Automated Lubrication System

New Holland Combine Models CR920, CR940, CR960 and CR970

Dtd. 082003

System Overview

Thank you for purchasing the Quicklub® On Board Grease System for your New Holland Combine.

The system has been designed to increase the component life and overall productivity of your equipment, while reducing labor costs related to the traditional method of point-by-point manual lubrication. The system consists of the Quicklub® progressive metering valves that positively displace and meter precise amounts up to N.L.G.I. #2 shop grease down to -13°F temperature. Grease is distributed to each connected point through high-pressure tube and hose.

This Quicklub® kit is designed to work with your New Holland Combine models CR 920, CR940, CR960 and CR970. There are subtle differences between models and years and this kit will accommodate all changes. You may simply remove the grease zerks on the banks and connect the tubing with fittings included in the kit. Also, the kit was designed with excess lengths of tubing. Simply cut your tubing to length and install.

This is a fully automated lubrication system utilizing a 12 volt DC heavy duty electric pump with integrated timer that dispenses lubricant to the progressive metering valves at timed intervals. The lubricant is pumped to the primary metering valve, which distributes it to secondary metering valves in specific zones of service. The secondary metering valves deliver measured amounts of lubricant proportional to each lube point in its zone.

The components are connected with lengths of high-pressure hose and tubing that are included in the kit. Contents of the kit are specifically marked to coincide with this instruction manual to achieve a consistent and quality installation.

This manual has been included with the system as an easy-to-follow guide for installation and operation. Keep it with the equipment, as it is also a trouble-shooting manual to keep your automated lubrication system working properly.

This kit also contains Installation and Operation Instructions for the QLS 301 system supply pump. Please refer to this manual for detailed information on operations, maintenance, trouble shooting and technical data. If missing, please contact Lincoln and request service page Q3-9, form #402865.

Durable and reliable, the Quicklub® On Board Grease System has been carefully designed using industry proven products to provide long and trouble-free life under the most severe farming conditions.

For further information on this system please contact Lincoln Technical Services at 1-314-679-4200 ext. 4782# or fax 1-314-679-4357.

® Quicklub is a registered trademark of Lincoln.

LIMITED WARRANTY

The following warranty relates to material and workmanship defects for components supplied in this kit however, standard maintenance is required for upkeep and reliability. In addition standard hose & tube routing practices will be needed, as described in this installation manual, to assure proper performance.

The installed system must be inspected periodically to correct any chaffing, rubbing or binding of the supply and feed lines. Connections must also be checked to insure continuity. Key point, is that due to the environment these combines operate in, normal wear and maintenance will be required.

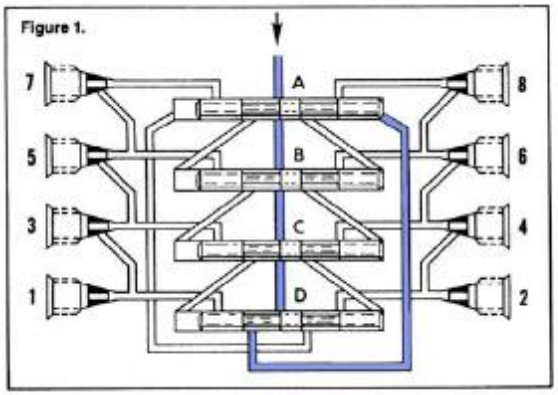
LINCOLN warrants the equipment it supplies to be free from defects in material and workmanship for one (1) year following the date of purchase. If equipment proves to be defective during this warranty period it will be repaired or replaced, at Lincoln's discretion, without charge provided that factory authorized examination indicates the equipment to be defective. To obtain repair or replacement, you must ship the equipment, transportation charges prepaid, with proof of date of purchase to a Lincoln authorized Warranty and Service Center, within the one (1) year following the date of purchase.

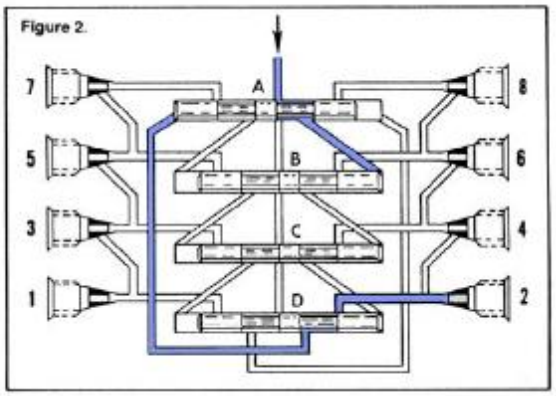
This warranty is extended to the original retail purchaser only. It does not apply to equipment damaged from accident, overload, abuse, misuse, negligence, faulty installation or abrasive or corrosive materials, or to equipment repaired or altered by anyone not authorized by Lincoln to repair or alter the equipment. This warranty applies only to equipment installed and operated according to the recommendations of Lincoln or its authorized field personnel. No other express warranty applies. Any implied warranties applicable to equipment supplied by Lincoln, including the warranties of merchantability and fitness for a particular purpose, will last only for (1) year from the date of purchase. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

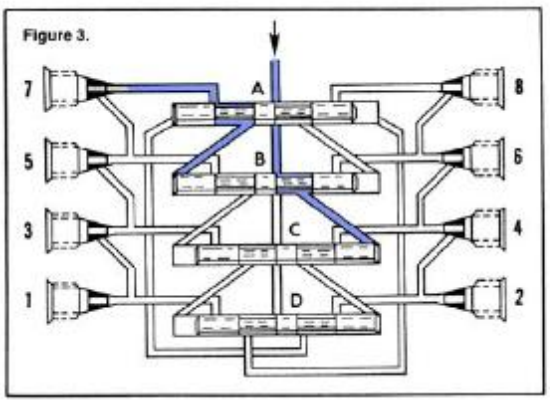
In no event shall Lincoln be liable for incidental or consequential damages. Lincoln's liability on any claim for loss or damage arising out the sale, resale or use of equipment it supplies shall in no event exceed the purchase price. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights. You may also have other rights that vary by jurisdiction.

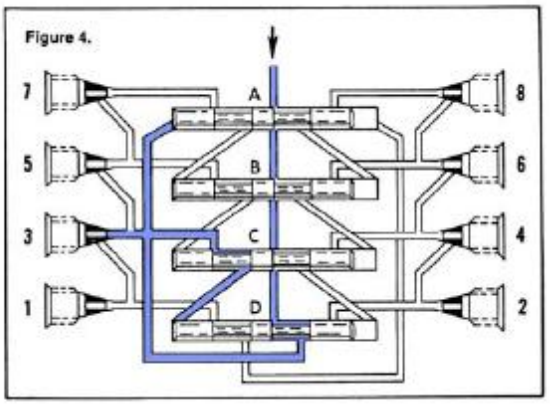
THE HEART OF THE QUICKLUB SYSTEM:

At the heart of every Quicklub System is the metering valve or progressive distributor block, designed to positively meter the input of lubricant (oil up to NLGI #2 greases) out to the connected number of lubrication points irrespective of distance and back pressure. The inlet passageway is connected to all piston chambers at all times with only one piston free to move at any one time. With all pistons at the far right, lubricant from the inlet flows against the right end of piston A (fig. 1).









Lubricant flow shifts piston A from right to left, dispensing piston A output through
Connecting passages to outlet 2. Piston A shift directs flow against right side of piston B (fig. 2).

Lubricant flow shifts piston B from right to left, dispensing piston B output through valve ports of piston A and through outlet 7 (fig. 3).

Lubricant flow shifts piston C from right to left dispensing piston C output through valve ports of piston B and through outlet 5. Piston C shift directs lubricant flow against right side of piston D (not illus.)

Lubricant flow shifts piston D from right to left, dispensing piston D output through valve ports of piston C and through outlet 3. Piston D shift directs lubricant through connecting passage to the left side of piston A (fig. 4).

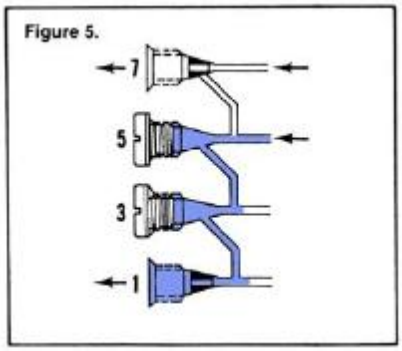
Lubricant flow against left side of piston A begins the second half cycle which shifts pistons from left to right, dispensing lubricant through outlets 1, 8, 6 and 4 of the divider valve.

Cross-porting (Divider Valve)

Installing a closure plug in one or more outlets may combine outputs from adjacent outlets. Lubricant from a plugged outlet is redirected to the next adjacent outlet in descending numerical order.

Outlets 1 and 2 must not be plugged since they have no cross-port passage to the next adjacent outlet.

In figure 5 outlets 5 and 3 are cross-ported and directed through outlet 1. In this example, outlet 1 will dispense three times as much lubricant as outlet 7. The tube ferrules in outlets 1 and 7 block the cross-port passage so that lubricant flow is directed through the outlets.



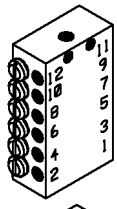
Installation Steps:

The following steps will assist the installer with a systematic approach for installing the Quicklub Automated lube system on New Holland Combines. By following the steps outlined, a successful installation will be realized and will increase the service life of all pins and bearings connected to the lube system.

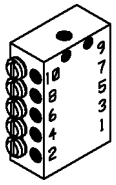
- Remove all grease fittings from lube points that will be connected to the lube system.
- Install appropriate adapters and tube fittings in lube points.
- Position valve mounting brackets to machine.
- Attach metering valves to previously mounted brackets.
- Use tubing cutters, cut to length individual tubing feed lines from secondary valves to lube points and make connections.
- When installing feed line tubing into the Quicklinc fittings, push until firmly seated.
- Neatly bundle, loom with spiral wrap provided and tie strap feed lines wherever possible to protect from abrasion.
- Size, cut and attach appropriate hose ends to all supply lines. The high pressure hose is used as supply lines from the pump to the primary, the primary to the secondary. It is recommended that the supply lines be routed and cut only after all valves and the electric pump have been attached to the machine. This assures the supply line is cut to the proper length. Also, allow for unrestricted movement while the machine is in motion.
- Route supply lines from the pump to primary valve and from the primary valve to the secondary valve and make connections.
- Secure supply/feed lines with tie straps, so not in harms way.
- Mount pump and make electrical connections (electrical diagram included with the pump).

NEW HOLLAND COMBINE COMPONENT GLOSSARY

CNH PART NUMBER (LINCOLN) and DESCRIPTION

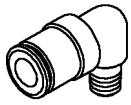


619-26398-2 - Divider valve SSV12 with 12 port outlets.....

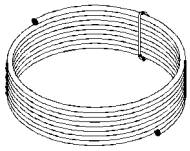


619-26844-1 - Divider valve SSV10 with 10 port outlets.....

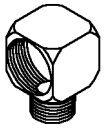
249913 - .375 P-style clamp for 12mm bolt.....



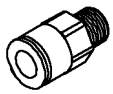
244054 - QL Fitting 1/4 X 1/4 90 Degree.....



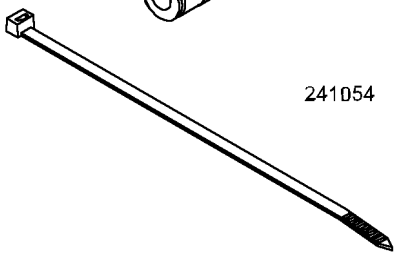
241288 - 1/8" Grease filled high pressure hose (40 ft. coil).....



20026 - 1/4-28 X 1/8 Adapter, 90 Degree.....



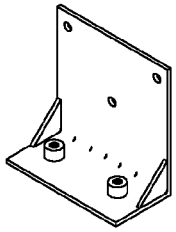
244047 - QL Fitting 1/4 X 1/8 Straight.....



241054 - Nylon Ties (100 count poly bag) 7" Length.....

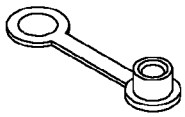
NEW HOLLAND COMBINE COMPONENT GLOSSARY

CNH PART NUMBER (LINCOLN) and DESCRIPTION

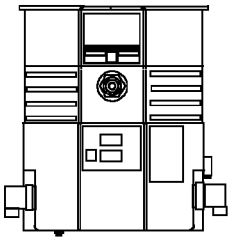


249520 - Mounting bracket assembly.....

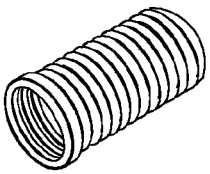
51304 - 1/4" Nylon locknut for valve mounting.....



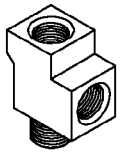
242125 - Plastic Grease fitting cap.....



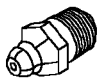
P3016121151 - QLS301 With Back Mounted SSV12.....



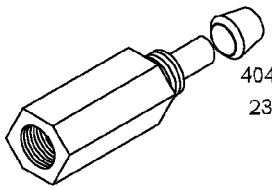
241110 - Feed Line Bundling Spiral Wrap (10ft.).....



67448 - Male run tee.....



5045 - Straight leak-proof grease fitting.....

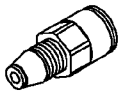


404225812 - Clamping ring (ferrule).....

239857 - Valve outlet adapter.....

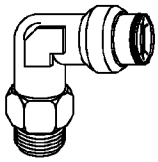
NEW HOLLAND COMBINE COMPONENT GLOSSARY

CNH PART NUMBER (LINCOLN) and DESCRIPTION

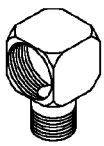


244883 - 1/4" tube Quicklinc valve outlet fitting.....

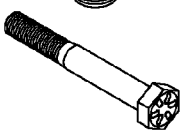
303-17499-3 - Valve closure plug for Black divider valves.....



243699 - 90° Swivel quicklinc fitting.....

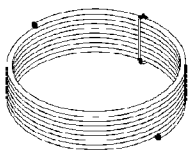


20029 - 1/8" NPT 90° Adapter.....

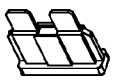


247023 - Grade 8 - 1/4" valve mounting bolt.....

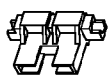
249209 - Grade 8 - 12mm Mounting bracket bolt.....



242050 - 1/4" grease filled black nylon tubing (50 ft coil).....



241052 - FUSE 7.5 AMP .....



241053 - FUSE HOLDER .....

NEW HOLLAND COMBINE COMPONENT GLOSSARY

CNH PART NUMBER (LINCOLN) and DESCRIPTION

272394 - HOSE STUD, 90°.....

272401 - HOSE STUD, STRAIGHT.....

272427 - THREADED SLEEVE.....

272658 - VALVE, OUTLET FITTING.....

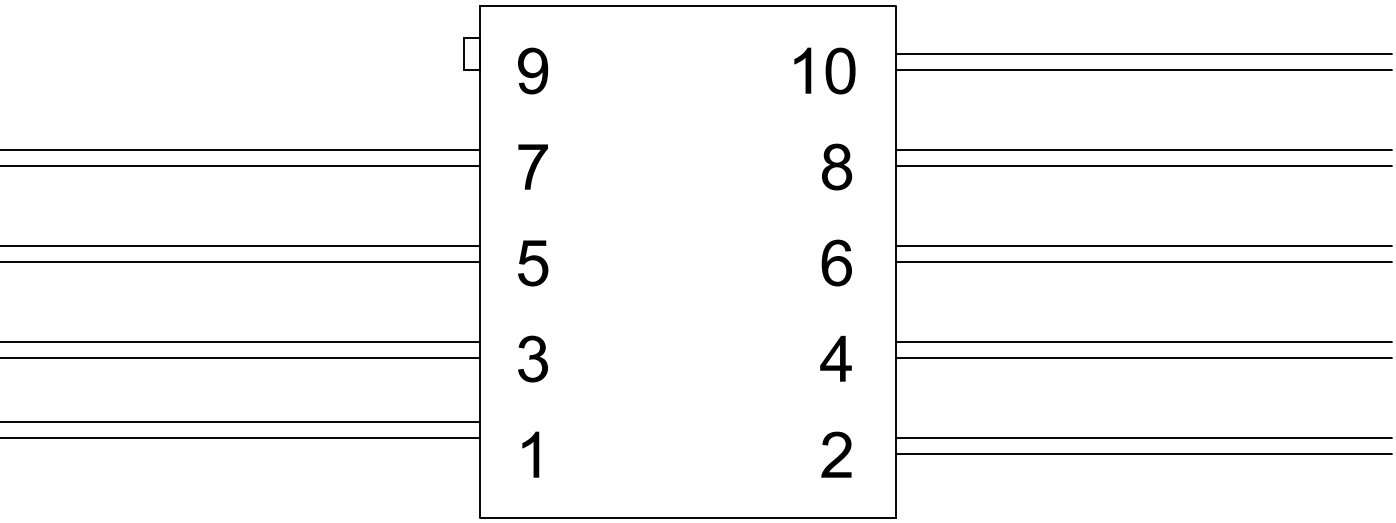
272659 - QUICKLINC, HIGH PRESSURE.....

244048 - QUICKLINC, 90°.....

321061 - TERMINAL .....

226-12508-5 - TUBE CUTTER.....

Left Side Secondary Valve

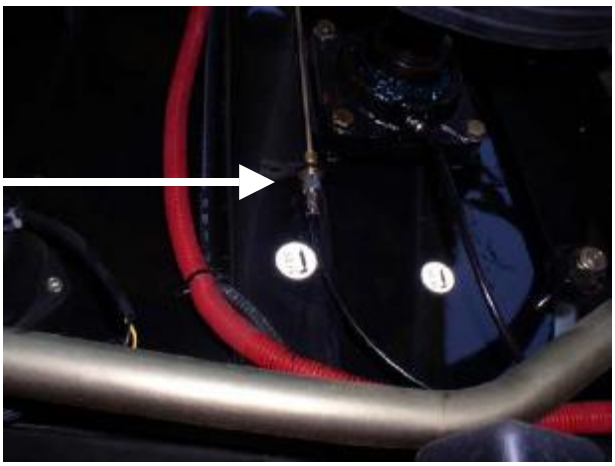


Outlet #	Description	Tube Length
1	Straw chopper rotor bearing	6 ft.
2	Return Gearbox	5 ft.
3	Straw Chopper intermediate shaft	3 ft.
4	Cleaning shoe drive drive idler arm	10 ft.
5	Beater shaft bearing	5 ft.
6	Cleaning shoe drive bottom gearbox	10 ft.
7	Main shaft bearing	5 ft.
8	Cleaning shoe drive top gearbox	8 ft.
9	Plug	
10	Eccentric hub cleaning shoe drive	8 ft.

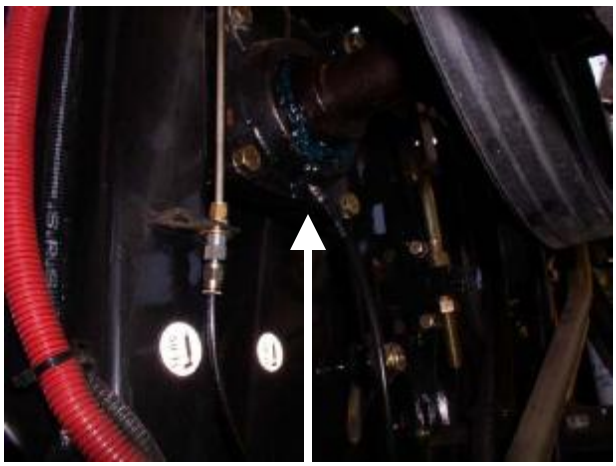
Left Side Grease Fittings

Mount Left Secondary Valve toward the Left center of the combine as indicated above. Drill two holes for ¼" mounting bolts. Use the actual valve mounting holes as a template.

Install one #20029 adapter and one #244047 fitting, replacing grease zerk for the straw chopper intermediate shaft. Route/install tubing from **Outlet 3** of left valve.



Install one #244047 fitting, replacing grease zerk for the main shaft bearing. Route/install tubing from **Outlet 7** of left valve.



Install one #244047 fitting, replacing grease zerk for the beater shaft bearing. Route/install tubing from **Outlet 5** of left valve.

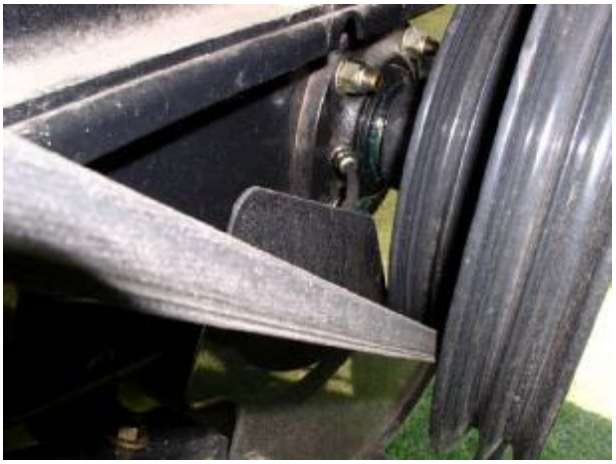
Install one #244047 fitting, replacing grease zerk for the return gearbox. Route/install tubing from **Outlet 2** of left valve.

Install one #20029 adapter and one #244048 fitting, replacing grease zerk for the eccentric hub cleaning shoe drive. Route/install tubing from **Outlet 10** of left valve.

Install one #244048 fitting, replacing grease zerk for the cleaning shoe arm drive idler arm. Route/install tubing from **Outlet 4** of left valve.

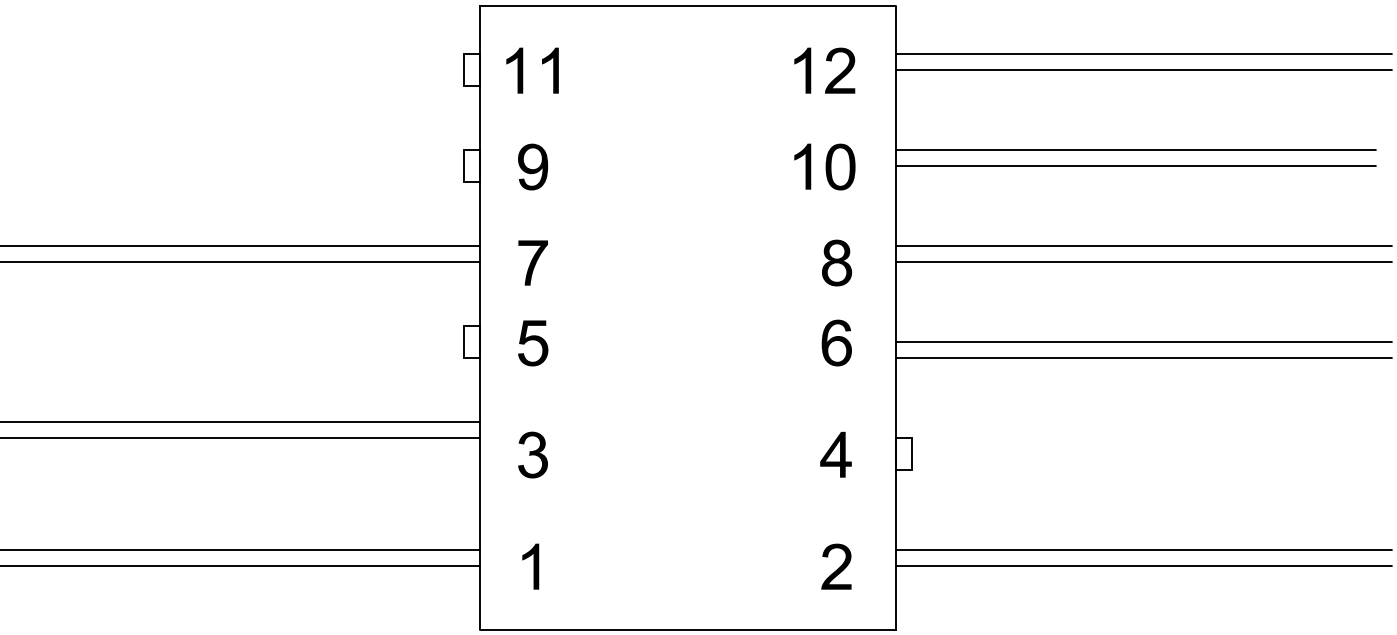
Install one #244047 fitting, replacing grease zerk for the cleaning shoe drive bottom gearbox. Route/install tubing from **Outlet 6** of left valve.

Install one #20029 adapter and one #244047 fitting, replacing grease zerk for the cleaning shoe drive top gearbox. Route/install tubing from **Outlet 8** of left valve.



Install one #244047 fitting, replacing grease zerk for the main straw chopper rotor bearing. Route/install tubing from **Outlet 1** of left valve.

Right Front Secondary Valve



Outlet #	Description	Tube Length
1	Feeder faceplate pivot	21 ft.
2	Reverser actuator shaft	22 ft.
3	Eccentric hub cleaning shoe drive	12 ft.
4	Plug	
5	Plug	
6	Center concave lift linkage	2 ft.
7	Thrust Bearing on fan variation	12 ft.
8	Front concave lift linkage	2 ft.
9	Plug	
10	Right-hand rotor front bearing	4 ft.
11	Plug	
12	Left-hand rotor front bearing	4 ft.

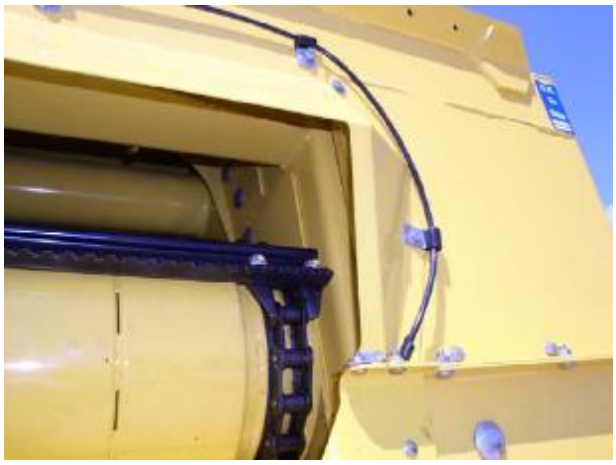
Mount Right Front Secondary Valve toward the right front of the combine by the feeder housing, as indicated above. Drill two holes for ¼" mounting bolts. Use the actual valve mounting holes as a template.

Install two #243699 fittings, replacing grease zerks for the center concave lift linkage & the front concave lift linkage. Route/install tubing from **Outlets 6 & 8** of right front valve.

Install one #20026 adapter and one #244048 fitting, replacing grease zerk for the eccentric hub cleaning shoe drive. Route/install tubing from **Outlet 3** of right front valve.

Install one #244048 fitting, replacing grease zerk for the thrust bearing on fan variation. Route/install tubing from **Outlet 7** of right front valve.

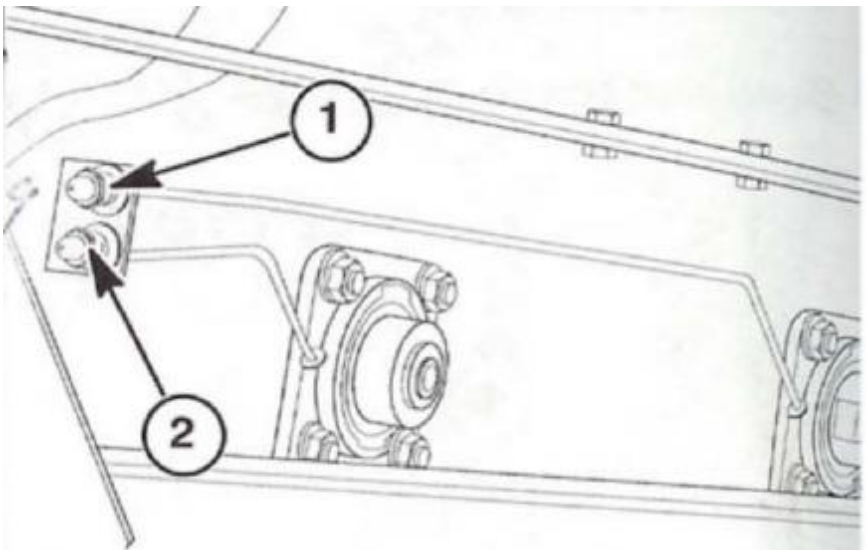
Install one #20026 adapter and one #243699 fitting, replacing grease zerk for the feeder faceplate pivot. Route/install tubing from **Outlet 1** of right front valve.



Route tubing using #249913 p-clamps and existing hardware to keep lines flush to the faceplate of feeder housing. Use 241110 spiral wrap to protect lines in abrasive areas.

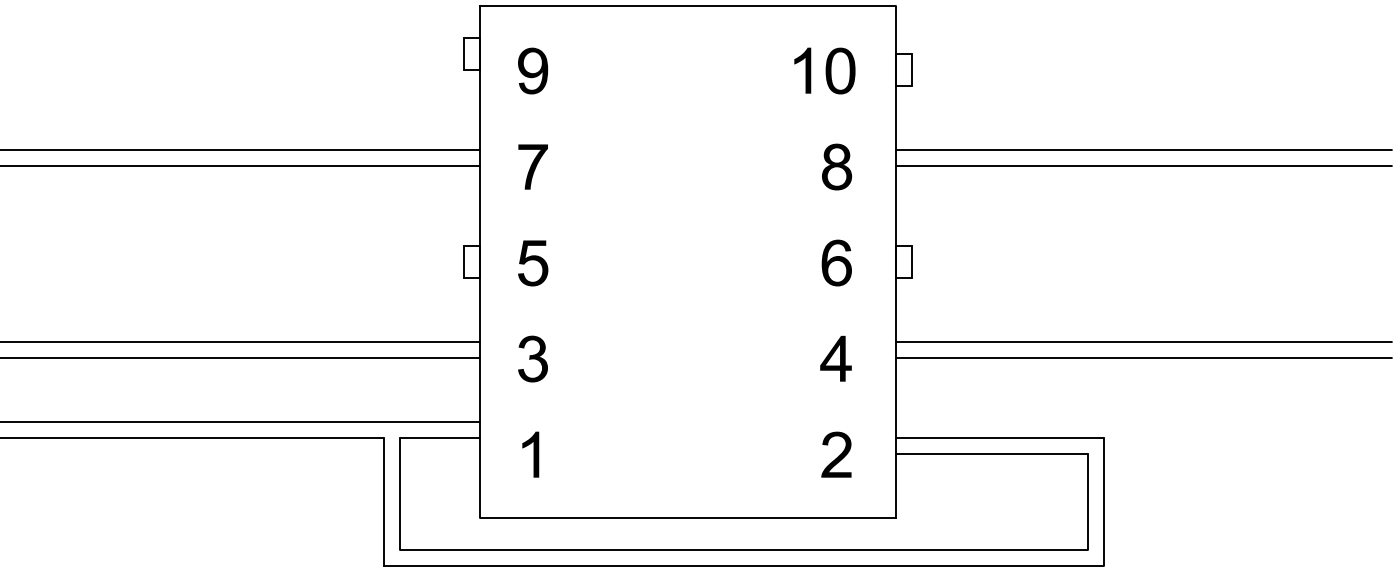
Install one #244054 fitting, replacing grease zerk for the reverser actuator shaft. Route/install tubing from **Outlet 2** of right front valve.

Route tubing along existing lines for support and to assure lines will not interfere with moving components, as shown above.

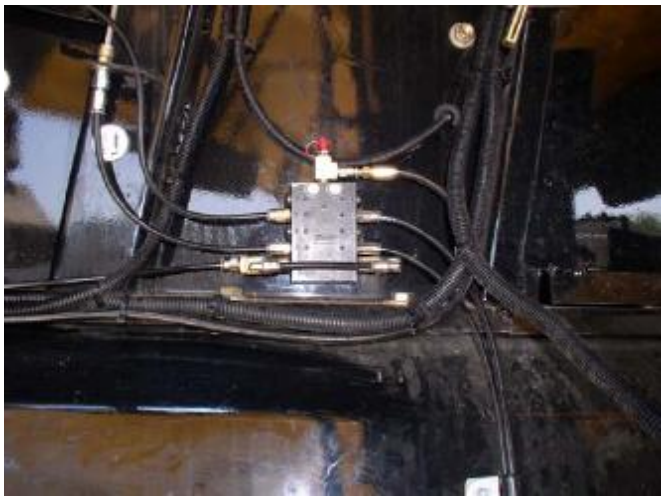


Install two #243699 fittings, replacing grease zerks for the right and left-hand rotor front bearings.
Route/install tubing from **Outlet 10 & 12** of right front valve.

Right Rear Secondary Valve

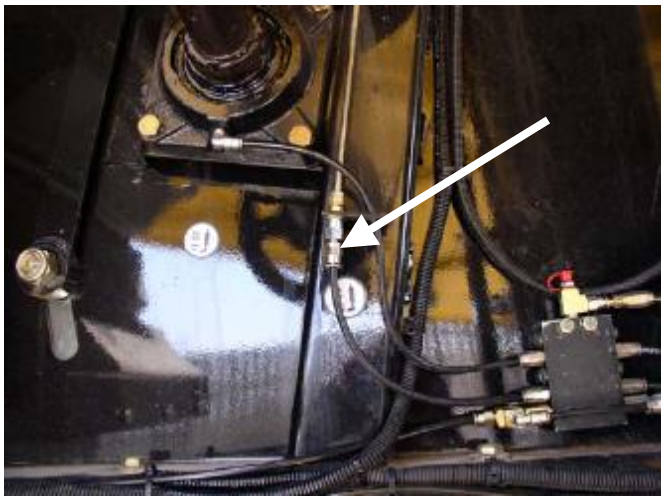


Outlet #	Description	Tube Length
1	Straw chopper rotor bearing	13 ft.
2	Same as outlet 1	2 ft.
3	Return Gearbox	4 ft.
4	Main shaft bearing	2 ft.
5	Plug	
6	Plug	
7	Hex nut on fan variator control spindle	6 ft.
8	Beater shaft bearing	2 ft.
9	Plug	
10	Plug	

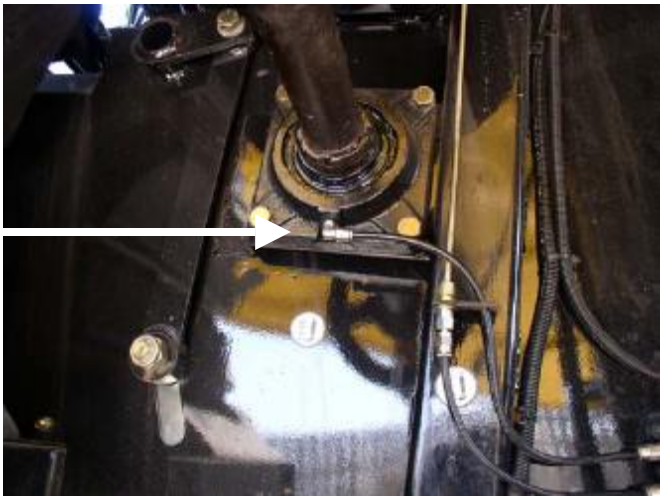


Mount Right Rear Secondary Valve toward the Right center of the combine as indicated above. Drill two holes for ¼" mounting bolts. Use the actual valve mounting holes as a template.

Install one #243699 fitting, replacing grease zerk for the straw chopper rotor bearing. Route/install tubing from **Outlet 2** of right rear valve.



Install one #244047 fitting, replacing grease zerk for the main shaft bearing. Route/install tubing from **Outlet 4** of right rear valve.

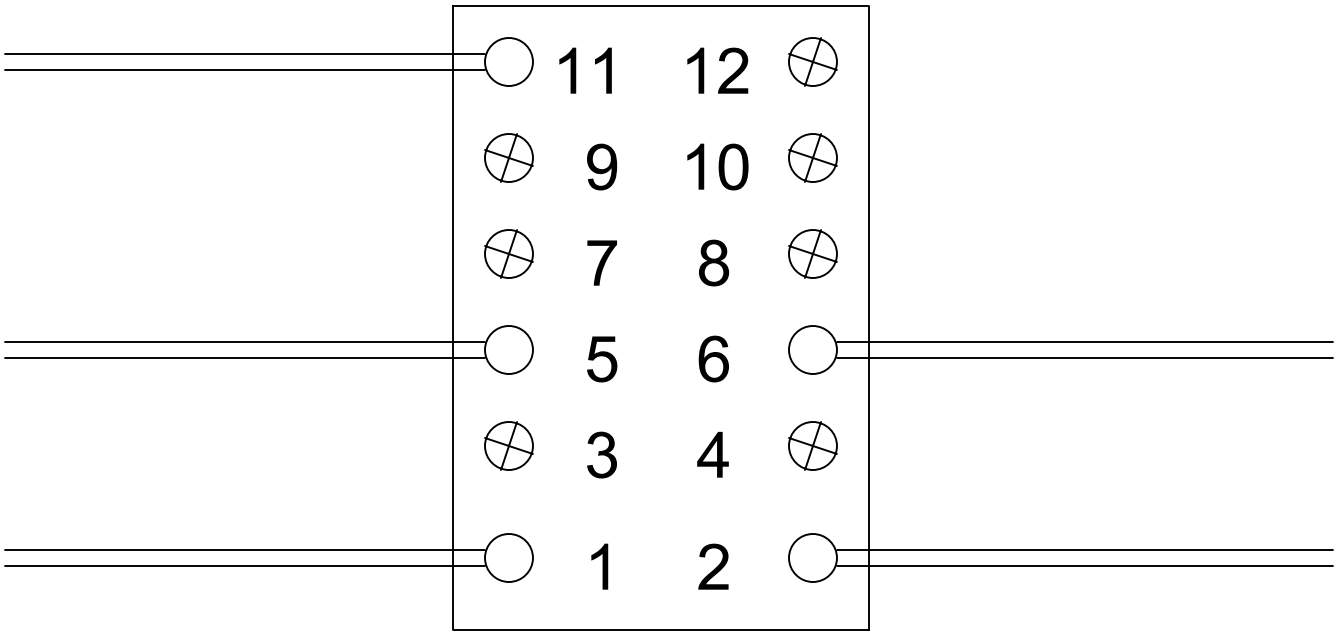


Install one #244048 fitting, replacing grease zerk for the beater shaft bearing. Route/install tubing from **Outlet 8** of right rear valve.

Install one #244048 fitting, replacing grease zerk for the return gearbox. Route/install tubing from **Outlet 3** of right rear valve.

Install one #20026 adapter and one #243699 fitting, replacing grease zerk for the hex nut on fan variator control spindle. Route/install tubing from **Outlet 7** of right rear valve.

Primary Valve

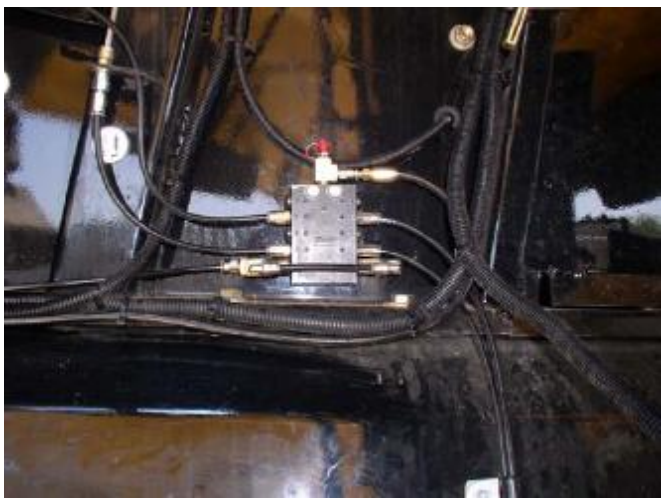


Outlet #	Description	Tube Length
1	Right rear secondary valve	22 ft.
2	Right front secondary valve	30 ft.
3	Plug	
4	Plug	
5	Header return line	1 ft.
6	Left secondary valve	13 ft.
7	Plug	
8	Plug	
9	Plug	
10	Plug.	
11	Rear Axle (for power steer axle only)	TBD
12	Plug	

Install hose assemblies that feed the secondary valves into the primary valve located on the back of the QLS301 pump. Install hoses as described on the primary valve schematic, from the previous page. Simply insert the #272394 Hose Stud into the appropriate outlet fitting, installed from the factory.

Install hose from **Outlet 6** of Primary Valve by simply inserting the #272401 hose stud into the inlet of the Left Secondary Valve.

Install hose from **Outlet 2** of Primary Valve by simply inserting the #272401 hose stud into the inlet of the Right Front Secondary Valve.



Install hose from **Outlet 1** of Primary Valve by simply inserting the #272401 hose stud into the inlet of the Right Rear Secondary Valve.

Install hose from **Outlet 5** of Primary Valve by simply inserting the #272401 hose stud into the inlet of the pump inlet as this outlet can be used to feed a header kit.

Mounting Pump and Bracket

Mount the QLS-301 pump to pump mounting bracket, using hardware supplied in the pump box. Mount pump and bracket to the deck with two 247023 bolts. To accomplish this, you will need to drill two holes through the rear deck to the left of the walkway and just outside the hand rail. This pump incorporates the primary valve that will feed all the secondary valves, that in turn supply the lubrication points.

Note: Use caution when drilling to avoid damage to fuel tank or other objects below rear deck.

Electrical installation and requirements for QLS 301 Pump.

Safety note: Be sure to disconnect the combine battery wires before proceeding.

The Lincoln Quicklub System utilizes three wires from the pump. The RED wire is not used. The BLACK wire is “positive” and is to be connected to the positive lead at the ignition solenoid. The BROWN wire is the system ground and is to be connected to the chassis ground at the PTO housing.

Locate the BROWN wire at the lube pump and connect it to the ground cable at the rear of the PTO housing or main chassis. See photo 1.

Locate the BLACK wire and route it towards the engine starter. Be sure to route it away from the rear deck where it may be stepped on.. Connect it to the positive lead at the ignition solenoid.

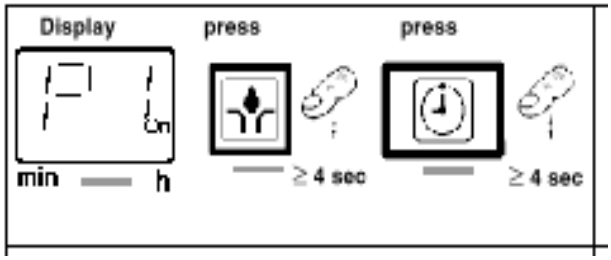
Reassemble as necessary.

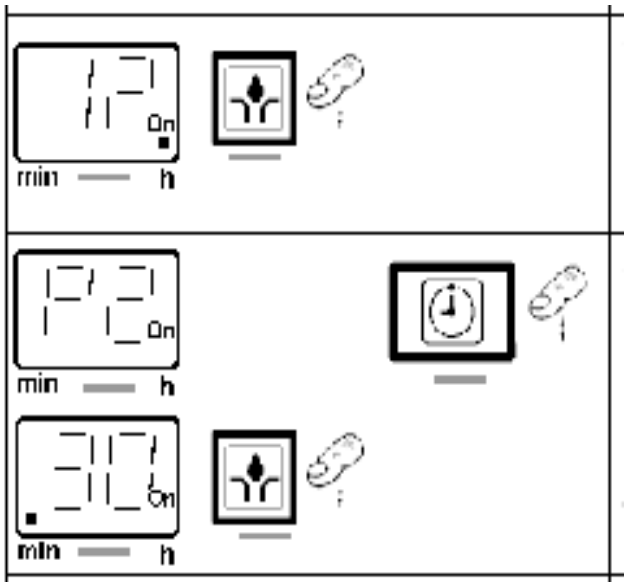
Note: Avoid routing/attaching the wire to fuel lines.

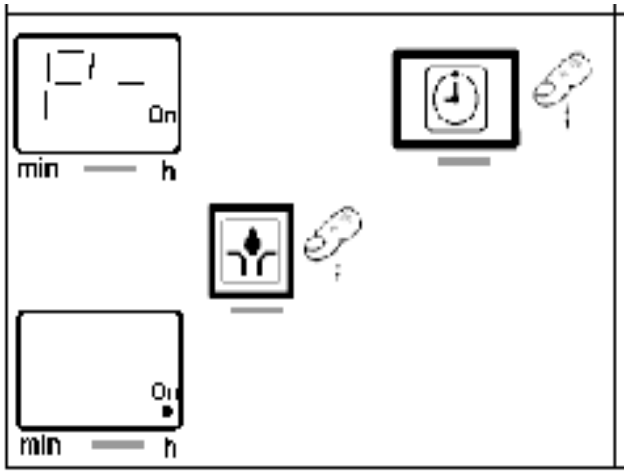
Wiring Pictures

Programming the Pump

Recommended setting is for the pump to run one cycle every 20 minutes or 3 cycles/hour.







Programming directions - Pause time (time between cycles):

1. Power must be on to the pump
2. To access the programming mode, **press both buttons** at the same time for **4 seconds.**
3. After this is done, **P1 will flash** on the screen and a **number**.

   This is the current **hour** setting of the controller.

   P1 controls the hour setting (0 - 99 hrs.)

   P2 controls the minute setting (0 - 59 min.)

   Pause time- Min- 0 hrs. 20 min. Max- 99 hrs. 59 min.

   The fields ''hour'' and ''minutes'' are indicated by a decimal point on the right-hand for the hours, on the left-hand for the minutes.
4. Press the green button to set P1 (hours) to 0.

   Settings are made in one direction: 0, 1, 2, 3, ... 99 h

   Button pressed once.....increases by 1 hour

   Button pressed continuously.....quick sequence
5. Press the red button to set P2 (minutes).
6. Press the green button to set the time (minutes) to 20.

   Settings are made in one direction: 0,1, 2, 3....59 min

   Button pressed once.....increases by 1 minute

   Button pressed continuously.....quick sequence

   Note: If hours are set to zero, the minimum pause time begins with 20 minutes. When pause times < 20 minutes are programmed, the display automatically shows **.20**.

Completing the programming

7. Press the red button. **"P-"**is displayed.

   There are two ways to complete the programming:

   - by pressing the green button,

   or

   - if the button is not pressed within 30 seconds, programming mode is closed automatically.

Verifying the programming

8. Hold down the red button In sequence:
   - PP The Programmed setting will be displayed.
   - RP The Remaining Time until a lube cycle will be displayed.

System Checkout

The following checklist has been developed as an aid in verifying proper installation and operation of the Quicklub® Onboard Grease System. By completing the steps outlined below, the operational readiness of the system and resulting extension of the component life of all points connected to the system will be insured.

- Apply grease gun (manual or pneumatic) to the grease fitting located on the Primary valve and each secondary valve inlet. While pumping grease through the system, cycle the indicator pin on the primary metering valve a minimum of 15 times. NOTE: Grease gun nozzle and grease fitting should be thoroughly cleaned before lubricating to prevent flow of contaminants into the lube system.
- Inspect primary valve supply and outlets for grease discharge. If leakage is detected, tighten the fittings.
- Continue to cycle the system until fresh grease appears at each lube point.
- Inspect each lube point fitting for leaks. Correct any leaks by firmly pushing tube into the fitting until seating occurs, or tighten the threaded fittings for components connected with hose.
- Operate the equipment through its complete range of motion, inspecting for unrestricted movement of tube and hose. Correct any problems of rubbing, chaffing or kinking.
- Inspect all hose and tube that is not covered with some type of protective wrap. Wrap any tube or hose that would be susceptible to damage from rubbing or chaffing.
- Inspect all hose and tube connected to moving components. Insure that adequate hose or tube is provided to allow unrestricted movement to these moving lube points.
- Verify proper pump operation and verify time setting by activating pump with the green activation button located on the face of the pump control panel. Activate the pump at least three times to insure proper operation.
- After the Combine is in operation for a period of time (approx. 80 hours), you may find you need to adjust timing to a shorter or longer period based on the operating conditions.
- Fill the reservoir with selected grease by filling at the grease fitting located on the face of the pump reservoir.

Daily Walk-Around Inspection

The Lincoln Industrial Quicklub automated lube system components are designed, engineered, manufactured and assembled to the highest quality standards. This lube system requires little maintenance, however, to ensure maximum reliability and to realize maximum service life of all components, it is highly recommended that a **daily walk-around inspection** be performed.

The daily walk-around inspection should include the following:

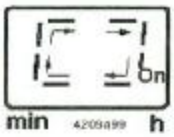
NOTE: Operator to confirm operation of electric pump while machine is in service.

- Observe lubricant level in reservoir. Fill reservoir if it is low.
- Inspect the display for error or low level messages. If panel indicates error, refer to the trouble shooting guide on next page.

  Inspect all valves and lube point connections to verify that no leaks are occurring.
- Inspect supply/feed lines to insure that no breaks or leaks have occurred.
- Inspect lube points so that all lube points have a **"fresh grease appearance."**

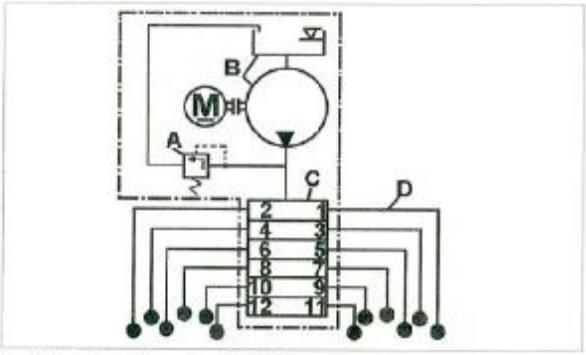
Troubleshooting

Pump of the QLS 301 system



- The green rotating display indicates that the pump operates properly.

• **Fault: pump motor doesn't run**	
• **Cause:**	• **Remedy:**
• Power supply interrupted. Green decimal point On/h on display is not lit.	* Check the voltage supply to the pump/ fuses. If necessary, eliminate the fault or replace the fuses. ⚠ WARNING * Check the feed line from the fuses to the plug of the pump and then to the printed circuit board.
• Power supply from printed circuit board to motor interrupted. Electric motor defective.	* Initiate an additional lube cycle. Check voltage supply from the printed circuit board to the motor.
• Printed circuit board defective. • Key pad or button is defective. **"EP"** display at the key pad flashes.	* Replace printed circuit board. * Replace housing with key pad.
• **Fault: pump does not deliver lubricant**	
• **Cause:**	• **Remedy:**
• Reservoir is almost empty. **"LL"**display at the key pad is flashing. • Pump lost prime and **"Er"** display at the key pad is flashing.	* Fill up the reservoir with clean grease. Let the pump run (initiate an additional lube cycle) until the lubricant shows at all lube points. *Note: Dependent on the ambient temperature and/or sort of lubricant output. Therefore, iniate several additional lube cycles.*
• Air pockets in lubricant.	* Trigger an additional lubrication cycle. Lubricant must dispense without air bubbles.
• Improper lubricant has been used.	* Change the lubricant.
• Suction hole of pump element clogged.	* Remove pump element. Check suction hole for foreign particles. If there are any, remove them.
• Pump piston is worn.	* Replace pump element.
• Check valve in pump element defective or clogged.	* Replace pump element.

• Fault: Blockage in the downstream progressive system	
• Cause:	• Remedy:
• Bearings, lines or divider block clogged • Mounting position of divider block : bottom - In the case of the divider block SSV 8,12 and 18 the outlet ports 1 and/or 2 are closed. • Mounting position of divider block : back-side, until preserial no 99800006711/004 and serial no 998000099C/001 - In the case of the divider block SSV 6, 12 and SSV 18 the outlet 1on the odd side is closed. The fault can be identified as follows: a) Fault indication "Er" flashing on the key pad display. b) The indicator pin mounted on the divider block piston does not move.  Fig. 31 - Example of a QLS 301 4232a99	• Determine the cause of the blockage as described in the following example and eliminate it. * Let the pump run (refer to "Initiating an additional lube cycle") * Disconnect all feed lines of the divider block one after the other. If grease shows under pressure (i. e. at outlet 3, Fig. 31) the blockage is located in the line of outlet 3 or in the connected bearing point. * Pump through the blocked line or bearing point using a hand pump. *Note: To check the individual outlets, leave all outlet disconnected for a while, since only one piston stroke is executed with each motor revolution. Several strokes are required for a full cycle of all divider blocks.* * Check pressure relief valve (Fig.16). Replace it, if necessary. A - pressure relief valve B - pump C - SSV 12 divider block D - feed lines
• Divider valve is blocked	* Replace the divider block or clean it as follows. * Remove all threaded tube fittings. * Unscrew the piston closure plugs. * Remove the piston, if possible, with a soft mandrel (smaller than ø 6 mm, 0.24 in). **Important**: The pistons are individually fitted in the bore holes of the divider block. After removing the pistons, mark them in order to reinstall them in the right direction and position. They may not be interchanged. * Thoroughly clean the divider block body in a grease-solving detergent and dry them out with compressed air. * Clean through the material passages (ø 1.5 mm, 0.59 in) at the thread ends of the piston bore holes using of a pin. * Clean the divider block once more and dry it thoroughly. * Reassemble the divider block.
• Fault:Differing lubricant amounts at the lubrication point	
• Cause:	• Remedy:
• Lubricant metering not correct. • Setting of the pause time incorrect.	* Check the lubricant metering acc. to the lubrication chart. * Check time setting.