OP-4A
Automatic Chain Pin Oiler

Clean, Effective Lubrication Of Most Overhead Monorail And Power And Free Rivetless Power Chains

OP-4A is the most accurate conveyor chain pin lubricator on the market today.

- The OP-4A system lubricates chain pins while conveyor is running under normal conditions.
- Automatically deposits a clean, metered shot of oil directly and precisely to chain pins at desired intervals. No waste or mess from over oiling.
- Proper lubrication reduces friction and wear - extends conveyor life.
- Fast payback based on reduced maintenance and extended productive conveyor life.
- Eliminates surging caused by non-lubricated and worn chains, so product can be spaced closer, increasing productivity.
- Helps reduce drive power requirements.

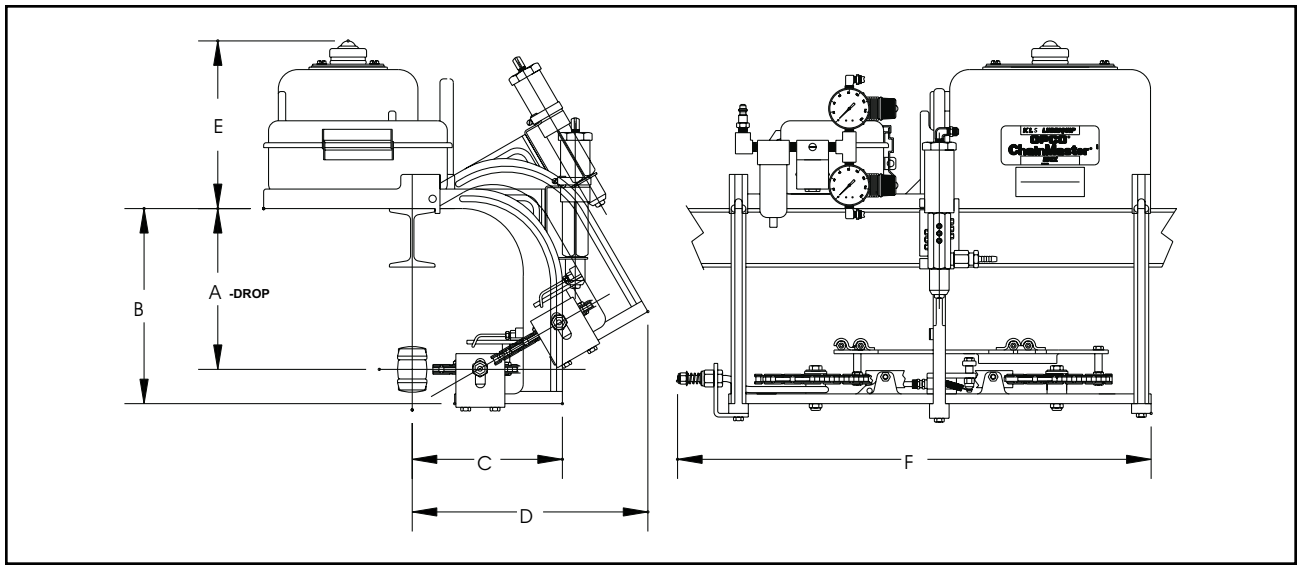
Accurate, Reliable Operation

The OP-4A is pneumatically powered and electrically timed. A caterpillar chain assembly engages the conveyor chain, engaging the oil dispensing nozzle plate, moving it over the chain pin links. An air operated pump meters a precise amount of oil through each nozzle, lubricating chain pins and links simultaneously. The 1000-hour repeat cycle timer features cycle progress display and memory.

Optional Components

- Lubricant reservoir auto-fll device
- 12 hour manual on/automatic off timer.
- Manual on/off (no electric required).

OP-4 SPECIFICATIONS	
Lubricant	32 – 220 cST@40°C (not to exceed 250 cST @ operating temperature), lubricants with solid additives must be colloidal < 5 microns viscosity improvers and stickslip additives degrade “shot” performance and must be approved by OPCO prior to use.
Shot Volume	0.0045 in^3 (0.074 cm^3) per output line
Lubricant Lines	1/8 in O.D. Nylon
Air Requirements	80 psi (min), 1/4 in NPT inlet pipe size
Reservoir Capacity	1.7 gallons (6.4 liters)
Ambient Temperature	40ºF to 120ºF (5ºC to 45ºC)
Input Power	115 VAC, 50/60Hz standard, 1.5 amp: 220 VAC, 50/60Hz optional: 0.8 amp
Material Compatibility	Nonmetallic parts exposed to the lubricant: Buna-N, Nylon, Delrin, Neoprene, Butyrate, & Viton; Nonmetallic parts exposed to ambient: Poly carbonate, Neoprene, Nylon, & Thermoplastic
Outline Dimensions	See Chart below



Chain Pitch in (mm)	A in (mm)	B in (mm)	C in (mm)	D in (mm)	Reservoir Size	E in (mm)	Chain Pitch in	F in (mm)
3 (76)	5.5 (140)	7.75 (197)	8.62 (219)	9.06 (230)	1.7 gal	9 (229)	2 & 4	25 (635)
4 (102)	7.18 (182)	9.31 (236)	8.58 (218)	11.1 (282)	5 gal	13 (330)	3 & 6	28 (711)
4 (102)	8 (203)	10.19 (256)	8.58 (218)	11.6 (265)	–	–	–	–
6 (152)	7.44 (189)	10.19 (256)	8.91 (226)	12.8 (325)	–	–	–	–
6 (152)	10 (254)	12.12 (308)	8.91 (226)	13.25 (337)	–	–	–	–

E-Series – All Electric Lubrication Systems

All electric lubrication systems for conveyors – no air required

- Solid shot lubricating designs available for a wide variety of moving points, chains and conveyors
- Reduce downtime due to premature conveyor wear
- Eliminates surging caused by non-lubricated conveyor components
- Available in kit form for general purpose use
- Low-cost installation
- Conveyor runs smoother, keeps product from swaying, reducing possibility of damage to product and injury on the line
- Delivers a wide viscosity range of lubricants
- Reduces drive-power requirements
- Integral 5-gallon reservoir
- No waste or contamination – a metered amount of lubricant is cleanly and precisely delivered to the wear points
- Independent operation or centralized fill
- Built-in power-on and low-lubricant-level status lights

Electric-Only Lubrication – reliable and efficient operation

The ChainMaster E-Series Lubrication Systems are all electric and designed to deliver metered amounts of lubricant in solid shot form to conveyor wear points. The lubricant shots are discharged from nozzles which are rigidly mounted close to the moving wear points.

The system consists of a reservoir/pump and controls assembly, and a sensing and delivery assembly. The reservoir/pump and controls assembly includes the integral lubricant reservoir, the electronic controls and the pump module. The sensing and delivery assembly includes one or more target sensors, nozzles and tubing for lubricant delivery and all bracketry.*

*Units supplied in kit form include proximity switch and nozzle brackets only.

Reservoir/Pump And Controls Assembly

Standard Components – the heart of the E-Series

- Adjustable volume/velocity positive displacement piston pump(s)
- Integral 5-gallon lubricant reservoir
- Power-on and low-lubricant-level status lights
- Low-lubricant-level isolated contacts and automatic shut-off circuit
- ChainMaster lubricator controller-keypad-programmable, digital-readout, multi-function counter*

*Optional on general purpose kit systems

Optional Equipment – increase ease of operation

- Remove-fill control valve
- 5, 16, or 55-gallon remote-fill pump*
- Drip pans and mounting brackets

*Remote-fill pumps may be used as centralized supply pumps to multiple E-Series lubrication systems

Control Options

- Programmable 1000-hour timer with cycle progress display
- 12-hour manual-on, automatic-off timer
- Manual on/off switch*
- Electric on/off design for PC interface

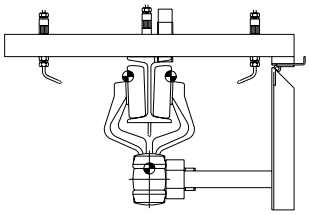
*Standard on general purpose kit systems.

SPECIFICATIONS*	
Lubricant	22 – 220 cST@40°C (not to exceed 250 cST @ operating temperature), lubricants with solids must be colloidial < 5 microns viscosity improvers and stick-slip additives degrade "shot" performance and must be approved by OPCO prior to use
Shot Volume	0.0011 to 0.0045 in^3 (0.018 to 0.74 cm^3) per outlet line
Lubricant Lines	4 mm nylon or copper
Lubricant Lines Length	8 ft (2.5 meters) maximum
Reservoir Capacity	5 gal (18.9 liter)

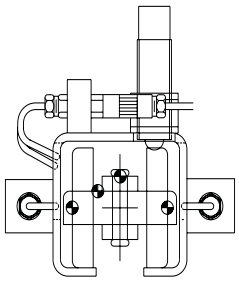
Ambient Temperature	40ºF to 110ºF (5ºC to 44ºC)
Input Power	115 VAC 50/60Hz, standard 1.5 amp; 220 VAC, 50/60Hz, optional 0.8 amp
Material Compatibility	Non-metallic parts exposed to lubricant Buna-N, nylon, delirn and eposy; Non-metallic parts exposed to ambient air temperature Lexan, neoprene, nylon, SBR and thermoplatic

*Specifications shown are for standard units. Custom designed units for your special applications are available. Consult your OPCO Representative.

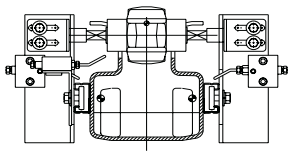
ChainMaster® E-Series Lubricators Engineered For Your Application



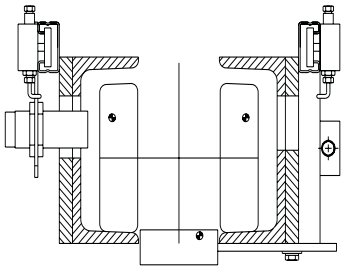
OP-47E
OVERHEAD MONORAIL OR POWER & FREE POWER TROLLEY WHEELS & CHAIN



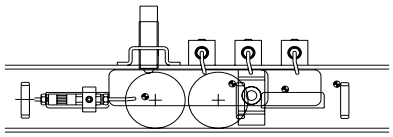
OP-41E
OVERHEAD ENCLOSED TRACK
CHAIN WHEELS



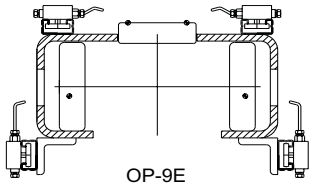
OP-10E
INVERTED POWER & FREE POWER CHAIN & TROLLEY WHEELS



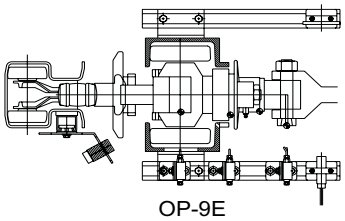
OP-9E
OVERHEAD FREE TROLLEY LOAD WHEELS AND GUIDE ROLLERS



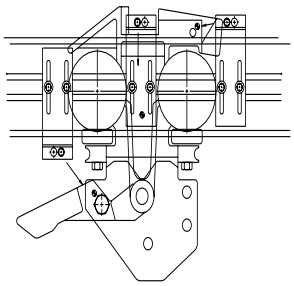
OP-48E
OVERHEAD ENCLOSED TRACK POWER & FREE POWER CHAIN AND WHEELS



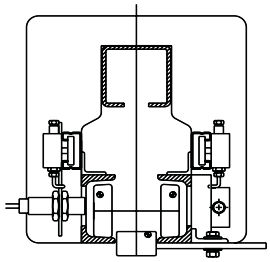
OP-9E
INVERTED FREE TROLLEY LOAD WHEELS & GUIDE ROLLERS



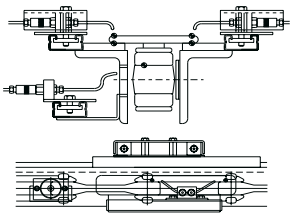
OP-9E
INVERTED CARRIER KING PINS



OP-9E
OVERHEAD FREE TROLLEY DOG ACTUATOR & PIVOT PINS

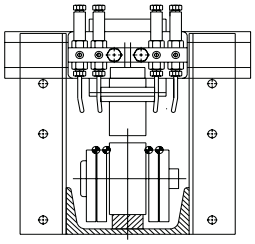


OP-9E
OVERHEAD ENCLOSED TRACK FREE TROLLEY LOAD WHEELS & GUIDE ROLLERS

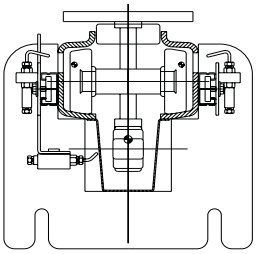


OP-10E
CHAIN ON EDGE DRAG LINES

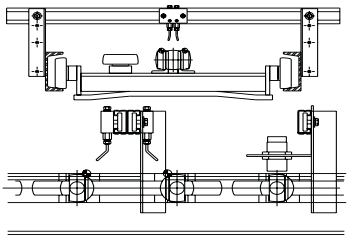
ChainMaster® E-Series Lubricators Engineered For Your Application Cont'd



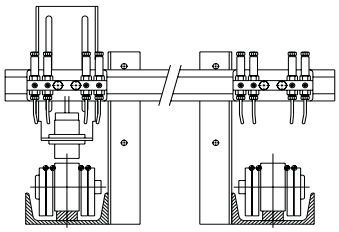
OP-40E
SINGLE STRAND CC5 CHAIN



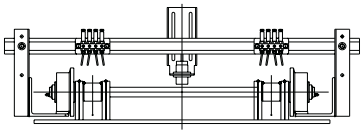
OP-40E
TOWVEYOR CHAIN
AND TROLLEY WHEELS



OP-40E
SLAT CONVEYOR CHAIN

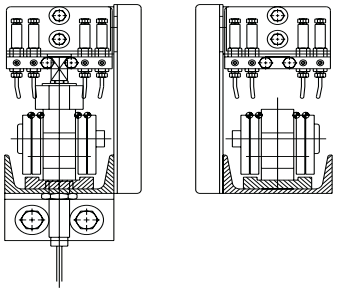


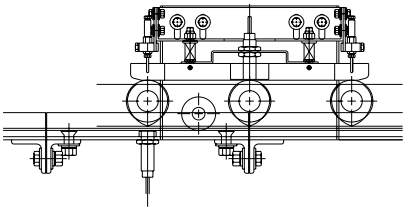
OP-40E
DOUBLE STRAND CC5 CHAIN



OP-40E
FLAT TOP CHAIN &
DRIVE BUSHINGS

OP-40E
DOUBLE STRAND CC5
ROLLER FLIGHT





OP-40E
SINGLE STRAND CC5 ROLLER FLIGHT

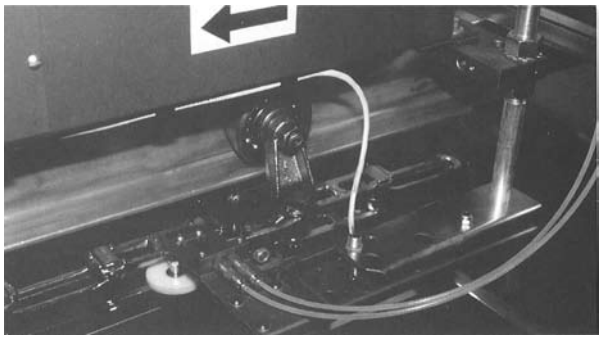
WIDE VARIETY – UNITS AVAILABLE FOR ALL STANDARD APPLICATIONS			
Standard Applications	**Oiler Model**	**Standard Applications**	**Oiler Model**
Overhead Conveyors		**Floor Conveyors**	
Monorail or Power & Free Chain	OP-47E	Chain on Edge Drag Lines	OP-10E
Monorail or Power & Free Power Trolley Wheels	OP-47E	Chain on Flat	OP-40E
Free Trolley Load Wheels	OP-9E	Single Strand CC5 Chain	OP-40E
Free Trolley Guide Rollers	OP-9E	Double Strand CC5 Chain	OP-40E
Free Trolley Dog Actuator & Pivot Pins	OP-9E	Single Strand CC5 Roller Flight	OP-40E
Enclosed Track Chain and Wheels	OP-41E	Double Strand CC5 Roller Flight	OP-40E
Enclosed Track Power & Free Power Chain and Wheels	OP-48E	Inboard Roller Chains	OP-40E
Enclosed Track Free Trolleys	OP-9E	Towveyor Chain	OP-40E
Cable Conveyor Trolleys	OP-47E	Towveyor Trolley Wheels	OP-40E
Cable Conveyor Cable Joints	OP-47E	Pedestal Conveyor Chains	OP-40E
Inverted Conveyors		Pedestal Conveyor Wheels	OP-40E
Power & Free Power Chain	OP-10E	Flat Top Chain & Drive Bushings	OP-40E
Power & Free Power Trolley Load Wheels	OP-10E	Slat Conveyor Chain & Drive Bushings	OP-40E
Free Trolley Load Wheels	OP-9E		
Free Trolley Guide Rollers	OP-9E		
Carrier King Pins	OP-9E		
Enclosed Track Power & Free Power Chain and Wheels	OP-48E		
Enclosed Track Free Trolleys	OP-9E		

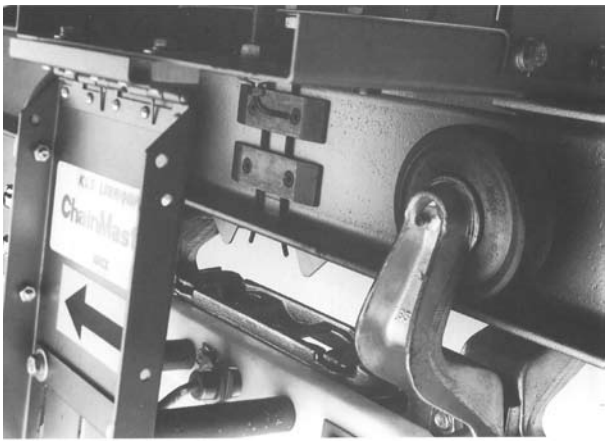
Accurate Sensing and Delivery – no wasted lubricant

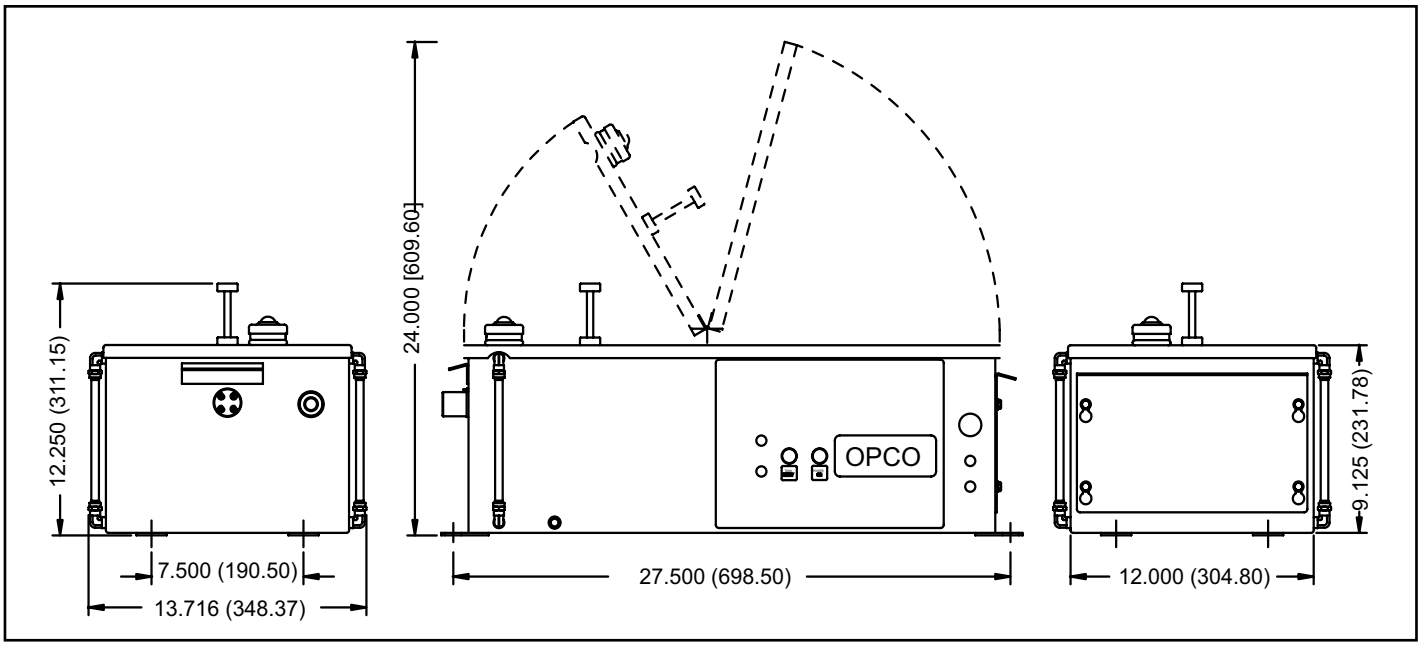
Accurate sensing and lubricant delivery is an important factor in maintaining trouble-free operation and extending the life of your conveyor equipment. All E-Series systems are specially designed to match the sensing and delivery needs of your conveyors.

The Precision Arm Sensing and Delivery System accurately lubricates at varying chain speeds and mounts directly to I-beams to avoid track modifications.

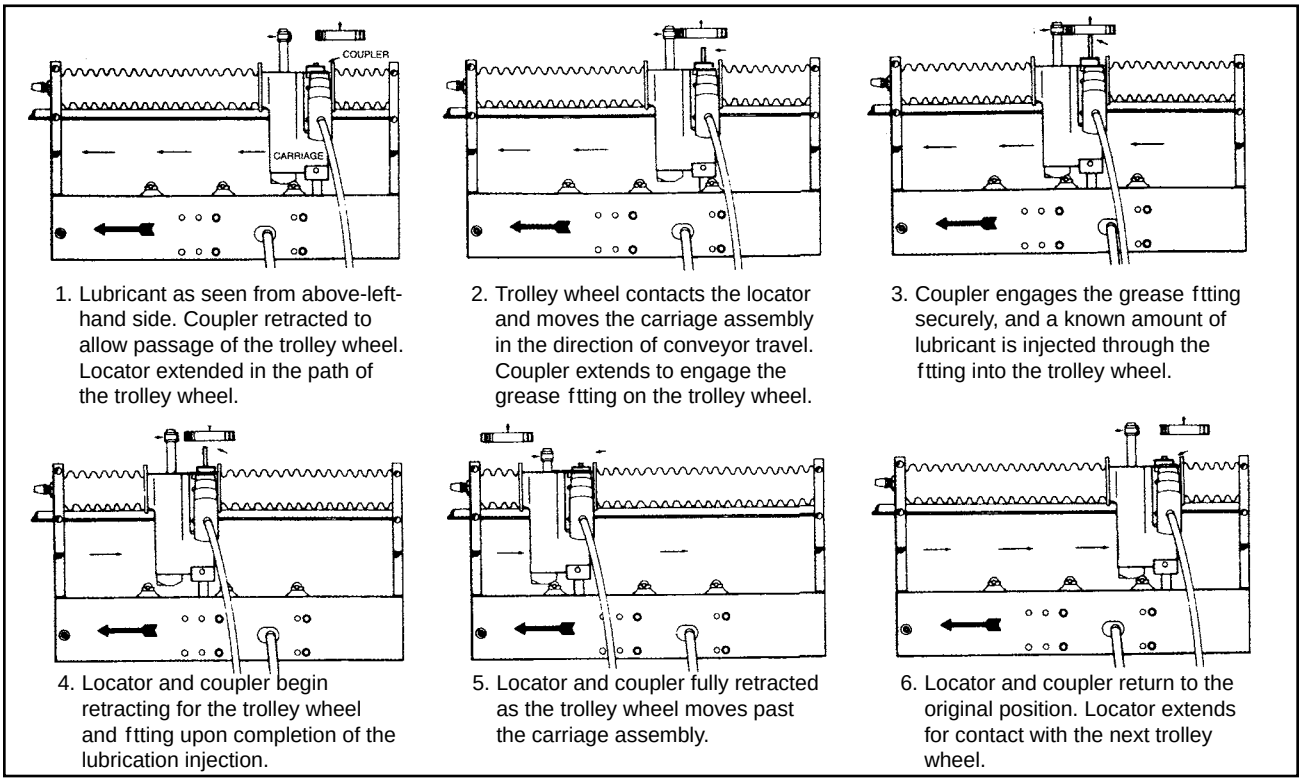
The Ski Bar Stationary Nozzle Sensing and Delivery System avoids direct contact with the chain and offers a switch-face-protected proximity switch for accurate lubricant delivery.







Sequence of Operation



1. Lubricant as seen from above-left-hand side. Coupler retracted to allow passage of the trolley wheel. Locator extended in the path of the trolley wheel.
2. Trolley wheel contacts the locator and moves the carriage assembly in the direction of conveyor travel. Coupler extends to engage the grease fitting on the trolley wheel.
3. Coupler engages the grease fitting securely, and a known amount of lubricant is injected through the fitting into the trolley wheel.
4. Locator and coupler begin retracting for the trolley wheel and fitting upon completion of the lubrication injection.
5. Locator and coupler fully retracted as the trolley wheel moves past the carriage assembly.
6. Locator and coupler return to the original position. Locator extends for contact with the next trolley wheel.

Conveyor Travel ← **Carriage Travel** →

Technical Assistance

Customized Technical Assistance Programs are available.

Warranty

A limited warranty is provided with each OP-201 lubricator.

WearMaster Lubricants – Specially Designed for OPCO ChainMaster Lubrication

OPCO has a complete line of conveyor lubricants, for all conveyor applications, designed to keep your system running smoothly. Using the right lubricant for the application can save money otherwise lost to wear, increased power consumption and unscheduled downtime.

Recognized worldwide as lubrication systems specialists, we have years of experience in every aspect of conveyor lubrication - from equipment design, sales and installation to lubricant sales, systems service, consultation and custom problem-solving. As a result, we're familiar with your needs and concerns. We can supply you with the WearMaster lubricants that will provide the best results in your conveyor system.