

B. W. SINCLAIR INC.

BULK MATERIAL HANDLING
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ROLLER CHAIN LUBRICATION

Roller chain consists of a series of connecting traveling metallic bearings, which must be properly lubricated to obtain the maximum service life of the chain. Although many slow speed drives operate successfully with little or no lubrication beyond the initial factory lubrication, proper lubrication will greatly extend the useful life of every chain drive. The chain drive requires lubrication for six purposes.

1. To resist wear of the pin-bushing joint.
2. To cushion impact loads.
3. To dissipate any heat generated.
4. To flush away foreign materials.
5. To lubricate chain-sprocket contact surfaces.
6. To retard rust or corrosion.

A good grade of clean petroleum oil without additives, free flowing at the prevailing temperatures, should be used. Some additives leave a varnish or gum deposit which prevents the oil from entering chain joints. Heavy oils and greases are generally too stiff to enter the chain joints and should not be used.

The following table indicates the lubricant viscosity recommended for various surrounding temperatures:	
Grade	Temperature, °F
SAE 5	-50 to + 50
SAE 10	-20 to + 80
SAE 20	+10 to +110
SAE 30	+20 to +130
SAE 40	+30 to +140
SAE 50	+40 to +150

Manual or drip lubrication. (Type A): Oil should be applied periodically between the chain linkplate edges with a brush, spout can, or drip lubrication.

Oil bath or oil slinger. (Type B): With bath lubrication the lower strand of chain runs through a sump of oil in the drive housing. The oil level should reach the pitch line of the chain at its lowest point while operating. Only a short length of chain should run through the oil. Drive arrangements which permit long length of chain to travel through the oil should be avoided as overheating or foaming may result.