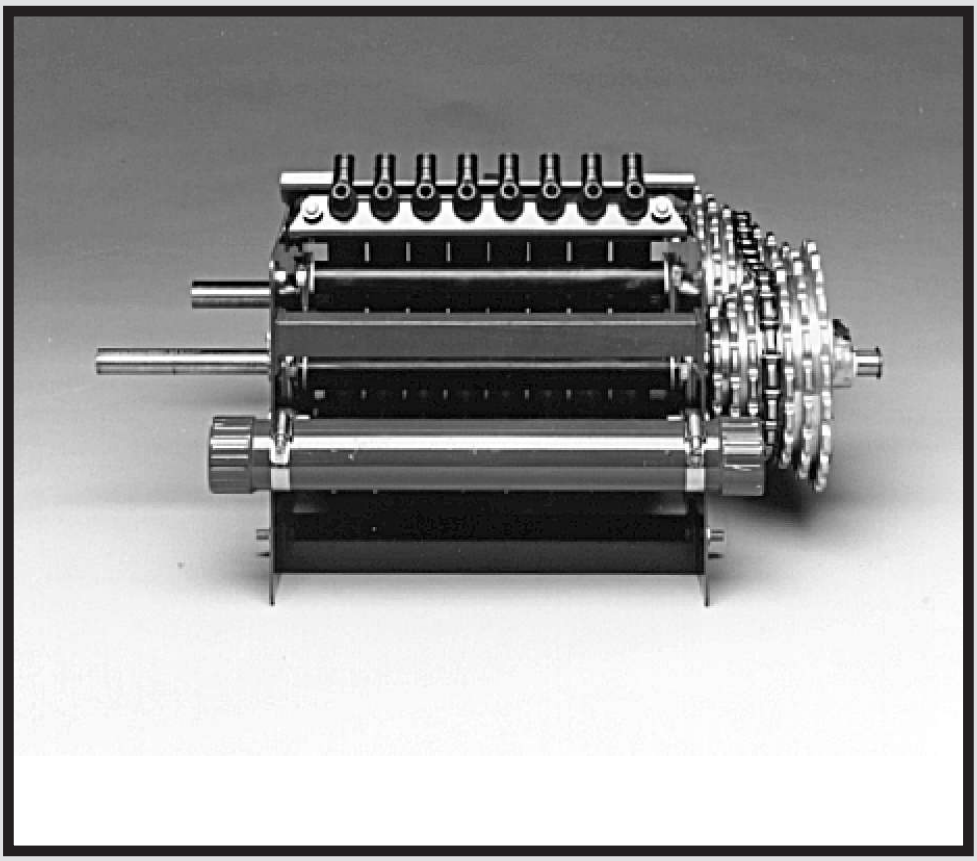
CDS-John Blue Squeeze Pumps Parts and Instruction Manual



CDS-JOHN BLUE COMPANY
DIVISION OF ADVANCED SYSTEMS TECHNOLOGY, INC.
290 Pinehurst Drive • Huntsville, Alabama 35806
P.O. Box 1607 • Huntsville, Alabama 35807
Telephone: (256) 721-9090 • FAX (256) 721-9091 • Toll Free: 1-800-253-2583
Web: www.cds-johnblue.com • e-mail: info@cds-johnblue.com

PRINTED IN U.S.A. **12-M-30** 9/08

TABLE OF CONTENTS

Note to the Owner....2
Safety Precautions....2
Warning....2
Pump Specifications....3
Installation Instructions....4-6
Maintenance....6
Drive Factor Equations....6-7
Parts List....8-11
Warranty....12

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 CDS-JOHN BLUE COMPANY. CDS-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 CDS-JOHN BLUE TECHNICAL STAFF AT 1-800-253-2583

Note to the Owner

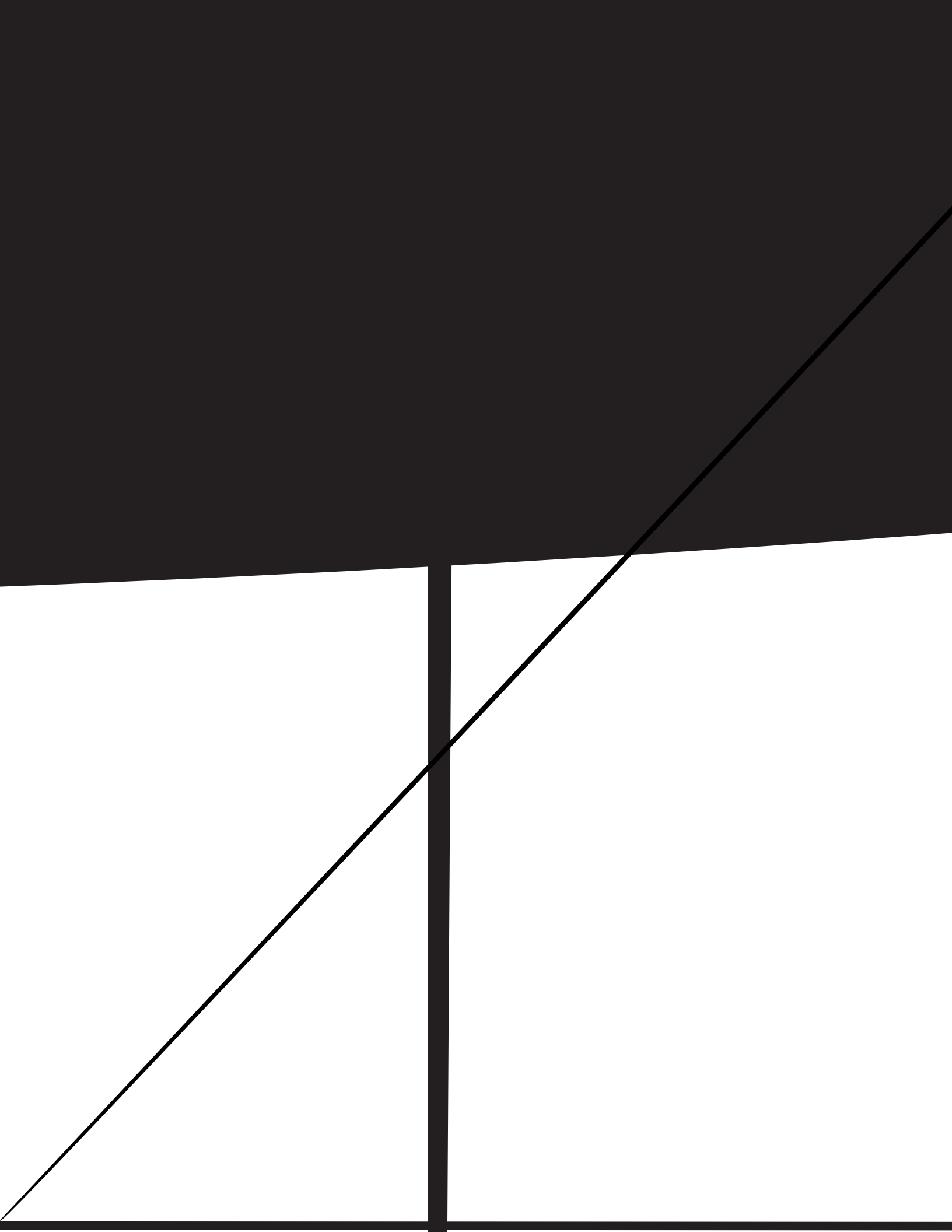
Please study this manual carefully. It will assist you in the care, installation and operation of your CDS-John Blue Pump. Familiarize yourself with all parts and adjustments before attempting to operate or service your pumps. Enter your serial number and date of purchase in the space provided for future reference. This information will be required for ordering replacement parts or servicing your pump.

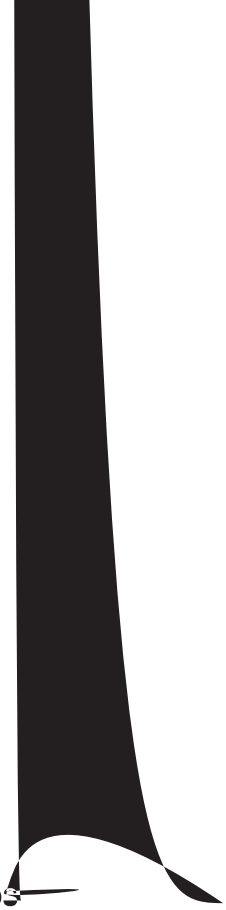
CDS-John Blue ENGINEERING DEPARTMENT CONSTANTLY IMPROVES ITS PRODUCTS. WE RESERVE THE RIGHT TO MAKE DESIGN AND SPECIFICATION CHANGES WITHOUT NOTICE.

SERIAL NUMBER:_____**DATE OF PURCHASE:**_____

Safety Precautions

- Safety equipment such as gloves, goggles, etc. should be worn at all times while performing any repairs, adjustments, or maintenance to the pumping system.
- A careful operator is the best insurance against an accident.
- Only trained and responsible people should operate equipment.
- Check all valves, filters, hose clamps, etc. for tightness and soundness before admitting chemicals to system. Also, check again at regular intervals.
- Replace hoses when worn, cracked or if leaking.





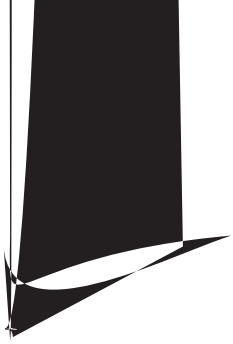
The screw clamps under pressure of the clamp. As this occurs over time it is best to retighten the screw clamps slightly before starting a new pump. **Only retighten the screw clamps on the inlet side where the tube is attached to the manifold. Do not retighten the fittings in the manifold; they are sealed at the factory.**

6. Chain Adjustment

The chain between the CDS-John Blue Squeeze Tube coned sprockets is adjusted by removing the master link and moving the chain to the correct position.

7. Tube Tension Adjustment

The oval-shaped tubes need to be stretched across the four rollers in order to perform efficiently. To tighten the tension on the tubes insert the handle, supplied with the pump, on the tube tension bar #1 (see drawing). Using the handle pull forward toward the manifold #2 until the latch #3 engages into the notch on the frame end plate. When engaged the outlet fitting rack #4 will have been pushed forward and will stay in the forward position. There are two notches on the frame end plate, use only the minimum tension to stop product from flowing through the pump. For new pumps this is the first notch. The pump will not work without tube tension. When the pump is not being used, the tension should be taken off the tubes by releasing the latch #3.



come with the hydraulic motor and control valve, which is connected with standard h
There are many power take-off options associated with different tractor manufacturers so it is best to consult your local tractor supplier for proper installation.

Maintenance

When the pump is not in use ***always*** take the tension off the tubes by releasing the latch, see #7 Tube Tension Adjustment Instructions.

Drive Factor Equations

The information and charts are provided to assist you in the initial set up of your squeeze tube pump. The attached information provides the basic calculations for a squeeze pump installation. This information is also available online at www.cds-johnblue.com under "Calculate your Rates." It is highly recommended that you take advantage of the website to assist you in your rate calculations.

Complete the Following for all Applications

_____Row Spacing = actual distance in inches between each point of application.

_____GPA Desired = amount of material to be applied in gallons per acre (GPA).

_____Wheel Diameter = ground wheel diameter in inches, (height of the tire in inches). If using a rub wheel measure the rub wheel height.

_____Speed = the speed you will be traveling in MPH.

Step 1 Finding Pump RPM

_____	x	_____	x	.134 for B pump or .067 for L pump	=	_____
Row Spacing		GPA Desired				RPM of Mainshaft

Example: Row spacing is 12 inches; you want 29 GPA using an "L" pump.
Correct answer: 12 x 29 x.067 = 23 RPM (Round off to whole number)

Never operate the pumps over 100 RPM, this is affected by ground speed; see "Adjustment for Speed."

For Hydraulic Driven Pumps; see "Adjustment for Speed."

Step 3 Finding A

Count the number of teeth on the driving sprocket you are using. The driving sprocket is the sprocket on the ground wheel, rub wheel or existing shaft.

Ratio from Step 2	x	Teeth on Driving Sprocket	=	Teeth on Jack Shaft Sprocket
_____	x	_____	=	_____

Example: The number of teeth on your driving sprocket is 10.
Correct Answer: 2.4 x 10 = 24 tooth sprocket on pump's jackshaft. Using the coned sprockets or other jackshaft sprocket always multiply by the driving sprocket and divide by the driven sprocket. Counting the number of teeth on the sprockets is easiest. It's important to make sure that the sprocket teeth are the same width.

Existing Shaft

When you want to turn the pump's jackshaft directly from an existing shaft, complete Step 1 to find the main shaft RPM for the desired GPA. At the desired speed of application count the RPM of the existing shaft and divide that number by the mainshaft RPM to find the sprocket ratio.

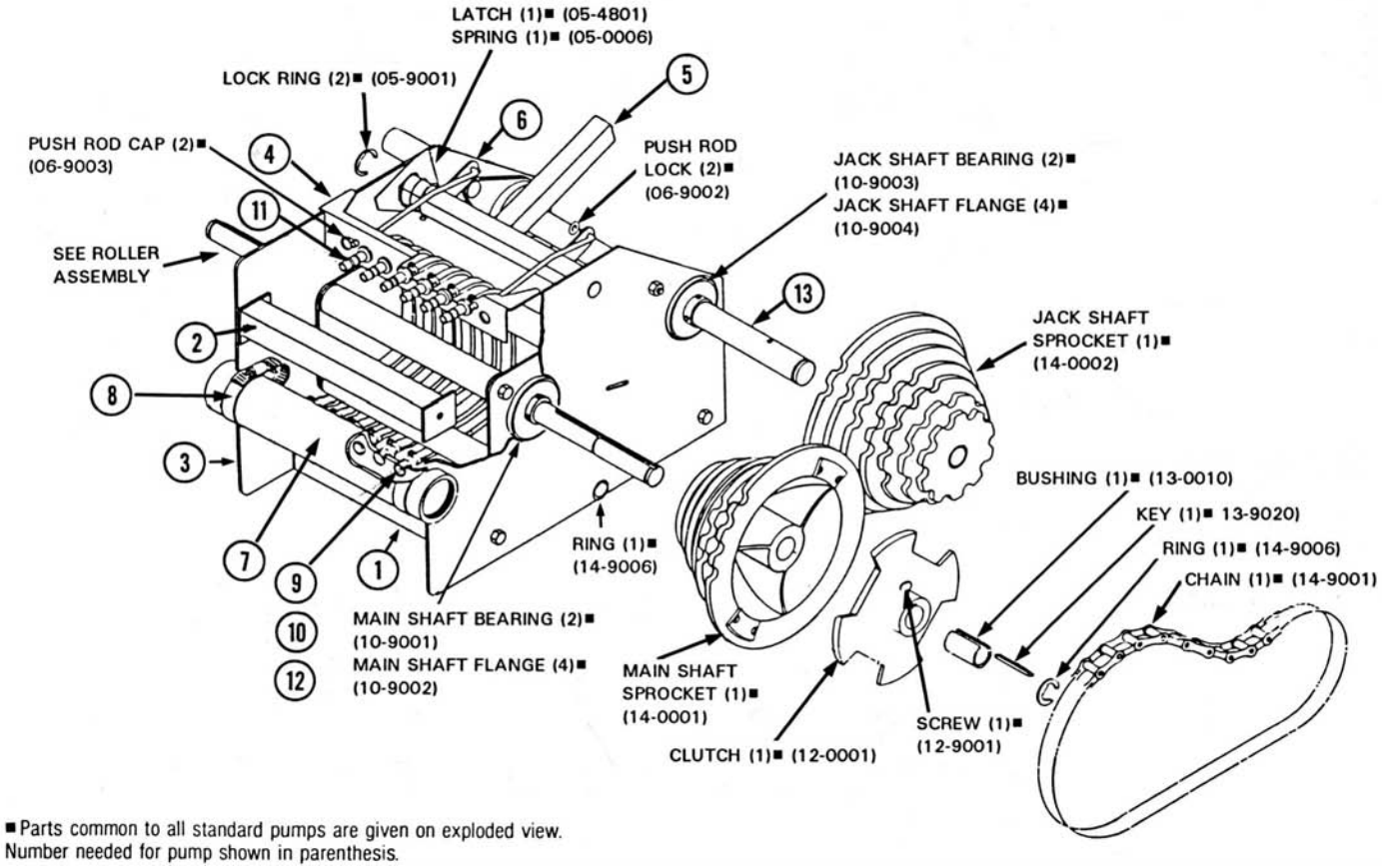
RPM of Existing Shaft	=	
Mainshaft RPM from Step 1		Ratio Jackshaft to Existing Shaft

Example: RPM from Step 1 is 40 and your shaft turns 80 RPM's at 5 MPH.
Correct Answer: 80 divided by 40 = 2.0
This is the ratio between the pump's jackshaft and your driving shaft. Use this factor in Step 3 above to select the correct sprocket.

Adjusting for Speed

All calculations are based on 5 MPH. You need to adjust for the speed you plan to travel for hydraulic driven pumps to get the right RPM. For ground driven pumps we need to insure that the pump operates fewer than 100 RPM's at the speed you travel. Take the RPM from Step 1 or if you use the coned sprockets the adjusted RPM and multiply as follows:

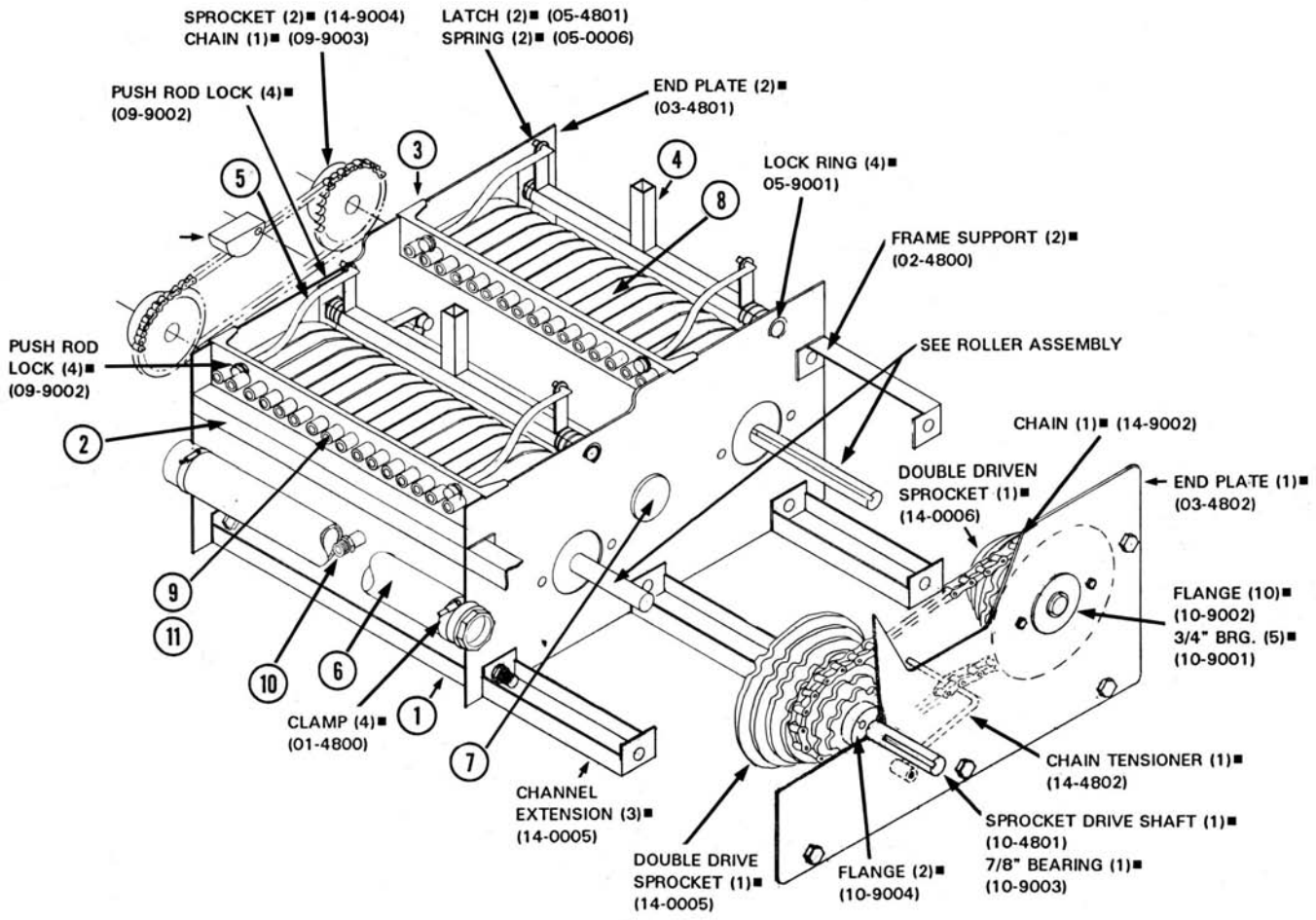
3 MPH	RPM_____	x .6 =	_____
4 MPH	RPM_____	x .8 =	_____
5 MPH	RPM_____	x1.0 =	_____
6 MPH	RPM_____	x1.2 =	_____
7 MPH	RPM_____	x1.4 =	_____
8 MPH	RPM_____	x1.6 =	_____
9 MPH	RPM_____	x1.8 =	_____
10 MPH	RPM_____	x2.0 =	_____



■ Parts common to all standard pumps are given on exploded view.
Number needed for pump shown in parenthesis.

		05-24	05-1620	05-1610	05-1220	05-1210	05-0820	05-0810
	Push Rod (2)	06-0011	06-0021	06-0011	06-0021	06-0011	06-0021	06-0011
	Supply Manifold	07-2410	07-1620	07-1610	07-1220	07-1210	07-0820	07-0810
	Manifold Clamp (2)	07-9002	07-9002	07-9001	07-9002	07-9001	07-9001	07-9001
	Squeeze Tube*	08-0010	08-0020	08-0010	08-0020	08-0010	08-0020	08-0010
10	Inlet Fitting * Plastic	n/a	08-0021	n/a	08-0021	n/a	08-0021	n/a
	Inlet Fitting * SS	08-0015	n/a	08-0015	n/a	08-0015	n/a	08-0015
11	Outlet Fitting * Plastic	n/a	08-0022	n/a	08-0022	n/a	08-0022	n/a
	Outlet Fitting * SS	08-0013	n/a	08-0013	n/a	08-0013	n/a	08-0013
12	SS Screw Clamps*	08-9003	08-9004	08-9003	08-9004	08-9003	08-9004	08-9003
13	Jack Shaft	10-2411	10-1621	10-1611	10-1221	10-0821	10-0821	10-0811
	Manifold Plug*	08-9001	08-9002	08-9001	08-9002	08-9001	08-9002	08-9001

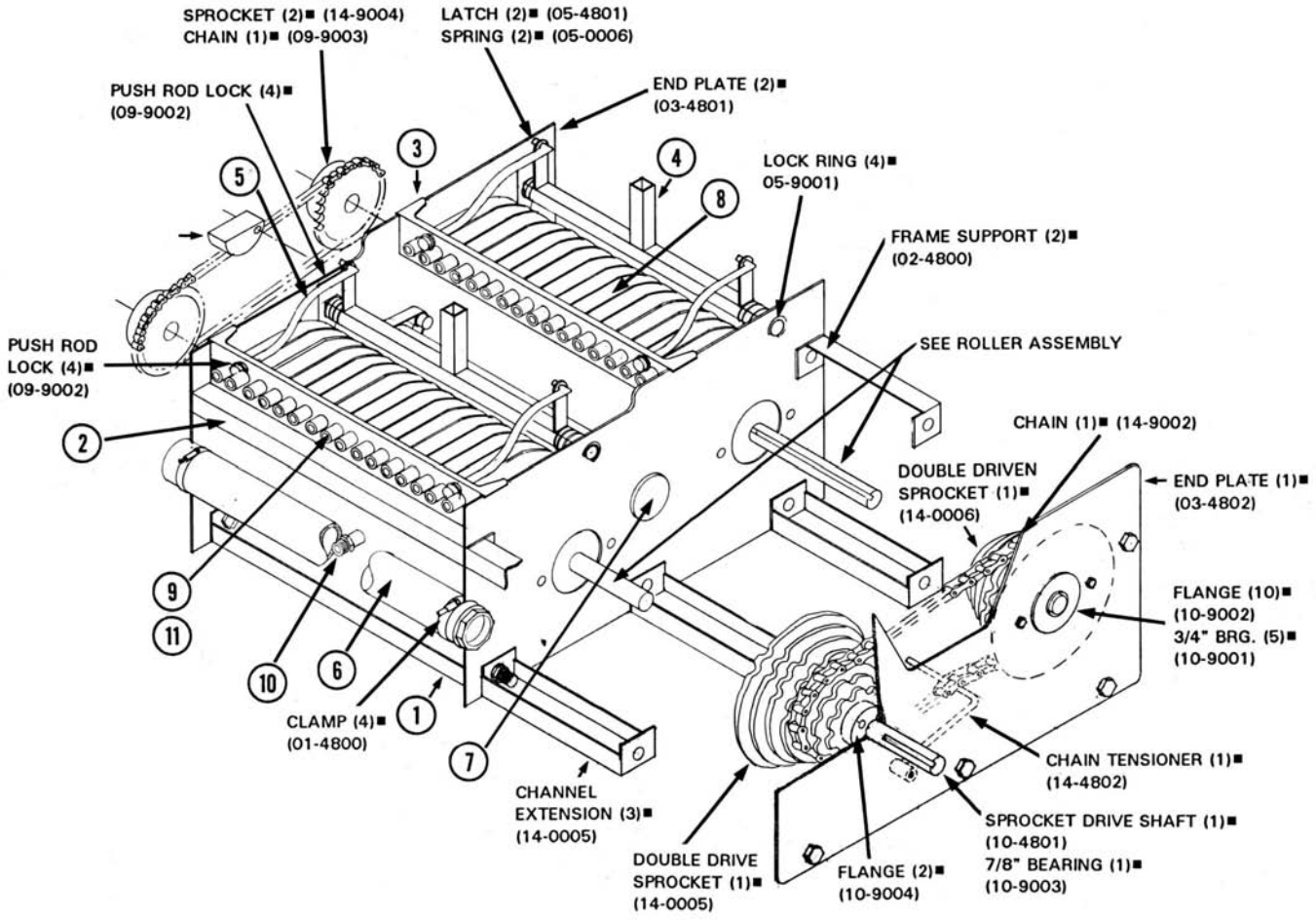
Parts List
Double Squeeze Tube Pumps



Item #	Description	24LD	32BD-1	40BD-1	48BD-1
1	Base Channel (3)	01-1220	01-1610	01-1620	01-2410
2	Frame Support Bar (2)	02-1220	02-1610	02-1620	02-2410
3	Outlet Fitting Rack (2)	04-1220	04-1610	04-2010	04-2410
4	Tube Tension Bar (2)	05-1220	05-1610	05-2010	05-2410
5	Push Rod (4)	06-0021	06-0011	06-0011	06-0011
6	Manifold - Front	07-1220	07-3211	07-2010	07-2410
7	Manifold - Center	07-2420	07-3212	07-4010	07-4812
8	Squeeze Tube*	08-0020	08-0010	08-0010	08-0010
9	Outlet Fitting * Plastic	08-0022	n/a	n/a	n/a
	Outlet Fitting * SS	n/a	08-0013	08-0013	08-0013
10	Inlet Fitting * Plastic	08-0021	n/a	n/a	n/a
	Inlet Fitting * SS	n/a	08-0015	08-0015	08-0015
11	SS Screw Clamps	08-9004	08-9003	08-9003	08-9003
	Manifold Plug*	08-9002	08-9001	08-9001	08-9001

*Requirements based on number of outlets

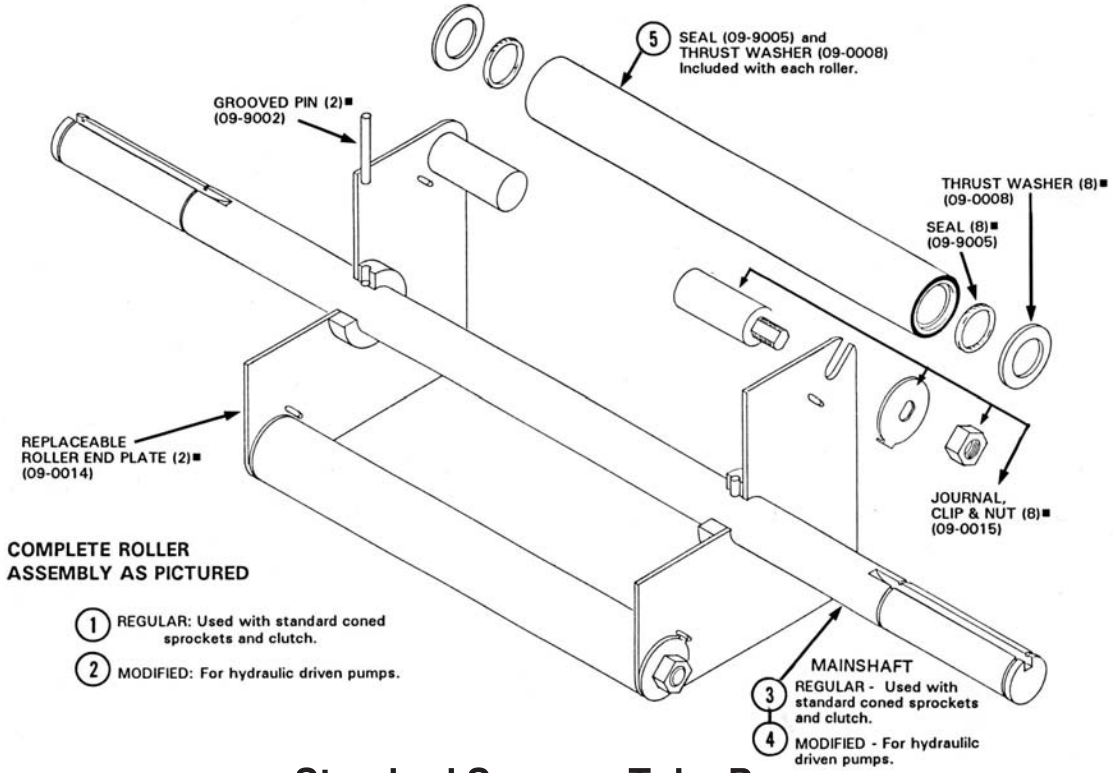
Parts List
Combination Squeeze Tube Pumps



Item #	Description	8B-1/8L	12B-1/8L
1	Base Channel (3)	01-0820	01-0820
2	Frame Support Bar (2)	02-0820	02-0820
3	Outlet Fitting Rack (2)	8B 04-1210	12B 04-1210
		8L 04-0820	8L 04-0820
4	Tube Tension Bar (2)	8B 05-1210	12B 05-1210
		8L 05-0820	8L 05-0820
5	Push Rod (4)	8B 06-0011	12B 06-0011
		8L 06-0021	8L 06-0021
6	Manifold - Front	07-1611	07-1610
7	Manifold - Center	07-1622	07-1622
8	Squeeze Tube*	B 08-0010	B 08-0010
		L 08-0020	L 08-0020
9	Outlet Fitting * SS	B 08-0013	B 08-0013
	Outlet Fitting * Plastic	L 08-0022	L 08-0022
10	Inlet Fitting * SS	B 08-0015	B 08-0015
	Inlet Fitting * Plastic	L 08-0021	L 08-0021
11	SS Screw Clamps	B 08-9003	B 08-9003
		L 08-9004	L 08-9004
	Manifold Plug*	L 08-9002	L 08-9002
		B 08-9001	B 08-9001

*Requirements based on number of outlets

Parts List
Complete Roller Assembly



Standard Squeeze Tube Pump

Item #	Description	24B-1	16L	16B-1	12L	12B-1	8L	8B-1
1	Regular Roller Assembly	09-2410	09-1620	09-1610	09-1220	09-0820	09-0820	09-0810
2	Modified Roller Assembly	09-2412	09-1622	09-1612	09-1222	09-0822	09-0822	09-0812
3	Regular Mainshaft	10-2410	10-1620	10-1610	10-1220	10-0820	10-0820	10-0810
4	Modified Mainshaft	10-2412	10-1622	10-1612	10-1222	10-0822	10-0822	10-0812
5	Rollers (4)	09-2411	09-1621	09-1611	09-1221	09-0821	09-0821	09-0811

Double and Combination Squeeze Tube Pumps

		24LD		32BD-1		40BD-1		48BD-1	
Item #	Description	Front	Center	Front	Center	Front	Center	Front	Center
1	Regular Roller Assembly	09-2423	09-2424	09-3213	09-3214	09-4010	09-4011	09-4813	09-4814
2	Modified Roller Assembly	09-2423	09-2424	09-3213	09-3214	09-4010	09-4011	09-4810	09-4811
3	Regular Mainshaft	10-2423	10-2424	10-3212	10-3214	10-3223	10-3224	10-4813	10-4814
4	Modified Mainshaft	10-2423	10-2424	10-3212	10-3214	10-3223	10-3224	10-4813	10-4814
5	Rollers (4)	09-1221	09-1221	09-1611	09-1611	09-1621	09-1621	09-2411	09-2411

		8B-1/8L		12B-1/8L	
Item #	Description	Front	Center	Front	Center
1	Regular Roller Assembly	09-1623	09-1624	09-1623	09-1624
2	Modified Roller Assembly	09-1623	09-1624	09-1623	09-1624
3	Regular Mainshaft	10-1623	10-1624	10-1623	10-1624
4	Modified Mainshaft	10-1623	10-1624	10-1623	10-1624
5	Rollers (4)	09-0821	09-0821	09-0821	09-0821

LIMITED WARRANTY

CDS-
JOHN BLUE
COMPANY

Telephone: (25 721-9 Fax (256)-721-9091 - Toll Free 1-800-253-25
ww.cds-johnblue.com

Your Local Dealer