510	1
9	91111	618 Outer Cone LM48548	1
10	91190	Washer Hub	1
11	91210	Castlelated Nut	1
12	CP0324	Cotter Pin 3/16" x 1 1/2"	1
13	91231	618 Dustcap	1
14	91001	11L x 6 Ply Tire 15" (30', 40' & 50')	*
	91002	11L x 8 Ply Tire 15" (60' only)	*
15	91050	15" x 8" x 6 Wheel Rim	1
16	92005	Valve Stem	1
*As Required			

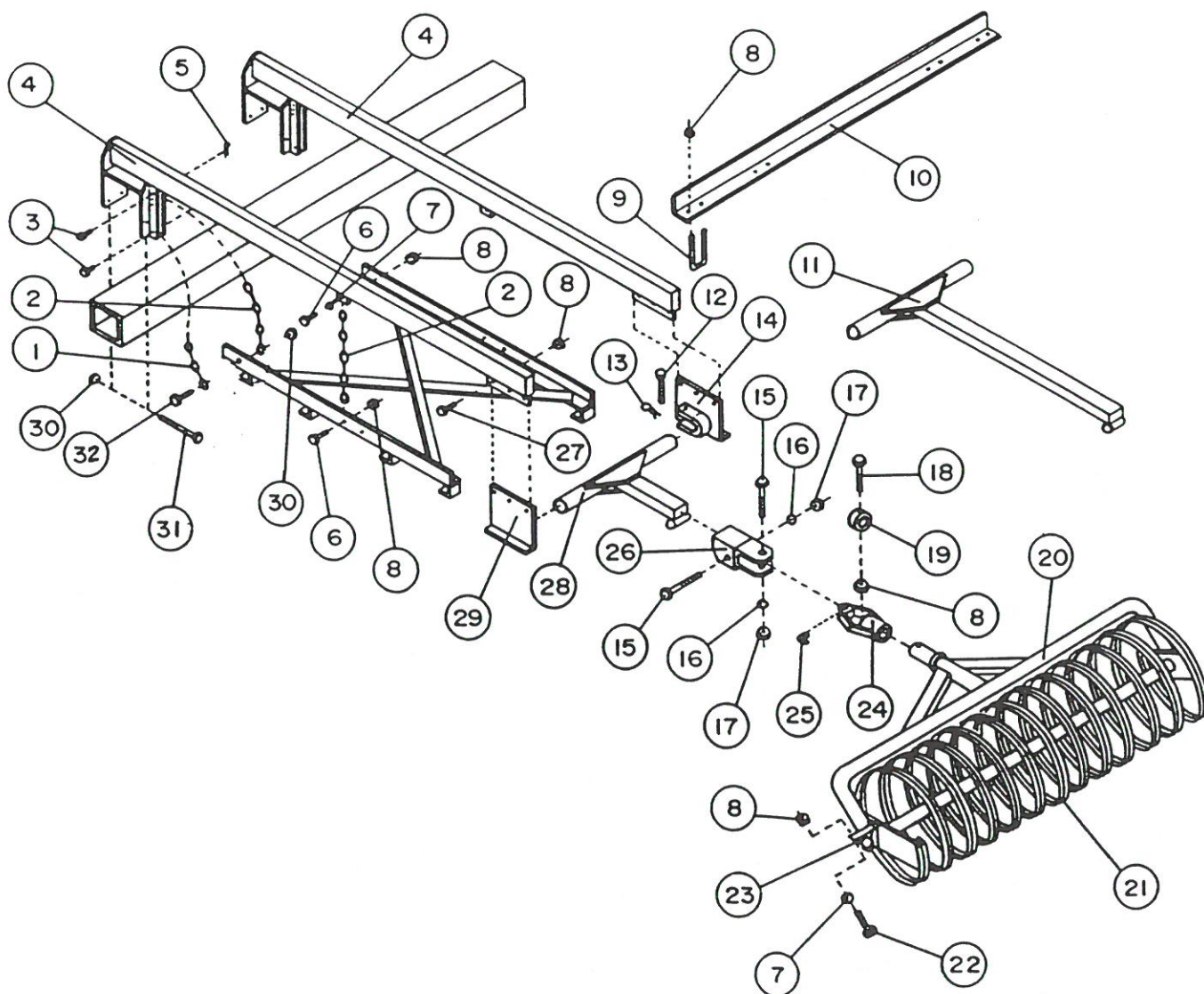
812 Hub and Spindle



ITEM	PART NUMBER	DESCRIPTION	Nº
1	91254	812 Spindle 2 1/2" x 14 3/4"	1
2	91092	812 Seal	1
3	91172	812 Inner Cone 3780	1
4	91152	812 Inner Race 3720	1
5	91700	Grease Nipple 1/8" NPT Straight	1
6	91072	812 Hub	1
7	91061	Wheel Bolt 9/16"	8
8	91132	812 Outer Race LM 2720	1
9	91112	812 Outer Cone LM 2790	1
10	91190	Washer Hub	1
11	91210	Castlelated Nut	1
12	CP0324	Cotter Pin 3/16" x 1 1/2"	1
13	91232	812 Dustcap	1
14	91003	12.5L x 10 Ply Tire 15" (70' & 80' only)	1
15	91052	15" x 10" x 8 Wheel Rim	1
16	92005	Valve Stem	1

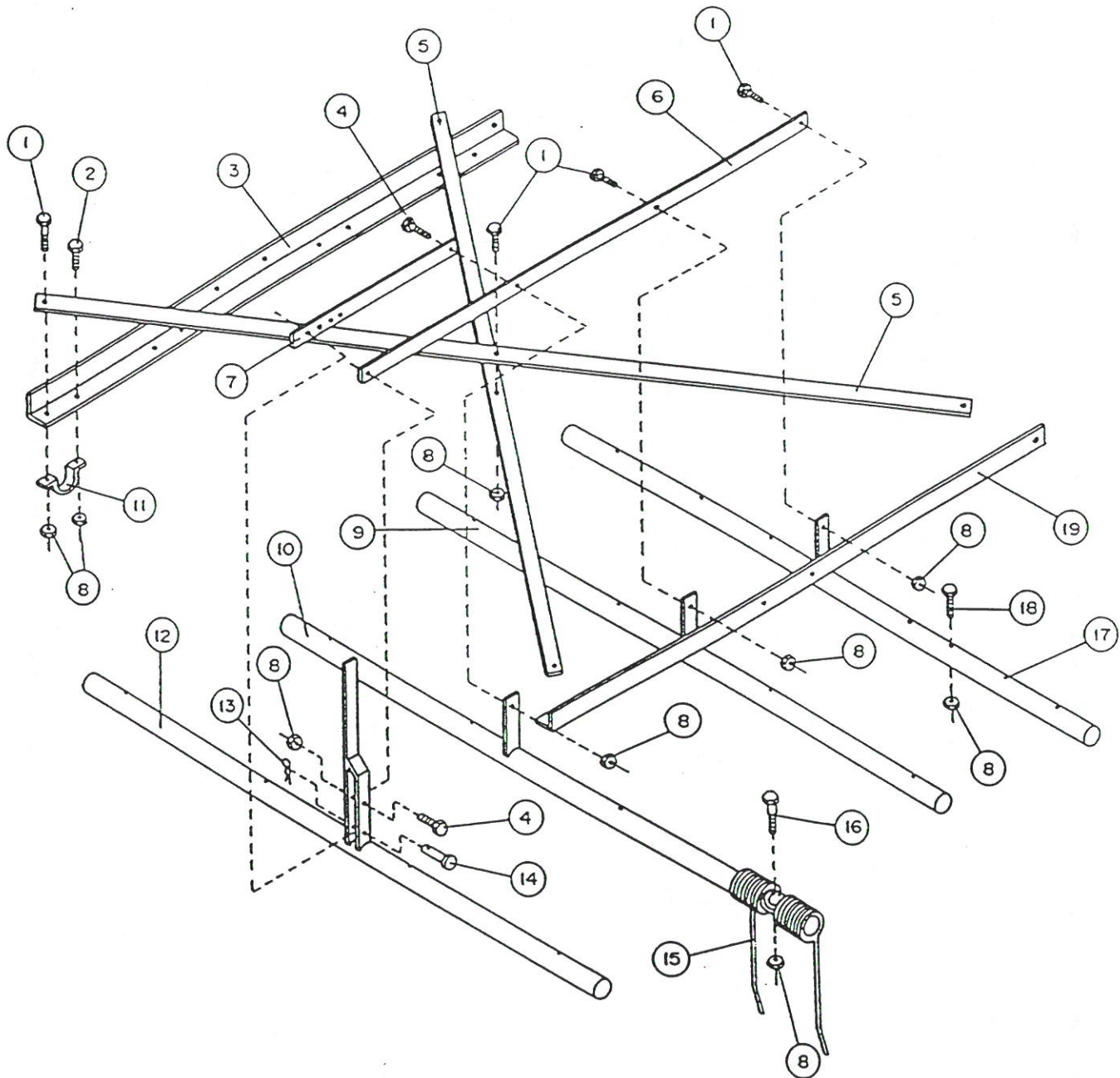
Lift Arm, Sections and Packers

- A. INSTALL REQUIRED LIFT ARM SUPPORT ANGLES (#10) ON LIFT ARMS WITH $7/16"$ x $2\frac{1}{8}"$ x $4\frac{3}{4}"$ U-BOLTS. THEN TIGHTEN LIFT ARMS.
- B. POSITION SECTIONS UNDER LIFT ARMS. INSTALL 6 AND 7 (#1, #2) LINK CHAINS TO FRONT OF SECTION. 7 LINK OUTSIDE AND 6 LINK INSIDE OF SECTION ANGLE WITH $1/2"$ x $1\frac{1}{2}"$ Whiz Lock. SECURE CHAINS TO LIFT ARMS WITH 6 LINK CHAIN TO BOTTOM AND 7 LINK CHAIN TO TOP OF LIFT ARMS WITH PINS (#3) $1/2"$ x $1\frac{5}{8}"$. BOLT OTHER 7 LINK CHAIN TO FRONT HOLE ON ANGLE AND TO LUG ON LIFT ARM WITH $7/16"$ x $1\frac{1}{4}"$ BOLT.
- C. INSTALL LEFT AND RIGHT PACKER BRACKETS (#14, #29) TO LONG AND SHORT PACKER HITCHES (#11, #28) USING PIN (#12) $1/2"$ x $3\frac{9}{16}"$. BOLT BRACKET TO PLATES ON LIFT ARM WITH $7/16"$ x $1"$ BOLTS.
- D. INSTALL PACKER KNUCKLE (#26) TO SHORT AND LONG PACKER HITCH WITH $3/4"$ x $4\frac{1}{2}"$ BOLTS.
- E. INSTALL PACKER OVERBRACE (#20) TO PACKER COILS (#21) BOLTING PILLOW BLOCKS (#23) WITH $7/16"$ x $1\frac{3}{4}"$ BOLTS. INSTALL PACKER SWIVEL HITCH (#24) TO OVERBRACE WITH COLLAR (#19) AND $7/16"$ x $3\frac{1}{2}"$ BOLTS.
- F. BOLT PACKER SWIVEL HITCH (#24) TO PACKER KNUCKLE (#26) WITH $3/4"$ x $4\frac{1}{2}"$ Bolt.



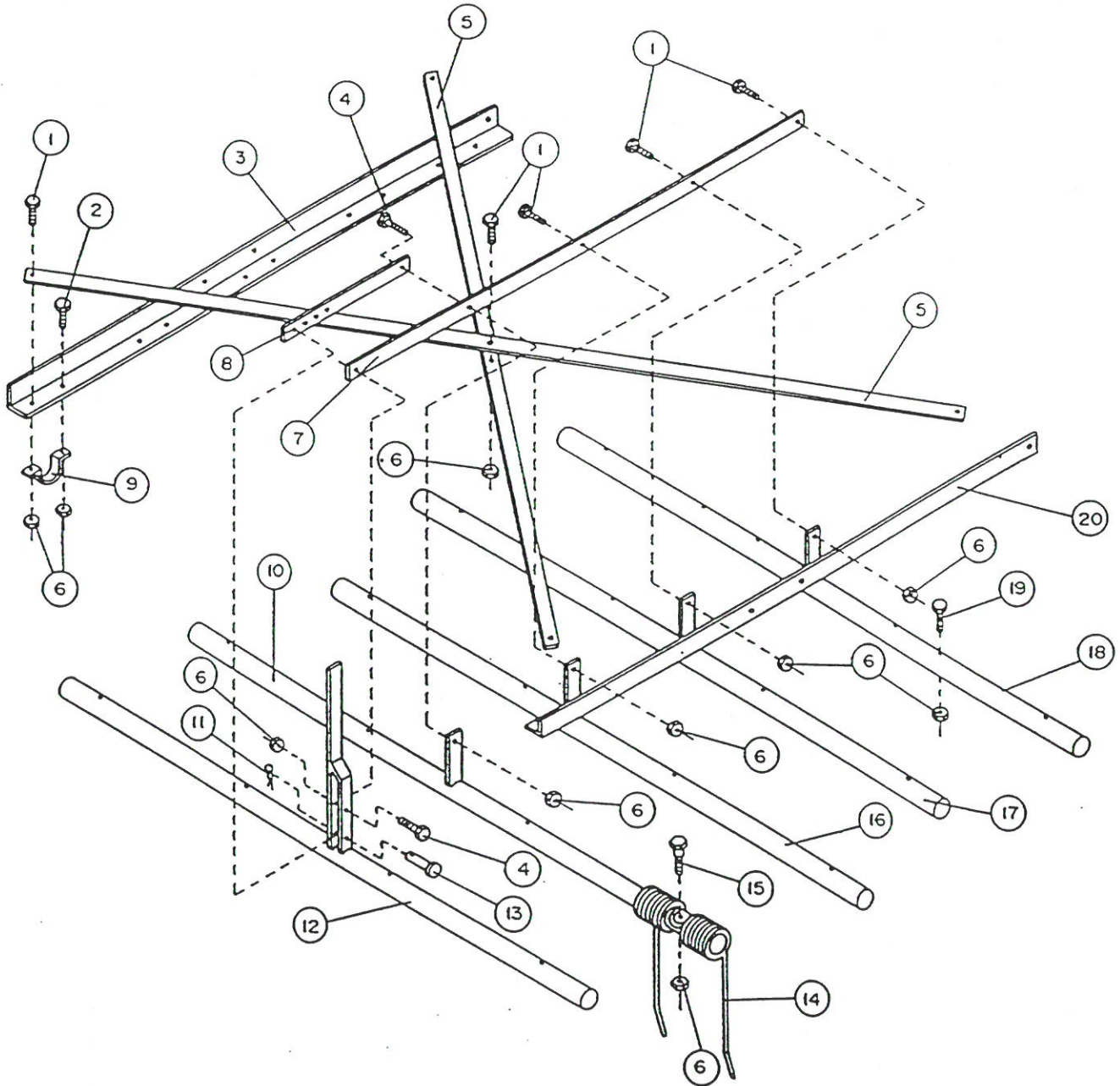
ITEM	PART NUMBER	DESCRIPTION	NO
1	91501	6 Link Chain 5/16"	2
2	91500	7 Link Chain 5/16"	4
3	91601	Pin Chain 1/2" x 1 5/8"	4
4	10104	Short Lift Arm	2
	10105	Long Lift Arm	2
5	CP0216	Cotter Pin 1/8" x 1"	4
6	B5C0720P	Bolt 7/16" x 1 1/4"	8
7	FW07P	Flatwasher 7/16"	12
8	LN5C07P	Locknut 7/16"	*
9	UB073476	U-Bolt 7/16" x 2 1/8" x 4 3/4"	*
10	10129	8' 5" Lift Arm Angle for Centres & 30'	*
	10130	13'5" Lift Arm Angle for 40'	2
	10131	18'5" Lift Arm Angle for 50'	2
	10132	23'5" Lift Arm Angle for 60'	2
	10133	28'5" Lift Arm Angle for 70'	2
	10150	33'5" Lift Arm Angle for 80'	2
11	10134	Long Packer Hitch	1
12	92020	Pin Packer Hitch Bracket	2
13	HP40	Hair Pin Clip 2 1/2"	2
14	10045	Right Packer Hitch Mount Bracket	1
15	B5C1272P	Bolt 3/4" x 4 1/2"	2
16	W12P	Lockwasher 3/4"	2
17	N5C12P	Nut 3/4"	2
18	B5C0756P	Bolt 7/16" x 3 1/2"	1
19	10044	Packer Collar	1
20	30021	Packer Overbrace	1
21	30023	Left Hand Packer Coil 1 1/2" x 5 Ft.	*
	30024	Right Hand Packer Coil 1 1/2" x 5 Ft.	*
	30025	Left Hand Packer Coil 1 3/4" x 5 Ft.	*
	30026	Right Hand Packer Coil 1 3/4" x 5 Ft.	*
22	B5C0728P	Bolt 7/16" x 1 13/4"	4
23	92000	Pillow Block	2
24	10043	Packer Swivel Hitch	1
25	91701	Grease Nipple 1/8" NPT x 90°	1
26	10062	Packer Knuckle	1
27	B5C0716P	Bolt 7/16" x 1"	6
28	10135	Short Packer Hitch	1
29	10047	Left Packer Hitch Mount Bracket	1
30	WLN5C08P	Whiz Lock Nut 1/2"	2
31	B5C08152P	Bolt 1/2" x 9 1/2"	2
32	WLB5C0824P	Whiz Lock Bolt 1/2" x 1 1/2"	2

5 ft. Section (4 Bar)



ITEM	PART NUMBER	DESCRIPTION	Nº
1	B5C0720P	Bolt 7/16" x 1 1/4"	7
2	B5C0716P	Bolt 7/16" x 1"	12
3	10107	Left Section Angle	1
4	B5C0728P	Bolt 7/16" x 1 3/4"	2
5	10120	Cross Brace	2
6	10051	Centre Tie	2
7	10118	Adjustment Bar	1
8	LN5C07P	Locknut 7/16"	38
9	10111	2nd Pipe	1
10	10113	3rd Pipe	1
11	92018	5' Section Pipe Clamp	8
12	10114	4th Pipe	1
13	HP24	Hair Pin Clip 1 1/2"	1
14	91600	Pin Section 7/16" x 1 1/2"	1
15	91403	Tine 3/8" x 12"	16
16	92008	Special Head Bolt Tines	16
17	10110	Front Pipe	1
18	B5C0732P	Bolt 7/16" x 2"	1
19	10106	Right Section Angle	1
	10137	5' Section Complete (4 Bar)	*
*As Required			

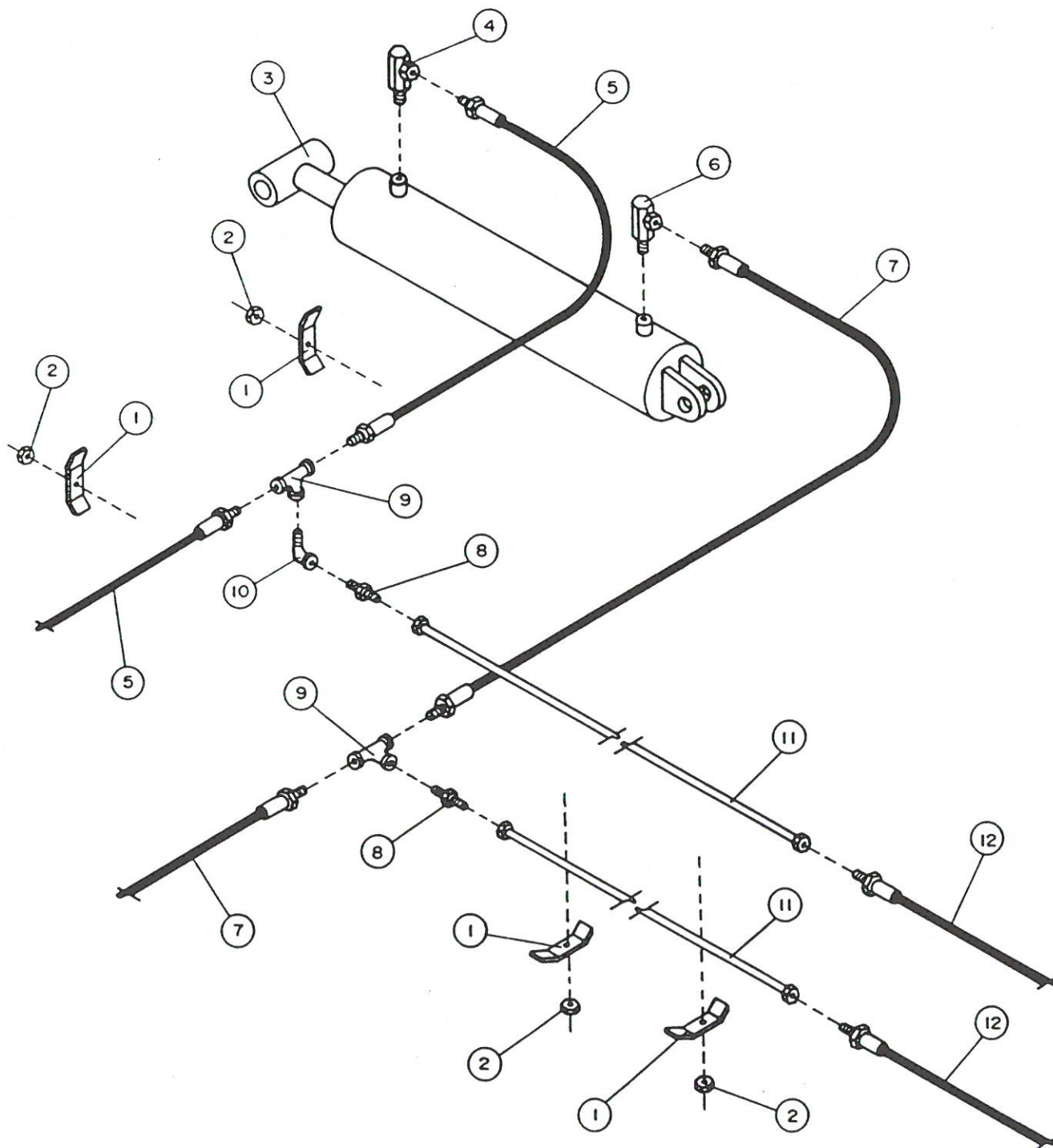
5 ft. Section (5 Bar)



ITEM	PART NUMBER	DESCRIPTION	Nº
1	B5C0720P	Bolt 7/16" x 1 1/4"	8
2	B5C0716P	Bolt 7/16" x 1"	16
3	10109	Left Section Angle	1
4	B5C0728P	Bolt 7/16" x 1 3/4"	2
5	10120	Cross Brace	2
6	LN5C07P	Locknut 7/16"	47
7	10121	Centre Tie	1
8	10119	Adjustment Bar	1
9	92018	5' Section Pipe Clamp	10
10	10115	4th Pipe	1
11	HP24	Hair Pin Clip 1 1/2"	1
12	10116	5th Pipe	1
13	91600	Pin Section 7/16" x 1 1/2"	1
14	91403	Tine 3/8" x 12"	20
15	92008	Special Head Bolt Tines	20
16	10113	3rd Pipe	1
17	10112	2nd Pipe	1
18	10110	Front Pipe	1
19	B5C0732P	Bolt 7/16" x 2"	1
20	10108	Right Section Angle	1
	10138	5' Section Complete (5 Bar)	*
		*As Required	

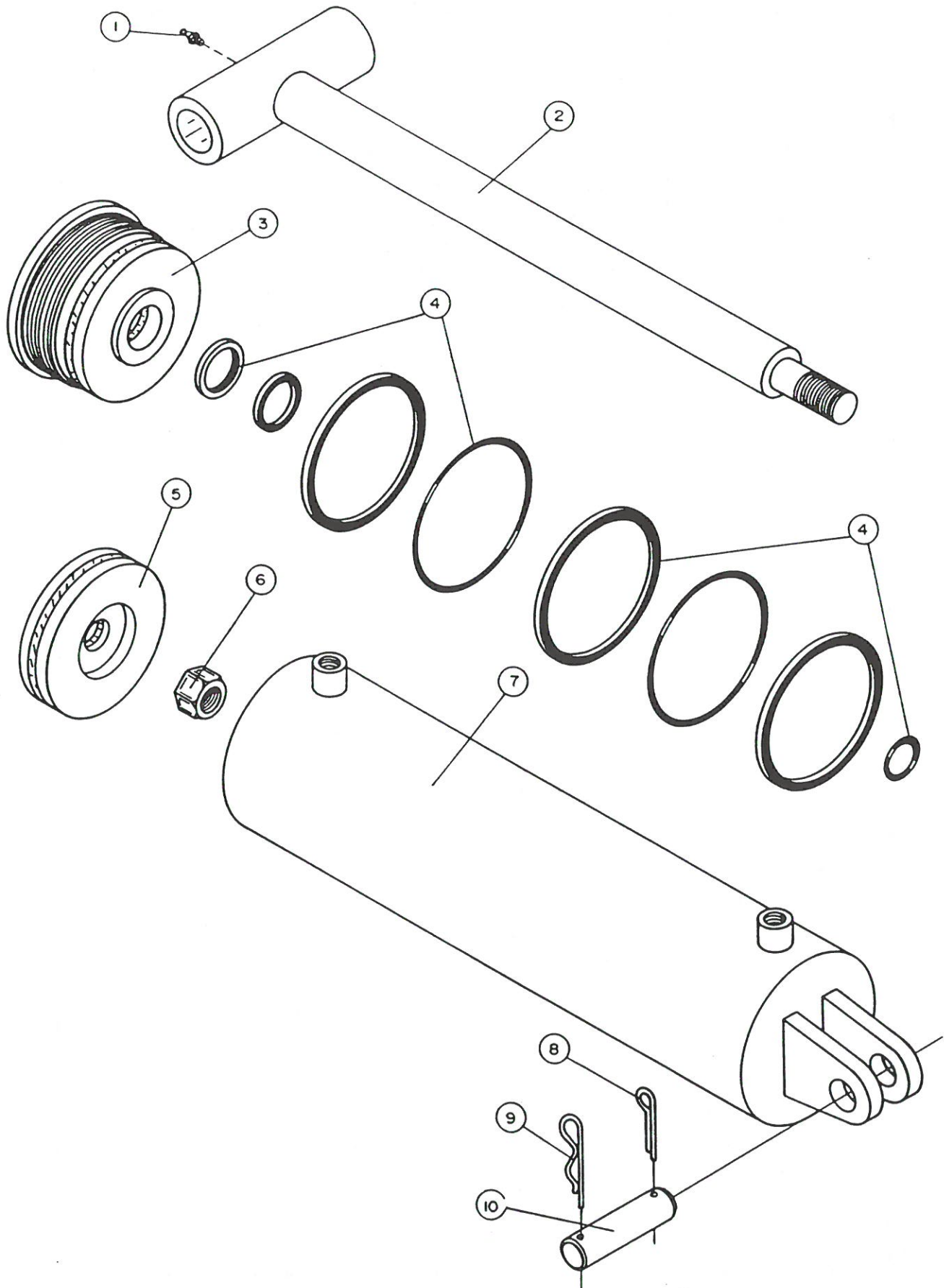
20 ft. A-Frame Hydraulics

- A. INSTALL CYLINDERS (#3) PORT HOLES UPWARD, TUBE END TO CENTRE TUBE.
- B. INSTALL 90° SWIVEL ELBOWS (#4,#6) ON CYLINDERS WITH RESTRICTED ELBOW (#4) IN TOP PORT.
- C. INSTALL STREET ELBOWS (#10) STREET TEES (#9) FLARE ADAPTORS (#8) TO 1/2" HYDRAULIC LINES (#11). THEN INSTALL HYDRAULIC LINES TO UNDERSIDE OF A-FRAME SECURING THEM WITH HOLE CLAMPS (#1).
- D. INSTALL HOSES (#5,#7,#12) AS SHOWN BELOW CHECKING PARTS LIST ON PAGE 22 FOR RIGHT HOSE LENGTHS.



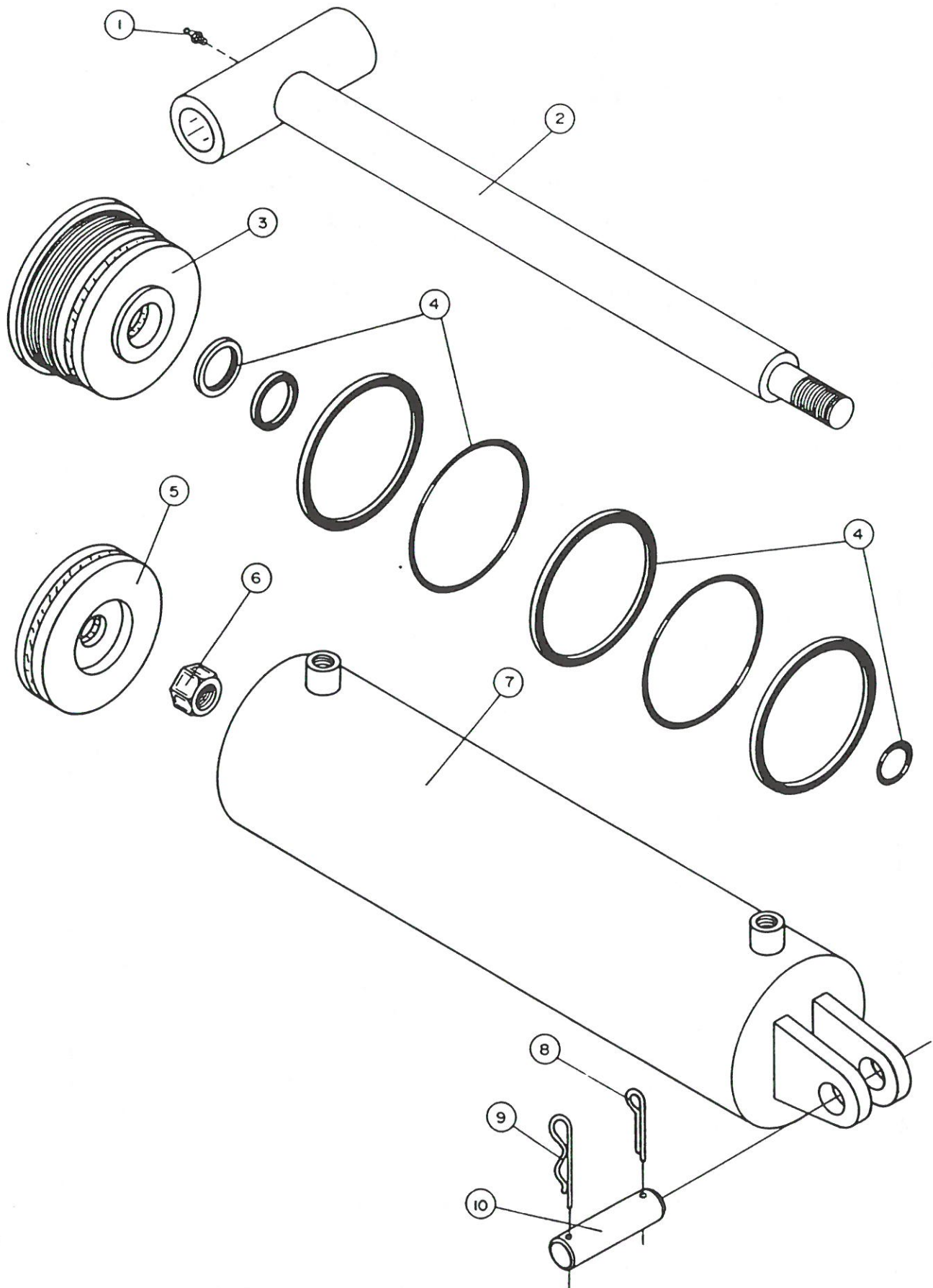
ITEM	PART NUMBER	DESCRIPTION	Nº
1	10034	Hose Clamp	4
2	LN5C08P	Locknut 1/2"	4
3	90106	Cylinder 3 1/2" x 30" Tube End	2
	90107	Cylinder 4" x 30" Tube End	*
4	90500	1/2" x 90° Swivel Elbow (Restricted)	2
5	90221	1/2" Hose 1/2" MB x 1/2" MB x 89"	2
6	90501	1/2" 90° Swivel Elbow	2
7	90216	1/2" Hose 1/2" MB x 1/2" MB x 60"	2
8	90550	1/2" Flare Adaptor	2
9	90600	1/2" Street Tee F-F-F	2
10	90502	1/2" 90° Street Elbow	2
11	90400	1/2" Hydraulic Lines x 132"	2
12	90202	1/2" Hose 1/2" MB x 1/2" MJ x 84"	2
*As Required			

3 1/2" x 30" Cylinder (CTD)



ITEM	PART NUMBER	DESCRIPTION	Nº
1	91700	Grease Nipple 1/8" NPT Straight	1
2	90644	Cylinder Shaft c/w Tube End	1
3	90662	3 1/2" Cylinder Screw on End Cap	1
4	90680	Seal Kit 3 1/2" Cylinder	1
5	90700	Piston 3 1/2" Cylinder	1
6	90720	Piston Nut 3 1/2" Cylinder	1
7	90742	3 1/2" x 30" Cylinder Screw on Tube	1
8	CP0324	Cotter Pin 3/16" x 1 1/2"	1
9	HP52	Hair Pin Clip 3 1/4"	1
10	91603	Pin Cylinder 1" x 3 3/4"	1
	90106	Cylinder Complete 3 1/2" x 30" (tube end)	*
		*As Required	

4" x 30" Cylinder (optional) (CTD)

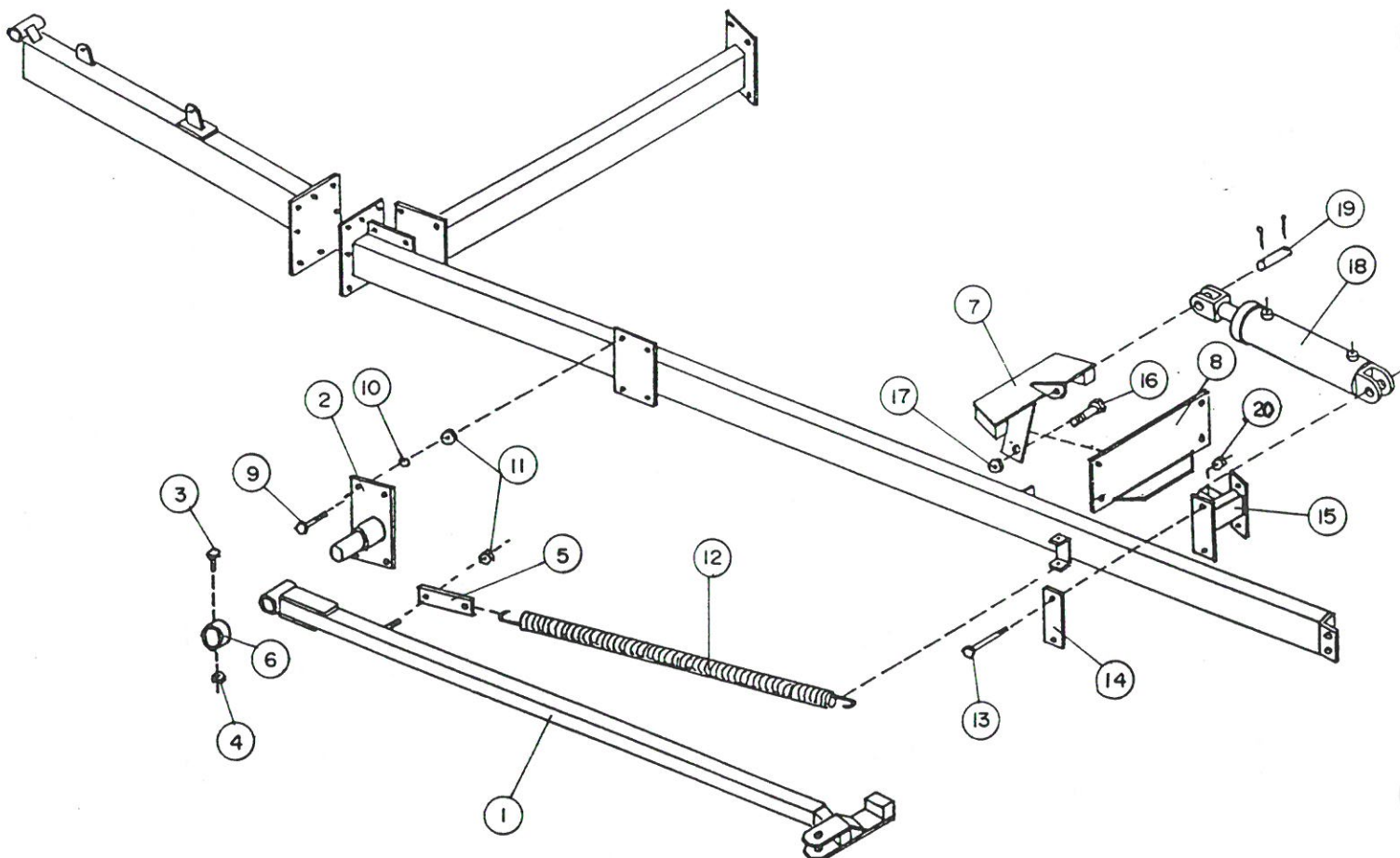


ITEM	PART NUMBER	DESCRIPTION	Nº
1	91700	Grease Nipple 1/8" NPT Straight	1
2	90644	Cylinder Shaft c/w Tube End	1
3	90663	4" Cylinder Screw on End Cap	1
4	90682	Seal Kit 4" Cylinder	1
5	90702	Piston 4" Cylinder	1
6	90720	Piston Nut 4" Cylinder	1
7	90743	4" x 30" Cylinder Screw on Tube	1
8	CP0324	Cotter Pin 3/16" x 1 1/2"	1
9	HP52	Hair Pin Clip 3 1/4"	1
10	91603	Pin Cylinder 1" x 3 3/4"	1
	90107	Cylinder Complete 4" x 30" (tube end)	*
		*AS Required	

Two Piece Auto Fold (optional)

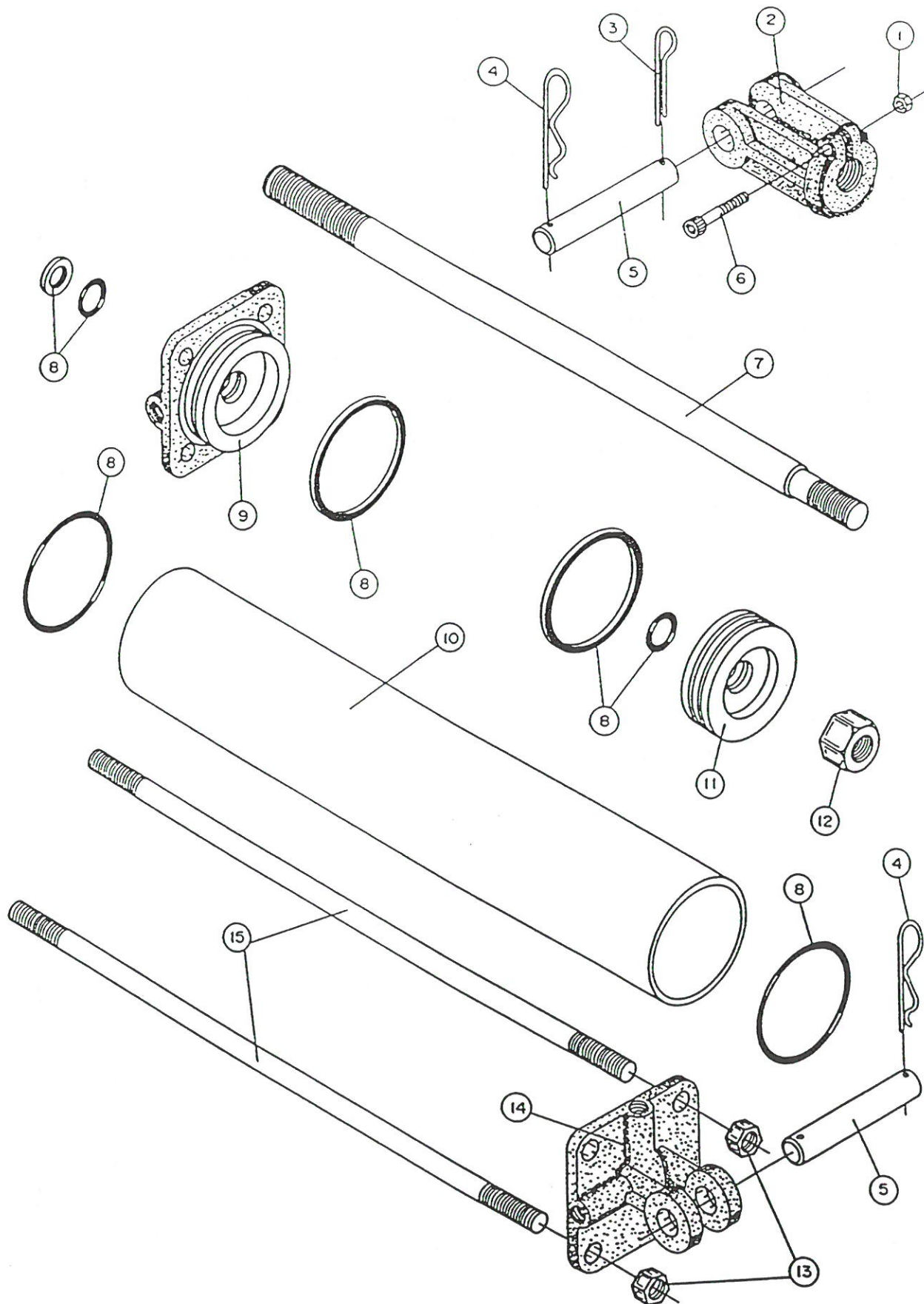
NOTE: DO NOT TIGHTEN BOLTS UNTIL ALL PARTS ARE IN PLACE.

- A. BOLT AUTOFOLD A-FRAME BRACKET RIGHT #2, TO THE 15 FT. OR 20 FT. A-FRAME AS SHOWN. SLIP RIGHT ARM #1 ON COLLAR AND BOLT SHAFT COLLAR #6 WITH $\frac{1}{4}$ " x $2 \frac{1}{4}$ " BOLT. DO THE SAME FOR THE LEFT SIDE.
- B. LOOSELY BOLT AUTOFOLD CABLE BRACKET (#3,#4) TO CENTRE TUBE WITH $\frac{1}{2}$ " x $9 \frac{1}{2}$ " BOLTS. TIGHTEN AFTER LIFT ARMS ARE IN PLACE.
- C. BOLT FRONT LOCK #7 TO #8 CROSS PLATE C/W BOLT $\frac{3}{4}$ " x 2" (#16).
- D. BOLT CYLINDER BRACKET #15 WITH $\frac{1}{2}$ " x $4 \frac{1}{2}$ " #13 AND BACK-UP BRACKET #14.
- E. ATTACH 2" x 8" CYLINDER #18 TO FRONT LOCK #7 AND CYLINDER BRACKET #15 C/W 1" PINS #19.



ITEM	PART NUMBER	DESCRIPTION	Nº
1	20124	Auto Fold Right Arm	1
	20123	Auto Fold Left Arm	1
2	20106	A-Frame Bracket Right	1
	20105	A-Frame Bracket Left	1
3	B5C0428P	Bolt 1/4" x 1 3/4"	2
4	LN5C04P	Locknut 1/4"	2
5	20108	Backing Plate	2
6	20110	Shaft Collar	2
7	20156	HPB Auto Fold Lock	1
8	20108	Cross Plate	1
9	B5C1028P	Bolt 5/8" x 1 3/4"	12
10	W10P	Lockwasher 5/8"	8
11	N5C10P	Nut 5/8"	8
12	91400	Auto Fold Spring	2
13	B5C0872P	Bolt 1/2" x 4 1/2"	4
14	10155	Auto Fold Cylinder Backing Plate	2
15	10159	Hydraulic Cylinder Plate (HPB)	1
16	B5C1232P	Bolt 3/4" x 2"	1
17	N5C12P	Nut 3/4"	1
18	90104	2" x 8" Cylinder	1
19	91603	Pin Cylinder 1" x 3 3/4"	2
20	LN5C08P	Locknut 1/2"	4

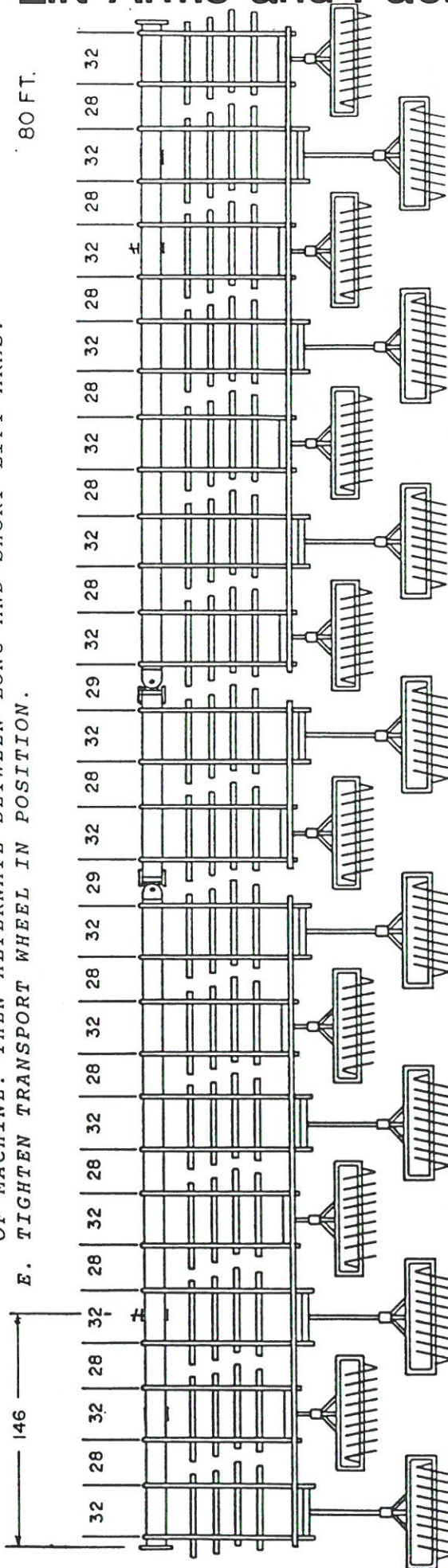
2" X 8" Cylinder



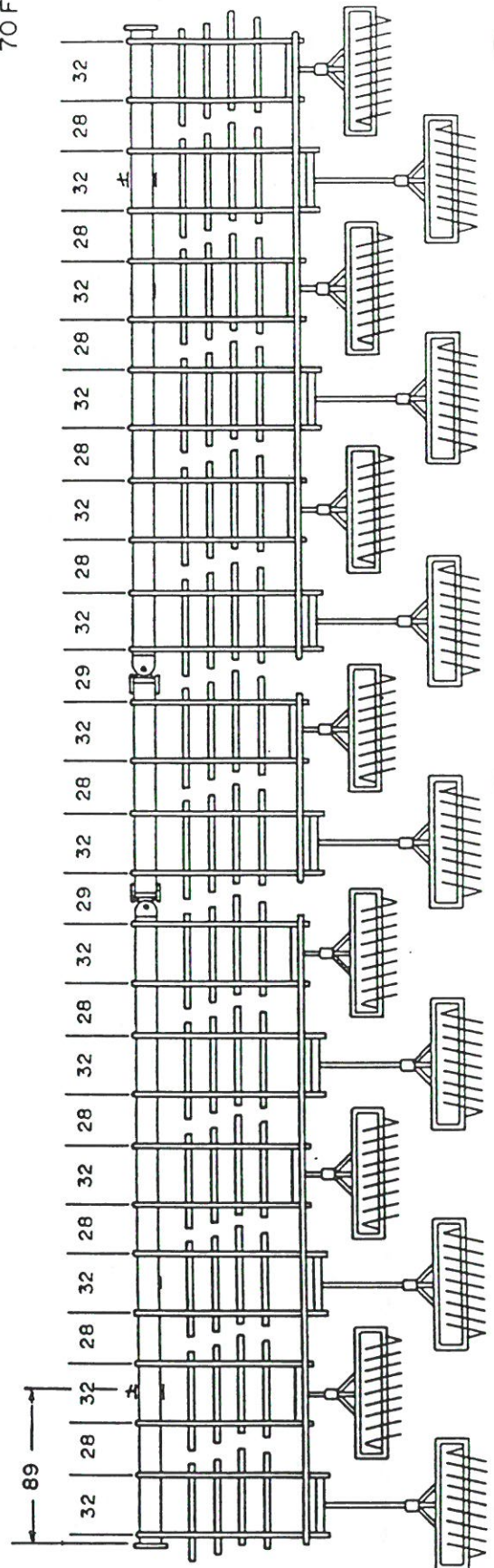
ITEM	PART NUMBER	DESCRIPTION	Nº
1	N5C06P	Nut 3/8"	1
2	90621	Cylinder Clevis 2" Cylinder	1
3	CP0324	Cotter Pin 3/16" x 1 1/2"	2
4	HP52	Hair Pin CLip 3 1/4"	2
5	91603	Pin Cylinder 1" x 3 3/4"	2
6	92016	Allan Head Bolt 3/8" x 2"	1
7	90641	Cylinder Shaft 2" x 8" Cylinder	1
8	90681	Seal Kit 2" Cylinder	1
9	90661	Rod End Cap 2" Cylinder	1
10	90741	Tube 2" x 8" Cylinder	1
11	90701	Piston 2" Cylinder	1
12	90721	Piston Nut 2" Cylinder	1
13	90801	Tie Rod Nuts 3/8"	8
14	90761	Anchor End Cap 2" Cylinder	1
15	90781	Tie Rods 2" x 8" Cylinder	4
	90104	Cylinder Complete 2" x 8"	*
*As Required			

Lift Arms and Packer Spacing

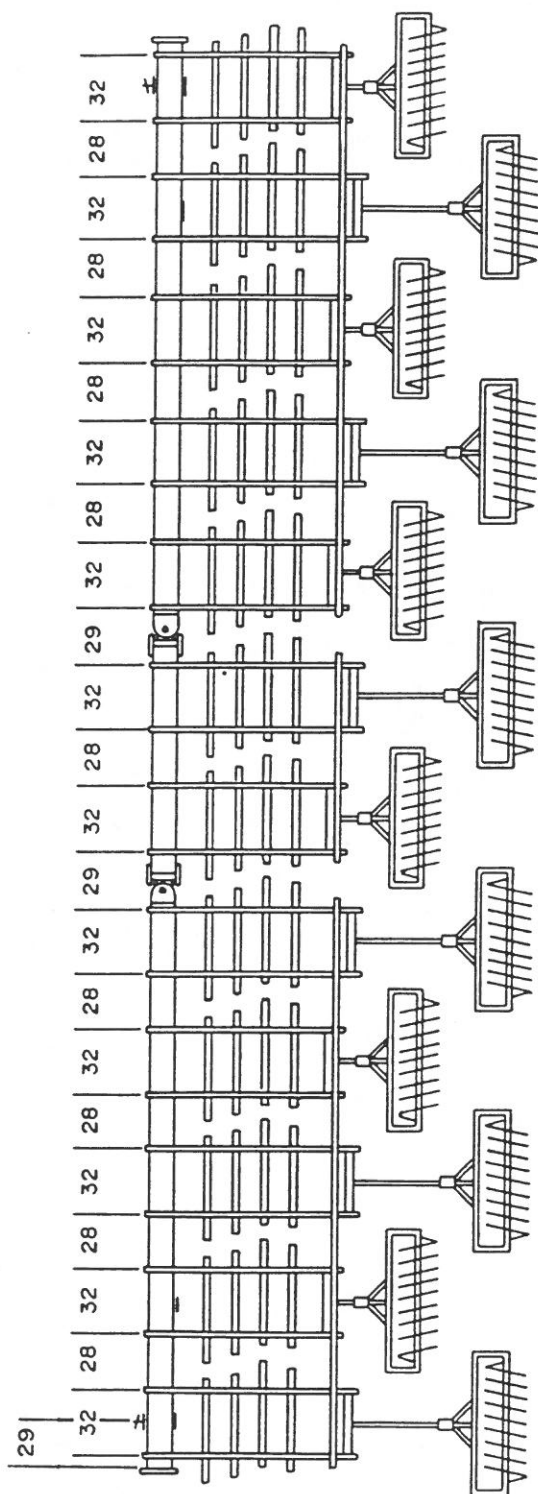
- A. REFERRING TO CHARTS, FIND SIZE AND SPACING NECESSARY FOR LIFT ARMS.
- B. ASSEMBLE LIFT ARMS AND PACKERS IN WORKING POSITION.
- C. MEASURE AND MARK LIFT ARMS BEFORE SECURING, START FROM CENTRE OF CENTRE TUBE MEASURE 14 INCHES ON EITHER SIDE OF CENTRE FOR PLACEMENTS OF FIRST ARM.
- D. ALWAYS START WITH RIGHT HAND PACKER ON SHORT LIFT ARM ON RIGHT SIDE OF MACHINE. THEN ALTERNATE BETWEEN LONG AND SHORT LIFT ARMS.
- E. TIGHTEN TRANSPORT WHEEL IN POSITION.



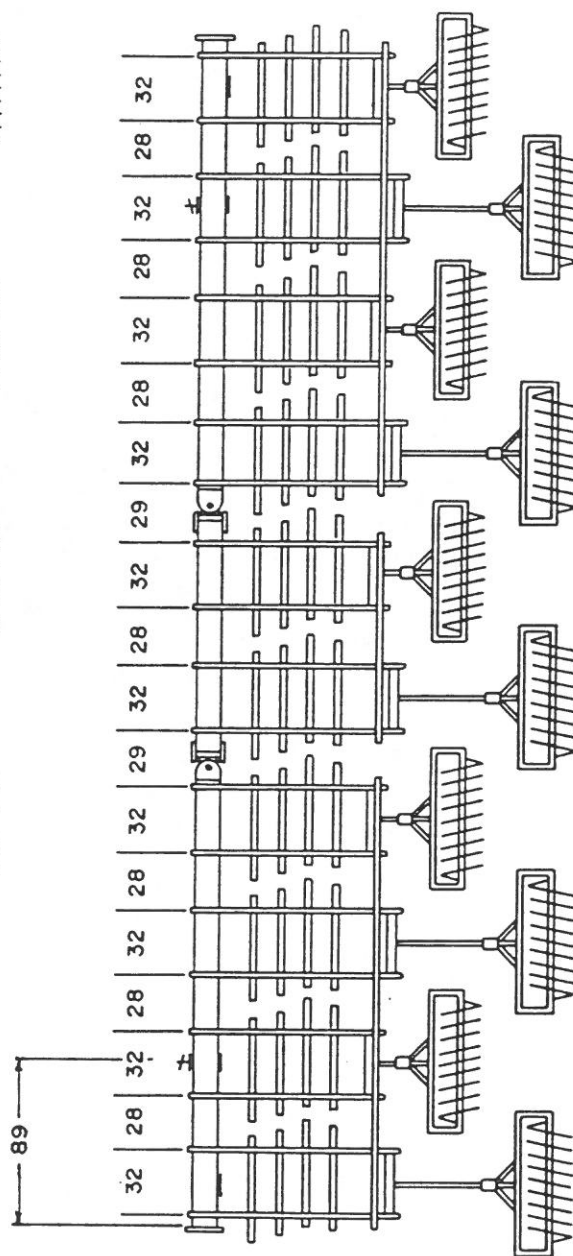
70 FT.



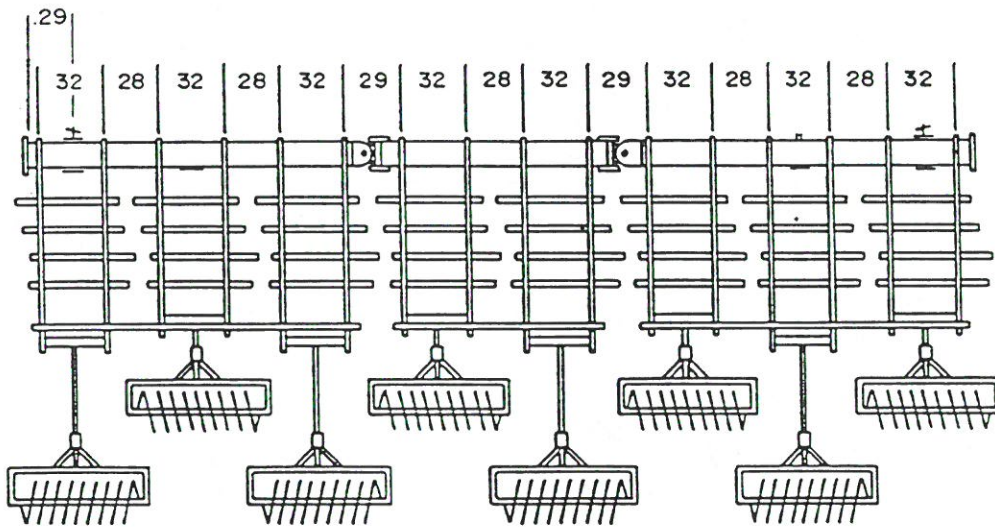
60 FT.



50 FT.



- A. REFERRING TO CHARTS, FIND SIZE AND SPACING NECESSARY FOR LIFT ARMS.
- B. ASSEMBLE LIFT ARMS AND PACKERS IN WORKING POSITION.
- C. MEASURE AND MARK LIFT ARMS BEFORE SECURING, START FROM CENTRE OF CENTRE TUBE MEASURE 14 INCHES ON EITHER SIDE OF CENTRE FOR PLACEMENTS OF FIRST ARMS.
- D. ALWAYS START WITH RIGHT HAND PACKER ON SHORT LIFT ARM ON RIGHT SIDE OF MACHINE. THEN ALTERNATE BETWEEN LONG AND SHORT LIFT ARMS.
- E. TIGHTEN TRANSPORT WHEEL IN POSITION.



OPERATOR'S INSTRUCTIONS



HOOK UP:

SECURE HARROW PACKER BAR TO TRACTOR. CONNECT HYDRAULIC HOSES, OPERATE HYDRAULICS. WHILE PERFORMING THIS OPERATION, ALL PERSONAL SHOULD STAY CLEAR FROM EQUIPMENT. PRESSURIZE CYLINDERS TO THE FULLY CLOSED. THEN REMOVE CYLINDER LOCK PLATES.

NOTE: THE TRACTOR RESERVOIR MAY REQUIRE ADDITIONAL OIL AFTER CYLINDERS ARE PRESSURIZED.

NOTE: BEFORE MOVING HARROW PACKER BAR BE SURE STABILIZER JACKS ARE RAISED AND PARALLEL TO WING TUBES.

TRANSPORT POSITION:

TO SET HARROW PACKER BAR IN TRANSPORT POSITION, ACTIVATE CYLINDERS TO LIFT HARROWS AND PACKERS TO UPRIGHT POSITION. AUTO FOLD SHOULD BE IN RELEASED POSITION. INSTALL CYLINDER LOCKS. DRIVE FORWARD UNTIL WINGS ARE FOLDED BACK.

WORKING POSITION:

TO SET HARROW PACKER BAR IN WORKING POSITION. UNBOLT CYLINDER LOCKS. ONLY IF CYLINDERS ARE PRESSURIZED. BACK UP HARROW PACKER BAR UNTIL CENTRE TUBE AND WING TUBES ARE IN STRAIGHT LINE. AUTO FOLD SHOULD BE CLOSED. LOWER THE HARROWS AND PACKERS SLOWLY UNTIL THE FIRST SET OF PACKERS TOUCH THE GROUND. DRIVE AHEAD SLOWLY AND PROCEED TO LOWER THE REMAINING HARROWS AND PACKERS.

DISCONNECT UNIT:

TO UNHOOK HARROW PACKER BAR FROM TRACTOR. FIRST LOWER STABILIZER JACKS ON WING TUBES, HAVE THEM SET TO TAKE PRESSURE OFF THE TRACTOR HITCH. DISCONNECT HYDRAULIC HOSES AND REMOVE DRAW BAR PIN.

LUBRICATION:

GREASE MACHINE EVERY 30 HOURS OF USE. CHECK PERIODICALLY BOLTS, KNUCKLE PINS AND COTTER PINS TO BE SURE THAT THEY ARE SECURE. WHEEL BOLTS SHOULD BE TORQUED AT 90 Ft. Lbs 1/2", 110 Ft. Lbs 9/16".

PARTS INDEX

PART #	PAGE	ITEM	DESCRIPTION	PART #	PAGE	ITEM	DESCRIPTION
10014	5	2	Pin Cylinder Swivel	10114	17	12	4th Pipe 4 Bar
10015	5	7	Pin Hitch	10115	19	10	4th Pipe 5 Bar
10016	1	6	Oscillating Axle Pocket	10116	19	12	5th Pipe 5 Bar
10017	1	4	Oscillating Axle	10118	17	7	Adjust ment Bar 4 Bar
10022	1	20	Bolt on Draw Hitch	10119	19	8	Adjustment Bar 5 Bar
10026	7	5	Jack Mount Plate	10120	17	5	Cross Brace
10026	9	12	Jack Mount Plate	10120	19	5	Cross Brace
10027	9	9	Jack Plate c/w Stub	10121	19	7	Centre Tie
10032	5	14	Pin Knuckle	10123	1	16	Cross Plate
10032	9	10	Pin Knuckle	10124	5	11	Cylinder Lock Plate
10034	21	1	Hose Clamp	10129	15	10	8' 5" Lift Arm Angle
10043	15	24	Packer Swivel Hitch	10130	15	10	13'5" Lift Arm Angle
10044	15	19	Packer Collar	10131	15	10	18'5" Lift Arm Angle
10045	15	14	RT Packer Hitch Bracket	10132	15	10	23'5" Lift Arm Angle
10047	15	29	LT Packer Hitch Bracket	10133	15	10	28'5" Lift Arm Angle
10051	17	6	Centre Tie	10134	15	11	Long Packer Hitch
10059	7	24	Spring Plate	10135	15	28	Short Packer Hitch
10060	1	27	Pin Cable Bracket	10136	5	13	Pin Cylinder Lock
10060	7	3	Pin Cable Bracket	10137	17	*	5' Section 4 Bar
10061	9	18	Pin Transport	10138	19	*	5' Section 5 Bar
10062	15	26	Packer Knuckle	10141	7	1	Auto Fold
10069	1	23	Cable Bracket Plates	10142	7	18	Auto Fold Cross Plate
10070	1	24	Bolt on Cable Bracket	10143	1	21	Tension Spring Plate
10085	5	1	Centre Tube	10143	7	16	Tension Spring Plate
10086	5	15	Left Knuckle	10144	7	6	Auto Fold Cable Angle
10087	5	15	Right Knuckle	10145	7	19	Auto Fold Lock Arm
10088	1	12	Left AFrame Hitch Tube	10147	9	13	33'10" Wing Tube for 80'
10089	1	8	Right AFrame Hitch Tube	10148	9	14	LT Transport Wheel 812 Hub
10090	1	13	Left AFrame Hitch	10149	9	14	RT Transport Wheel 812 Hub
10091	1	28	Right AFrame Hitch	10150	15	10	33'5" Lift Arm Angle
10092	1	11	Cross Member	30021	15	20	Packer Overbrace
10093	1	15	Cross Angle	30023	15	21	Left Coil 1 1/2" 5'
10094	7	23	Left AutoFold Bracket	30024	15	21	Right Coil 1 1/2" 5'
10095	7	11	Right AutoFold Bracket	30025	15	21	Left Coil 1 3/4" 5'
10096	9	13	8' 10" Wing Tube for 30'	30026	15	21	Right Coil 1 3/4" 5'
10097	9	13	13'10" Wing Tube for 40'	90106	5	4	Cylinder 3 1/2" x 30" Tube End
10098	9	13	18'10" Wing Tube for 50'	90106	21	3	Cylinder 3 1/2" x 30" Tube End
10099	9	13	23'10" Wing Tube for 60'	90107	5	4	Cylinder 4" x 30" Tube End
10100	9	13	28'10" Wing Tube for 70'	90107	21	3	Cylinder 4" x 30" Tube End
10101	9	14	LT Trans Wheel 618 Hub	90107	25	*	Cylinder 4" x 30" Tube End
10102	9	14	RT Trans Wheel 618 Hub	90202	21	12	1/2" Hose x 84"
10103	9	3	End Wheel 611 Hub	90216	21	7	1/2" Hose x 60"
10104	9	6	Short Lift Arm	90221	21	5	1/2" Hose x 89"
10104	15	4	Short Lift Arm	90400	21	11	1/2" Hydraulic Line x 132"
10105	9	6	Long Lift Arm	90500	21	4	90° Swivel Elbow (Restricted)
10105	15	4	Long Lift Arm	90501	21	6	90° Swivel Elbow
10106	17	19	RT Section Angle 4 Bar	90502	21	10	90° Street Elbow
10107	17	3	LT Section Angle 4 Bar	90550	21	8	Flare Adaptor
10108	19	20	RT Section Angle 5 Bar	90600	21	9	Street Tee F-F-F
10109	19	3	LT Section Angle 5 Bar	90644	23	2	Cylinder Shaft Tube End
10110	19	18	Front Pipe 4 Bar	90644	25	2	Cylinder Shaft Tube End
10111	17	9	2nd Pipe 4 Bar	90662	23	3	3 1/2" Cylinder Screw End Cap
10112	19	17	2nd Pipe 5 Bar	90663	25	3	4" Cylinder Screw End Cap
10113	17	10	3rd Pipe 4 Bar	90680	23	4	3 1/2" Cylinder Seal Kit
10113	19	16	3rd Pipe 5 Bar	90682	25	4	4" Cylinder Seal Kit

PART #	PAGE	ITEM	DESCRIPTION
90700	23	5	3 1/2" Cylinder Piston
90702	25	5	4" Cylinder Piston
90720	23	6	3 1/2" Cylinder Piston Nut
90722	25	6	4" Cylinder Piston Nut
90742	23	7	3 12" x 30" Cylinder Tube
90743	25	7	4" x 30" Cylinder Tube
91001	3	14	11L x 6Ply Tire 15"
91001	11	14	11L x 6Ply Tire 15"
91002	11	14	11L x 8Ply Tire 15"
91003	13	14	12.5Lx12Ply Tire 15"
91027	1	1	11Lx6 Ply c/w 8" Rim
91027	9	16	11Lx6 Ply c.w 8" Rim
90127	9	17	11Lx6 ply c/w 8" Rim
91028	9	16	11Lx8 Ply c/w 8" Rim
91029	9	16	12.5Lx12 Ply c/w 10" Rim
91050	3	15	15"x8"x6 Wheel Rim
91050	11	15	15"x10"x6 Wheel Rim
91052	13	15	15"x10"x8 Wheel Rim
91060	3	7	1/2" Wheel Bolt
91061	11	7	9/16" Wheel Bolt
91061	13	7	9/16" Wheel Bolt
91070	3	6	611 Hub
91071	11	6	618 Hub
91072	13	6	812 Hub
91090	3	2	611 Seal
91091	11	2	618 Seal
91092	13	2	812 Seal
91110	3	9	611 Outer Cone
91111	11	9	618 Outer Cone
91112	13	9	812 Outer Cone
91130	3	8	611 Outer Race
91131	11	8	618 Outer Race
91132	13	8	812 Outer Race
91150	3	4	611 Inner Race
91151	11	4	618 Inner Race
91152	13	4	812 Inner Race
91170	3	3	611 Inner Cone
91171	11	3	618 Inner Cone
91172	13	3	812 Inner Cone
91190	3	10	Washer Hub
91190	11	10	Washer Hub
91190	13	10	Washer Hub
91210	3	11	Castelated Nut
91210	11	11	Castelated Nut
91210	13	11	Castelated Nut
91230	3	13	611 Dustcap
91231	11	13	618 Dustcap
91232	13	13	812 Dustcap
91250	3	1	611 Spindle 2" x 10"
91251	11	1	618 Spindle 2" x 13"
91254	13	1	812 Spindle 2 1/2" x 14 3/4"
91400	7	12	AutoFold Springs
91403	17	15	Tine 3/8" x 12"
91403	19	14	Tine 3/8" x 12"

PART #	PAGE	ITEM	DESCRIPTION
91405	7	17	AutoFold Tension Spring
91500	15	2	7 Link Chain 5/16"
91501	15	1	6 Link Chain 5/16"
91600	17	14	Pin Section
91600	19	13	Pin Section
91601	15	3	Pin Chain
91603	5	8	Pin Cylinder 1" x 3 3/4"
91603	23	10	Pin Cylinder 1" x 3 3/4"
91603	25	10	Pin Cylinder 1" x 3 3/4"
91700	1	7	Grease Nipple 1/8" Str
91700	3	5	Grease Nipple 1/8" Str
91700	5	16	Grease Nipple 1/8" Str
91700	11	5	Grease Nipple 1/8" Str
91700	13	5	Grease Nipple 1/8" Str
91700	23	1	Grease Nipple 1/8" Str
91700	25	1	Grease Nipple 1/8" Str
91701	15	25	Grease Nipple 1/8" 90°
91817	5	10	16'6" Auto Fold Cable
91818	9	15	22'4" Cable 40' & 50'
91819	9	15	30'2" Cable 60', 70' & 80'
91821	9	15	Cable 30'
92000	15	23	Pillow Block
92003	1	27	Serial Number Plate
92005	3	16	Valve Stem
92005	11	16	Valve Stem
92005	13	16	Valve Stem
92008	17	16	Special Head Bolt Tines
92008	19	15	Special Head Bolt Tines
92014	7	8	Cable Wire Clamp 1/4"
92015	7	7	Thimble
92018	17	11	5' Section Pipe Clamp
92018	19	9	5' Section Pipe Clamp
92020	15	12	Pin Packer hitch Bracket
92022	9	7	Stabilizer Jack
B5C0716P	15	27	Bolt 7/16" x 1"
B5C0716P	17	2	Bolt 7/16" x 1"
B5C0716P	19	2	Bolt 7/16" x 1"
B5C0720P	15	6	Bolt 7/16" x 1 1/4"
B5C0720P	17	1	Bolt 7/16" x 1 1/4"
B5C0720P	19	1	Bolt 7/16" x 1 1/4"
B5C0728P	15	22	Bolt 7/16" x 1 3/4"
B5C0728P	17	4	Bolt 7/16" x 1 3/4"
B5C0728P	19	4	Bolt 7/16" x 1 3/4"
B5C0732P	17	18	Bolt 7/16" x 2"
B5C0732P	19	19	Bolt 7/16" x 2"
B5C0756P	15	18	Bolt 7/16" x 3 1/2"
B5C0824P	1	14	Bolt 1/2" x 1 1/2"
B5C08152P	7	4	Bolt 1/2" x 9 1/2"
B5C08152P	9	5	Bolt 1/2" x 9 1/2"
B5C08152P	15	32	Bolt 1/2" x 9 1/2"
B5C1028P	1	10	Bolt 5/8" x 1 3/4"
B5C1028P	7	20	Bolt 5/8" x 1 3/4"
B5C1028P	9	4	Bolt 5/8" x 1 3/4"
B5C1080P	1	25	Bolt 5/8" x 5"

PART #	PAGE	ITEM	DESCRIPTION	PART #	PAGE	ITEM	DESCRIPTION
B5C1232P	7	14	Bolt 3/4" x 2"				
B5C1272P	15	15	Bolt 3/4" x 4 1/2"				
B5C16120P	1	22	Bolt 1" x 7 1/2"				
B8C1232P	5	5	Bolt 3/4" x 2" Gr 8.				
CB5C0832P	15	33	Carriage Bolt 1/2" x 2"				
CP0216	15	5	Cotter Pin 1/8" x 1"				
CP0324	3	12	Cotter Pin 3/16" x 1 1/2"				
CP0324	5	9	Cotter Pin 3/16" x 1 1/2"				
CP0324	11	12	Cotter Pin 3/16" x 1 1/2"				
CP0324	13	12	Cotter Pin 3/16" x 1 1/2"				
CP0324	23	8	Cotter Pin 3/16" x 1 1/2"				
CP0324	25	8	Cotter Pin 3/16" x 1 1/2"				
CF0440	5	3	Cotter Pin 1/4" x 2 1/2"				
CF0440	9	11	Cotter Pin 1/4" x 2 1/2"				
FW07P	15	7	Flatwasher 7/16"				
FW08P	15	31	Flatwasher 1/2"				
HP24	17	13	Hair Pin Clip 1 1/2"				
HP24	19	11	Hair Pin Clip 1 1/2"				
HP40	5	6	Hair Pin Clip 2 1/2"				
HP40	15	13	Hair Pin clip 2 1/2"				
HP52	1	26	Hair Pin Clip 3 1/4"				
HP52	5	10	Hair Pin Clip 3 1/4"				
HP52	7	2	Hair Pin Clip 3 1/4"				
HP52	23	9	Hair Pin Clip 3 1/4"				
HP52	25	9	Hair Pin Clip 3 1/4"				
LN5C07P	15	8	Locknut 7/16"				
LN5C07P	17	8	Locknut 7/16"				
LN5C07P	19	6	Locknut 7/16"				
LN5C08P	1	5	Locknut 1/2"				
LN5C08P	7	9	Locknut 1/2"				
LN5C08P	9	8	Locknut 1/2"				
LN5C08P	15	30	Locknut 1/2"				
LN5C08p	21	2	Locknut 1/2"				
LN5C10P	7	25	Locknut 5/8"				
LN5C12P	5	12	Locknut 3/4"				
N5C10P	1	2	Nut 5/8"				
N5C10P	7	22	Nut 5/8"				
N5C10P	9	1	Nut 5/8"				
N5C12P	7	15	Nut 3/4"				
N5C12P	15	17	Nut 3/4"				
N5C16P	1	18	Nut 1"				
W10P	1	3	Lockwasher 5/8"				
W10P	7	21	Lockwasher 5/8"				
W10P	9	2	Lockwasher 5/8"				
W12P	7	13	Lockwasher 3/4"				
W12P	15	16	Lockwasher 3/4"				
W16P	1	19	Lockwasher 1"				
UB073476	15	9	U-Bolt 7/16" x 2 1/8" x 4 3/4"				
UB0850146	1	9	U-Bolt 1/2" x 3 1/8" x 9 1/8"				