Auto Lube System

Parts Manual & Schematic

80-737 (1/04) Printed in U.S.A.

GROENEVELD

PACIFIC WEST

Groeneveld Pacific West L.L.C.
1089 Valentine Ave. S.E.
Pacific, WA 98047
(253) 863-3700 Office
(253) 863-3131 Fax

HI-LIGHTS OF THE QUICKLUBE ON BOARD HI-PRESSURE LUBRICATION SYSTEM

****

1. INCLUDES 4000# POSITIVE DISPLACEMENT IN LINE, PROGRESSIVE SINGLE LINE PRESSURE SYSTEM.

2. INCLUDES USE OF N.L.G.I. # 2 GREASE DOWN TO -20 DEGREES (F), # 1 GREASE DOWN TO -50 DEGREES (F).

3. INCLUDES ADAPTABILITY TO SERVICE UP TO 432 NORMAL GREASE ZERKS AT ONE TIME.

4. INCLUDES 12V AT 2 AMP OR 24V AT 1 AMP OPERATION.

5. INCLUDES SERVICE ABILTIY OF SECONDARY LINES WITH STANDARD BRASS 1/4" COMPRESSION FITTINGS OR QUICK LUBE FITTINGS.

6. INCLUDES NON-RESETTABLE ELECTRONIC COUNTER TO MONITOR POSITIVE OPERATION.

7. INCLUDES SOLID STATE ELECTRONIC TIMER.

8. INCLUDES LIST OF 2400+ SYSTEMS IN THE NORTHWEST AND ALASKA SINCE THE INTRODUCTION TO THE U.S.A. EIGHT YEARS AGO, AFTER USE IN EUROPE FOR TEN YEARS.

Pacific West

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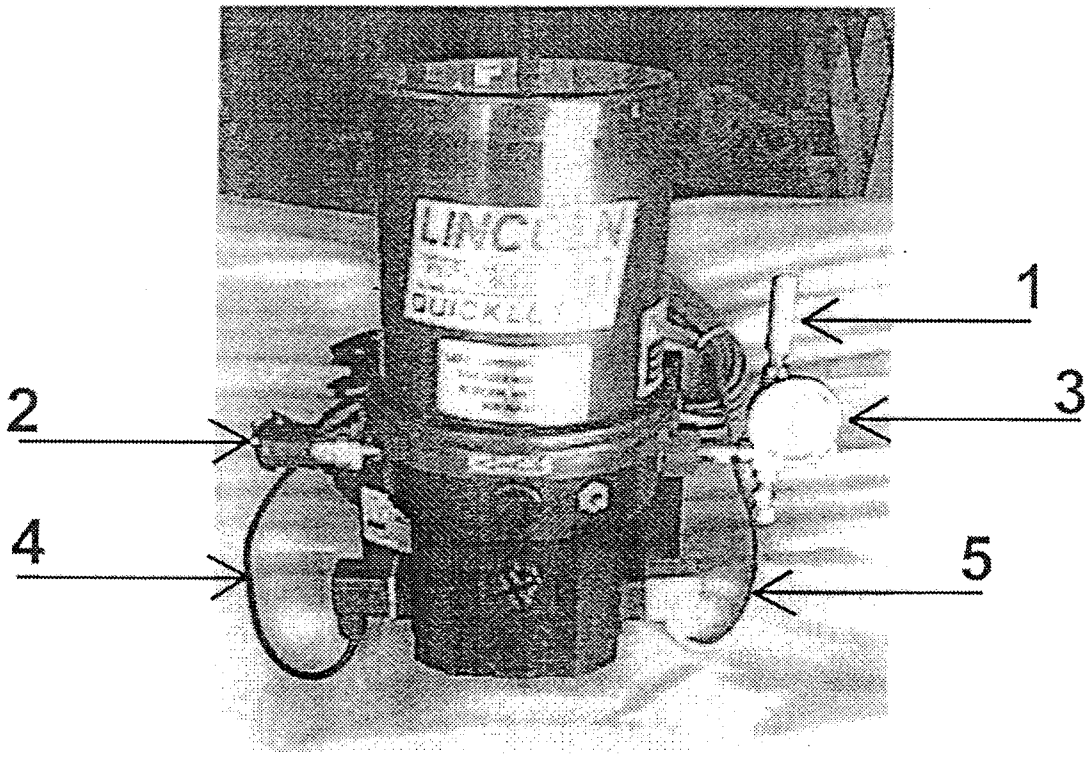
Lincoln Quick lube pump



#1 Pressure relief, if the system is building too much pressure (5000 PSI), usually caused by a blockage, grease will bleed through the small hole at the base. **If grease is showing here you must immediately find the cause,** the system is blocked and will not grease your machine.

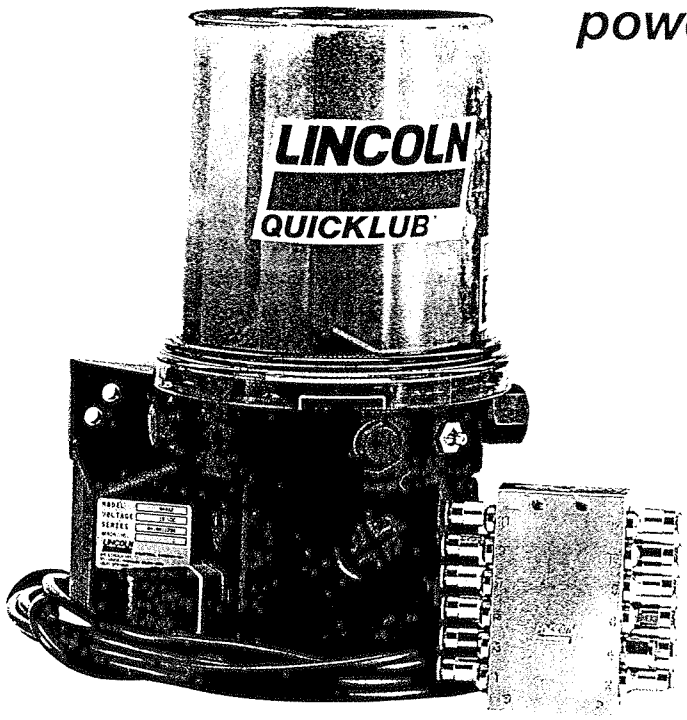
#2 Cam Lok fitting and rubber cover. For attaching optional quick fill device.

#3 0-5000 PSI Pressure gauge

#4 Black power cable.

#5 Gray cable, connected to button by counter on dash.

☐ *Uses NLGI No. 2 grease*
☐ *Works down to −13°F*
☐ *Operates on dependable electric power, 12 VDC or 24 VDC*

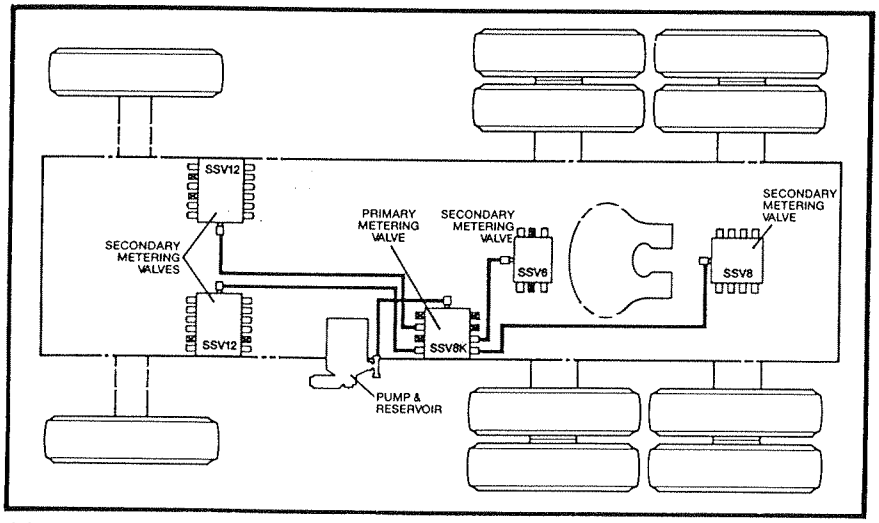


Modular System Design!

A. Zoned Single Point.
All lube points in an area or zone are connected to a metering valve mounted in a convenient location. Lubricant is supplied manually from a single point.

B. Single Central Point.
A master metering valve may connect several zoned valves and provide one grease point for all connected bearings.

C. Full Automatic System.
Automate the system by adding the electric grease pump and timer.



Lincoln Quicklub system layout for typical tandem-axle tractor.

This system works down to 50 degrees below zero by using NLGI #1 Arctic grease

Distributed by:

See your dealer/distributor for custom designed kits.

LINCOLN
Industrial Division–USA
ISO 9001 Registered

One Lincoln Way
St. Louis, Missouri 63120-1578
(314) 679-4200

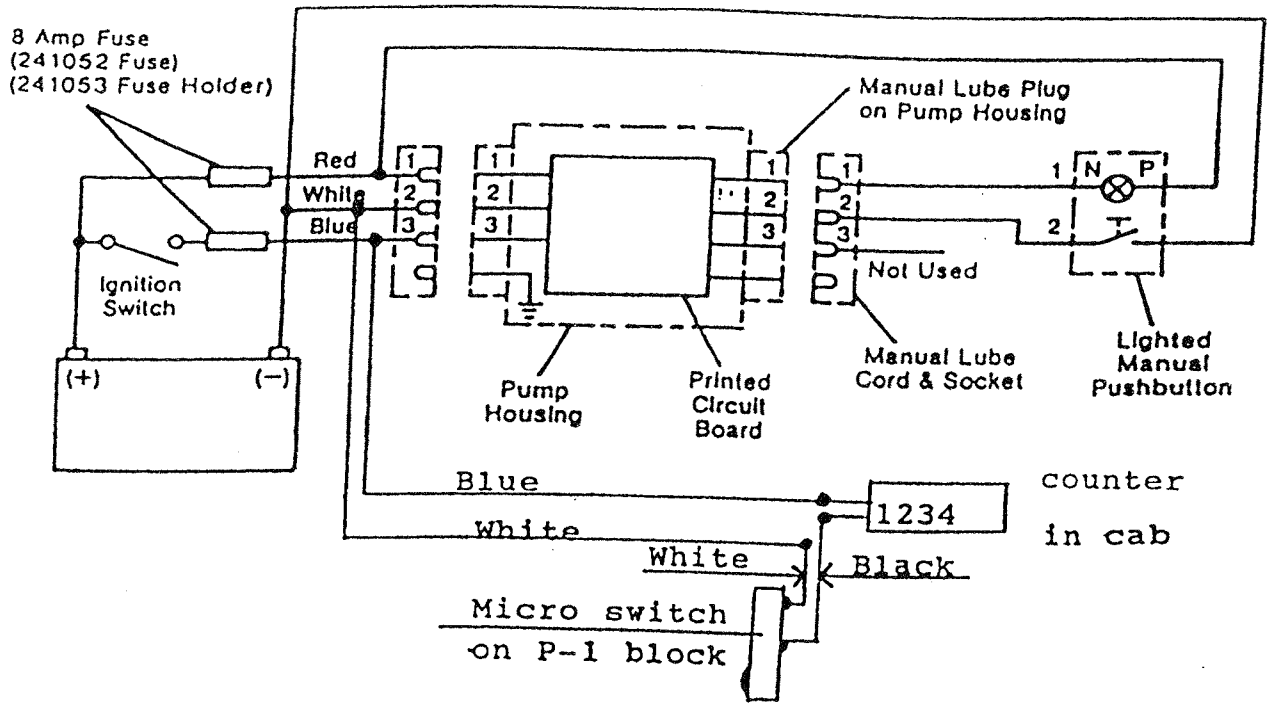
Form 440874R

LINCOLN®

Lincoln Quicklub On-Board Automated Chassis Lubricating System For Construction Equipment

SYSTEM ACCESSORIES

Description	Qty.	Part No.
Illuminated Manual Switch (12 VDC)	1	241419
Illuminated Manual Switch (24 VDC)	1	241484



WIRING INSTRUCTIONS - *Refer to wiring diagram.*

1. Connect the wire in the manual lube cord marked "#1" to the lamp terminal marked "N". Connect the other lamp terminal marked "P" to Battery (+).
2. Connect the wire in the manual lube cord marked "#2" to one of the terminals on the switch. Connect the other switch terminal to Battery (−).
3. The wire marked "#3" in the manual lube cord is not used.

IMPORTANT!
When Model 94012 or 94024 replaces an old style 103 with a remote manual lube switch, a wiring change must be made. The existing wire that connects the light to Battery (−) must be disconnected. Reconnect it to Battery (+).

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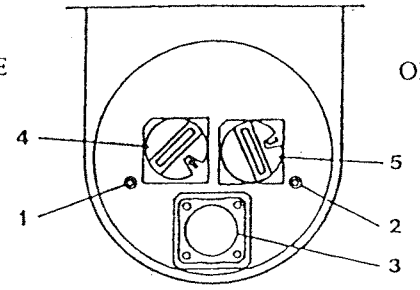
SETTINGS FOR 24 VOLT



1. The LED marked "battery" lights when power is applied to the PC board.
2. The LED marked "motor" lights when pumping lubricant
3. Depressing push-button for 2 seconds will initiate a manual lube event.
4. Off time rotary switch. Can be adjusted to 15 values (see chart below).
5. On time rotary switch. Can be adjusted to 15 values (see chart below).

IMPORTANT: Do Not use the Zero position located on the Off time and On time switches.

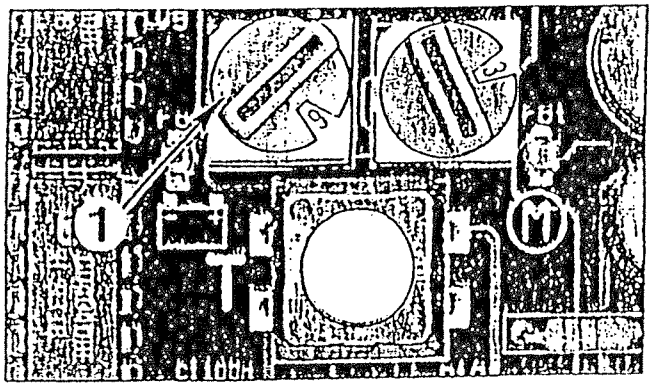


Fig. 23 - Rotary switch, pause time

1 - rotary switch, blue

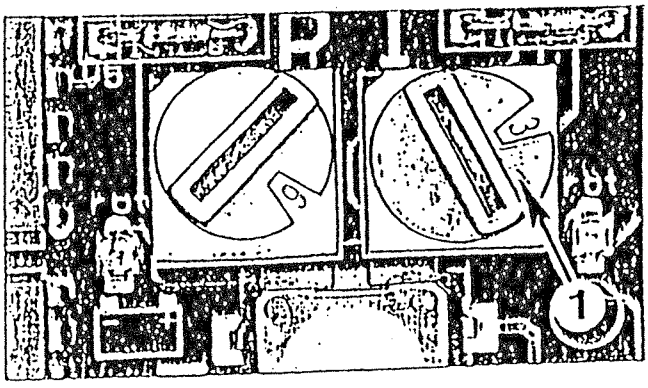


Fig. 24 - Rotary switch, operating time

1 - rotary switch, red

To adjust pause time

The pause time is adjustable in 15 steps by way of the blue rotary switch.

Switch position	1	2	3	4	5	6	7	8	9
Minutes	3.75	7.5	11.25	15	18.75	22.5	26.25	30	33.75
Switch position	A	B	C	D	E	F			
Minutes	37.5	41.25	45	48.75	52.5	56.25			

To adjust operating time

The operating time is adjustable in 15 steps by way of the red rotary switch.

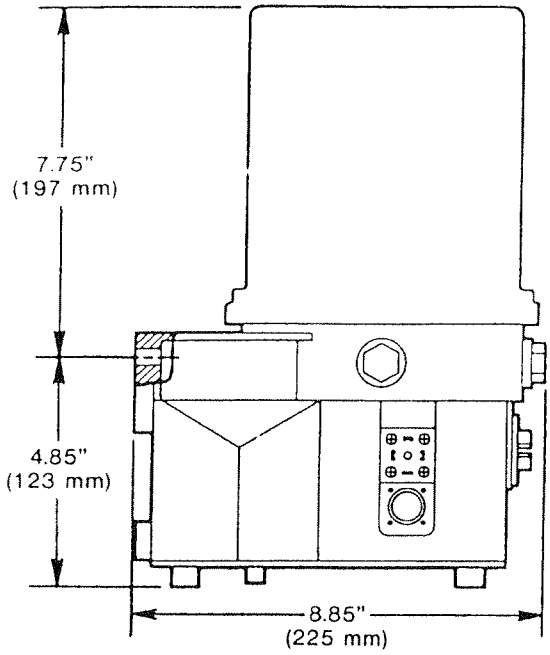
Switch position	1	2	3	4	5	6	7	8	9
Minutes	2	4	6	8	10	12	14	16	18
Switch position	A	B	C	D	E	F			
Minutes	20	22	24	26	28	30			

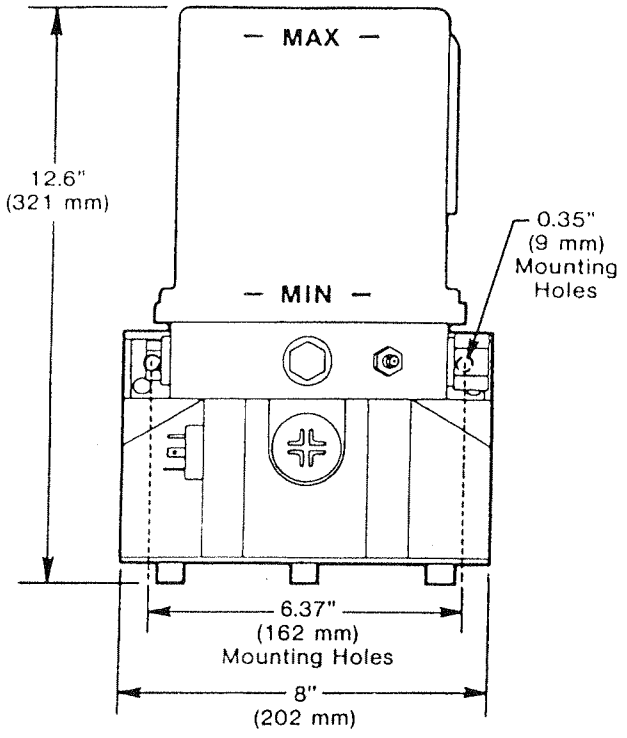
Troubleshooting
Model 203 Pump and Quicklub System

Symptom	Probable Cause	Solution
1. Pump will no operate.	Not receiving 12/24 volts	Check fuses, timer, and electrical supply. Check the electrical supply to the pump. If no current is received by the pump, trace to the electrical source and repair.
	Blocked pump cam.	If pump is receiving current and not turning, check for blockage and repair. Replace the pump motor if no blockage is identified.
2. The pump motor is running but there is no grease being discharged.	Air pocket at pump element inlet.	Disconnect the main delivery hose from the pump outlet. Run the pump until solid grease (no bubbles) flows from the outlet. If solid grease does not discharge after 20 minutes of operation, the pump inlet is blocked. NOTE: Depending on operating temperatures and types of grease, it may require 10 minutes to achieve full volume at the outlet.
	Blocked pump inlet.	Remove the pump element from the pump body and inspect the suction inlet port for foreign particles Reassemble the pump and element and cycle the pump. If the pump element done not discharge grease, replace the element.
3. Pump operated with an empty reservoir.	No grease	Fill the reservoir to the "max" level and press the manual lube switch or the momentary test switch (refer to page 14). Disconnect the main delivery hose from the pump and watch grease flow until solid grease (no air bubbles) is discharged. Reconnect the main delivery hose to the pump outlet.
4. Grease is discharged at the relief valve.	Blockage in the meter valves, hose, tubing, or connected bearing point.	Switch the pump on and loosen each outlet on the primary valve one at a time. The blocked outlet will start flowing grease and the indicator pin will index. Retighten all of the oulets from the primary valve. Trace the hose that flowed grease to its secondary valve. repeat the process of loosening each outlet one at a time until the blocked feed line is found. Retighten all outlets. Repair the bearing blockage. If a metering valve is creating the blockage, replace the valve.
5. Indicator pin on the primary valve does not move.	Refer to 4.	Refer to 4.
6. Lube point not receiving grease.	Cut hose or tubing.	Replace complete hose or tube or: If tube is broken, cut tube at break and repair using tube connector (part #68468). If hose is broken, cut ends at the break and swedge new hose studs (part #241289) and screw into an 1/8" NPT female connector (part #67063).

Models 94012, 94024
CHASSIS LUBE ELECTRIC GREASE PUMP
Series "A"

OWNER/OPERATOR MANUAL





⚠ WARNING

Do Not use pump without pressure relief valve.

SPECIFICATIONS

Electrical Requirements
Model 94012 ..... 12 VDC @ 3.5 amps
Model 94024 ..... 24 VDC @ 2 amps

Enclosure Rating..... IP 54 - Protected from water sprayed in all directions.

On Time ..... 2 minutes minimum
30 minutes maximum
in 2 minute increments

Off Time ..... 1 hour minimum
15 hours maximum
in 1 hour increments

Pump Output ..... 0.146 cu. in./min (2.4 cm/min)

Outlet Connection..... 1/8" NPT (female)

Maximum Recommended Operating Pressure .... 3600 psi (248 bar)

Reservoir Capacity..... 122 cu. in. (2000 cc)

Lubricant ..... Greases up to NLGI grade 2 (depending on the operating temperature and type of lubricant)

Temperature Range..... −13° F (−25° C) to +158° F (+70° C)

Pressure Relief Valve .... 4000 psi +/− 250 psi (276 bars) +/− (17 bars)

DESCRIPTION

The chassis lube pump is electrically operated and used in a progressive type centralized lubrication system. The pump consists of a pump housing, electric gear motor, a timer and a plastic reservoir with stirring paddle. The high operating pressure allows the pump to supply lubricant up to NLGI 2 grease.

MOUNTING THE PUMP

Select an easily accessible place of installation which allows access to the timer and lubricant reservoir filler fitting. The pump must be mounted vertically on an even surface by means of two bolts.

TO FILL RESERVOIR

Fill the reservoir through the grease fitting located at the base of the reservoir, using a hand operated grease pump. Refill reservoir when grease reaches "MIN" mark located on the reservoir. Fill the reservoir up to the "MAX" mark located on the reservoir.

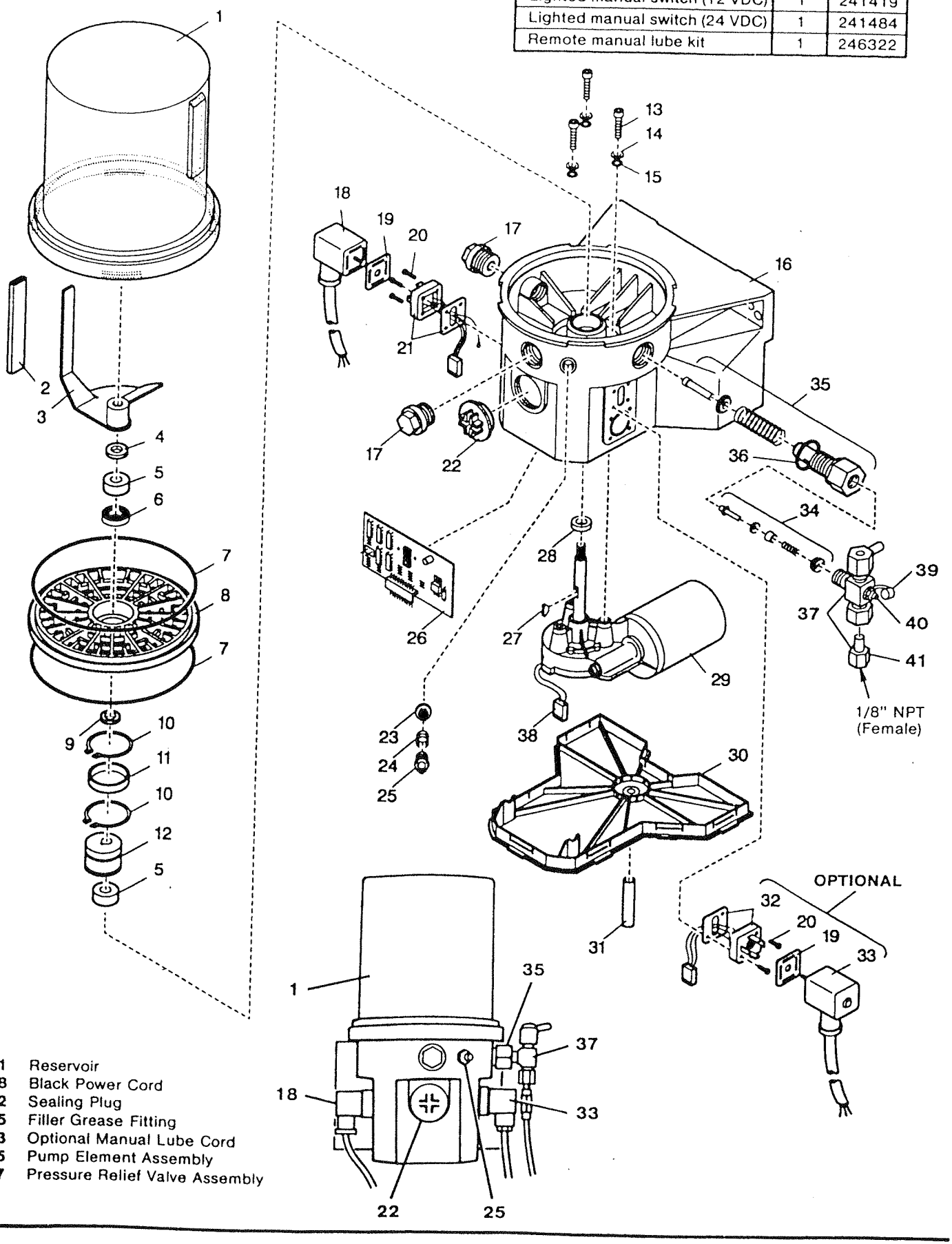
TO PRIME SYSTEM

Pump & Supply Line: After reservoir has been filled with recommended lubricant, loosen the supply line fitting. Operate the pump until lubricant flows from outlet, then tighten fitting.

Feed Lines: Pre-fill each feed line with lubricant before connecting to outlet of divider valve and bearing.

SYSTEM ACCESSORIES

Description	Qty.	Part No.
8 amp fuse	1	241052
8 amp fuse holder	1	241053
Lighted manual switch (12 VDC)	1	241419
Lighted manual switch (24 VDC)	1	241484
Remote manual lube kit	1	246322



1 Reservoir
18 Black Power Cord
22 Sealing Plug
25 Filler Grease Fitting
33 Optional Manual Lube Cord
35 Pump Element Assembly
37 Pressure Relief Valve Assembly

TROUBLESHOOTING CHECK LIST
FOR AUTOMATIC LUBE SYSTEMS

1. Check for adequate grease in reservoir, at least 2/3 full. Be careful not to contaminate grease in pump.
2. To pressurize and test system, pump grease thru bypass zerk normally located at pump injector. Do not pump thru the "fill zerk".
3. Push reset button to start pump. If pump doesn't start, check wiring & fuse.
4. While pump is running, check indicator pin at primary block. If the pin moves in and out, about once a minute, the pump is O.K.
5. Check system for leaks, and inspect each lube point for a wet look.
6. **DO NOT PLUG ANY LINES!** A broken line will not drain the system.

PLEASE CALL GROENEVELD PACIFIC WEST FOR ADDITIONAL HELP
(253) 863-3700

OPERATORS CHECKLIST

- Fill reservoir daily or as often as necessary.
- Record the counts from counter daily. Count should increase each day of operation.
- **DO NOT** remove lid to fill canister. Use a grease gun or a Groeneveld Quick Fill Gun.
- **DO NOT PLUG BROKEN LINES OR FITTINGS.**
- **DO NOT** attempt to change system in any way.
- If relief valve overflows, contact supervisor.
- Call Groeneveld 1-253-863-3700 for adjustments or modifications.

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WARRANTY REQUIREMENTS

Lube counts must be recorded on a daily or weekly basis, depending on the size of machine, and reported to Groeneveld Pacific West L.L.C.. monthly, for the warranty to remain in effect. Groeneveld cannot be responsible for Lube Systems that are neglected.

Machine # _____ Model # _____ Make # _____ Year _____

Date	Hour Meter or Mileage	Lube Counts
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Company: _____ Address: _____

Contact Person: _____ Telephone: _____
(PRINT)