Installation and Operating Instructions
for Models 87311, 87312, 87411 and 87412
Quicklub Centralized Lubrication Kits.

LINCOLN INDUSTRIAL

## INTRODUCTION

Your Lincoln Quicklub Manual Lubrication System contains all the components required for installation on your equipment. Follow the instructions for quick and easy installation. Should you require further assistance or materials, please contact your local Lincoln distributor, or call Lincoln Technical Service at (314) 679-4200, Ext. 782. See Page 4 for parts List.

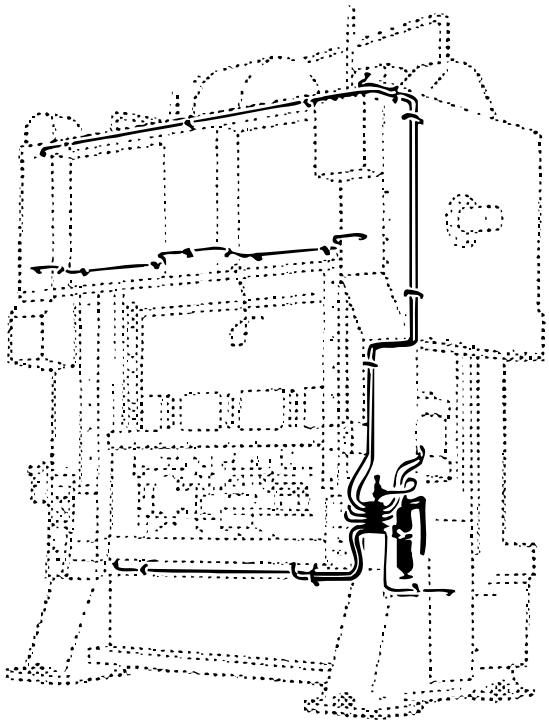

**Figure 1. Typical Installation**

## I. Preparation of the Divider Valve

**All Outlets not feeding lubrication points must be plugged. (Figure 2)**

The SSV-12 Divider Valve may serve up to 12 feed lines. Install the closure plugs in the divider valve to close off unneeded outlets in the application. Tighten the closure plugs to 60 in. lbs. torque. By inserting a closure plug and washer in an outlet, the metered volume from the outlet will be combined with the outlet directly below. If two closure plugs are inserted in adjacent outlets, both volumes will be combined with the outlet directly below. By following this procedure you can close up to a maximum of five outlets on each side, connecting them to the remaining open outlet.

**Example:** Nine points of lubrication are required therefore, closure plugs need to be installed in three outlets, i.e. 12, 11 and 7. (Figure 2)

**CAUTION: Never plug outlets 1 and 2. Plugging these outlets will stop the flow of grease from all outlets.**

**CAUTION: There must not be any open ports during operation. Ports must be either fitted with closure plugs or outlet adapters and tubing, before operating the system. (Installation of outlet adapter is covered in section III.)**

**CAUTION: Never feed grease from one outlet to more than one fitting. Grease flow to more than one fitting will not be positively controlled and will result in under or over lubrication.**

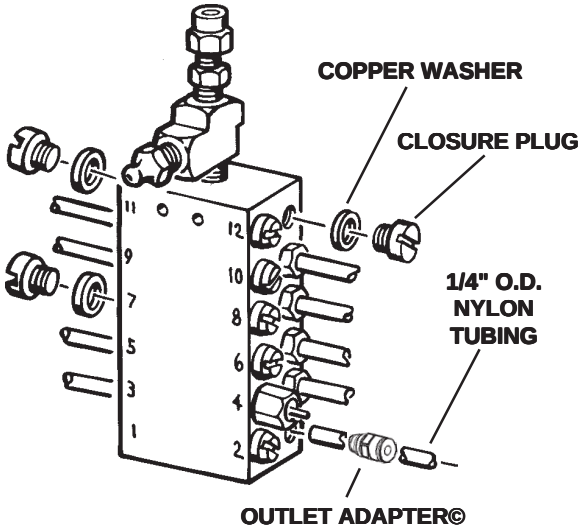


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**Figure 2. Divider Valve**

**All outlets without closure plugs should receive an outlet adapter and 1/4" nylon tubing.**

## I. Positioning the Divider Valve

1. The divider valve should be centrally located relative to its lubrication points; allowing for lengths of feed line tubing to be as equal as possible. It should also be accessible to the operator for ease in contacting the grease fitting at the inlet to the divider valve. (Figure 1)

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2. Position the metering valve template on the equipment. (Figure 3) Remove the backing from the template and affix it in place.

**DO NOT MOUNT THE DIVIDER VALVE UNTIL THE FEED LINE TUBING HAS BEEN CONNECTED.**

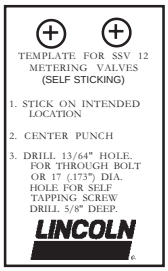



**Figure 3. Metering Valve Template**

## III. Preparation of Feed Line Tubing©

1. Make a rough estimate of the nylon tube length required from the metering valve to the first lube point. Allow extra length for any moving points and for "shortening" during final bundling of the tubes. It may be necessary to feed the free end of the tube through and/or around any frame members in order to obtain the shortest and most protected routing for the tubes.
2. Cut the Nylon tubing to the approximate length. Be sure to keep cut end square and clean to avoid leaks. (See step 3 of "Connecting The Feed Line to The Lube Points").
3. Install outlet adapters into divider valve outlets as required and tighten 3/4 turn past finger tight. Install Nylon tubing by pushing the end of each tube firmly into the outlet adapter as far as it will go.
4. Repeat this procedure for all feedlines.

## IV. Mounting the Divider valve

Determine mounting methods (bolts and nuts or self tapping screw.) Drill holes per instructions on template. Install bolts and nuts or self tapping screws and tighten. (Figure 3) Specification Chart for mounting screws is shown on Page 4.

Kit Nos. 87311 and 87411 can now be primed by temporarily installing a Lincoln No. 5000 Grease Fitting in place of the pressure relief fitting and using it to introduce lube into the system. Pump lubricant into the system until it flows from all tubes. **Note:** Lube pressures as high as 6000 PSI may develop during priming. After all lines are filled, remove the temporary fitting and reinstall the pressure relief fitting.

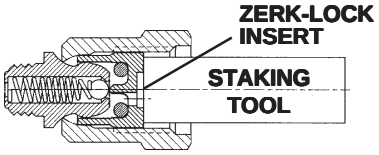
## V. Connecting The Feed Line Tubing To The Lube Points©

After mounting the divider valve the tubing should be secured to the machine surface to avoid damage during operation.

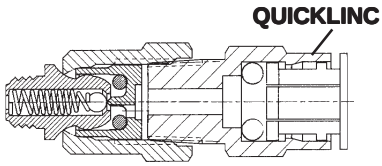
**This is one of the most important steps in the installation.**

**NOTE: Care should be taken when routing feed lines to avoid areas with extreme heat, machine chips or corrosive material.**

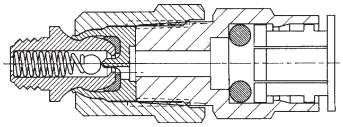
1. Route all feed lines starting at the divider valve. Secure the tubing with clips while working toward the lubrication points. See tube routing Figure 4.
2. Secure the tubing as close as possible to the lubrication point.
3. Connect feed lines directly to existing grease fittings using the Zerk-Lock™ fittings included with the kit. The Zerk-Lock fittings consists of the Zerk-Lock body, insert, and a Quicklinc™ fitting.




- Place the Zerk-Lock body over the grease fitting and place the staking tool firmly against the Zerk-Lock insert. (Staking tool included in the kit.) Strike the tool sharply with a hammer until the Zerk-Lock insert partially crimps onto the grease fitting.




- Screw the Quicklinc fitting into the Zerk-Lock body and tighten until parts resist further tightening, (about 1-1/2 turns). **Note:** Quicklinc hex is 1/2". Zerk-Lock body hex is 12mm.



- Move the Zerk-Lock and tube fitting from side to side on the grease fitting to insure the Zerk-Lock is firmly seated.

**Figure 5. Connecting Feedlines to Lube Points**

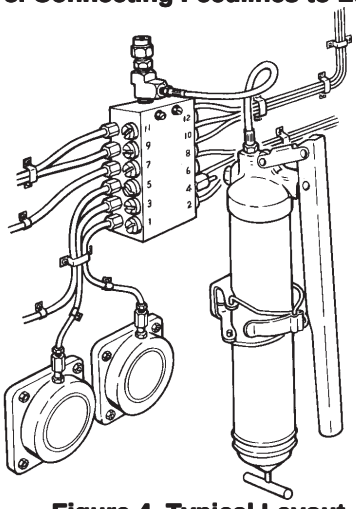


**Figure 4. Typical Layout**

4. Determine proper feed-line length from the tube clip installed in step #2 to snap-on coupler. Allow adequate length to compensate for any moving parts on the machine.
5. Pump the grease gun slowly until all lube points have been lubricated as indicated by lube flow from tube ends.
6. Wipe away excess lubricant and insert the nylon tubing firmly into the Quicklinc-coupler until it is fully seated in the body.

## VI. Pump Alternatives

A. For a portable operation, the lubricant is pumped through the installed grease fitting with a manually operated grease gun.
The system could be exposed to dirt, moisture and cutting oil. The system will endure this environment, however, the GREASE FITTING SHOULD BE THOROUGHLY CLEANED before lubricating to prevent introduction of contaminants into the system. See Paragraph C, for system inspection procedure. Pump the grease gun slowly until all lube points have been lubricated as indicated by the movement of the indicator pin. See Figure 6.

B. For a permanently mounted grease gun operation proceed as follows:

1. Locate the grease gun near the divider valve. Remove the coupler and extension from the grease gun and install No. 71512 hose in its place.
2. Remove the No. 5000 grease fitting from the divider valve assembly. Insert the No. 71512 hose in the open port and tighten.
3. Determine where the No. 82760 Holster Clamp should be mounted. Allow for the proper positioning of the grease gun and the operation of its handle. Mark mounting hole locations and drill two #16 (.177") holes, 3/8" deep. Secure holster clamp with two No. 66962 self tapping screws. Insert grease gun in the holster clamp. (Figure 4)

C. Inspect all fitting connections and tubing runs for leaks. Tighten or replace as necessary. Operate pump while observing indicator pin. Movement of the indicator pin, in then out, indicates all lube points have received lubricant.

## VII. Operating The System

You are now able to begin normal operation of your Quicklub System.

1. Operator needs to be aware of the following fault warnings:
   A. The divider valve cycle indicator pin shows proper operation. If the pin fails to move during operation, there is a fault.
   B. A pressure relief valve is installed in the tee, at the divider valve inlet. Blockage in the divider valve, feed lines or lubrication point(s) will cause excessive back pressure, rupturing a disk in the pressure relief assembly, indicating a fault. See the Troubleshooting Chart to correct these situations.

NOTE: Contamination may cause system malfunctions and bearing damage. Keep equipment as clean as possible at all times. Grease fitting should be thoroughly cleaned prior to each application.

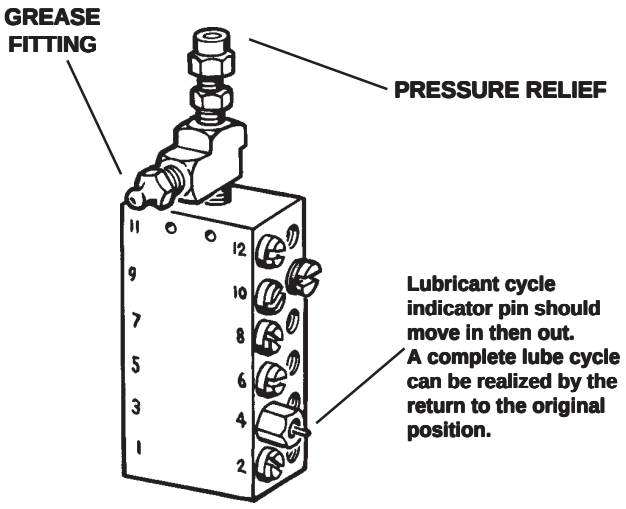



**Figure 6. Divider Valve**

## TROUBLESHOOTING©

| SYMPTOM | PROBLEM CAUSE | SOLUTION |
|---|---|---|
| 1. Lever gun can be pumped but there is little resistance and indicator pin does not cycle. | Grease gun has lost prime or has run out of grease. | Fill the grease gun with proper lubricant and re-prime. |
| 2. Lever gun can be pumped but only with great force. | Operating temperature for the grease is too low requiring higher pressure to flow the grease. | Use a more flowable grease or lubricate the metering valve at a high temperature. |
| 3. Burst rupture disc. | Tubing may be blocked or bearing inlet obstructed. | Disconnect one tube at a time from the metering valve. The outlet adapter which flows grease when disconnected is the blocked outlet. Trace this line and discover the cause of the blockage. Repair blockage or remove obstruction.* |
| | Divider valve piston stalled | Replace divider valve.* |

*After correcting problem replace burst rupture disc with part #69813-10

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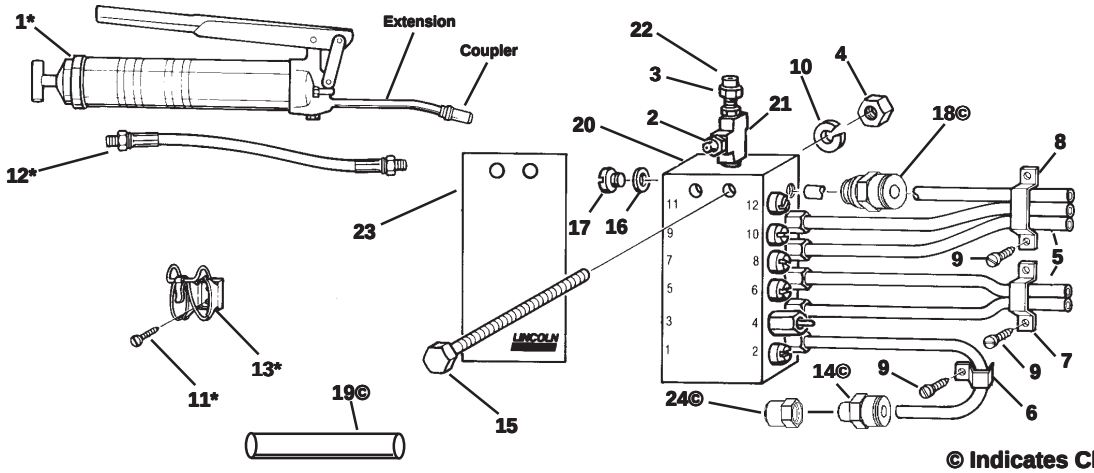


## PARTS LIST

| Item No. | Part No. | Qty. | Description | Item No. | Part No. | Qty. | Description |
|---|---|---|---|---|---|---|---|
| 1 | *1142 | 1 | Grease gun | 12 | *71512 | 1 | Hose |
| 2 | 5000 | 1 | Grease fitting | 13 | *82760 | 1 | Holster clamp |
| 3 | 87019-14 | 1 | Relief Valve | 14 | 244047 | 12 | 1/4" tube Quicklinc coupler© |
| 4 | 51100 | 2 | Hex nut | 15 | 241880 | 2 | Self-tapping screw (1-1/2" long) |
| 5 | **242050 | 2 | 50' 1/4" O.D. grease filled nylon tube | 16 | 209121582 | 10 | Gasket |
| | ***62357 | 1 | 100' 1/4" O.D. unfilled nylon tube | 17 | 303174992 | 10 | Closure plug |
| 6 | 64533-1 | 12 | Tubing clamp (one tube) | 18 | 244884 | 12 | Outlet Adapter© |
| 7 | 64533-2 | 4 | Tubing clamp (two tube) | 19 | 250475 | 11 | Staking Tool© |
| 8 | 64533-3 | 4 | Tubing clamp (three tube) | 20 | (Note #2) | 1 | Divider valve |
| 9 | 66202 | 30 | Mounting screw | 21 | 67448 | 1 | 1/8" NPT street tee |
| 10 | 66213 | 2 | Lockwasher | 22 | 69813-10 | 6 | Rupture disc (Pkg of 10) |
| 11 | *66962 | 2 | Self-tapping screw (5/16" long) | 23 | (Note #2) | 1 | Drill template |
| | | | | 24 | 247340 | 12 | Zerk-Lock Fitting Assembly© |

*Supplied in the 87411 and 87412 Kits only. **Supplied in the 87312 and 87412 Kits only. ***Supplied in the 87311 and 87411 Kits only.

**NOTES:**

1. The grease used to fill tubing is Lithium Hydroxysterate thickened Shell ALVANIA® NLGI Grade 2. Material Safety Data Sheets (MSDS) can be obtained from Lincoln Technical Services upon request at (314) 679-4200, Ext. 782.
2. Not available as a service item.

## SPECIFICATION FOR MOUNTING SCREWS

| Part No. | Thread | Drill Size Dia. | Depth | Type Connection |
|---|---|---|---|---|
| 241880 | #10-24 | 13/64" (.203") | Through | Nut & Lockwasher |
| 241880 | #10-24 Self Tapping | #17 (.173") | 5/8" | Self Tapping |
| 66202 | #6 Type B | #30 (.1285") | 3/8" | Self Tapping |
| 66962 | #10-32 Self Tapping | #16 (.177") | 7/16" | Self Tapping |

**NOTE:** 241880 Mounting Screw may be used as a self-tapping screw or with supplied nut and lockwasher.

## LIMITED WARRANTY

LINCOLN, a division of McNeil (Ohio) Corp., a subsidiary of Pentair, Inc., warrants that lubrication equipment, materials dispensing equipment, and other related equipment manufactured by it will be free from defects in materials and workmanship during the one (1) year following the date of purchase. If equipment proves to be defective during this warranty period, it will be repaired or replaced without charge, provided the factory examination indicates the equipment to be defective. To obtain repair or replacement it must be shipped, 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. This warranty 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 to lubrication equipment, materials dispensing equipment, and other related equipment manufactured by Lincoln

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