Mobile Chassis Lubrication Systems

"My job is to make sure our systems are installed correctly and our technicians are properly trained because our customers deserve the very best value for their investment."

Wendell Robinson, Lincoln Industrial Application Specialist

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People, Capabilities and Systems to Save Money and Increase Productivity

We're the largest and most successful company in our field because we continually satisfy our customers with the world's best lubrication and pumping systems. For almost 90 years, companies have relied on our technical and quality leadership, our world-class manufacturing and customer service, and our vast network of distributors and support facilities.

Lincoln Industrial develops new products and systems at research and development facilities in the U.S., Germany and India that provide global and regional application solutions.

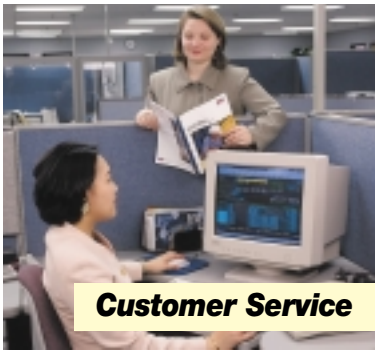
We have solutions for large processing plants, automotive manufacturing, pulp and paper mills, and food and beverage facilities. Virtually every industrial professional involved in operations and maintenance can benefit from Lincoln Industrial systems.

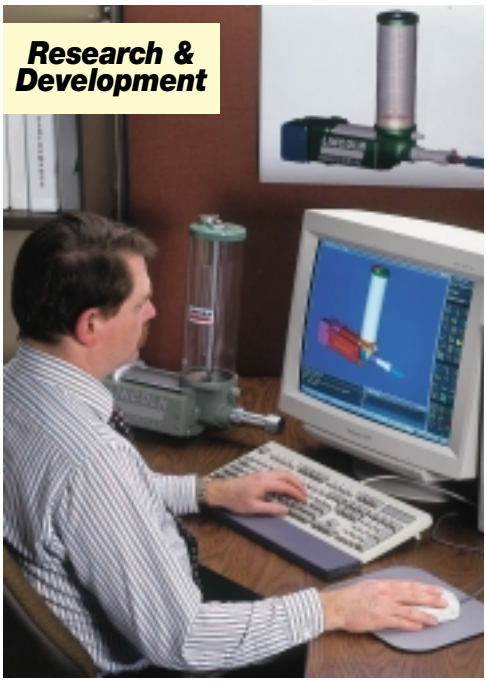
On the road or in the field, Lincoln Industrial protects heavy equipment used in mining, construction, agriculture and over-the-road trucking. The world's leading manufacturers offer our systems as standard equipment or factory options.

Lincoln Industrial builds precision metal components, state-of-the-art electronic controls, and the industry's top-performing pump systems. Our quality systems in the United States and Germany are ISO 9001 registered.

With five technical support centers on three continents, and a network of systems houses and distributors supported by regional sales and service offices, our customers can always draw on our worldwide resources.

To make sure your investment results in significant savings, Lincoln Industrial developed a unique program called BearingSaver®. You not only get a complete audit of your facility, you also receive an analysis of your return on investment.





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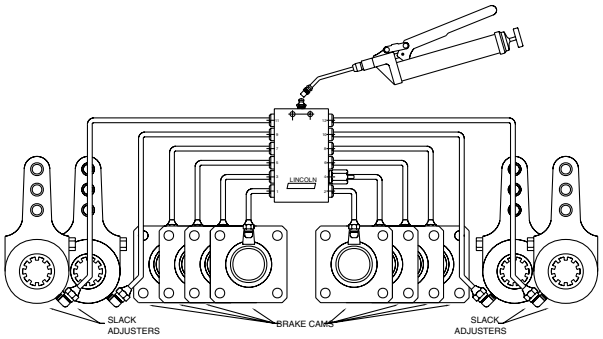
Quicklub® Automated Lubrication System

The Lincoln Industrial Quicklub system is designed to provide a relatively simple and inexpensive method of centralizing or automating the lubrication of many types of on-road and off-road mobile equipment, including construction and agricultural machinery.

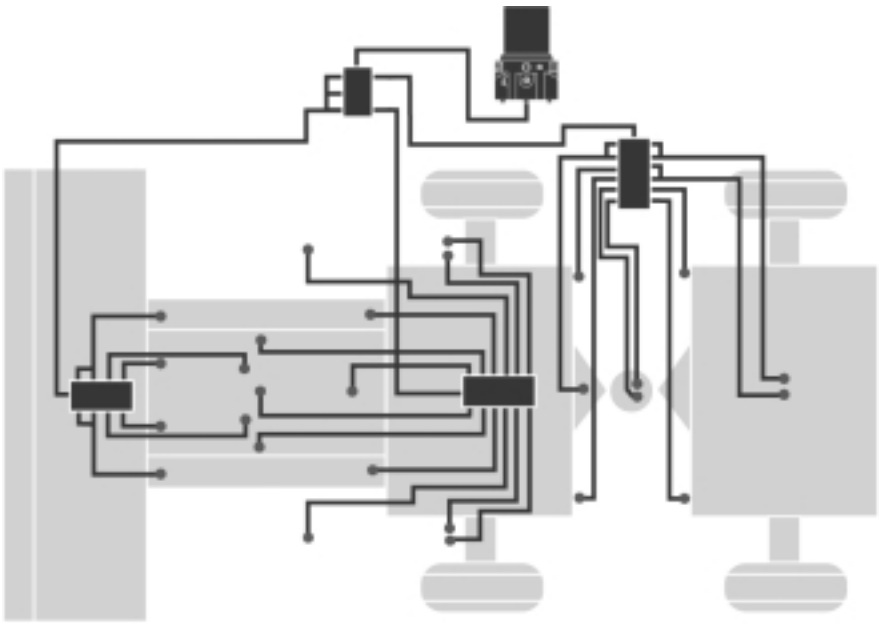
Quicklub can be a simple, centralized system with lubricant supplied manually from a lever gun. Pre-assembled kits are available to service up to 12 points from a single grease fitting. Custom kits can also be provided by our distributors to cover virtually any quantity of points desired.

Quicklub® lubrication method
A Quicklub® centralized lubrication system typically dispenses measured amounts of lubricant to each Slack Adjuster and Brake Cam. Even those hard to reach are assured of being properly lubricated and purged of contaminants.



System Operation
1. The lubricant is delivered to the divider valves through a hand or air-operated grease gun.
2. The divider valve dispenses lubricant in measured amounts directly to each Brake Cam and Slack Adjuster through the feed-lines. Visual indication of cycle pin assures that all points are lubricated.

Quicklub can also be a fully automated system with lubricant supplied by our 12 and 24VDC electric pumps. An automated lubrication system typically dispenses small measured amounts of lubricant at frequent intervals while mobile equipment is operating. The electric pumps incorporate an integrated timer for easy installation and trouble-free operation.



There are many mobile equipment and O.E.M. machinery applications for which Quicklub systems have proven to be the right solution to eliminating costly, manual point-by-point lubrication. Examples include:

- Over-the-road tractors
- Single-axle trailers
- Tandem-axle trailers
- Tri-axle trailers
- Yard tractors
- Trucks of all types
- Refuse haulers
- Wheel loaders
- Hydraulic excavators
- Motor graders
- Backhoe loaders
- Hydraulic hammers
- Street sweepers
- Road and highway paving equipment

The heart of the Quicklub® system

More than a drilled manifold block, the valve incorporates a series of metering pistons which accurately dispense lubricant from each outlet, overcoming back pressure of up to 1,000 psi. Visual monitoring is provided with an indicator pin, which confirms a complete cycle of the valve.

Figure 1

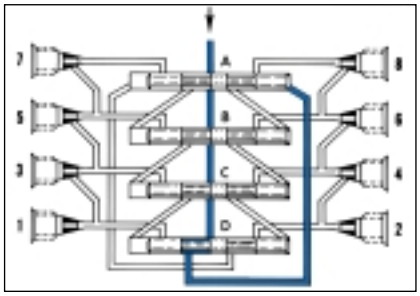


Figure 2

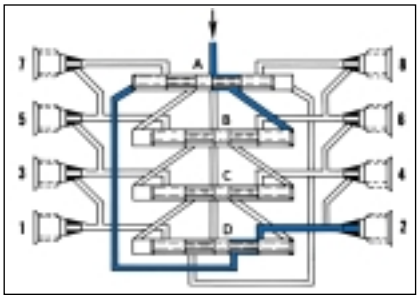


Figure 3

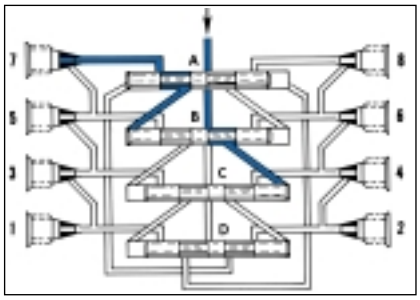
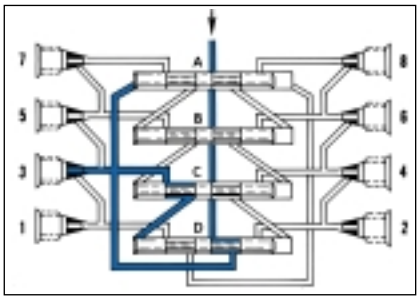


Figure 4



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 lubricant through connecting passages to outlet 2. Flow is then directed against right side of piston B (fig 2).
- Piston B shifts from right to left dispensing lubricant through outlet 7. Lubricant flow is directed against right side of piston C (fig 3).
- Piston C shifts from right to left dispensing lubricant through outlet 5. Lubricant flow is directed against right side of piston D.
- Piston D shifts from right to left, dispensing through outlet 3. Piston D shift directs lubricant through connecting passage to the left side of piston A (fig. 4).

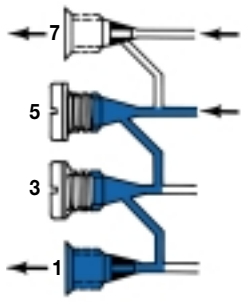
Lubricant flow against left side of piston A begins the second half-cycle which shifts pistons from left to right, dispensing lubricant through outlets 1,8,6 and 4 of the divider valve.

Crossporting a divider valve

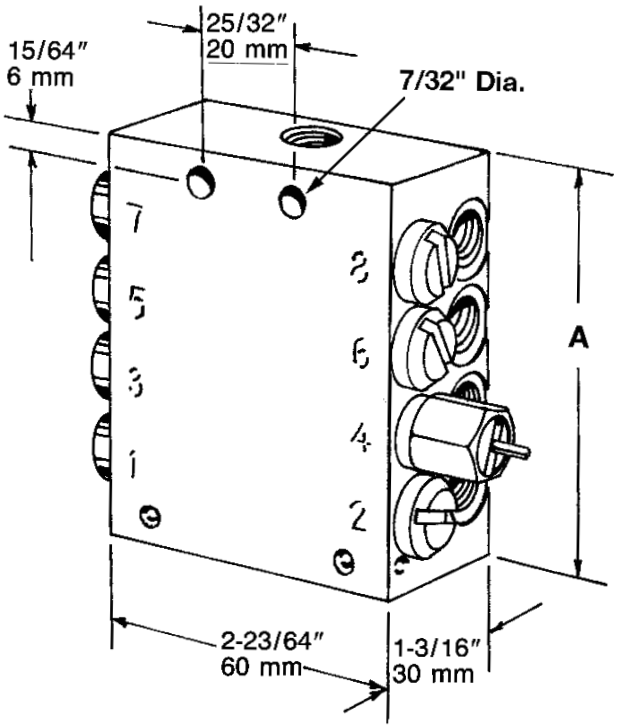
Outputs from adjacent outlets may be combined by installing a closure plug in one or more outlets. Lubricant from a plugged outlet is redirected to the next adjacent outlet in descending numerical order. Outlets 1 and 2 must not be plugged since they have no crossport passage to the next adjacent outlet.

In figure 5, outlets 5 and 3 are crossported 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 crossport passage so that lubricant flow is directed through outlets.

Figure 5



SSV Divider Valves



The SSV Divider Valve is the “heart” of a manual or automated Quicklub® system. Featuring from 6 to 18 outlets, valves are available with cycle indicator pins to provide visual indication of system operation.

Specifications:

Construction Material	Maximum Operating Pressure	Output/Cycle per Outlet	Lubricant Inlet
Carbon Steel	4350 psig / 300 bar	.012 cu. in. / .2 cc	⅛" NPTF(F)

Notes:
Lubricant outlet must use Lincoln Industrial Quicklub fittings.

Model No. Carbon Steel	Max. No. of Outlets	Cycle Indicator Pin	Dimension A	
			in.	mm
619271211	6	No	2.36	60
619271221		Yes		
619263962	8	No	2.95	75
619266462		Yes		
619268441	10	No	3.54	90
619268452		Yes		
619263982	12	No	4.14	105
619266482		Yes		
619272921	18	Yes	6.50	165

Note:
You must use outlets 1 and 2 for each of the above referenced models in order for the system to operate properly with the exception of Model 619272921, which requires utilization of outlets 17 and 18.

SSV Divider Valve Accessories

Part Number	Description
249010	Cycle switch for providing feedback monitoring for SSV systems

Note:
Cycle switch can only be used with SSV Series Quicklub valves that have indicator pins. Remove slotted plug from indicator assembly on valve prior to installing switch.

Electric Grease Pumps

Supply up to NLGI #2 grease (depending on temperature) to divider valves.
Note: Customer must furnish a 12 or 24 volt D.C. power source.

General Specifications:

Output/Min Per Element:**	.171 cu. in.	2.8 cc
Lubricant Outlet:	⅛" NPT (F)	
Max. System Operating Pressure:	3600 psig	248 bar
Enclosure Rating:	IP54*	
Operating Temperature Range:	Min. -13°F Max. 158°F	-25°C 70°C
Reservoir Fill Method:	By grease fitting	
Pressure Relief Valve:	4000 psi, +/- 250	276 bar, +/- 17

* Protected from water sprayed in all directions.
** Single 6mm element standard; to increase pump output, add one or two additional element(s) #600268762 and relief valve #249567.

Model Specifications:

Model No.	Electrical Requirements	Interval Timer Setting				Reservoir Capacity		
		On Time (2 minute increments)		Off Time (1 hour increment)		lb.	kg.	liter
		Min	Max	Min	Max			
94012	12 VDC 3.5 Amps	2 minutes	30 minutes	1 hour	15 hours	4	1.8	two
94412						8	3.6	four
94812						16	7.2	eight
94024	24 VDC 2 Amp					4	1.8	two
94424						8	3.6	four
94824						16	7.2	eight

Model 249567 Pressure Relief Valve

Designed to protect supply lines in instances of high pressure caused by a blocked component inlet or extremely cold temperatures. The valve assembly consists of a pressure relief valve, a grease fitting for manual servicing of the system and an 1/8" NPT female supply line connection.

Pump Elements

Model No.	Piston Diameter	Lubricant Output	Max. Operating Pressure	Connection Thread
600268752	5 mm	.122 in^3/min / 2 cm^3/min	5000 psi 350 bar	G 1/4"
600268762	6 mm	.171 in^3/min / 2.8 cm^3/min		
600268772	7 mm	.244 in^3/min / 4 cm^3/min		
*600287501				

* Special hammer paste element for electric grease pumps to be used for applications on hydraulic hammers.

Pump Reservoir Conversion Kits & Accessories

Part Number	Description
544320221	4 liter conversion kit
544320231	8 liter conversion kit
226141055	Outlet adapter for 4 & 8 liter pump models
246322	Remote push button manual lube kit
*241419	12 VDC illuminated manual switch
*241484	24 VDC illuminated manual switch

* To be used with #246322 remote push button manual lube kit

Standard Compression Fittings for Steel or Nylon Tubing

Part No.	Description
241290	¼" tube x ⅛" NPT male straight fitting
241293	¼" tube x ⅛" NPT male 90° fitting

Quicklinc® Push-In Style Fittings for Nylon Tubing

Part No.	Description
244047	¼" tube x ⅛" NPT male straight fitting
244048	¼" tube x ⅛" NPT male 90° fitting
243699	¼" tube x ⅛" NPT male 90° swivel fitting
244054	¼" tube x ¼ - 28 male straight fitting
244055	¼" tube x ¼ - 28 male 90° fitting
244056	¼" tube x 6 mm male 90° fitting
244057	¼" tube x 6 mm straight fitting
244058	¼" tube x ¼" tube splicer union

Divider Valve Outlet Adapters Without Check Valves

Quicklub® adapters without check valves are for use in manual systems where lubricant is supplied from hand grease guns or pneumatic powered lever guns. Quicklub® adapters with check valves are for use in all automated systems.

Divider Valve Outlet Adapters for ¼" O.D. Steel or Nylon Tubing Compression Style With Check Valve

Part No.	Description
68462	Ferrule ¼"
402226021	Compression nut
504316063	Check valve body
404225812	Clamping ring

Divider Valve Outlet Adapters for ¼" O.D. Steel or Nylon Tubing Compression Style Without Check Valve

Model	Description
404202364	Comp. Nut
404236681	Comp. Nut
404225812	Ferrule

Divider Valve Outlet Adapters for ¼" O.D. Nylon Tubing Quicklinc® Push-In Style

Part No.	Description
244883	Valve outlet fitting with check
244884	Valve outlet fitting without check

Divider Valve Outlet Adapters for ⅛" I.D. Hose

Part No.	Description
404225812	Clamping ring
239857	Valve outlet adapter with check
239959	Valve outlet adapter without check

Divider Valve Mounting Accessories

Part No.	Description
246416	Valve mounting bracket
51304	¼" nylon locknut for valve mounting
247023	Grade 8, ¼" valve mounting bolt
239499	Template for divider valve mounting (6,8, 10 and 12 outlet valves)
241233	Template for 18 outlet (model 619272921) valve

Divider Valve Outlet Closure Plugs & Gaskets

Part No.	Description
209121582	Valve outlet closure plug gasket
303174992	Valve outlet closure plug

Supply and Feed Line Hose

Min. Burst	Lube Working Pressure	Nominal Size		Minimum Bending Radius	Construction
		I.D.	O.D.		
10,000 psig 690 bar	4000 psig 276 bar	⅛"	5⁄16"	3½"	Nylon Tube Dacron Braid Polyurethane Cover

Part No.	Description
241285	2 ft. (.61m) coil grease filled
241286	26 ft. (7.92m) coil grease filled
241287	35 ft. (10.66m) coil grease filled
241288	40 ft. (12.19m) coil grease filled
252717	200 ft (60.96m) coil non-grease filled

Hose Ends for ⅛" I.D. Hose

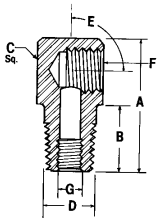
Part No.	Description
241289	⅛" NPT swedge on hose stud (requires swedging tool)
246002	⅛" NPT field installable hose coupling (swedging tool not required)

Feed Line Nylon Tubing

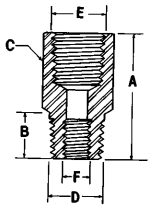
O.D. Inches	Wall Thickness In. / mm	Working Pressure		Minimum Bending in / mm
		psig	bar	
¼"	.050 / 1.27	625	42.5	.875 / 22.2

Part No.	Description
242025	25 ft. (7.62m) coil grease filled
242050	50 ft. (15.24m) coil grease filled
62357	100 ft. (30.48m) coil non-grease filled
247022	500 ft. (152.40m) coil non-grease filled


Style 1 Style 2




Style 3

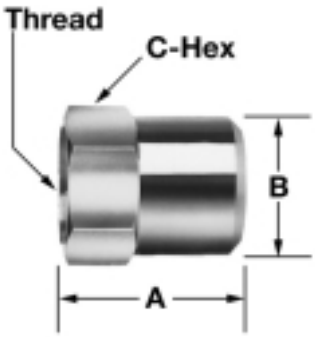


Pipe Thread Adapters

Model No.	Style	A	B	C	D	E	F	G
13154	3	7/8	3/8	1/2 sq.	1/8 NPSM	1/8 NPTF	1/4-28 UNF	
13155	1	1	3/8	1/2 sq.	1/8 NPSM	90°	1/8 NPTF	1/4-28 UNF
14054	3	7/8	7/16	1/2 sq.	1/8 NPSM	1/8 NPTF	1/4-28 UNF	
20024	3	7/8	5/16	1/2 hex	1/4-28 Taper	1/8 NPSF		
20026	1	13/16	5/16	1/2 sq.	1/4-28 Taper	90°	1/8 PTF	
20028	2	1	15/32	1/2 sq.	1/8 PTF	45°	1/8 PTF	
20029	1	1	15/32	1/2 sq.	1/8 PTF	90°	1/8 PTF	

Metric Adapters

Model No.	Description
20042	6 mm male x 1/8" NPSF female straight
20043	6 mm male x 1/8" NPSF female 90°
244201	1/8" BSPT male x 1/8" NPT female thread



Zerk-Lock™ Grease Fitting Adapter

Connects any 1/8" NPTF male tube adapter directly to a standard grease fitting. Aluminum, carbon steel construction; fluorocarbon elastomer seal.

Model No.	Thread	Dimensions					
		A		B		C-Hex	
		in.	mm	in.	mm	in.	mm
247340	1/8" NPSL Female	.625	15.9	.500	12.7	.500	12.7

Note:
Zerk-Lock, with a straight female thread, is designed to accept a tube connector with a tapered male thread. This tapered to straight thread engagement is required for secure seal.

Grease Fittings

Part No.	Description
5010	1/4" - 28 taper threaded straight fitting
5045	1/8" NPT threaded straight leakproof fitting
5050	1/4" PTF special extra short straight fitting
5200	1/8" PTF special short 45° fitting
5300	1/8" PTF special short 65° fitting
5400	1/8" PTF special short 90° fitting
5410	1/4" - 28 taper threaded 90° fitting
5701	1/8" PTF special short straight buttonhead fitting
242125	Plastic grease fitting cap

Swivels

Part No.	Description
91048	⅛" NPT male x ⅛" NPT female 90° swivel
91308	⅛" NPT male x ⅛" NPT female straight swivel

Adapter Unions and Locknuts

Part No.	Description
66649	⅛" NPT male x ⅛" NPT female swivel adapter union
51055	⅛" NPSM locknut utilized for remote ⅛" I.D. hose bulkhead connections

Installation/Assembly Tools

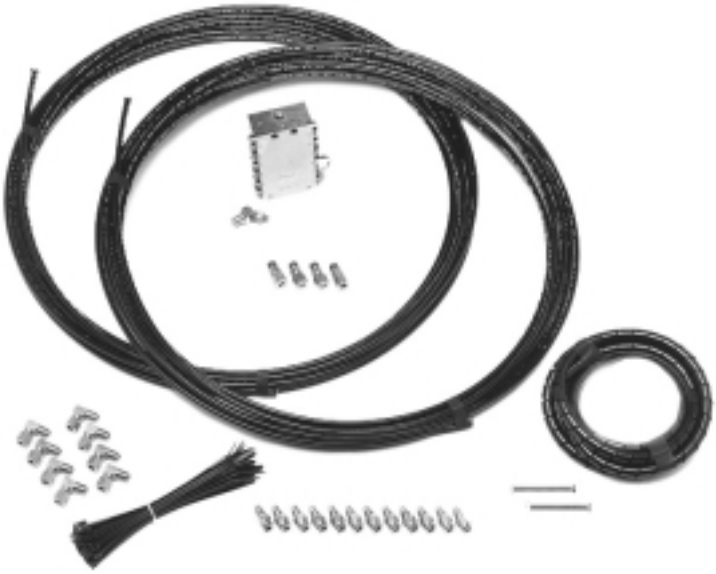
Part No.	Description
241237	Plastic tube and hose cutter
241238	Swedging tool for field installation of Model 241289
241239	QL screwdriver

System Finishing Accessories

Part No.	Description
241110	Feed line bundling spiral wrap (10 ft. (3m) length)
241054	Nylon ties (100 count poly bag)
241055	Nylon ties (50 count poly bag)

Trailer Kits—Unassembled

Model No.	Description
239406	6 point manual QL kit
239408	8 point manual QL kit
239410	10 point manual QL kit
239412	12 point manual QL kit
239418	18 point manual QL kit
247519	5 point manual QL kit—landing gear
247619	4 point manual QL kit—landing gear



Trailer Kits—Preassembled

Model No.	Description
244506	6 point manual QL kit—single axle
244512	12 point manual QL kit—tandem axle

Note: Above referenced kits require purchase of electric grease pump (see Pump section of this catalog) when fully automated system is desired.

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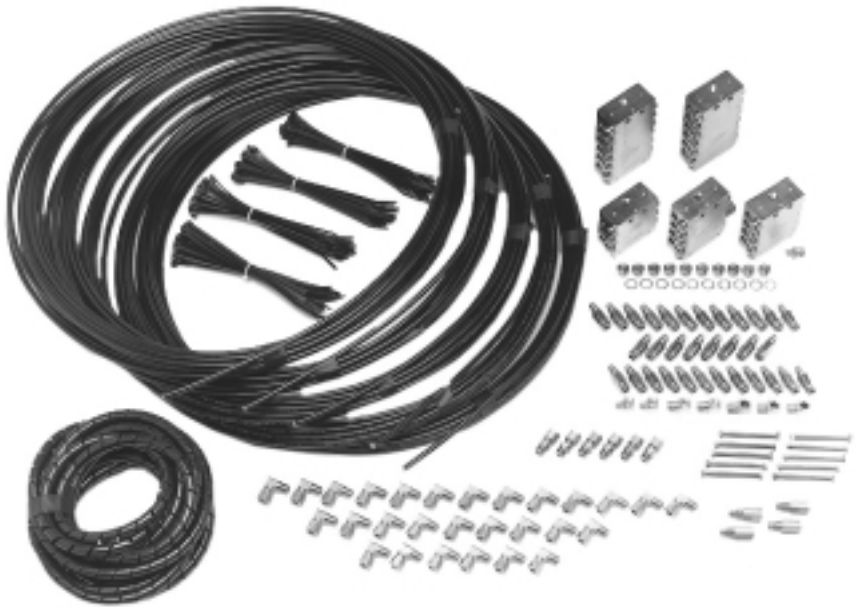
Tractor/Truck/Construction Kits
Unassembled Manual Kits

Model No.	Description
241316	16 point manual QL kit
241324	24 point manual QL kit
241328	28 point manual QL kit
241332	32 point manual QL kit



Preassembled Manual Kits

Model No.	Description
247232	32 point manual preassembled kit

Note: Above referenced kits require purchase of electric grease pump (see Pump section of this catalog) when fully automated system is desired.

Unassembled Auto QL Kit (12 VDC Pump)

Model No.	Description
241116	16 point auto QL kit
241124	24 point auto QL kit
241128	28 point auto QL kit
241132	32 point auto QL kit

Unassembled Auto QL Kit (24 VDC Pump)

Model No.	Description
242016	16 point auto QL kit
242024	24 point auto QL kit
242028	28 point auto QL kit
242032	32 point auto QL kit

Note: Above referenced models include either a 12 VDC or 24VDC electric grease pump which is boxed separately.

Numerical Index

A Complete Line of Lubrication Solutions and Industrial Pumping Products

Automated Lubrication

Our automated systems dispense measured amounts of lubricant at predetermined intervals. Systems include Helios® and Duo-Matic™ two-line systems, and Centro-Matic®, Modular Lube®, Quicklub® and ORSCO precision oil lubrication. With our BearingSaver® program, we find the best automated solution for you from our wide range of systems for grease, fluid grease and oil.

General Lubrication

Sometimes a simple approach is the best solution. Our wide range of products includes smaller, self-contained automated lubricators and general lubrication equipment.

Industrial Pumping

Lincoln Industrial has developed specialized pumps and pumping stations to handle the difficult job of transferring thick fluids. From the industry-best PileDriver III® and PowerMaster III® pumps and air motors to specialty pumps, controls and mounting accessories, Lincoln Industrial is the preferred pumping system for many tough applications.

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Lincoln Industrial's global distribution network is the best in the industry.

Whatever the service—evaluating your lubrication methods, installing a custom-engineered system, or supplying top-quality centralized or automated lubrication products—your Lincoln Industrial mobile chassis distributor makes certain you always get the very best value.

Mobile Chassis Distributors

Our mobile chassis distributors offer the highest level of expertise available in the industry. They can survey and then custom design a specific bill of material of Lincoln Industrial components for virtually any on-road or off-road equipment application. Then, they can either install the system, using their trained technicians or work with your personnel to insure the job is done correctly.

Each distributor maintains a full inventory of our chassis lube products including electric pumps, metering valves, accessory items along with both unassembled and preassembled kits suitable for virtually any mobile equipment application. From Los Angeles to London, Boston to Bangkok, Lincoln Industrial's mobile chassis distributors are recognized by the industry for their expertise and full service capabilities. You can also be assured they will be available to serve you when and where they are needed.

For the nearest authorized Lincoln Industrial mobile chassis sales and service representative, call:

Americas:	**Europe/Africa:**	**Asia/Pacific:**
St. Louis, Missouri	Walldorf, Germany	Singapore
314-679-4200	49-6227-33-0	65-5627960
Fax: 800-424-5359	Fax: 49-6227-33-259	Fax: 65-5629967

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