



Automated Lubrication System
Installation/Operators Instructions

For John Deere Walker Combine
Models - 9450, 9550, 9650, 9560
And 9660.

(dated 10/30/03)

System Overview

Thank you for purchasing the Quicklub® On Board Grease System for your John Deere 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 John Deere Combine models 9650 and 9750. There are subtle differences between models and years and this kit will accommodate all changes.

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 203 system supply pump. Please refer to this manual for detailed information on operations, maintenance, trouble shooting and technical data.

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.

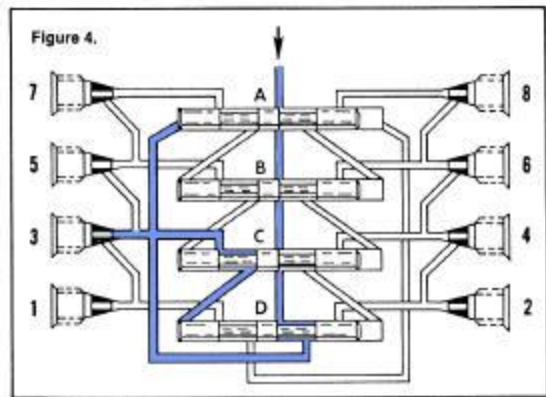
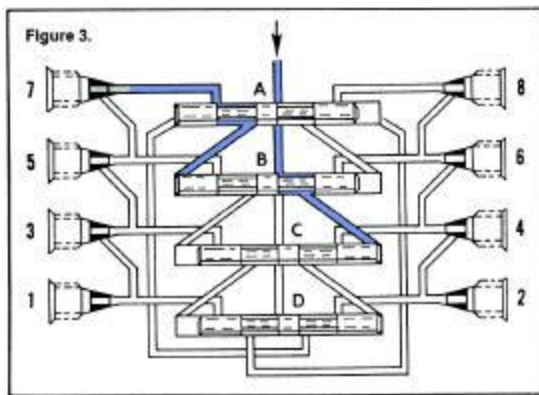
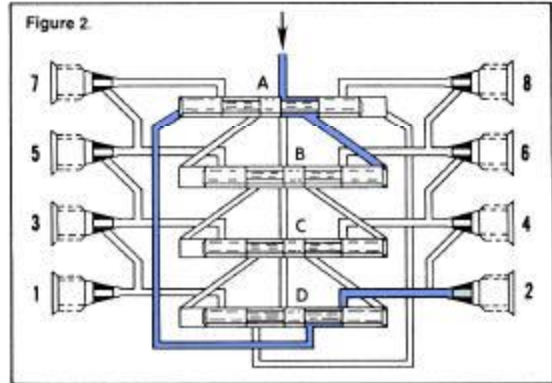
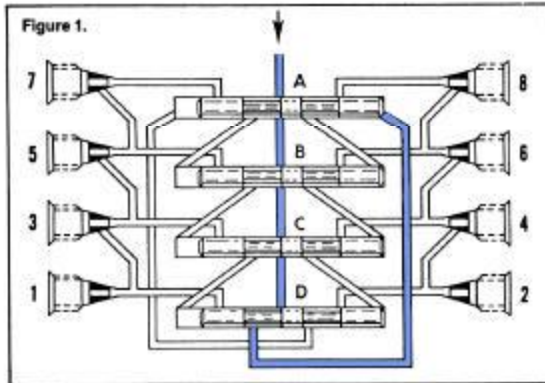
For further information on this system please contact Lincoln Technical Services at 1-314-679-4200 ext. 4782# or fax 1-314-679-4357.

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® Quicklub is a registered trademark of Lincoln.

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).

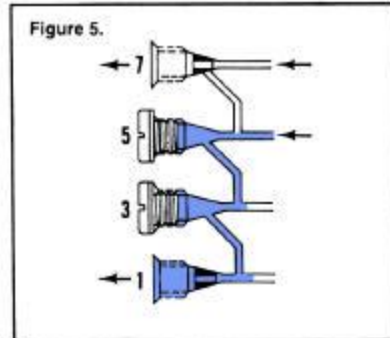
Lubricant flow against left side of piston A begins the second half cycle which shifts pistons from left to right, dispensing lubricant through outlets 1, 8, 6 and 4 of the divider valve.

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 John Deere 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).

Zerk-Lock Assembly Instructions



1. Place a Zerk-lock onto the grease fitting.



2. Tap Zerk-lock onto fitting. Position Zerk-lock on grease fitting and secure by gently tapping with hammer and staking tool.



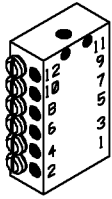
3. Thread a Quicklinc completely into the Zerk-lock.



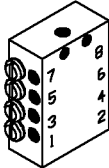
4. Push the tube into the Quicklinc adapter.

JOHN DEERE WALKER COMBINE COMPONENT GLOSSARY

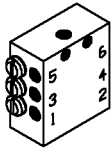
PART NUMBER (LINCOLN) and DESCRIPTION



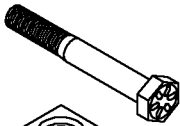
619-26398-2 - Divider valve SSV12



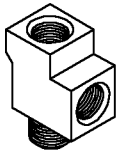
619-26396-2 - Divider valve SSV8



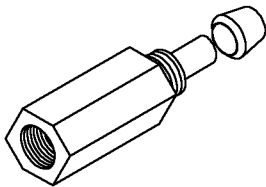
619-27121-1 - Divider valve SSV6



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

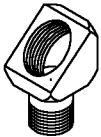


67448 - Male run tee.....



404-22581-2 - Clamping ring (ferrule).....

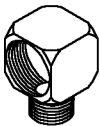
239857 - Valve outlet adapter.....



20028 - 1/8" NPT 45° Adapter.....



270784 - ZERK-LOCK FITTING



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

JOHN DEERE WALKER COMBINE COMPONENT GLOSSARY

PART NUMBER (LINCOLN) and DESCRIPTION



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



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



243699 - 90° Swivel quickinc fitting.....



20029 - 1/8" NPT 90° Adapter.....



246416 - Valve mounting bracket.....



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



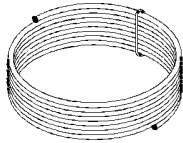
242125 - Plastic Grease fitting cap.....



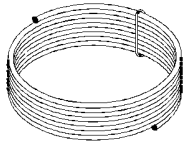
246002 - 1/8" NPT field installable hose coupling.....

JOHN DEERE WALKER COMBINE COMPONENT GLOSSARY

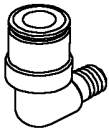
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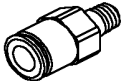
241288 - 1/8" Grease filled high pressure hose (40 ft. coil),.....



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



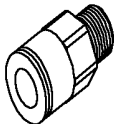
244054 - 1/4"-28 Male 90° Fitting,.....



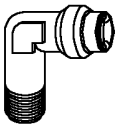
244055 - 1/4"-28 Male Straight Fitting,.....



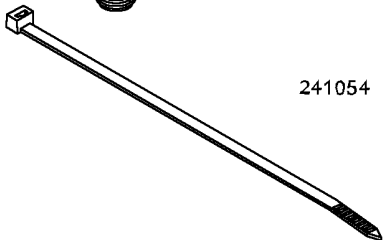
20024 - 2 1/4"-28 Straight Adapter,.....



244047 - 1/4" Tubing x 1/8" NPT Male Straight



244048 - 1/4" Tubing x 1/8" NPT Male 90° Fitting



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

JOHN DEERE WALKER COMBINE COMPONENT GLOSSARY

PART NUMBER (LINCOLN) and DESCRIPTION



272394 - HOSE STUD, 90°.....

272401 - HOSE STUD, STRAIGHT.....



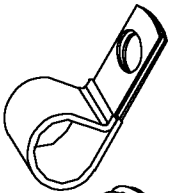
272427 - THREADED SLEEVE.....



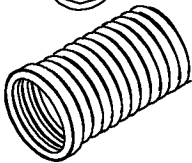
272658 - VALVE, OUTLET FITTING.....



272659 - QUICKLINC, HIGH PRESSURE.....



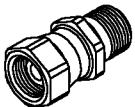
249913 - .375 P-style clamp for 12mm bolt.....
 246990 - 1.625 P-style clamp for 10mm bolt.....



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



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



66649 - 1/8" NPT Straight swivel.....

JOHN DEERE WALKER COMBINE COMPONENT GLOSSARY

PART NUMBER (LINCOLN) and DESCRIPTION



10182

- 1/8" Straight adapter.....



249209

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



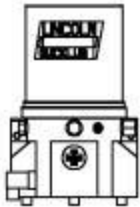
10181

- 1/8" Straight adapter.....



241289

- 1/8" NPT Swedge on hose stud.....



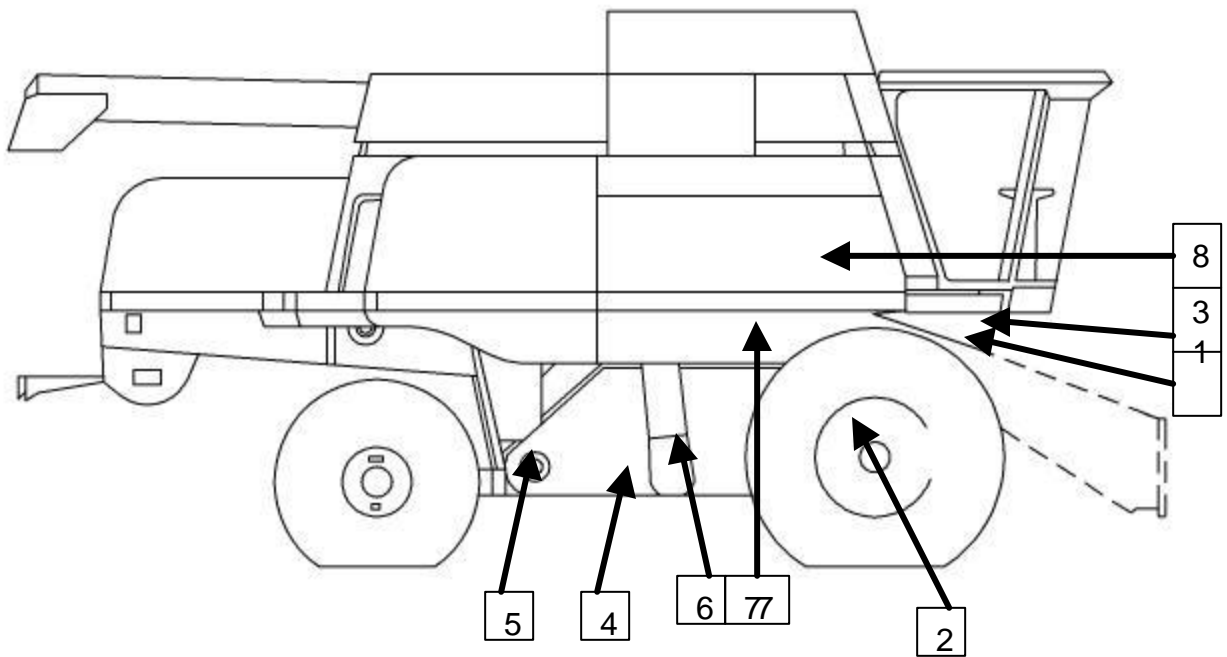
94012

- QSL203 Pump with 2 Liter Reservoir / 12VDC.....

The following lube points on your John Deere combine are not covered by this lubrication system as they are rotating. Please follow your John Deere supplied Operator's Manual for lubrication requirements and procedures for these specific lubrication points only.

Points not covered by AutoLube on 9650 walker machines			
Description	freq. (hrs.)	O.M. Page No.	Illus.. No.
Cleaning fan variable sheaves (2 places)	50	115-8	1
Feeder house lower sheaves (2 fittings)	50	115-8	2
Feeder house upper sheaves (2 fittings)	50	115-8	3
Cylinder variable drive upper sheave (2 fittings)	50	115-9	4
Cylinder drive (2 fittings)	50	115-9	6
Conveyor auger drive slip clutch	200	115-14	2
Intermediate drive	400	115-16	all
Cylinder drive bearing	400	115-17	1
Dual range cylinder drive bearing	400	115-17	2
Rear wheel hubs (standard and H.D. non-powered axle only)	400	115-18	1
Tailing auger slip clutch	400	115-19	1
Cylinder drive (1 of 2 fittings)	400	115-19	3
Straw chopper drive sheave	400	115-23	6
Separator driveshaft U-joint (both ends)	400	115-25	1

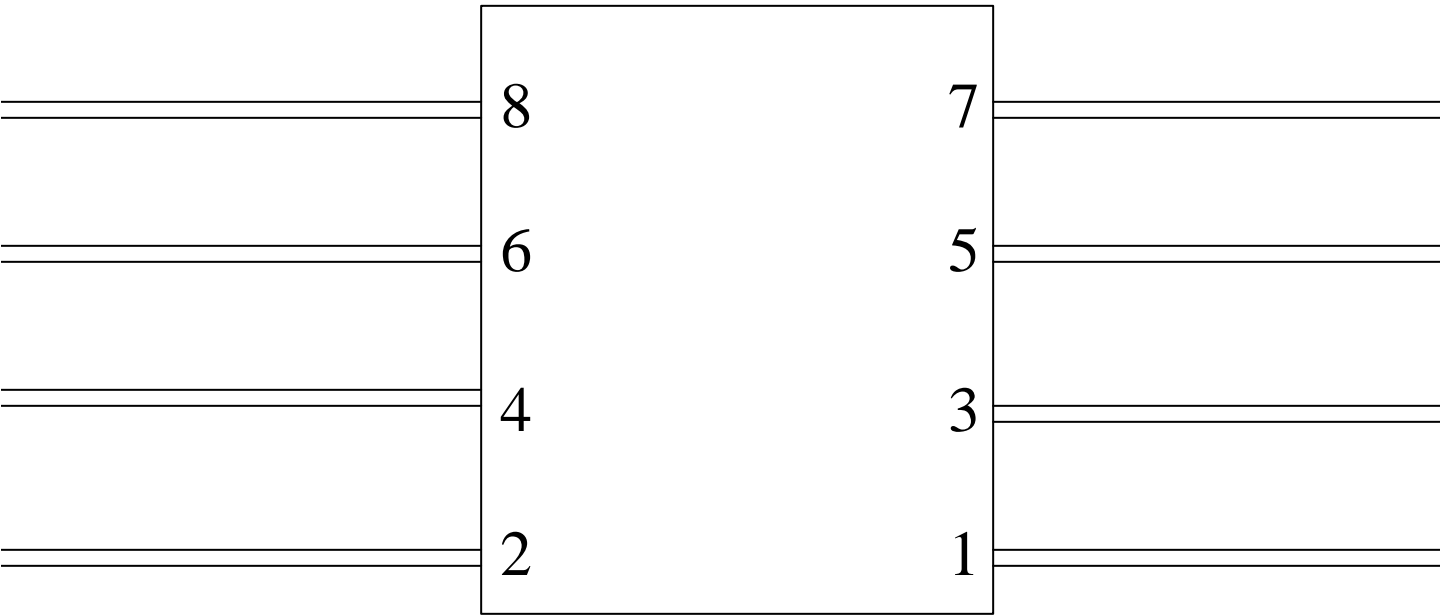
Right Side Grease Fittings



Lube System Service Points

- | | |
|---|----------------------------------|
| 1 | Bottom Variable Cylinder Bearing |
| 2 | Final Drive Outer Bearing |
| 3 | Top Cylinder Shaft Bearing |
| 4 | Fan Bearing |
| 5 | Beater Bearing |
| 6 | Secondary Counter Shaft |
| 7 | Cylinder Drive |
| 8 | Primary Counter Shaft Bearing |

Right Secondary Valve



<u>Outlet #</u>	<u>Description</u>	<u>Tube Length</u>
1	Bottom Variable Cylinder Bearing	14 ft.
2	Final Drive Outer Bearing	14 ft.
3	Top Cylinder Shaft Bearing	4 ft.
4	Fan Bearing	6 ft.
5	Beater Bearing	8 ft.
6	Secondary Counter Shaft	4 ft.
7	Cylinder Drive	9 ft.
8	Primary Counter Shaft Bearing	4 ft.

Right Grease Fittings



Mount Right Secondary Valve to the right of the Cylinder Drive, as shown in picture above. Use existing hardware for mounting valve bracket.



Install one 244055 fitting, replacing grease zerk for Cylinder Shaft Bearing (shown top). Route/install tubing from outlet 3.

Install one 244055 fitting, replacing grease zerk for Variable Cylinder Bearing (shown bottom). Route/install tubing from outlet 1.



Install one 244048 fitting, replacing grease zerk for Final Drive Outer Bearing. Route/install tubing from outlet 2.



Install one 20024 adapter and one 244048 fitting, replacing grease zerk for Cleaning Fan Shaft Bearing. Route/install tubing from outlet 4.



Install one 20024 adapter and one 244048 fitting, replacing grease zerk for Beater Bearing. Route/install tubing from outlet 5.



Install one 270784 zerk lock and one 244047 fitting, replacing grease zerk for Secondary Counter Shaft. Route/install tubing from outlet 6.

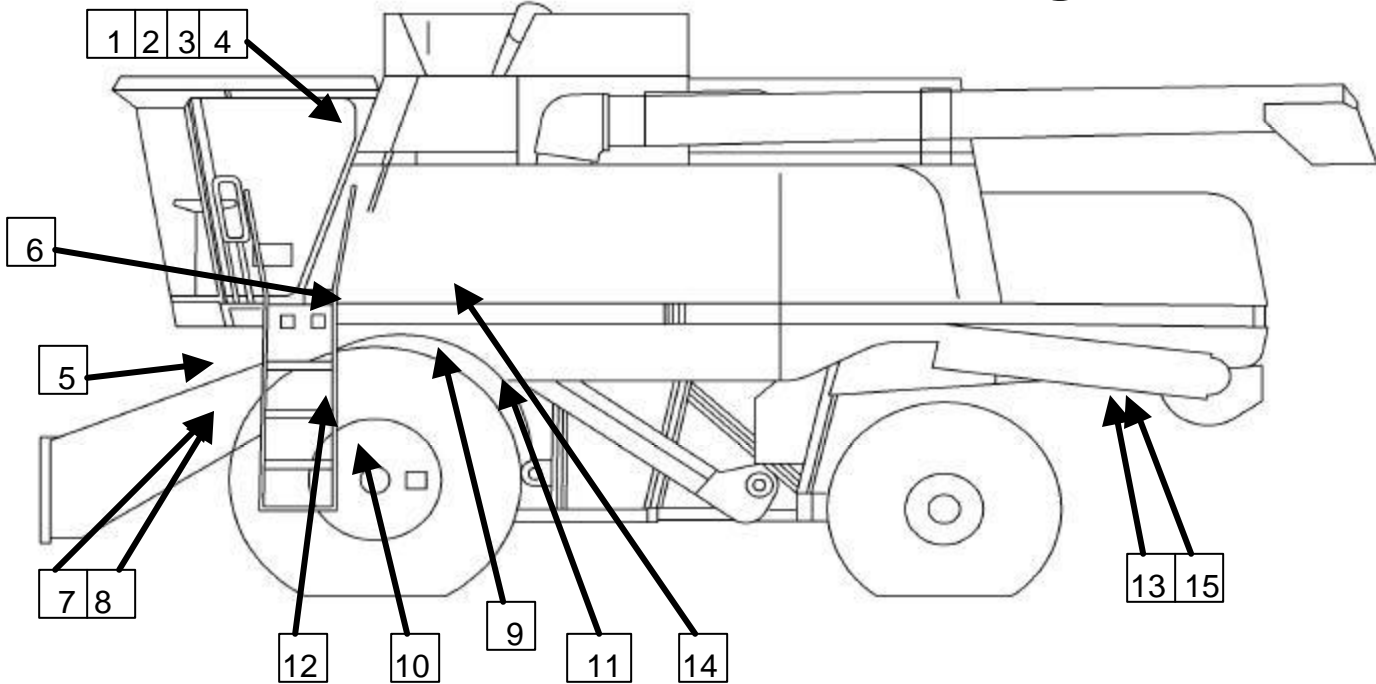


Install one 244048 fitting, replacing grease zerk for Cylinder Drive. Route/install tubing from outlet 7.



Install one 244048 fitting, replacing grease zerk for Primary Counter Shaft. Route/install tubing from outlet 8.

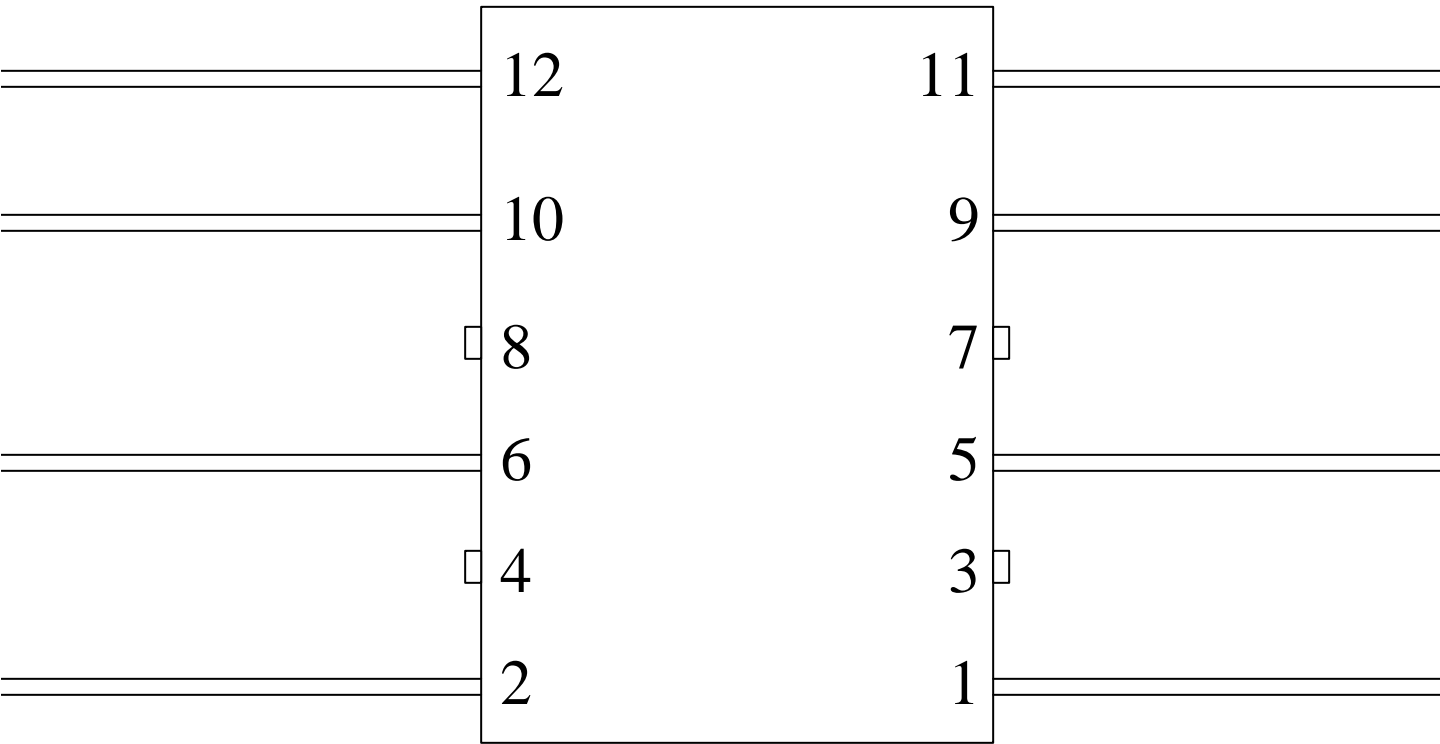
Left Side Grease Fittings



Lube System Service Points

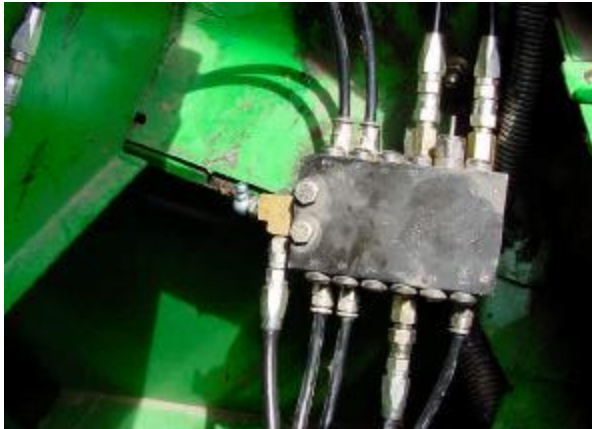
- | | |
|----|-------------------------------------|
| 1 | Unloading Auger |
| 2 | Unloader Auger Upper |
| 3 | Unloading Auger |
| 4 | Unloading Auger |
| 5 | Cylinder Shaft Bearing |
| 6 | Beater Shaft Bearing |
| 7 | Conveyor Auger Drive Bearing |
| 8 | Conveyer Auger Drive Bearing |
| 9 | Cleaning Fan Shaft Bearing |
| 10 | Final Drive Outer Bearing |
| 11 | Secondary Counter Shaft |
| 12 | Reel Drive Sheave Bearing |
| 13 | Chopper Drive Counter Shaft Bearing |
| 14 | Unloading Auger Lower Gear Case |
| 15 | Chopper Drive Counter Shaft Bearing |

Left Front Secondary Valve



<u>Outlet #</u>	<u>Description</u>	<u>Tube Length</u>
1	Unloading Auger	2 ft.
2	Unloader Auger Upper	3 ft.
3	Plug	
4	Plug	
5	Unloading Auger	2 ft.
6	Unloading Auger	3 ft.
7	Plug	
8	Plug	
9	Cylinder Shaft Bearing	8 ft.
10	Beater Shaft Bearing	8 ft.
11	Conveyor Auger Drive Bearing	10 ft.
12	Conveyer Auger Drive Bearing	13 ft.

Left Front Grease Fittings



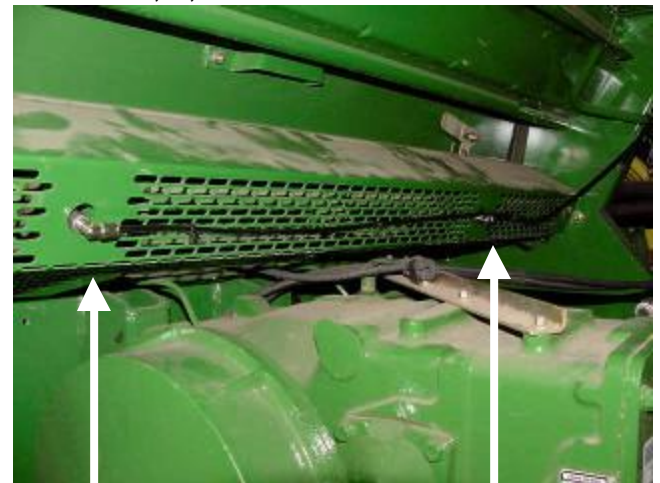
Mount Left Front Secondary Valve in front of unloading auger lubrication lines as shown in picture above. Use existing hardware for mounting valve bracket.



Install one 244054 fitting, replacing grease zerk for Unloader Auger Upper and three 20026 adapters, replacing grease zerks for Unloading Auger (3 places). Route/install tubing/hose from outlet 1, 2, 5 and 6.

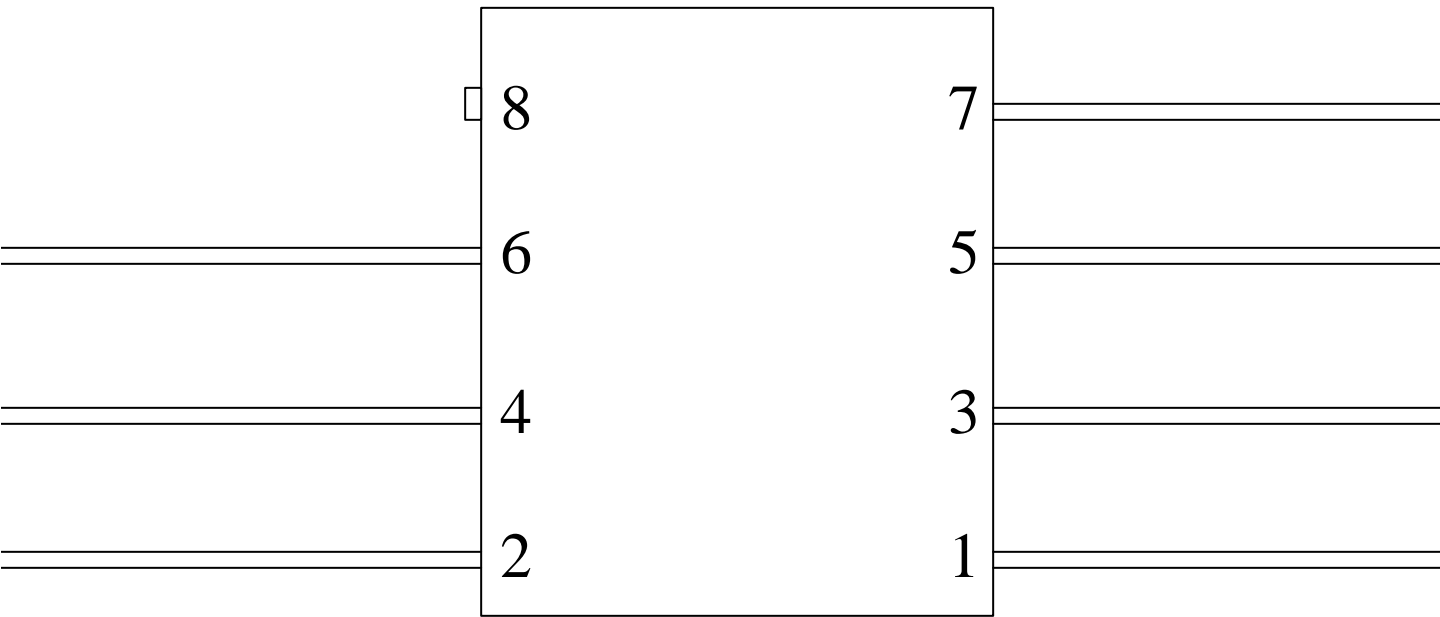


Install two 244055 fittings, replacing grease zerk for Cylinder Shaft Bearing and Beater Shaft Bearing. Route/install tubing from outlet 9 and 10.



Install two 270784 zerk locks, two 10182 adapters, and 244048 fittings, replacing two grease zerks for Conveyor Auger Drive Bearings. Route/install tubing from outlet 11 and 12. Note: If installing on narrow combines, only one line is required. Remove tube and outlet fitting from Left Front Secondary Valve and install one 303-17499-3 Closure Plug.

Left Rear Secondary Valve



<u>Outlet #</u>	<u>Description</u>	<u>Tube Length</u>
1	Cleaning Fan Shaft Bearing	8 ft.
2	Final Drive Outer Bearing	9 ft.
3	Secondary Shaft	6 ft.
4	Reel Drive Sheave Bearing	7 ft.
5	Chopper Drive Counter Shaft Bearing	10 ft.
6	Unloading Auger Lower Gear Case	5 ft.
7	Chopper Drive Counter Shaft Bearing	10 ft.
8	Plug	

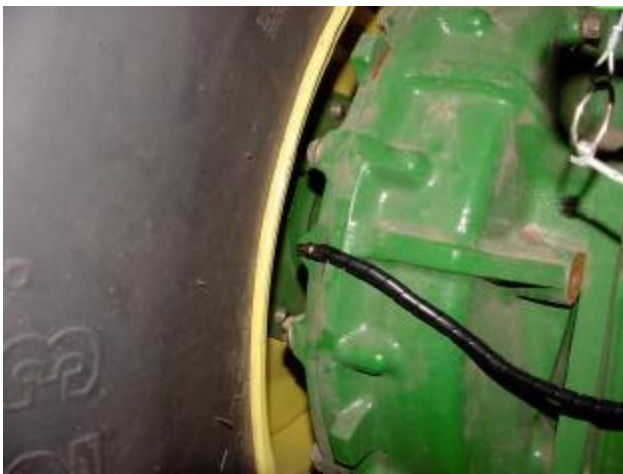
Left Rear Grease Fittings



Mount Left Rear Secondary Valve as shown above. Use existing hardware for mounting valve bracket.



Install one 20024 adapter and one 244047 fitting, replacing grease zerk for Cleaning Fan Shaft Bearing. Route/install tubing from outlet 1.



Install one 244048 fitting, replacing grease zerk for Final Drive Outer Bearing. Route/install tubing from outlet 2.



Install one 270784 zerk lock and one 244047 fitting, replacing grease zerk for Secondary Counter Shaft. Route/install tubing from outlet 3.



Install one 20029 adapter and one 244047 fitting, replacing grease zerk for Reel Drive Pump. Route/install tubing from outlet 4.

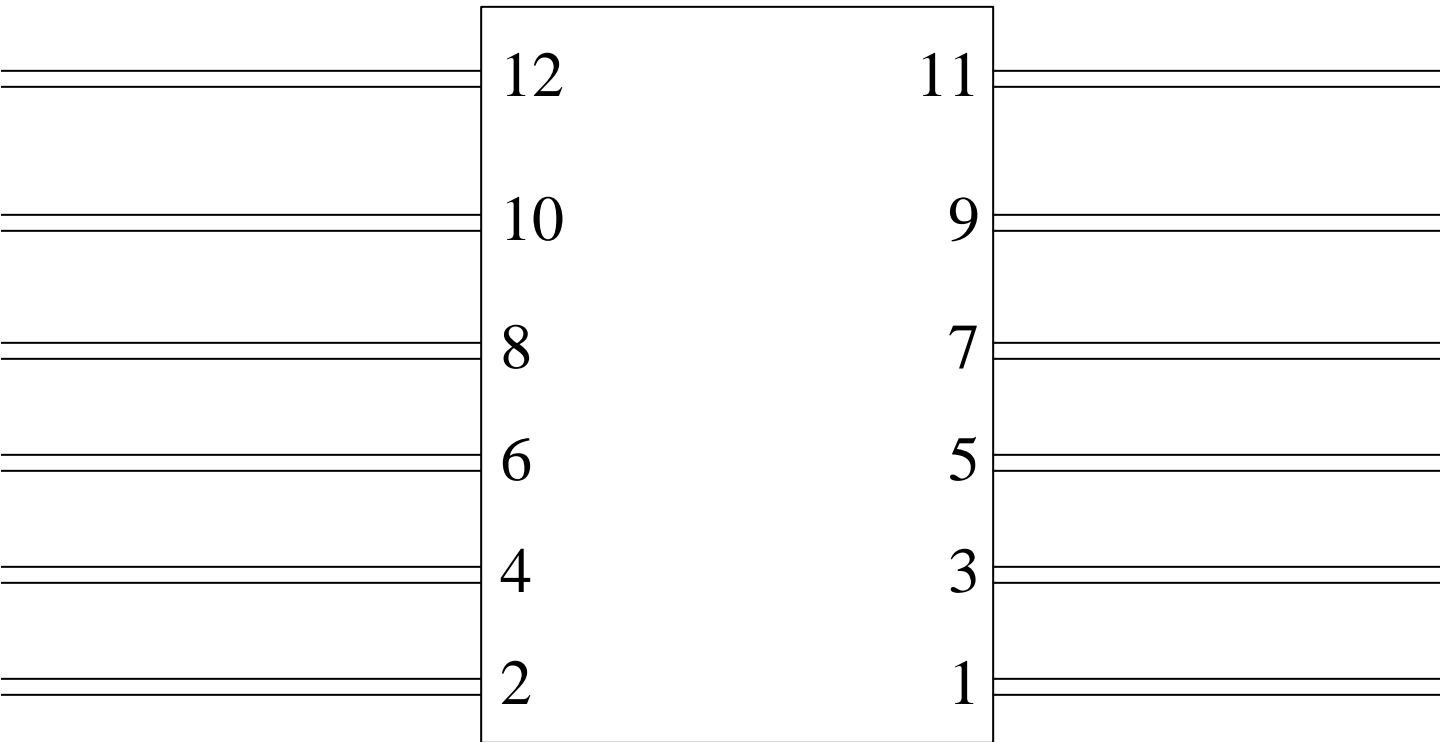


Install two 20024 adapters and two 244048 fittings, replacing grease zerks for Chopper Drive Countershaft Bearings. Route/install tubing from outlets 5 and 7.



Install one 10181 adapter, one 20028 adapter and one 244048 fitting, replacing grease zerk for Unloader Auger Gear Case. Route/install tubing from outlet 6.

Straw Walker Secondary Valve



<u>Outlet #</u>	<u>Description</u>	<u>Hose Length</u>
1	Rear Straw Walker Bearing	11 ft.
2	Chopper Rotor Bearing Left	14 ft.
3	Front Straw Walker Bearing	11 ft.
4	Chopper Rotor Bearing Right	5 ft.
5	Rear Straw Walker Bearing	12 ft.
6	Rear Straw Walker Bearing	12 ft.
7	Front Straw Walker Bearing	13 ft.
8	Front Straw Walker Bearing	13 ft.
9	Rear Straw Walker Bearing	14 ft.
10	Rear Straw Walker Bearing	14 ft.
11	Front Straw Walker Bearing	15 ft.
12	Front Straw Walker Bearing	15 ft.

Straw Walker Grease Fittings



Mount Straw Walker Secondary Valve on the outer right side of combine by the walker area. Use two each of 247023 bolt and 51304 locknut for mounting valve to combine wall. Note: If installing on narrow combines with four walkers, remove tube and outlet fitting from outlets 11 & 12 Secondary Valve and install two 303-17499-3 Closure Plugs.



Install five 244054 fittings, replacing grease zerks for Front Straw Walker Bearings and five 244047 fittings, replacing grease zerks for Rear Straw Walker Bearings. Route/install tubing from outlets 3, 4, 5, 6, 7, 8, 9, 10, (11 and 12 if required).



Route tubing from valve along the left side wall using brackets and tie straps. Route tubing in groups of two to each front and rear Straw Walker Bearing. Install clamps using 68906 self tapping screws and existing hardware..



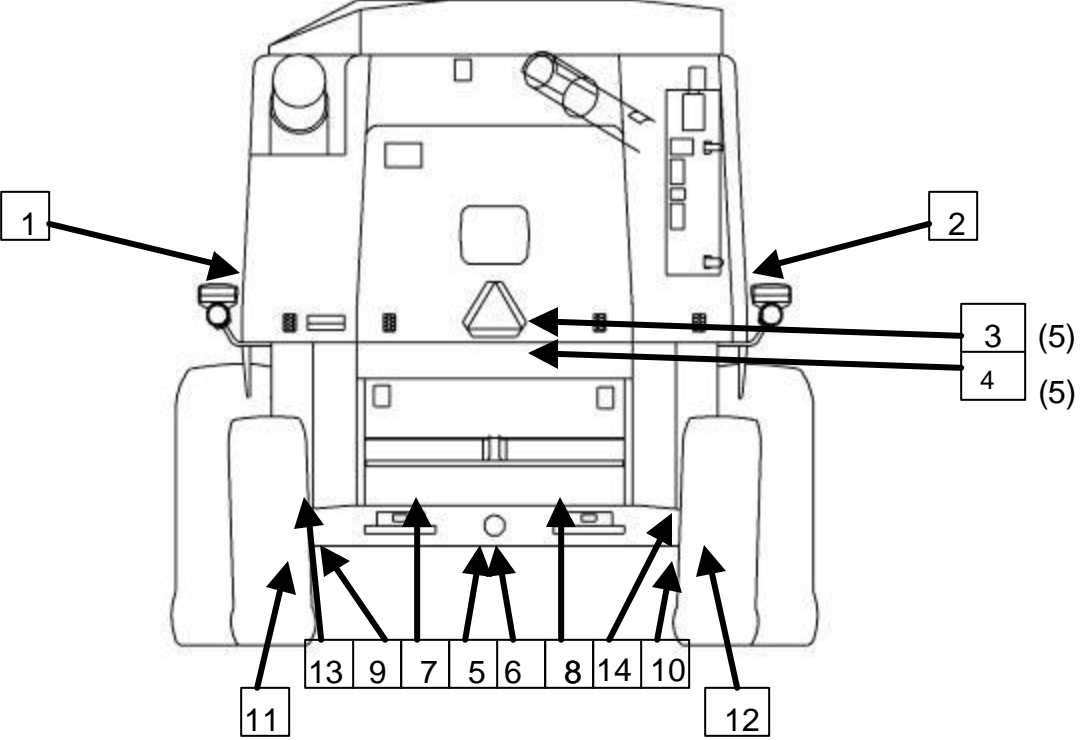


Install one 20026 adapter and one 244047 fitting, replacing grease zerk for Right Chopper Bearing. Route/install tubing from outlet 2.



Install one 20029 adapter and one 243699 fitting, replacing grease zerk for Left Chopper Bearing. Route 3 ft. piece of tubing into one 244048 fitting into one 13154 and 51055 bulkhead assembly in side panel as shown above. This bulkhead installation will require a 5/16" drilled hole. Install one 244054 onto the inner end of bulkhead. Rout/install tubing to outlet 1.

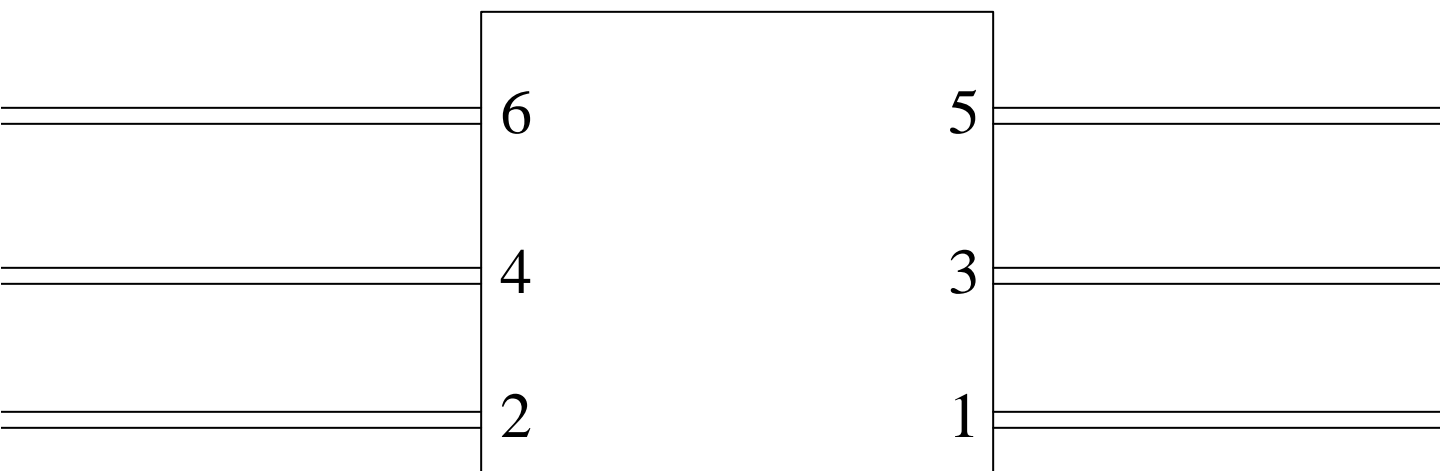
Rear End and Walker Grease Fittings



Lube System Service Points

- | | | | |
|----|-------------------------------------|----|--|
| 1 | Chopper Rotor Bearing Left | 11 | Tie Rod End Left |
| 2 | Chopper Rotor Bearing Rig | 12 | Tie Rod End Right |
| 3 | Rear Straw Walker Bearing (5) | 13 | Bottom 4 Wheel Drive Motor Pivot Left |
| 4 | Front Straw Walker Bearing (5) | 14 | Bottom 4 Wheel Drive Motor Pivot Right |
| 5 | Axle Pivot Front | | |
| 6 | Axle Pivot Rear | | |
| 7 | Power Steering Outer Left | | |
| 8 | Power Steering Outer Right | | |
| 7 | Power Steering Inner Left | | |
| 8 | Power Steering Inner Right | | |
| 9 | Top 4 Wheel Drive Motor Pivot Left | | |
| 10 | Top 4 Wheel Drive Motor Pivot Right | | |

Rear End Right Secondary Valve

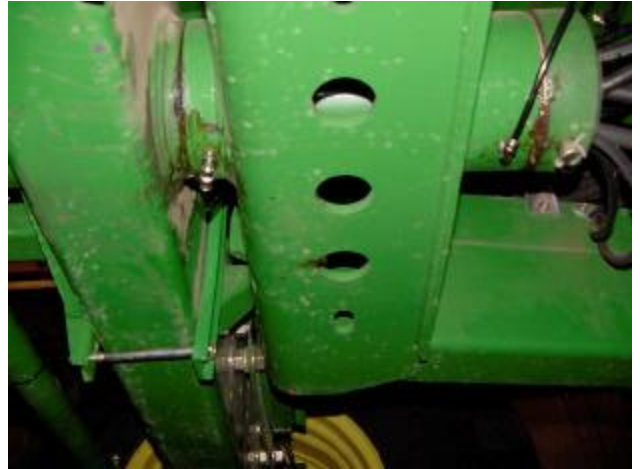


<u>Outlet #</u>	<u>Description</u>	<u>Tube Length</u>
1	Axle Pivot Front	4 ft.
2	Power Steering Outer	5 ft.
3	Power Steering Inner	6 ft.
4	Top 4 Wheel Drive Motor Pivot	5 ft.
5	Tie Rod End	10 ft.
6	Bottom 4 Wheel Drive Motor Pivot	5 ft.

Rear End - Right



Mount Rear End - Right Secondary Valve on the front right side of axle beam as shown in the picture above.



Install one 244048 fitting, replacing grease zerk for Axle Pivot Front. Route/install tubing from outlet 1.



Install one 20026 adapter and one 244048 fitting, replacing grease zerk for Bottom Motor Pivot. Route/install tubing from outlet 6.



Install one 20026 adapter and one 244047 fitting, replacing grease zerk for Top Motor Pivot. Route/install tubing from outlet 4.



Install one 244054 fitting, replacing grease zerk for Power Steering Inner. Route/install tubing from outlet 3.

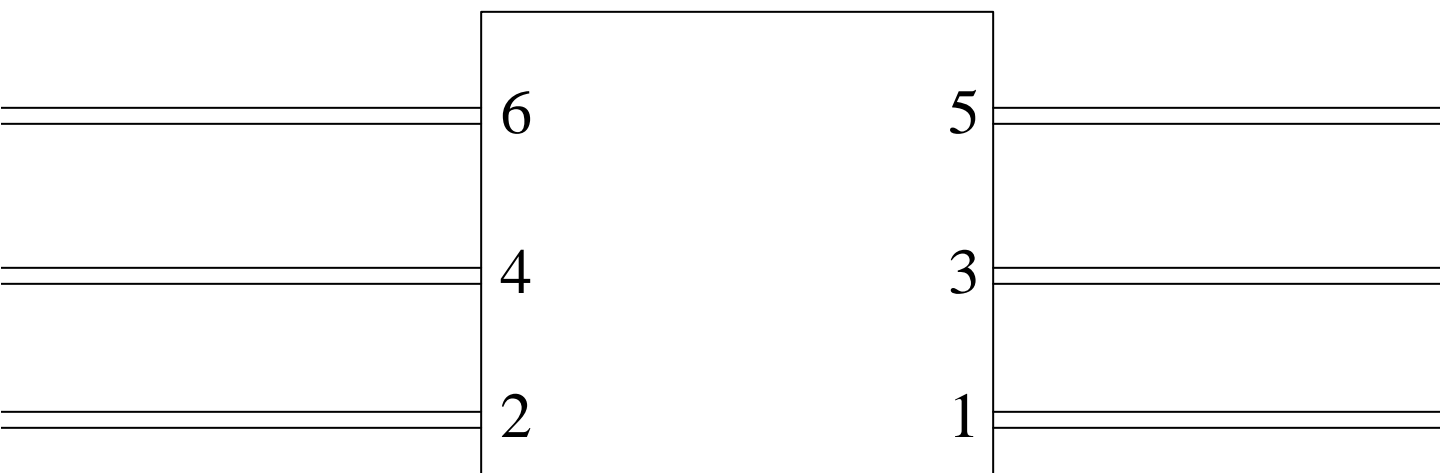


Install one 244054 fitting, replacing grease zerk for Power Steering Outer. Route/install tubing from outlet 2.



Install one 244054 fitting, replacing grease zerk for Tie Rod End. Route/install tubing from outlet 5.

Rear End Left Secondary Valve



<u>Outlet #</u>	<u>Description</u>	<u>Tube Length</u>
1	Power Steering Outer	5 ft.
2	Axle Pivot Rear	4 ft.
3	Top 4 Wheel Drive Motor Pivot	5 ft.
4	Power Steering Inner	6 ft.
5	Bottom 4 Wheel Drive Motor Pivot	5 ft.
6	Tie Rod End	10 ft.

Rear End - Left



Mount the Rear End - Left Secondary Valve on the front left of the axle beam as shown in the picture above.



Install one 20026 and one 244048 fitting, replacing grease zerk for Bottom Motor Pivot. Route/install tubing from outlet 5.



Install one 244054 fitting, replacing grease zerk for Tie Rod End. Route/install tubing from outlet 6.



Install one 244054 fitting, replacing grease zerk for Power Steering Outer. Route/install tubing from outlet 1.



Install one 244054 fitting, replacing grease zerk for Power Steering Inner. Route/install tubing from outlet 4.



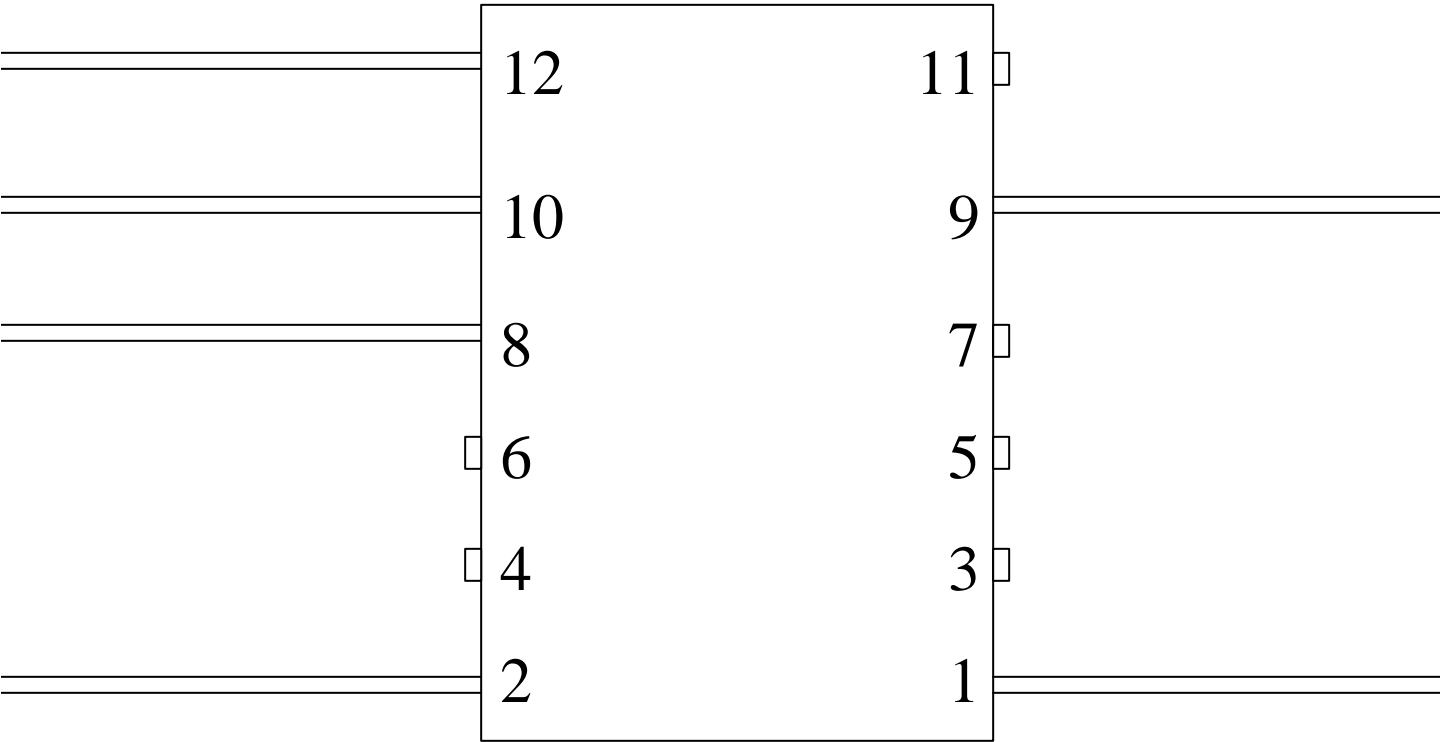
Install one 244699 fitting, replacing grease zerk for Axle Pivot Rear. Route/install tubing from outlet 2.



Install one 20026 adapter and one 244047 fitting, replacing grease zerk for Top Motor Pivot. Route/install tubing from outlet 3.

Primary Valve

(Located on Back of Pump)

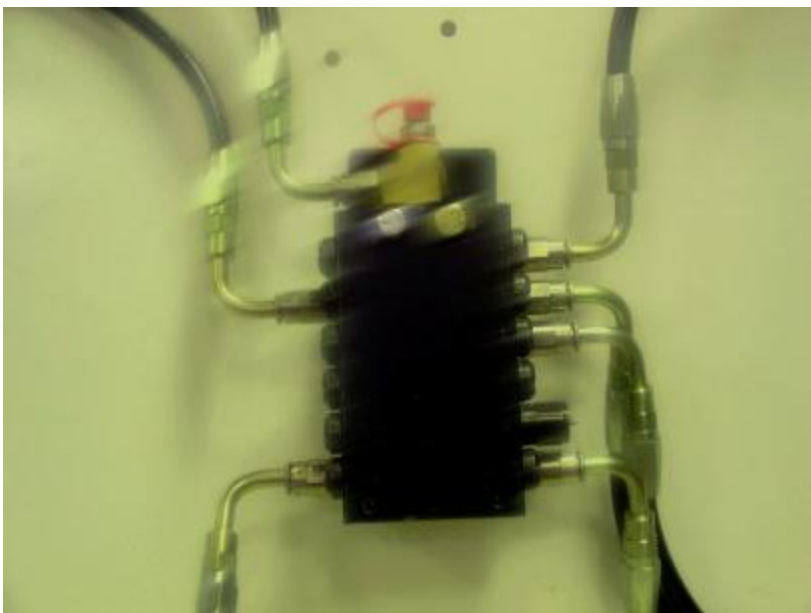


<u>Outlet #</u>	<u>Description</u>	<u>Hose Length</u>
1	Straw Walker Secondary	6 ft.
2	Left Rear Secondary	10 ft.
3	Plug	
4	Plug	
5	Plug	
6	Plug	
7	Plug	
8	Left Front Secondary	20 ft.
9	Right Secondary	30 ft.
10	Rear End Left	8 ft.
11	Plug	
12	Rear End Right	10 ft.

Primary Valve



Install hose assemblies that feed the secondary valves into the primary valve mounted near 203 Pump as shown. Install hoses as described on the primary valve drawing (previous page). It is easier to install the hoses prior to mounting the pump.



Pump Installation



Install the 203 Pump to the rear left corner of combine as indicated above. To accomplish this you will need to drill two holes using the drill template supplied with pump. Secure with hardware supplied.

Electrical Connections

Safety note: Be sure to disconnect the combine battery wires before proceeding with the electrical connections of this system.

Connect the black lead from the pump to the left hand main harness, circuit code 38 (red).

Connect the brown lead from the pump to local ground point using crimp on eyelet.

The red wire is not used.



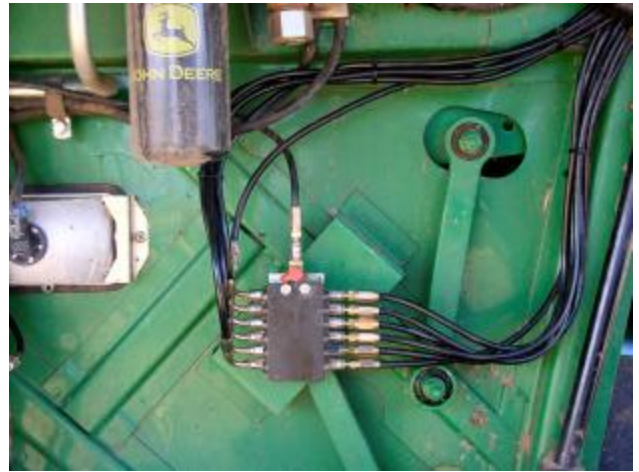
Install hose from outlet 2 of Primary Valve to the inlet of Right Secondary Valve.



Install hose from outlet 5 of Primary Valve to the inlet of Left front Secondary Valve.



Install hose from outlet 1 of Primary Valve to the inlet of Left Rear Secondary Valve.



Install hose from outlet 6 of Primary Valve to the inlet of Straw Walker Secondary Valve.



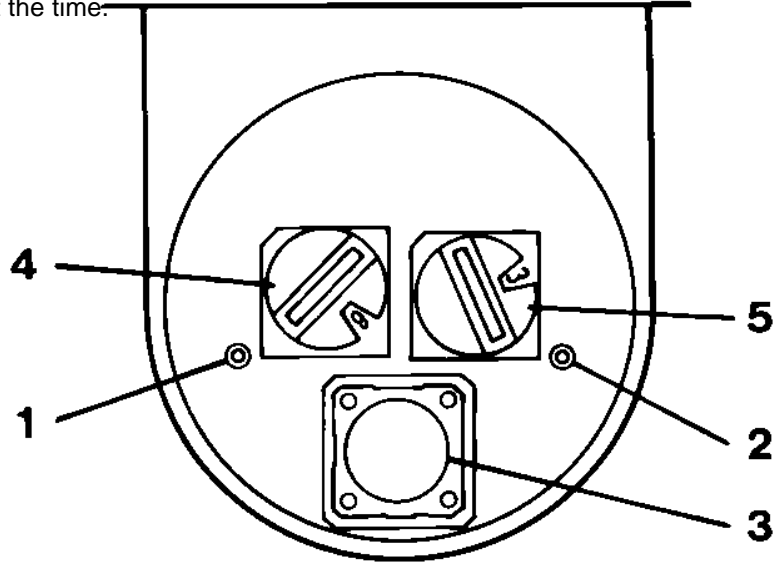
Install hose from outlet 11 of Primary Valve to the inlet of Rear End Left Secondary Valve.



Install hose from outlet 12 of Primary Valve to the inlet of Rear End Right Secondary Valve.

Timer Operation

Set timer to operate 10 minutes every hour. To accomplish this, position the #4 switch to setting #1 (1 hour) and the #5 switch to setting #6 (12 minutes). Refer to the following table to adjust the time.



- The LED marked “battery” lights when power is applied to the PC board.
- The LED marked “motor” lights when pumping lubricant.
- Depressing pushbutton for **2 seconds** will initiate a manual lube event.
- Off timer rotary switch, can be adjusted to 15 values, (do not set to “0”).
- On time rotary switch, can be adjusted to 15 values, (do not use “0”).

IMPORTANT: Do not use the zero position located on the ON or Off timer switch.

OFF- TIME RotarySwitch Setting	Interval Between Cycles	ON-TIME Rotary Switch Setting	Pump Will Run For:
0	Will not run	0	Will not run
1	1 hour	1	2 minutes
2	2 hour	2	4 minutes
3	3 hour	3	6 minutes
4	4 hour	4	8 minutes
5	5 hour	5	10 minutes
6	6 hour	6	12 minutes
7	7 hour	7	14 minutes
8	8 hour	8	16 minutes
9	9 hour	9	18 minutes
A	10 hour	A	20 minutes
B	11 hour	B	22 minutes
C	12 hour	C	24 minutes
D	13 hour	D	26 minutes
E	14 hour	E	28 minutes
F	15 hour	F	30 minutes

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 white activation button located below the timer setting switches inside the front cover. 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.”**

Trouble Shooting Guide

SYMPTOM	PROBABLE CAUSE	SOLUTION
1. Pump will not operate.	Not receiving voltage.	Check fuses, timer and electrical supply. Check the electrical supply to the pump. If the pump receives no current, trace to the electrical source and repair.
	Blocked pump cam.	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 with a contaminant. 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. Remove any particles found. Reassemble the pump and element and cycle the pump. If the pump element does not discharge grease, replace the pump element.
3. Pump was operated with an empty reservoir.	No grease	Fill the reservoir to the "max" level and press the manual reset button. 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 metering valves, hose, tube or connected component.	Switch the pump off and loosen each outlet in the primary valve one at a time. The blocked outlet will start discharging grease and the indicator pin will index. Retighten all of the outlets on the primary valve. Trace the hose that discharged grease to its secondary valve. Repeat the process of loosening each outlet one at a time until the blocked feed line is detected. Retighten all outlets. Repair the component blockage if found. If a metering valve is creating the blockage, replace the metering valve.
5. Indicator pin on the primary valve does not move.	Refer to #4.	Refer to #4.
6. Lube point not receiving grease.	Hose or tubing is cut or has chaffed through.	Replace the complete hose or tube. Or: If tube is broken, cut tube at break and repair using tube union (part number 244058). If hose is broken, cut ends at the break and install new reusable hose ends (part number 246002) and screw into a 1/8" NPT female connector (part number 67063).