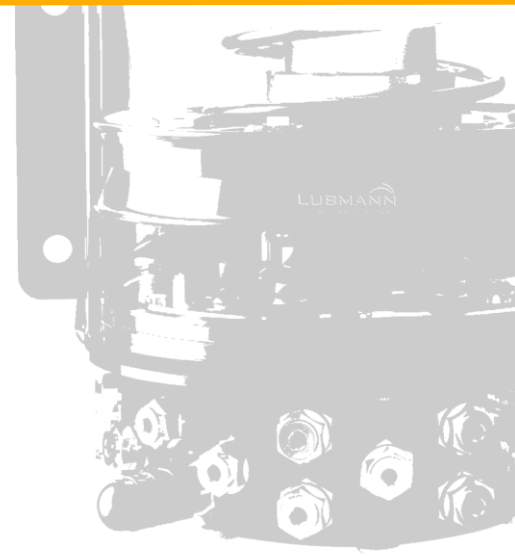


Application of CLS for Commercial Vehicle





Navigation

Introduction

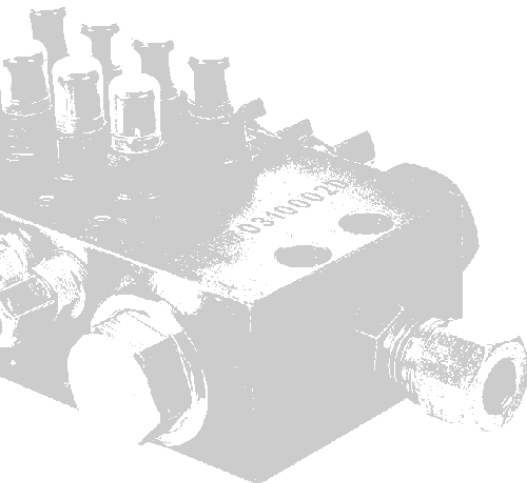
System Overview

Overview for Commercial Vehicle Application

CLS Solutions for Commercial Vehicle

Show Cases

Grease Gun/Grease Refilling Device



Introduction - Brands

Lubmann

Lubmann belongs to AUTOL Group, which locates in Duisburg, Germany since 2015 and provides you the world's leading lubrication equipment made in Germany – from manual greasing devices and tools to Automatic Lubrication Systems.



AUTOL

AUTOL is an Automatic Lubrication System Solution supplier which established in 2005 in Zhengzhou, China and provides a lot of world class's equipment/machinery manufacturers the high-performance lubrication solutions.



AUTOL Group

Both AUTOL and Lubmann systems are available through our global network of lubrication experts, offering you world-class installation and ongoing support on a local level – today and into the future. With the power of this network, and more than 200 years of combined friction management experience, we can help you improve machine reliability, reduce maintenance, increase productivity, enhance safety and optimize manpower resources.



In this document, we present the contents only for Lubmann products, including specifications, order information and so on. Any information from AUTOL products please ask your local AUTOL/Lubmann dealer.

Introduction - General Knowledge of Automatic Lubrication System

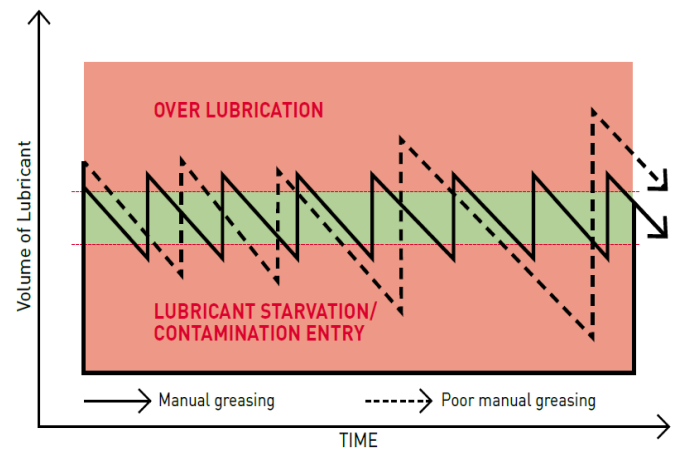
Manual Lubrication

- **Interval:** long and irregular.
- **Grease used:** too much per time and easy to degrade.
- **Friction pairs:** either grease excess or grease starvation.
- **Manual labor:** intensive and uncontrollable.
- **External dirt:** easy to enter lube points.
- **Operation time:** machines stop.
- **Point location:** some are not easy to access.

Results

- **Components' life:** greatly shortened.
- **Downtime:** unavoidable.
- **Environment:** polluted for excess grease.
- **Lubrication effect:** no guarantee.

Manual Greasing



Automatic Lubrication

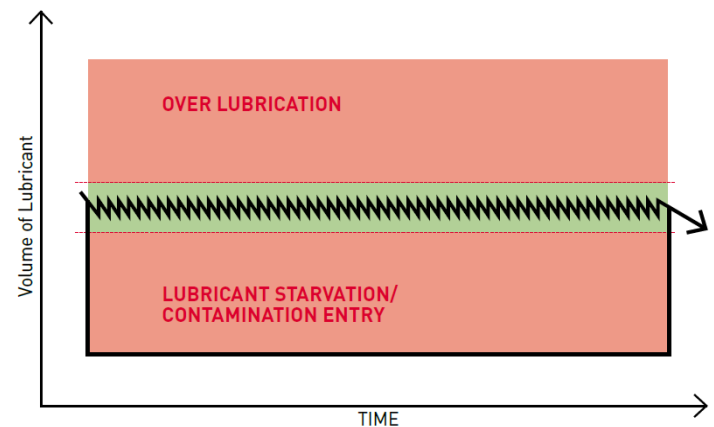
- **Interval:** short and regular.
- **Grease used:** as required every time, fresh and clean.
- **Friction pairs :** under adequate grease condition.
- **Manual labor:** save 95%, and actual effect is guaranteed.
- **External dirt:** a closed system, no dirt entrance.
- **Operation time:** the machine is running.
- **Point location:** regardless of location or ease of access

Results

- **Components' life:** greatly extended.
- **Downtime:** greatly reduced
- **Environment:** protected.
- **Lubrication effect:** guarantee.
- **Investment:** returned quickly

Save time, save grease, save labor, reduce maintenance cost.

Automatic Greasing



System Overview - Progressive

The progressive centralized lubrication system connects all levels of distributor (main block, secondary blocks) in turn by lubricating pump, conveys the grease to each lubricating point parallelly, and lubricates the friction pair.

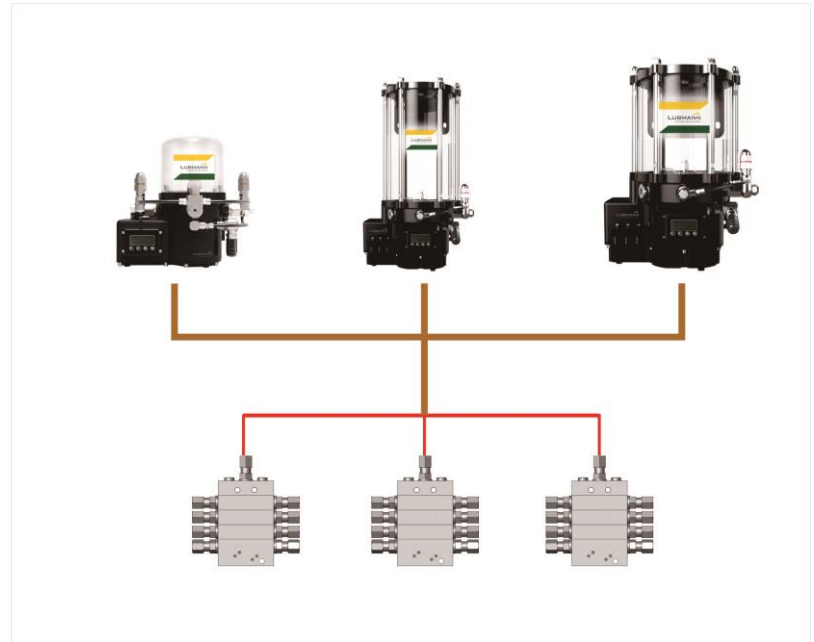
Components

Standard:

- Piston pump: 1 piece (Progressive, Plunger)
- Primary distributor: 1 piece (Block Type/Progressive)
- Secondary distributor: Optional (Block Type/Progressive)
- Monitor: Integrated in Pump/External

Optional:

- Indicator Rod
- Grease Level Sensor
- Pressure Sensor
- Flowrate Sensor



Accessories: Hoses and Fittings for connecting the whole system

Product	Function Principle	Grease Thickness till	Metering Quantity per Pump Element	Reservoir	Operating Max. Pressure	Operating Max. Pressure	Power Supply	Max. Pump Elements
			ml/Min		in bar	in psi		
LEP	Piston Pump/Paddle Mode	Up to 2	1.5-4.5	1-2	350 bar	5075	12/24 V DC 220V AC	3
LRMP	Piston Pump/Paddle Mode	Up to 2	1.5-4.5	2-8	350 bar	5075	12/24 V DC 220V AC	3
LRBP	Piston Pump/Paddle Mode	Up to 2	1.5-4.5	4-20	350 bar	5075	12/24 V DC 220V AC	4
LIGP	Piston Pump	Up to 2	400	60/100	400 bar	5800	220/380 AC	1
LIMP	Piston Pump/Spring Mode	Up to 2	1.5-4.5	2-8	350 bar	5075	12/24 V DC 220V AC	3
LIBP	Piston Pump/Spring Mode	Up to 2	1.5-4.5	4-20	350 bar	5075	12/24 V DC 220V AC	4

System Overview – Pressurized Single Line (Oil/Fluid Grease)

Grease pump delivers grease alternatively into each lube points through progressive distributors.

Components

Standard:

Piston pump: 1 piece (Single Line, Gear)

Pressurized Single Line Distributor:

X pieces in Series

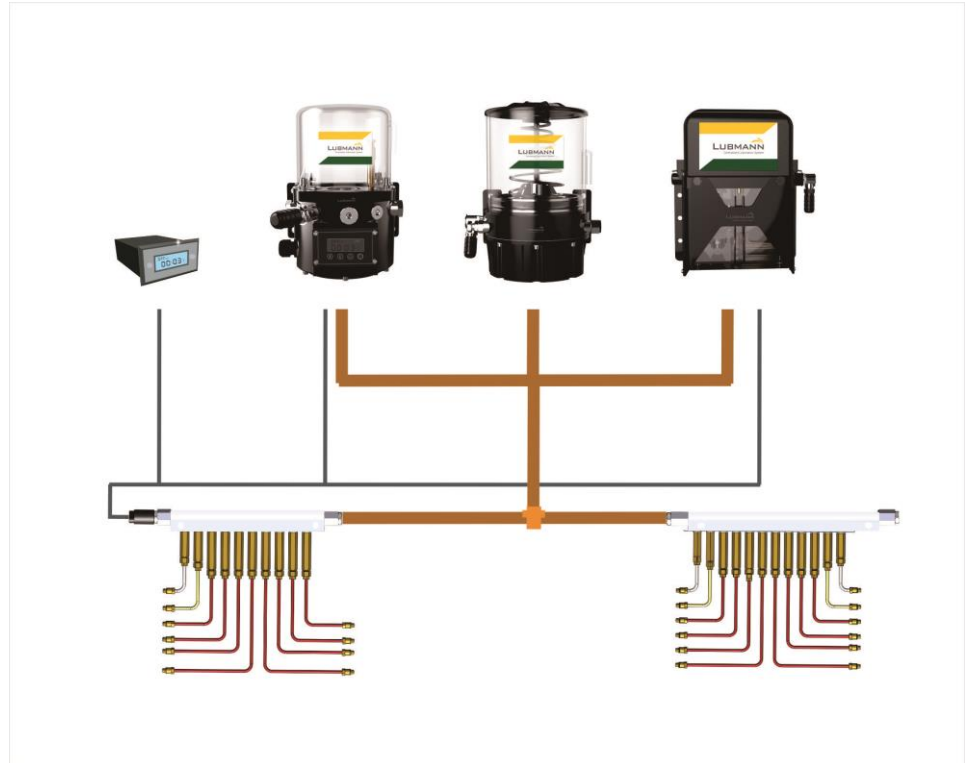
Optional:

Grease Level Sensor

Pressure Sensor

Flowrate Sensor

Monitor: Optional/External



Accessories:

Hoses and Fittings for connecting the whole system

Product	Function Principle	Grease Thickness till	Metering Quantity per Pump Element	Reservoir	Operating Max. Pressure	Operating Max. Pressure	Power Supply	Max. Pump Elements
			ml/Min		in bar	in psi		
LFS-1	Gear Pump/Paddle Mode	Up to 0	90	1	40 bar	751	12/24 V DC 220V AC	1
LFS-2	Gear Pump/Paddle Mode	Up to 0	55	2	63 bar	923	12/24 V DC 220V AC	1
LFS-3	Gear Pump/Spring Mode	Up to 0	120	2.8	40 bar	751	12/24 V DC 220V AC	1

Overview of Commercial Vehicle Application



CLS Solutions for Commercial Vehicle



Garbage Compression Vehicle



Concrete Mixer



Knuckle Boom Crane



Trailer



CityBus



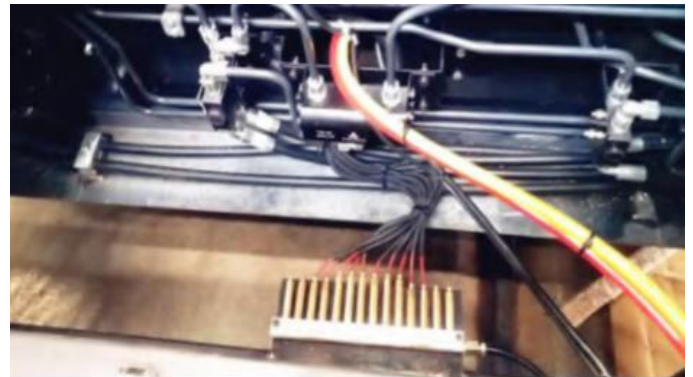
Coach

Type of Bearing	Remarks	Extra Components Recommended
Garbage Compression Vehicle	Compact Solu.: LFS Serie Pump+ LRK-SLA Blocks, High Perf.: LRMP Serie Pump + LR-VPKA Blocks.	Grease Level Sensor / Pressure Sensor / Indicator Rod
Concrete Mixer	Compact Solu.: LFS Serie Pump+ LRK-SLA Blocks, High Perf.: LRMP Serie Pump + LR-VPKA Blocks.	Grease Level Sensor / Pressure Sensor / Indicator Rod
Knuckle Boom Crane	Compact Solu.: LRMP Serie Pump + LR-VPKA Blocks. High Perf.: LID Serie Pump + Mixed Blocks.	Grease Level Sensor / Pressure Sensor / Indicator Rod / Manual or Electrical Grease Refilling Device
Trailer	Compact Solu.: LRMP Serie Pump + LR-VPKA Blocks. High Perf.: LID Serie Pump + Mixed Blocks.	Grease Level Sensor / Pressure Sensor / Indicator Rod
CityBus/Coach	Compact Solu.: LFS Serie Pump+ LRK-SLA Blocks, High Perf.: LRMP Serie Pump + LR-VPKA Blocks.	Grease Level Sensor / Pressure Sensor / Indicator Rod

Show Cases - Commercial Vehicle Application

CLS for Trailer

Manufacturer: FAW/BQ FOTON
Equipment: /
Installation Date: 2018.06
Lubrication System: Pressurized Single Line System
Pump: LFS2
Block: LRK-SLA



CLS for Garbage Compression Vehicle

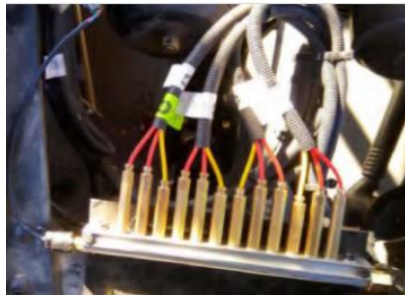
Manufacturer: Yutong
Wind turbine: YT-GCV
Installation Date: 2017.06
Lubrication System: Single Line System
Pump: LIMS 2 Liter
Block: LR-SLA



Show Cases - Commercial Vehicle Application

CLS for Heavy Duty Truck (Concrete Mixer/Dumper/Mucker/)

Manufacturer: Sunhunk
Equipment: /
Installation Date: 2017.02
Lubrication System: Pressurized Single Line
Pump: LFS3 (External Monitor)
Block: LRK-SLA



CLS for CityBus/Coach

Manufacturer: Yutong
Wind turbine: YT
Installation Date: 2017.10
Lubrication System: Pressurized Single Line
Pump: LFS3 (External Monitor)
Block: LRK-SLA



Grease Gun/Grease Refilling Device

Grease Gun (Portable Grease Device)

Product Model (Ordering Codes)	Working Principle	Grease	Operating Pressure Max.	Discharge Max.		Reservoir	Attached Accessories
		NLGI	Mpa	ml/Min	ml/Stroke	cc	
AMG1000	Manual	Up to 2	10		2	500	Nipple, Hose
AMG2000	Manual		10		2	500	Nipple, Hose
AMG3000	Manual		10		500 (only for CLS pump)	500	Nipple, Hose
APG1000	Pneumatic		6-8	70		600	Nipple, Hose
APG2000	Pneumatic		6-8	70		400	Nipple, Hose, one rechargeable cartridge
AEG1012	Electrical		45	60		500	Nipple, Hose, Battery
AEG1018	Electrical		57.5	70		500	Nipple, Hose, Battery
AEG1024	Electrical		70	80		500	Nipple, Hose, Battery

Grease Refilling Device (Pump)

Product Model (Ordering Codes)	Working Principle	Grease	Operating Pressure Max.	Discharge Max.		Reservoir	Attached Accessories
		NLGI	Mpa	ml/Min	ml/Stroke	L	
AMP1000	Manual	Up to 2	20-25		5	16	Nipple, Hose
AMP2000	Manual		20-25		5	12	Nipple, Hose
APP1000	Pneumatic		30-40	850		12	Nipple, Hose
APP2000	Pneumatic		30-40	850		30	Nipple, Hose
AEP1012T	Electrical 12V		40	350		18	Nipple, Hose
AEP1024T	Electrical 24V		40	350		18	Nipple, Hose
AEP1220T	Electrical 220V		40	350		18	Nipple, Hose
AEP1012B	Electrical 12V		40	350		18	Nipple, Hose
AEP1024B	Electrical 24V		40	350		18	Nipple, Hose





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