



*Quality Power Transmission Products*

## **Roller Chain Care**

# Type Of Lubrication

Lubrication is extremely important in maximizing a roller chains service life. Only a high quality non-detergent oil should be used. The table below shows the viscosity of oil by working temperatures and size chain.

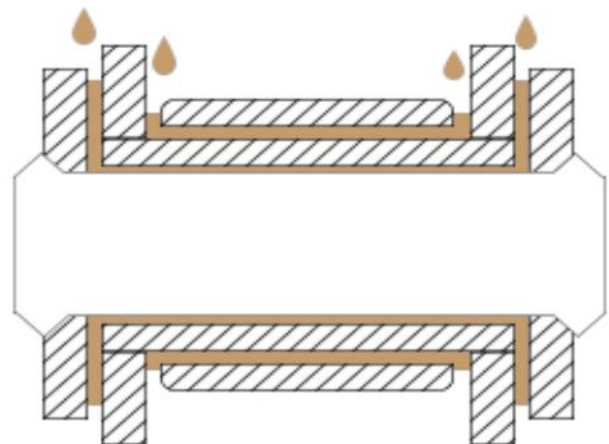
High Grade Viscosity Per Size & Operating Temperature								
Chain Size ANSI (DIN/ISO)	Ambient Temperature Range <sup>2</sup>							
	14°F to 32°F	32°F to 104° F	104°F to 122°F	122°F to 140°F	14°F to 32°F	32°F to 104° F	104°F to 122°F	122°F to 140°F
	For Type A & B Lubrication Method*				For Type C Lubrication Method*			
25 - 50 (06B - 10B)	SAE10	SAE20	SAE30	SAE40	SAE10	SAE20	SAE30	SAE40
60 - 80 (12B - 16B)	SAE20	SAE30	SAE40	SAE50	SAE10	SAE20	SAE30	SAE40
100 (20B)	SAE20	SAE30	SAE40	SAE50	SAE20	SAE30	SAE40	SAE50
120 - 240 (24B - 48B)	SAE30	SAE40	SAE50	SAE50	SAE20	SAE30	SAE40	SAE50

\*Methods of lubrication shown on page 3

<sup>2</sup> Temperatures under 14°F and over 140°F should use a special formulated lubrication made for low/high temperatures. See page 6 for more information regarding ambient operating temperatures.

Lubrication should be applied as shown on the right in diagram 1. This will ensure the oil is adequately applied to the pin, bushing and roller.

**NEVER use heavy oils, grease, used oil, oil with particles or low quality oils!**



**Diagram 1**

# Method Of Lubrication

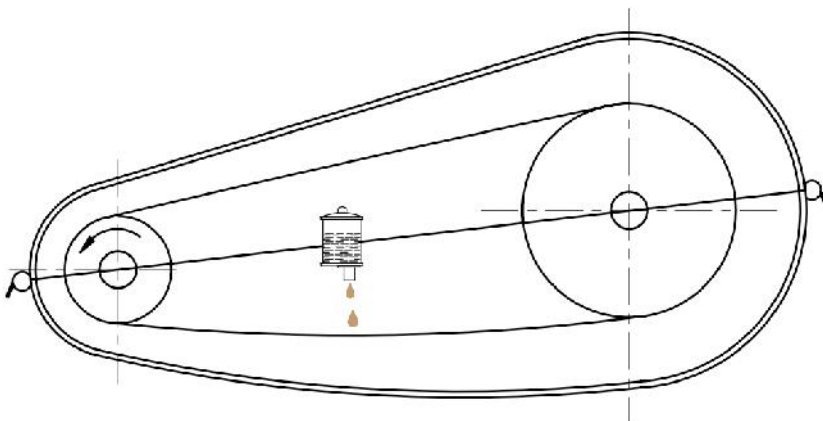
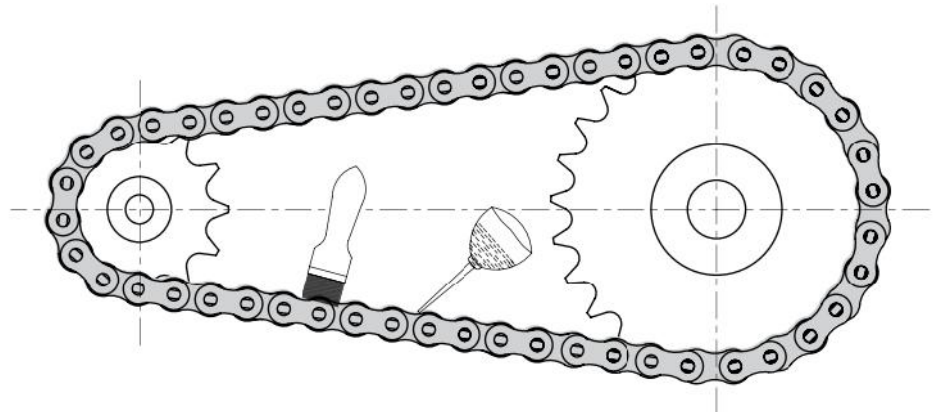
There are 5 different methods of lubrication that are broken down into 3 types. Types are based on chain size, RPM, horsepower ratings and service factors.

Methods	Type
Manual	A
Drip	A
Oil Bath	B
Oil Slinger Disc	B
Pump	C

Drip method is the preferred method for Type A. This will provide better lubrication over manual application.

## Manual

Apply oil with a brush or oiling can. Oil should be added about every 8 hours. Increase the frequency of oiling if the chain joints are becoming dry or a reddish/brownish color.

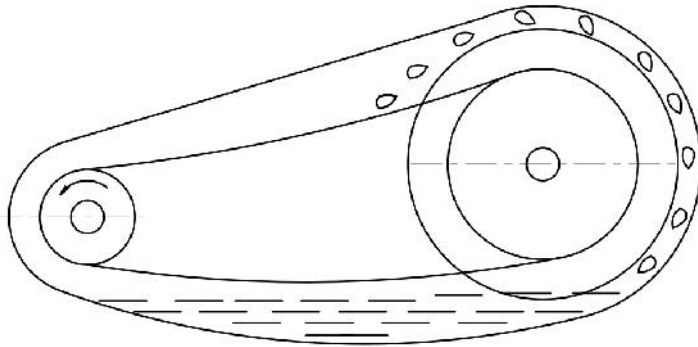
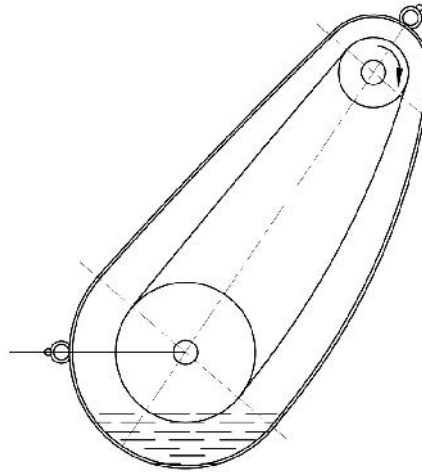


## Drip

Apply oil with a leakproof drip dispenser at rate of 15-30 drops per minute. Increase the drip frequency if the chain joints are becoming dry or a reddish/brownish color.

### **Oil Bath**

Apply oil using an oil bath from a leakproof case. Oil level should be at the pitch line of the roller chain. Oil level must be checked and maintained at the pitch level. Too much oil will cause the oil to overheat and too little will cause the chain joints to dry out.

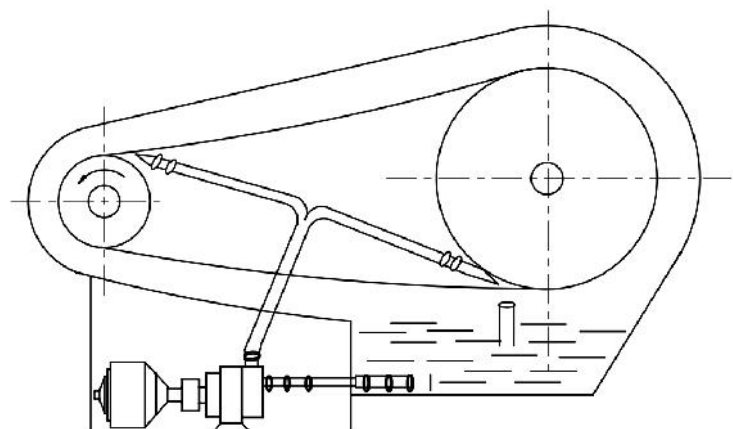


### **Oil Disc Slinger**

Apply oil with a disc slinger from a leakproof case. Oil slinger should reach rim speeds of 600 to 8,000 ft/min. Oil slinger should be used on both sides of the sprocket if the chain width is wider than 4.92"

### **Pump**

Apply oil with a continuous spray/stream using a pump from a leakproof case. The width of the spray/stream should cover the entire width of the chain. Pump method also helps keep the chain running cooler.



Roller chain should be cleaned periodically with a petroleum cleaner or a light weight oil. Examine the roller chain after cleaning. If the chain appears to have reddish/brownish color or unusual wear marks to the pin, bushing or roller, then this means the chain is not receiving an adequate amount lubrication.

## Temperature Range

Chain Type	Recommended Ambient Temperatures <sup>2</sup>	Lowest/Highest Working Temperatures
Standard*	14°F To 140°F	Lowest -39°F
304 Stainless Steel	-40°F to 752°F	Lowest -200°F Highest 1,200°F

\*Coated chains such as nickel, zinc and dacromet carry the same temperature rating.

<sup>2</sup> Ambient temperatures below or higher than the recommend should use a special formulated lubricant for low/high temperatures.

**Service life is decreased when chains are operating outside of the recommended ambient temperatures.**

### **Ambient temperatures higher than 140°F**

- ) Decreased strength
- ) Increased wear on chain components
- ) Lubricant deterioration

### **Ambient temperatures lower than 14°F**

- ) Stiff joints from frost and ice build up
- ) Solidification of the lubrication
- ) Lowered shock load strength due to brittleness



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