

LINCOLN



Introducing three new Lincoln Centro-Matic products

- FlowMaster II
- Grease level sensor
- Grease filter



SKF

Lincoln's new FlowMaster II

Continuous innovation increases pump life and simplifies pump installation, operation and service

- Common crankcase design for all FlowMaster motors (hydraulic, AC or DC electric).
- Less susceptible to grease contamination.
- Pump and reservoir combination models are level-sensor and shut-off system ready.
- Culmination of years of design and performance improvements makes this a premium-choice pump for single-line parallel lubrication systems.
- Two year warranty.



Crankcase improvements

- 4-bolt hole pattern for all FlowMaster motors.
- Dual bearing load support.
- O-ring seals for all motors.
- Wider bolt-hole pattern for easier top mounting of pump.
- All FlowMaster II pumps will fit existing reservoirs.
- Dual support ribs for increased strength.
- Inner seal allows for easy and clean motor replacements without loss of oil.
- Increased depth of pump tube and crankcase interface for added strength.
- Integrated oil drain for easier oil change.

FlowMaster II crankcase



Existing crankcase



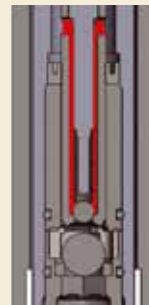
Follower



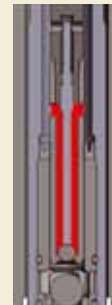
Reservoir



Ball check comparison



Previous design



New design

Follower improvements

- 2 in. (51 mm) closed foam seal resists grease bypass.
- Larger side bearing surface greatly reduces tilting of the follower plate.
- Improved vent tube seal.
- Sturdy construction greatly enhances sealing properties.
- Grease level sensor-ready.

Reservoir improvements

- Reservoir design incorporates 1 in. (25,4 mm) fill and 1 1/4 in. (32 mm) overflow ports.
- Accommodates new 2 in. (51 mm) follower.
- Lids are designed for top-mounting FlowMaster II pumps.
- Lids can be easily converted to grease level system operation.
- Each reservoir includes two lifting eye bolts for safety.
- Rigid pressure outlet connection fittings are replaced by a single flexible hose.

Upper ball check design

- Ball check spring has been removed from flow path allowing 70% more annular flow area.
- Reduces clogging problems caused by contamination from unfiltered grease.
- Grease has a clear flow path, reducing downtime and costly repairs.

Electric FlowMaster II pump



- 19:1 gear ratio results in lower current draw.
- Gear sets can be changed for different ratios.
- 18 in. (457 mm) wire motor leads with Deutsch connectors for easier installation.
- Wire leads are sheathed for protection from the elements and rub areas.

Hydraulic FlowMaster II pump



- Four-bolt motor design with dual bearing drive shaft support virtually eliminates motor loosening.
- New waterproof and weather-resistant solenoid valve coil with Deutsch connection.
- Adjustable hydraulic oil flow of 0 to 5 gal./min. (0 to 18,9 liter/min.) and manifold pressure of 100 to 400 psi (6,9 to 27,6 bar).
- O-ring motor-to-crankcase seal virtually eliminates oil leaks.

Lincoln's new FlowMaster II

Model numbers and specifications

| Current model ¹⁾ | FlowMaster II model | Power and gear ratio | Size | | Description |
|-----------------------------|---------------------|--------------------------------------|------|-----|----------------------------------|
| | | | lb. | kg. | |
| 86258 | 85722 | Hydraulic | 60 | 27 | Reservoir and pump |
| 85487 | 85723 | Hydraulic | 60 | 27 | Reservoir and pump |
| 85518 | 85724 | Hydraulic | 60 | 27 | Reservoir and pump |
| 85585 | 85725 | Hydraulic | 90 | 41 | Reservoir and pump |
| 85677 | 85726 | Hydraulic | 90 | 41 | Reservoir and pump |
| 85220 | 85727 | Hydraulic | 120 | 54 | Reservoir and pump |
| – | 85763 | 24 V DC electric, 19:1 | 60 | 27 | Reservoir and pump ²⁾ |
| 85471 | 85728 | 24 V DC electric, 19:1 | 60 | 27 | Reservoir and pump |
| 85472 | 85729 | 24 V DC electric, 19:1 | 90 | 41 | Reservoir and pump |
| 85473 | 85730 | 24 V DC electric, 19:1 | 120 | 54 | Reservoir and pump |
| 85483 | 85731 | Hydraulic | 35 | 16 | Pump |
| 85481 | 85732 | Hydraulic | 60 | 27 | Pump |
| 85480 | 85733 | Hydraulic | 120 | 54 | Pump |
| 85482 | 85734 | Hydraulic | 400 | 181 | Pump |
| 85484 | 85735 | Hydraulic | 60 | 27 | Pump |
| 85678 | 85741 | Hydraulic | 60 | 27 | Pump |
| 85676 | 85742 | Hydraulic | 120 | 54 | Pump |
| 274873 | 85750 | 24 V DC electric, 7:1 | 35 | 16 | Pump |
| 274874 | 85751 | 24 V DC electric, 7:1 | 35 | 16 | Pump |
| 85569 | 85747 | 24 V DC electric, 17.8:1 | 35 | 16 | Pump |
| 85587 | 85736 | 24 V DC electric, 19:1 | 35 | 16 | Pump |
| 85554 | 85737 | 24 V DC electric, 19:1 | 60 | 27 | Pump |
| 85566 | 85738 | 24 V DC electric, 19:1 | 120 | 54 | Pump |
| 85591 | 85739 | 24 V DC electric, 19:1 | 400 | 181 | Pump |
| 276041 | 85752 | 24 V DC electric, 19:1 | 35 | 16 | Pump |
| 276360 | 85753 | 24 V DC electric, 19:1 | 35 | 16 | Pump |
| 85592 | 85754 | 24 V DC electric, 19:1 | 60 | 27 | Pump |
| 85552 | 85748 | 24 V DC electric, 34:1 | 35 | 16 | Pump |
| 85553 | 85749 | 24 V DC electric, 34:1 | 120 | 54 | Pump |
| 85599 | 85743 | 115 to 230 V DC electric, 1 ph, 19:1 | 120 | 54 | Pump |
| 85598 | 85744 | 115 to 230 V DC electric, 1 ph, 19:1 | 400 | 181 | Pump |
| 85850 | 85745 | 380 to 420 V DC electric, 3 ph, 19:1 | 120 | 54 | Pump |
| 85851 | 85746 | 380 to 420 V DC electric, 3 ph, 19:1 | 400 | 181 | Pump |

¹⁾ Obsolete in 2013

²⁾ Includes grease level sensor

CAUTION

For all systems described in this brochure, see important product usage information on the back cover.

FlowMaster reservoir level sensor and overflow prevention system



Lincoln's new design automatically shuts off grease fill supply to the reservoir

Lincoln's advanced grease level gauge design with automatic overflow shut-off option is unique to the industry.

- The system senses the position of the follower in the reservoir (i.e., grease level) and sends the signal to a level gauge which can be mounted at the fill station.
- Grease level can be determined at all times.
- The level indicator signal can also be integrated into on-board systems.
- The system can virtually eliminate dangerous and costly overfills when used with the automatic shut-off valve system.
- Reduces maintenance time allowing personnel to do other jobs.

The Lincoln system does not use pressurized technology. Therefore, the reservoir is not completely welded together and eliminates the need to adhere to the governmental pressurized-vessel regulations in some countries (Australia).



FlowMaster pump and reservoir with follower and level sensor



FlowMaster pump and reservoir with 2 in. (50,8 mm) foam follower and level sensor

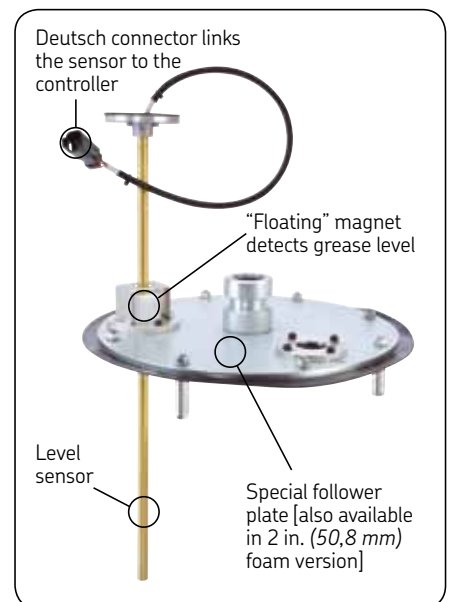
Overflow spillage is a common result of filling large, hard-to-reach grease reservoirs from a fill-access point on the ground. The Lincoln automatic shut-off system virtually eliminates this type of overflow that can create safety hazards and costly fines.

This system is completely retrofitable to all FlowMaster pump and bucket combinations with a follower.

When filling the reservoir, a high-pressure shut-off valve activates when the reservoir is full, stalling the supply pump. After the supply pump is turned off, a pressure-relief button on the control box opens to relieve supply line pressure so it can be safely uncoupled.



Over-filled reservoir with no overflow prevention system



FlowMaster reservoir level sensor and overflow prevention system



Control box with grease-level gauge (24 V DC), "full" light and momentary switch for shut-off valve.



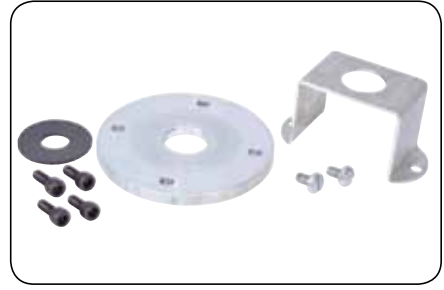
7 350 psi (507 bar) shut-off valve is designed to prevent overflow during reservoir filling.



10 000 psi (689,5 bar) high-pressure gauge before shut-off valve



Special FlowMaster reservoir lid to accept sensor



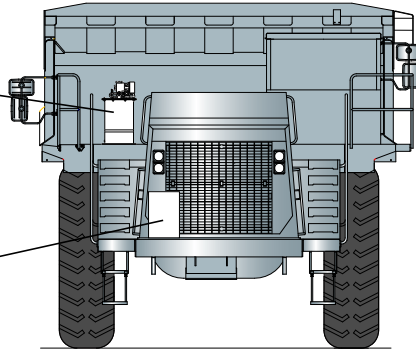
Follower magnet bracket kit



Cable assembly between sensor and controller

Schematic of pump and shut-off enclosure mounted on haul truck

60 lb. (27 kg) pump and reservoir mounted on the upper deck of the truck



Enclosure for controller, valve and gauge, at ground level for easy filling

WARNING

Make sure fill coupling is capable of handling high pressure.

| Model | Description |
|--------|---|
| 280455 | Controller for level sensor only |
| 280450 | Controller for level sensor and overflow prevention |
| 283005 | 7 350 psi (507 bar) high-pressure shut-off valve |
| 274524 | Sensor for standard 60 lb. (27 kg) follower |
| 277659 | Sensor for 2 in. (50,8 mm) 60 lb. (27 kg) foam follower |
| 274312 | Standard 60/90 lb. (27/41 kg) follower with sensor bracket |
| 85706 | 2 in. (50,8 mm) 60/90 lb. (27/41 kg) foam follower with sensor bracket |
| 280441 | Sensor-ready lid for 60/90 lb. (27/41 kg) reservoir with standard follower |
| 277703 | Sensor-ready lid for 60/90 lb. (27/41 kg) reservoir with 2 in. (50,8 mm) foam follower |
| 278092 | Sensor for standard 90/120 lb. (41/54 kg) follower |
| 277654 | Sensor for 2 in. (50,8 mm) 90/120 lb. (41/54 kg) foam follower |
| 278094 | Standard 120 lb. (54 kg) follower with sensor bracket |
| 278095 | 2 in. (50,8 mm) 120 lb. (54 kg) foam follower with sensor bracket |
| 280442 | Sensor-ready lid for 120 lb. (54 kg) reservoir with standard follower |
| 278096 | Sensor-ready lid for 120 lb. (54 kg) reservoir with 2 in. (50,8 mm) foam follower |
| 280414 | 30 ft. (10 m) controller cable |
| 278097 | Follower magnet bracket kit (for all followers) |
| 85763 | 60 lb. (27 kg) 24 VDC FlowMaster II pump and bucket with sensor and 2 in. (50,8 mm) foam follower |
| 274872 | 10 000 psi (689,5 bar) high-pressure gauge; 1/4 in. NPT; 2 1/2 in. (63,5 mm) face |

Note: standard follower, sensor and lid must be used together. 2 in. (50,8 mm) foam follower, sensor and lid must be used together. Do not mix.

Lincoln's Centro-Matic fill filter

High-pressure, high-flow filter designed specifically for the mining, off-highway and industrial markets

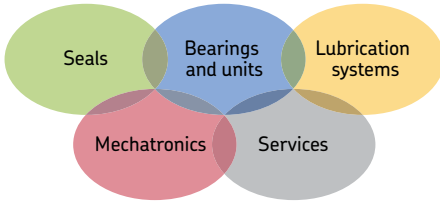
Features

- Clogged filter indicator with quick reset.
 - Red indicator pin is triggered when the filter element is almost completely clogged.
 - If the filter element becomes completely clogged, the grease will safely vent to the atmosphere, preventing contaminated grease from entering the reservoir.
- Promotes cost-effective preventative maintenance.
- Custom-designed filter element.
- Allows for easy and quick cleaning or replacement.
- Virtually crush-proof element; available in both 250 and 470 micron steel screen sizes.
- Durable ductile iron body construction.
- 4 500 psi (310 bar) pressure rating.
- 10 gal./min. (38 liter/min.) maximum flow rate.
- Three mounting points for stability.



Available filter models

| Model | Description |
|----------------|---------------------------|
| 276492 | 250 micron filter |
| 276492A | 470 micron filter |
| 282007 | 250 micron filter element |
| 282008 | 470 micron filter element |



The Power of Knowledge Engineering

Drawing on five areas of competence and application-specific expertise amassed over more than 100 years, SKF brings innovative solutions to OEMs and production facilities in every major industry worldwide. These five competence areas include bearings and units, seals, lubrication systems, mechatronics (combining mechanics and electronics into intelligent systems), and a wide range of services, from 3-D computer modelling to advanced condition monitoring and reliability and asset management systems. A global presence provides SKF customers uniform quality standards and worldwide product availability.

Important information on product usage

All products from SKF may be used only for their intended purpose as described in this brochure and in any instructions. If operating instructions are supplied with the products, they must be read and followed.

Not all lubricants are suitable for use in centralized lubrication systems. SKF does offer an inspection service to test customer supplied lubricant to determine if it can be used in a centralized system. SKF lubrication systems or their components are not approved for use with gases, liquefied gases, pressurized gases in solution and fluids with a vapor pressure exceeding normal atmospheric pressure (1 013 mbar) by more than 0,5 bar at their maximum permissible temperature.

Hazardous materials of any kind, especially the materials classified as hazardous by European Community Directive EC 67/548/EEC, Article 2, Par. 2, may only be used to fill SKF centralized lubrication systems and components and delivered and/or distributed with the same after consulting with and receiving written approval from SKF.

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