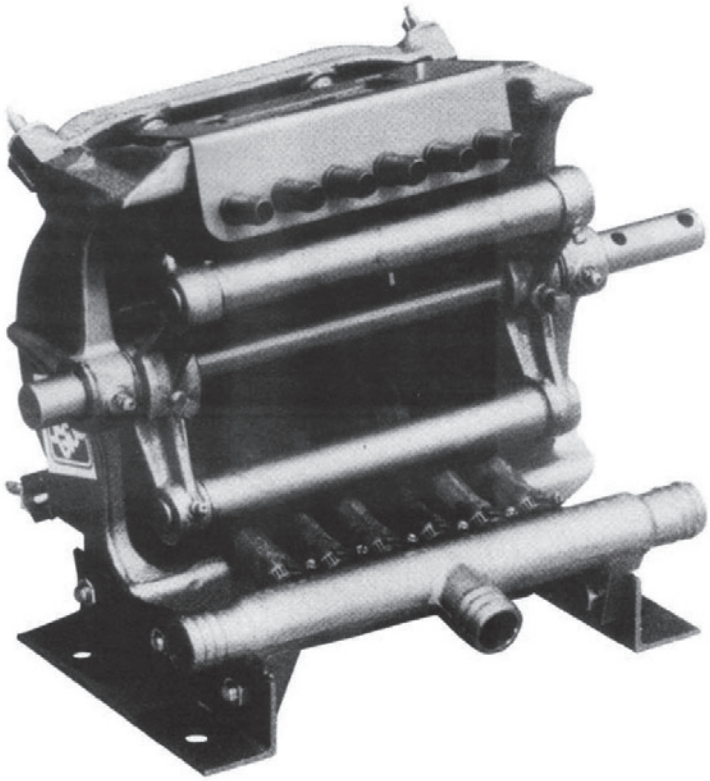
JOHN BLUE
SQUEEZE PUMP

PARTS AND
INSTRUCTION MANUAL



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SAFETY PRECAUTIONS

- Equipment should be operated only by trained, responsible people!
- A careful operator is the best insurance against an accident.
- Fill system with WATER first and check output.
- Check all valves, fittings, hose clamps, etc. for tightness and soundness before admitting fluid to system.
- Replace hoses when worn, cracked or if leaking.

WARNING: USE OF THIS PRODUCT FOR ANY PURPOSES OTHER THAN ITS ORIGINAL INTENT, ABUSE OF THE PRODUCT, AND/OR MODIFICATION TO THE ORIGINAL PRODUCT IS STRICTLY PROHIBITED BY JOHN BLUE COMPANY. JOHN BLUE COMPANY RESERVES THE RIGHT TO DENY WARRANTY OR LIABILITY CLAIMS IN ANY/ALL SITUATIONS INVOLVING MISUSE, ABUSE OR MODIFICATION.

THE ORIGINAL INTENT OF THIS PRODUCT DOES NOT INCLUDE USE WHERE THE MAXIMUM ALLOWED SPEED, PRESSURE, OR TEMPERATURE IS EXCEEDED, AND IT DOES NOT INCLUDE APPLICATIONS UTILIZING FLUIDS THAT ARE NOT COMPATIBLE WITH THE PRODUCT'S COMPONENT MATERIALS. DO NOT USE THIS PRODUCT WITH FLAMMABLE OR COMBUSTIBLE FLUIDS SUCH AS GASOLINE, KEROSENE, DIESEL, ETC…, AND DO NOT USE IN EXPLOSIVE ATMOSPHERES. FAILURE TO FOLLOW THIS NOTICE MAY RESULT IN SERIOUS INJURY AND/OR PROPERTY DAMAGE AND WILL VOID THE PRODUCT WARRANTY. IF IN DOUBT ABOUT YOUR APPLICATION, CONTACT YOUR STOCKING DEALER OR THE JOHN BLUE TECHNICAL STAFF AT 1-800-253-2583.

WARNING: This product can expose you to certain chemicals, which are known to the State of California to cause cancer or birth defects or other reproductive harm. **For more information go to: www.P65Warnings.ca.gov.**

BE CAREFUL! REMEMBER, SAFETY IS NO ACCIDENT!

TO THE OWNER

This manual has been prepared and illustrated to assist you in the maintenance of your JOHN BLUE PUMP.

Enter your serial number and date of purchase in the space provided below for future reference in serviceinformation or for ordering parts.

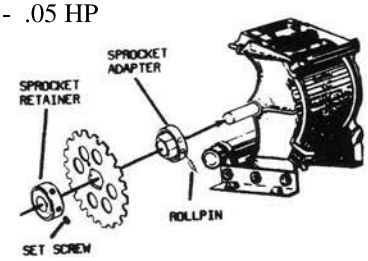
Because our engineering department is constantly improving products, we reserve the right to make design and specification changes without notice.

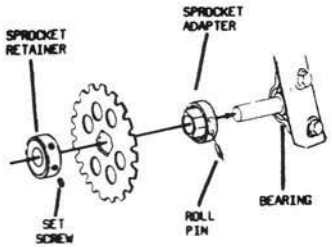
Serial No. _____ Purchase Date _____

Pump Specifications

These pumps feature a heavy duty cast iron body to hold them true when mounted on equipment that has to flex over rough terrain. The floating aluminum alloy back plate provides a positive shutoff when the pump stops.

Maximum Output per Hose	5/16" Diameter Hose - .58 GPM 1/2" Diameter Hose - 1.4 GPM
Maximum Speed	125 RPM
Maximum Pressure	5 PSI
Horsepower Required per Hose	5/16" Diameter - .03 HP 1/2" Diameter - .05 HP





Standard Model "C" Series	Metering Hose Size	Suction Hose Size	Application Output Hose Size
L-6-C	1/2	1	3/8
L-8-C	5/16	1	3/8
L-8-LC	1/2	1-1/4	3/8
L-12-C	1/2	1-1/4	3/8
L-16-C	5/16	1-1/4	3/8
PVC Series (PVC Manifold for Acid Fertilizers) USA/CAN			
L-6-P	1/2	1-1/4 FPT	1/2
L-8-SP	5/16	1-1/4 FPT	3/8
L-8-P	1/2	1-1/4 FPT	1/2
L-12-P	1/2	1-1/4 FPT	1/2
L-12-SP	5/16	1-1/4 FPT	3/8

Installation

Back Plate and Back Springs

Install back plate as shown in Figures 1 and 2. Position springs over raised spring platforms and under spring anchor bar. Secure each bar with the wing nuts provided. Pumps with stiff and light springs, install stiff springs on top.

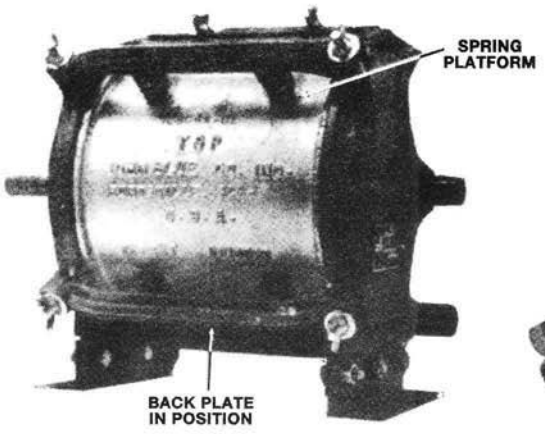


Fig. 1 - Positioning of Back Plate

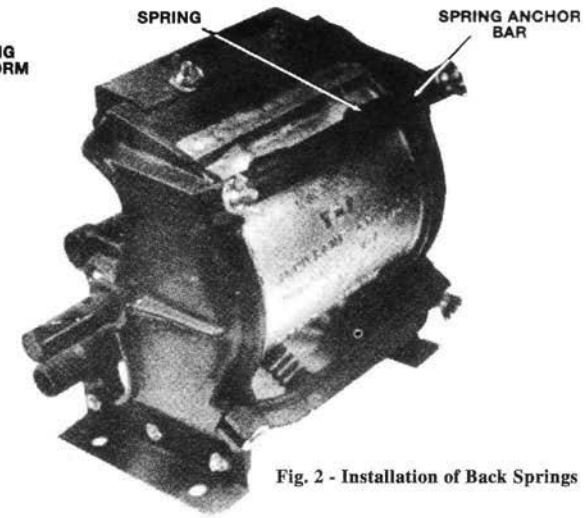


Fig. 2 - Installation of Back Springs

Adjustment of Discharge Manifold

Squeeze Pumps are shipped with the discharge manifold in the rearward or non-operating position. Before mounting the pump, position the discharge manifold in the forward or operating position and secure by tightening the wing nuts as shown in figures 3 and 4.

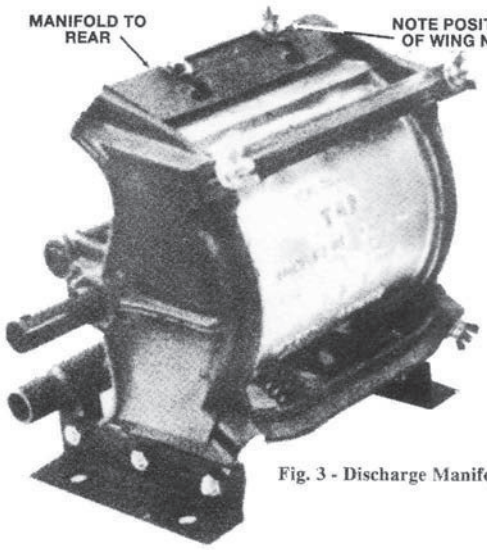


Fig. 3 - Discharge Manifold Rearward

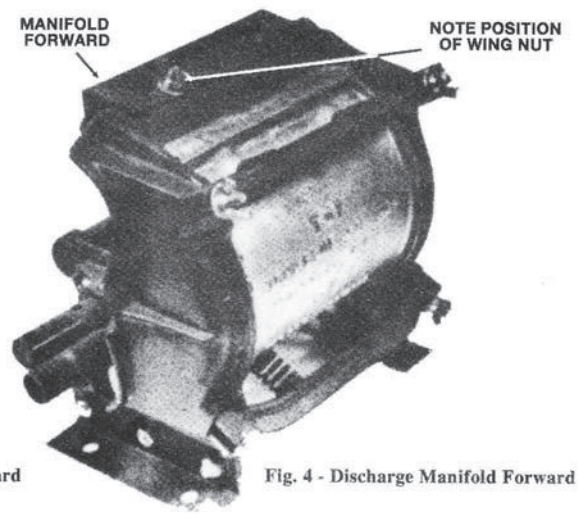


Fig. 4 - Discharge Manifold Forward

Pump Mounting and Hose Arrangement

The pump should always be mounted even with or lower than the fertilizer tank and for accurate metering, the speed should not exceed 125 RPM.

An important consideration for efficient operation of the pump is the hose arrangement. If fewer than the standard number of hoses are to be used, i.e., using 4 or 5 hoses on a 6 hose pump of 10 hoses on a 12 hose pump, the reduction in the number of hoses may be made by:

1. Removing the hoses from near the center of the intake manifold and capping the intake ports.
2. Running the unneeded hoses back into the solution tank or tanks with the hoses still connected to the pump.

Installation

Squeeze Pumps can be installed on a variety of implements too numerous to be covered in this book. The pumps should be positioned so that the suction manifold is lower than the tank bottom.

Maintenance

Lubrication

Grease the pump fittings twice daily. A thin coating of grease on the roller arms and exposed bolts will help prevent corrosion. Grease the pump after each use instead of before, especially "B" series with needle bearings.

When Pump is not in Use

During periods when the pump is not being used, these important steps are recommended to prevent hose deformation and prolong hose life.

1. Unscrew (about 1/2 inch) the wing nuts holding the spring anchor bar to the pump frame (Figure 3). this releases pressure against the hoses.
2. Loosen the wing nuts on the discharge manifold and shift the manifold rearward as shown in Figure 3.
3. Store out of direct sunlight.

Hose Alignment

If "A" or "B" hose (end hoses) should run off the back, realign the hoses as follows:

1. "A" Hose - Loosen hose clamp on intake manifold and twist hose 1/4 turn in a **counter-clockwise** direction.
2. "B" Hose - Loosen hose clamp on intake manifold and twist hose 1/4 turn in a **clockwise** direction.

See pages 10 and 11 for a selection of accessories and options for your John Blue Squeeze Pump

Drive Factor Equations

Two Countershafts

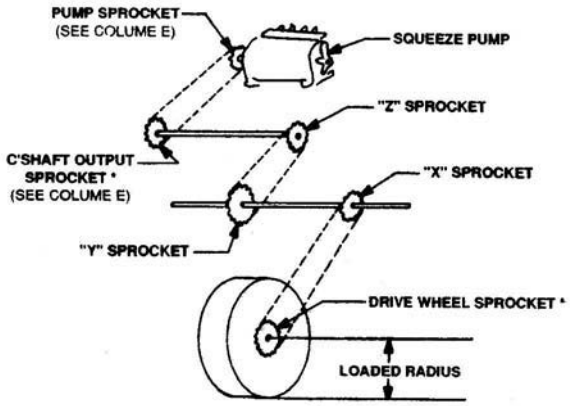
$$\text{Drive Factor} = \frac{\text{(Number of Teeth, Drive Wheel Sprocket) x (Number of Teeth, "Y" Sprocket) x 100}}{\text{(Loaded Radius in Inches) x (Number of Teeth "X" Sprocket) x (Number of Teeth "Z" Sprocket)}}$$

One Countershaft

$$\text{Drive Factor} = \frac{\text{(Number of Teeth, Drive Wheel Sprocket) x 100}}{\text{(Loaded Radius in Inches) x (Number of Teeth "X" Sprocket)}}$$

No Countershaft

$$\text{Drive Factor} = \frac{100}{\text{Loaded Radius in Inches}}$$



How to Use the Squeeze Pump Output Graph

Column A - Distance Between Outlet Hoses in Inches

Use distance in inches between single hose outlets. If there are 2 hose outlets per row, use the number corresponding to 1/2 the distance between rows. For 3 hose outlets per row, use the number corresponding to 1/3 the distance between rows.

Column B - Drive Factor

Points have been plotted on the Output Graph in Column B corresponding to some of the "Standard" drive combinations. For non-standard or unknown drive combinations, calculate the drive factor using one of the methods shown above in "Drive Factor Equations".

Column D - Gallons Per Acre

The numbers on the left side of Column D represent output in gallons per acre of the L-6-C, L-8-LC, L-12-C, L-6-P, L-8-P, and L-12-P Squeeze Pumps. The numbers to the right side represent the output in gallons per acre of the L-8-C, L-16-C, L-12-SC, L-8-SP and L-12-SP Squeeze Pumps.

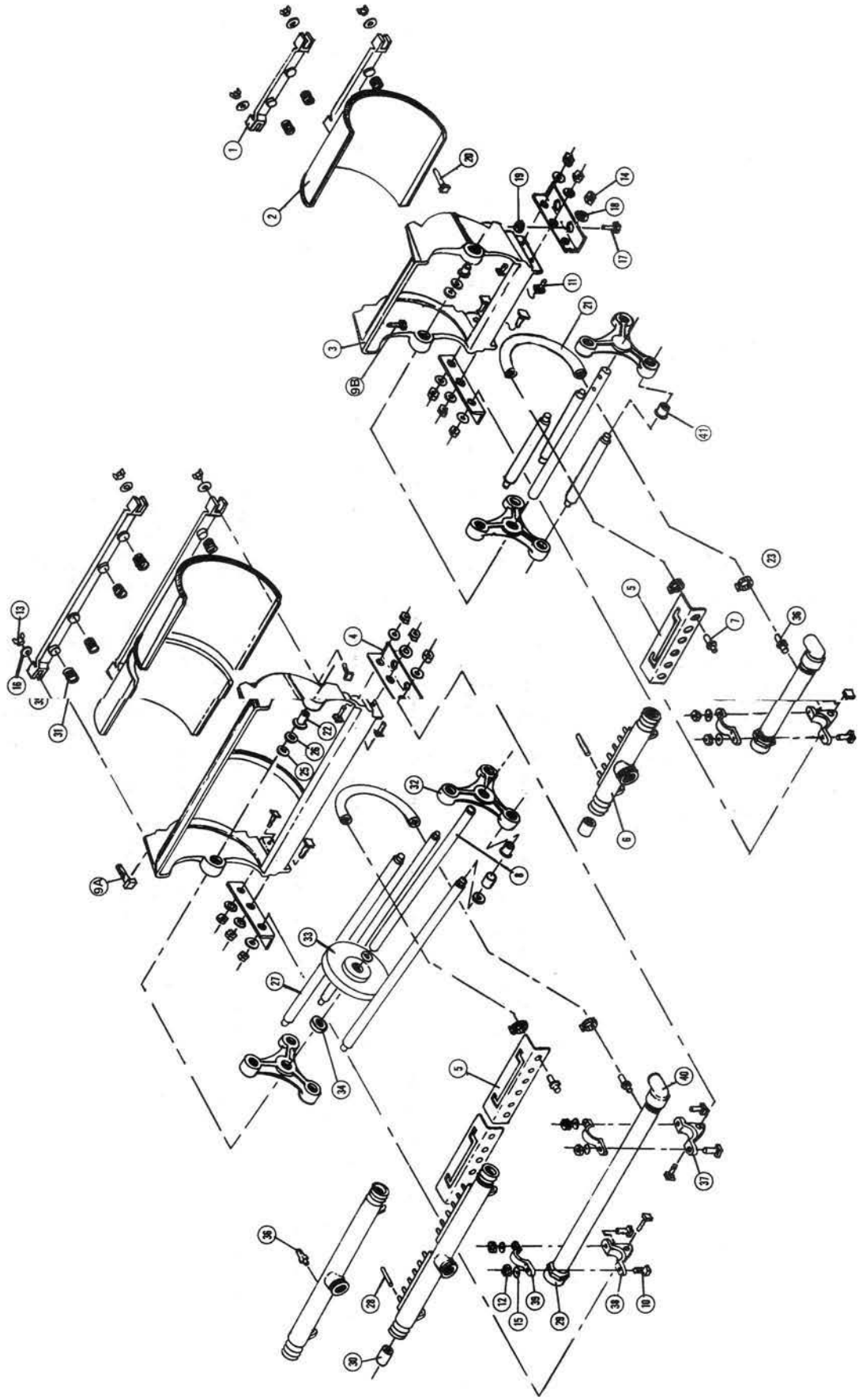
Column E - Number of Teeth Countershaft Output Sprocket and Number of Teeth Pump Sprocket

This column shows the number of teeth on sprockets to be placed on the countershaft and pump in order to get the desired output in gallons per acre.

Examples Using the Output Graph

Example 1 - "Standard Drive" as listed in Column B

[40" Rows, One Hose Outlet per Row, 30 Gallons per Acre, L-6-C Squeeze Pump Mounted on Liqui-Placer]Draw a straight line from 40 (Distance Between single Hose Outlets) on Column "A" through point marked "Liqui-Placer" on Column "B", on to Column "C". Mark the point where the line meets Column "C". From this point on Column "C" draw a straight line through 30 (Output in Gallons per Acre, under 1/2" Hose, Squeeze Pump Heading) on Column "D", on to Column "E". Mark the point where the line meets Column "E". Read to the left of this point to obtain the number of teeth required on the countershaft output sprockets (22 teeth), and to the right of this point to obtain the number of teeth required on the pump sprocket (9 teeth). This example is shown on the graph as a dashed line labeled "Example 1." (Continued on Page 9)



Parts List

No.	Part #	Description	L-6-C	L-8-C	L-8-LC	L-12-C	L-16-C	L-6-P	L-8-SP	L-8-P	L-12-P	L-12-SC	L-12-SP
1	108045-01	Spring Anchor Bar	2	2				2	2				
1	108499-01	Spring Anchor Bar			2	2	2			2	2	2	2
2	108044-01	Back Plate	1	1	2	2	2	1	1	2	2	2	2
3	108042-91	Frame	1	1				1	1				
3	108498-91	Frame			1	1	1			1	1	1	1
4	L-1259	Base Angle	2	2				2	2				
4	L-1275-L	Base Angle	1			1	1			1	1	1	1
4	L-1275-R	Base Angle	1			1	1			1	1	1	1
5	114372-01	Discharge Manifold Bracket										2	2
5	114369-01	Discharge Manifold Bracket	1			2		1			2		
5	L-1320-1	Discharge Manifold Bracket		1			2		1				
5	113430-01	Discharge Manifold Bracket			2					2			
6	L-1254-A	Intake Manifold	1										
6	L-1267	Intake Manifold			1								
6	L-1273-A	Intake Manifold					1						
6	L-1313-A	Intake Manifold				1							
6	L-1315-A	Intake Manifold		1									
6	113434-01	Intake Manifold									1		
6	113428-01	Intake Manifold								1			
6	113573-01	Intake Manifold							1				
6	113600-01	Intake Manifold						1					
6	114171-01	Intake Manifold											1
6	111045	Intake Manifold										1	
7	114368-01	Hose Coupling	6		8	12		6		8	12		
7	114370-01	Hose Couplings		8			16		8			12	12
8	L-1253	Drive Shaft	1	1				1	1				
8	L-1321	Drive Shaft	1			1	1			1	1	1	1
9A	90554	5/16-18 NC x 1-3/4 Sq HD MB	4	4	4	2	2	4	4	4	2	2	4
9B	90578	5/16-18 NC x 1 Carriage Bolt	2	2	4	4	4	2	2	4	4	4	4
10	90620	1/4 x 20 x 1 Plated						4	4	4	4		4
11	90651	3/8 x 16 x 1 Plated	6	6	6	6	6	6	6	6	6	6	6
12	92015	1/4-20 Hex Nut						4	4	4	4		4
13	92023	5/16-18 Wing Nut	6	4	8	8	8	6	4	8	8	8	8
14	92024	3/8-16 Hex Nut	10	10	10	10	10	10	10	10	10	10	10
15	93005	1/4 Lock Washer						4	4	4	4		4
16	93010	5/16 Flat Washer	6	6	8	8	8	6	6	8	8	8	8

Parts List

No.	Part #	Description	L-6-C	L-8-C	L-8-LC	L-12-C	L-16-C	L-6-P	L-8-SP	L-8-P	L-12-P	L-12-SC	L-12-SP
17	90653	3/8-16 x 1-1/4 Plated	4	4		4	4	4	4	4	4	4	4
18	93011	3/8 Flat Washer	8	8		8	8	8	8	8	8	8	8
19	93024	3/8 Lock Washer	4	4	4	4	4	4	4	4	4	4	4
20	90555	5/16-18 x 2 SQ HD				2	2				2	2	
21	87250	5/16" Hose		8			16		8			12	12
21	87249	1/2" Hose	6		8	12		6		8	12		
22	A-3656-A	Nylon Bushing Mainshaft	2	2	2	2	2	2	2	2	2	2	2
23	95528	Hose Clamp		16			32		16			24	24
23	S-5752	Hose Clamp	12		16	24		12		16	24		
24	A-3557	#4 x 3/16 Drive Screw	2	2	2	2	2	2	2	2	2	2	2
25	L-4627	1/32" Shim	2	2	4	4	4	2	2	4	4	4	4
26	L-4628	3/64" Shim	2	2	4	4	4	2	2	4	4	4	4
27	108096-01	Roller		3				3	3				
27	108097-01	Roller	3										
27	108507-01	Roller			3	3				3	3		
27	114172-01	Roller					3					3	3
28	L-1257	1/2" Cap	3		4	4		3		4	4		
28	L-1257-A	5/16" Cap		3			6		3			6	
29	113431-01	Manifold Cap						1	1	1	1		1
30	L-1266	Manifold Plug 1-1/4"			2	2	2			2		2	
30	L-1264	Manifold Plug 1"	2	2				2	2				
31	L-1261	Back Spring	4	4	8	4	4	4	4	8	4	4	4
31	L-4458	Back Spring					4				4	4	4
32	L-1463	Roller Arm Assembly	2	2	2	2	2	2	2	2	2	2	2
33	L-1440	Back Up Roller Assembly			1	1				1	1		1
33	L-4450	Back Up Roller Assembly										1	
34	H-12	Collar Set			2	2	2			2	2	2	2
35	L-4457	Bolt Spacer				2	2				2	2	2
36	L-4452	Hose Adaptor						6		8	12		
36	113571-01	Hose Coupling		8									12
37	113425-01	Lower Right Clamp						1	1	1	1		1
38	113426-01	Lower Left Clamp						1	1	1	1		1
39	113427-01	Manifold Clamp						2	2	2	2		2
40	113432-01	90˚ Elbow						1	1	1	1		1
41	L-1452	Roller Bushing (Nylon)	6	6	6	6	6	6	6	6	6	6	6

Designs and specifications change from time to time, John Blue reserves the right to alter or upgrade equipment as necessary. Always make sure you have the most current parts list before ordering replacement parts.

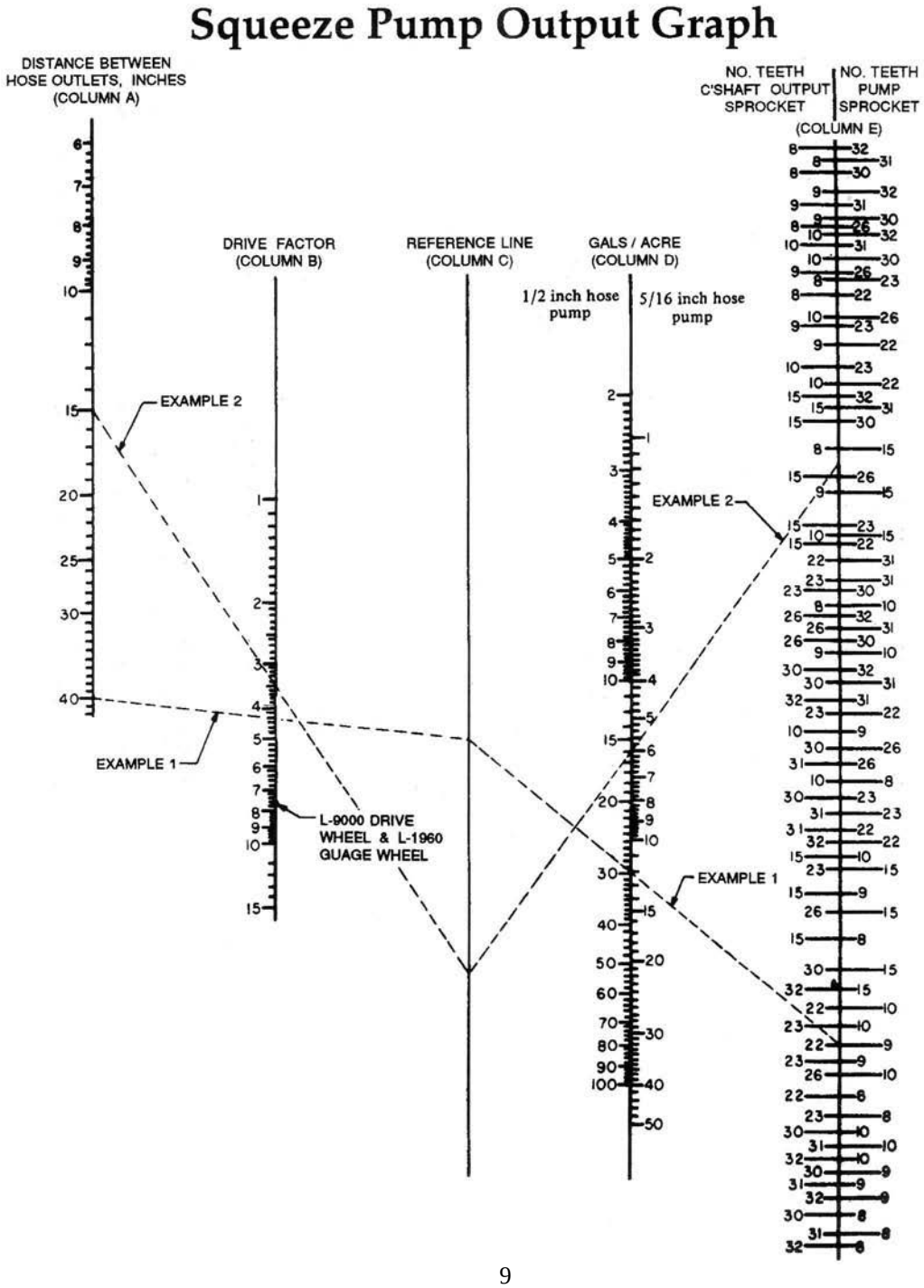
Example 2 - "Non Standard Drive" Not listed in Column B

[30" Rows, Two Hose Outlets per Row, 6 Gallons per Acre, L-8-C Squeeze Pump Mounted on a Non-Standard Drive having a Ground Wheel with 14.6" Loaded Radius, 15 Tooth Drive Wheel Sprocket, 26 Tooth "X" Sprocket, 8 Tooth "Y" Sprocket, and 9 Tooth "Z" Sprocket]

Since there are two hose outlets per row, start from point 15 (1/2 the distance of the 30" row) on Column "A". Calculate the drive factor using the formula shown on page 5. In this example, the Drive Factor would be derived as follows:

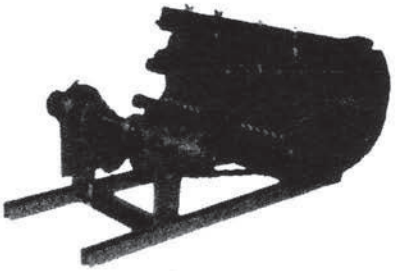
$$\text{Drive Factor} = \frac{(15) \times (8) \times (100)}{(14.6) \times (26) \times (9)} = 3.5$$

Mark this point at 3.5 on Column "B". Draw a straight line from 15 on Column "A" through the 3.5 point on Column "B", on to Column "C". From this point on Column "C", draw a line through 6 (Output in Gallons per Acre under 5/16" Hose Squeeze Pump Heading) on column "D", on to Column "E". Mark the point where the line meets Column "C". Read to the left of this point to obtain the number of teeth required on the countershaft output sprocket, and to the right of this point to obtain the number of teeth required on the pump sprocket. The nearest set of sprockets would have 15 teeth on the countershaft output sprocket and 26 teeth on the pump sprocket. This example is shown as a dashed line labeled as example 2 on the Output Graph.



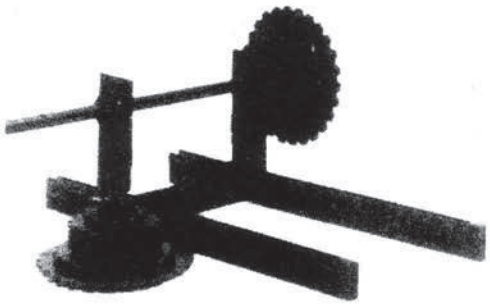
Accessories

John Blue Company Provides Various Mounting and Drives to Complete Your Liquid Fertilizer Application



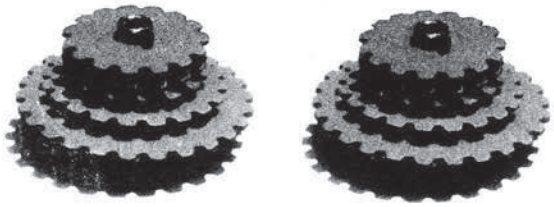
L-1485 Mount & Drive Unit
- Countershaft with Clutch
- Complete Set of Individual Sprockets for 87 Different Rates

114273 Mount & Drive Unit
- Countershaft without Clutch
- Sprocket Cluster Set Allows 6 Different Rates as Shipped
- Because Sprockets are Individual, 14 Additional Rates are Possible



114275 Squeeze Pump Mount
- Includes Countershaft Only with No Sprockets
- Sprockets Can Be Selected Individually or in Clusters to Obtain Specific Application Rates

114272 Sprocket Cluster Set
- Can be Purchased as a Kit to be Used on ANY John Blue Squeeze Pump
- Allows Conversion to Cluster Sprockets in the Field
- Individual Sprockets Means Complete Versatility

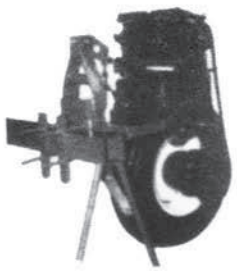


114303 Cluster Adaptor Kit
- Includes Adaptors and Spacers
- Allows You to Use Your Existing Sprockets to Make a Sprocket Cluster Kit

Accessories con't

Gauge Wheels and Drive Wheels

- Gauge Wheels Available for 2-1/2" Diamond Bars and 3" and 4" Square Bars
- Available with Squeeze Pump Mount and Drive
- Spring Loaded Drive Wheel comes Complete with Drive and Sprocket



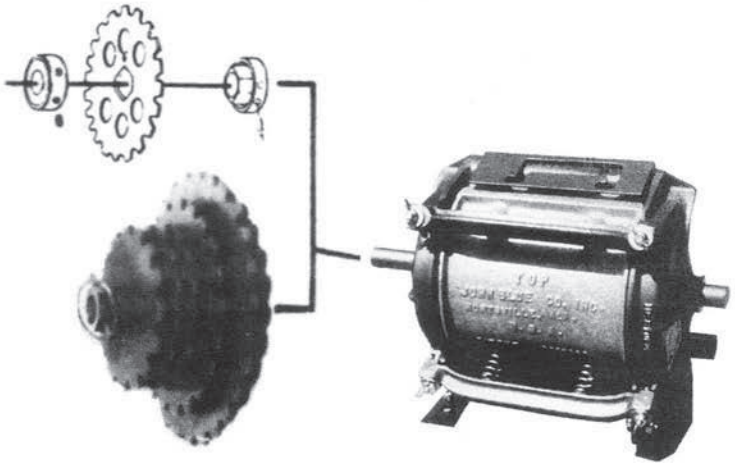
Options

John Blue Squeeze Pumps are Available with Several Options for Changing Sprockets in Order to Change Application Rates

- Individual Sprockets with Shaft Adaptors
  - 11 Different Sprockets Available
  - 87 Different Application rates Possible

- Sprockets Available Individually or in Sets
  - 5 Sprocket Set (L-4512)
  - 9 Sprocket Set (L-4513)

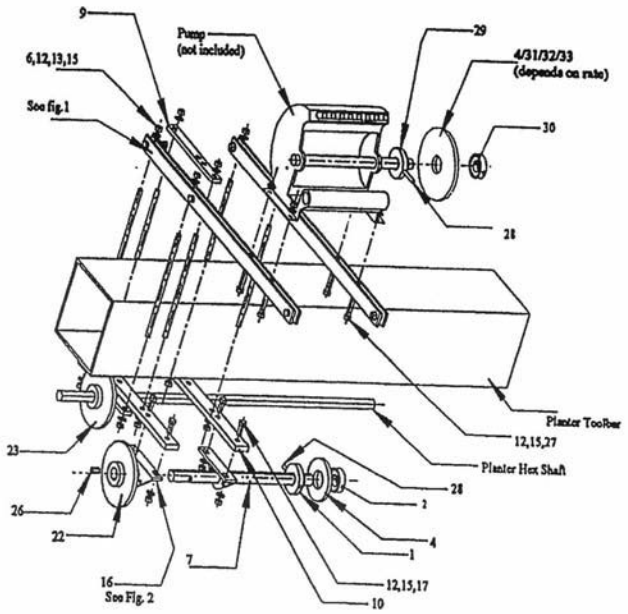
- Sprocket Cluster Set to facilitate Rate Change
  - 6 Different Application Rates - Standard
  - 14 Additional Rates Possible by Changing Sprockets



114939 SQUEEZE PUMP MOUNTING KIT

ITEM	PART NO.	DESCRIPTION	QTY.
1	L-1414-1	Shaft Adaptor (1" Bore)	1
2	L-4414-1	Sprocket Retainer	1
3	L-1404	Connector Link (20-40 Chain)	2
4	L-1385	Sprocket, 10T (Double Pitch)	1
*	114516-01	Sprocket 12T (for 1" Shaft)	1
5	114921-01	Rail, Pump Mount	4
6	114923-01	Threaded Rod	6
7	114922-01	Counter Shaft	1
8	114925-01	Chain (47 Links of 20-40 RC)	1
9	114926-01	Clamp Plate	2
10	114920-01	Clamp Plate	2
11	A-177	Spacer	6
12	93024	3/8 Lock Washer	22
13	93011	3/8 Flat Washer	10
14	90653	3/8 x 1-1/4 Bolt	6
15	92024	3/8 Hex Nut	26
16	A-4332	Bearing	2
17	90651	3/8 x 1 Bolt	4
18	90578	5/16 x 1 Carriage Bolt	4
19	92020	5/16 Hex Nut	4
20	93023	5/16 Lock Washer	4
21	S-2943	Connector Link (for Std 40 Chain)	1
22	114932-01	Sprocket, 32T (1" Bore)	1
23	114936-01	Sprocket Assembly, 32T (RC-40)	1
24	114934-01	Chain (60 Links of Std. 40 Chain)	1
25	144937-01	Spacer (for Mounting Pump)	4
26	L-1020	Key (for use with Sprocket)	2
27	90595	3/8 x 3-1/4 Carriage Bolt	4
28	A-2763	Roll Pin	1
29	L-1414	Sprocket Adaptor (7/8" Bore)	1
30	L-4414	Sprocket Retainer (7/8" Bore)	1
31	L-1389	Sprocket, 26T (Double Pitch)	1
32	L-1386	Sprocket, 15T (Double Pitch)	1
33	L-1392	Sprocket, 32T (Double Pitch)	1
34	114924-01	Chain (7 Links of 20-40 RC)	1

*** NOT SHOWN**



114939 Parts Schematic
(Suggested Mounting Arrangement)

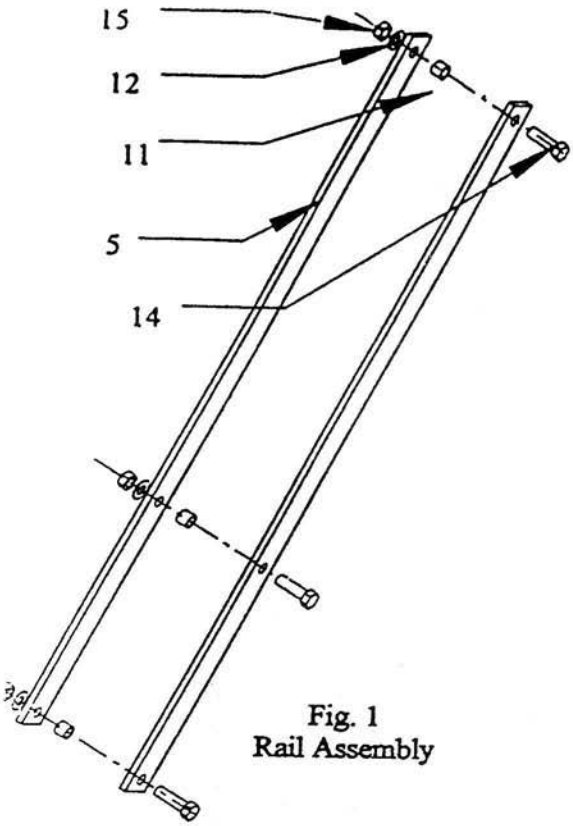


Fig. 1
Rail Assembly

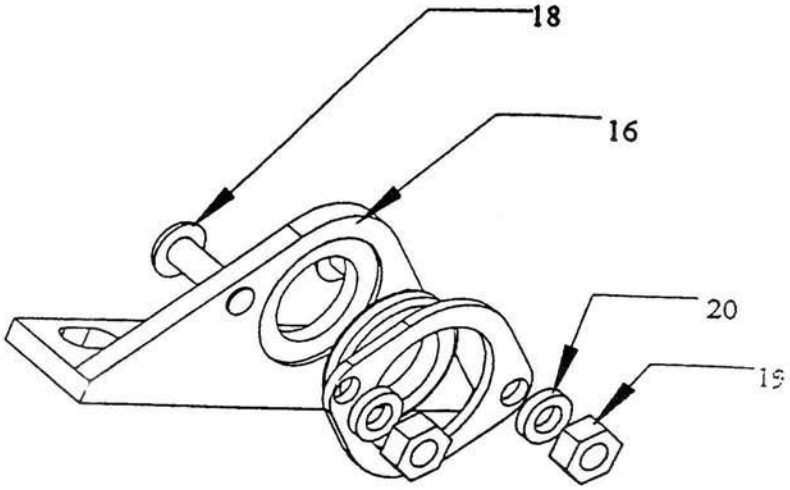


Fig. 2
Bearing Assembly

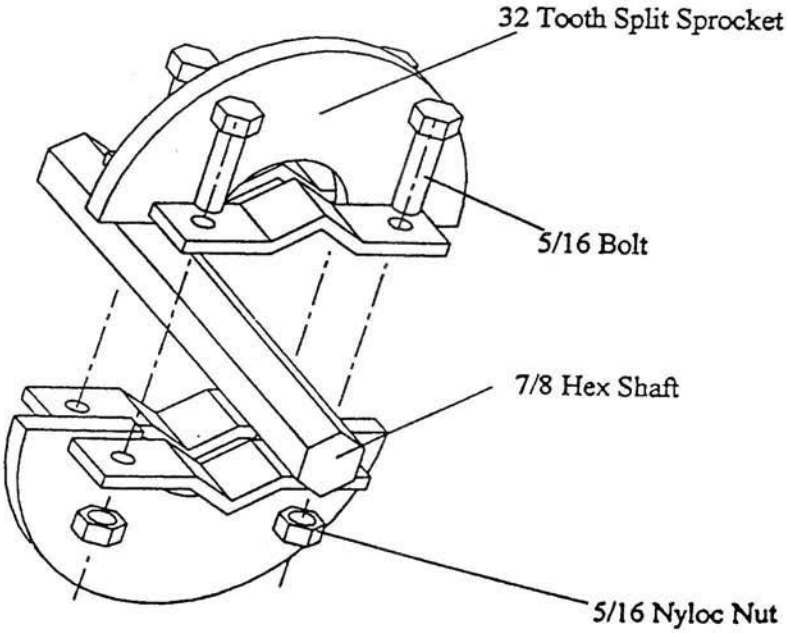


Fig. 3
Split Sprocket Assembly

NOTES

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