

Center Street Swing Bridge

Lubrication Schedule

- Lubrication Notes:**
1. Lubricant compatibility must be considered when switching lubricants. The lubricants provided below are considered appropriate for the components, but their compatibility with each other cannot be verified without testing. For this reason, do not mix lubricants. When switching lubricants, take care to completely remove old lubricants to the extent possible prior to providing new. Consult a lubrication engineer prior to selecting a lubrication alternative not shown in the table.
 2. The provided lubrication frequencies should be considered a baseline. Adjust the lubrication frequency as necessary to ensure wearing components remain fully lubricated.
 3. Provide an annual test of the reducer oil. Determine when replacement of the oil is necessary based on test results.
 4. Brake thrusters are intended to be sealed for life. Inspect and top off as necessary to the level recommended by the manufacturer. Replace thrusters with significant leakage.
 5. To lubricate the couplings, remove two pipe plugs in the coupling covers. Insert a lubrication fitting into one of the ports and leave the other port open to function as a vent. Pump in new lubricant until all old lubricant has drained from the vent port and new lubricant begins to drain.
 6. The manufacturer recommends operating the bridge while greasing the slewing bearing.

Component and Reference Information			Lubricant and Recommended Frequency				Maintenance Notes		
Item Name	Description	Drawing	Lubricant ¹	Application Method	Baseline Frequency ^{2,3}	Capacity	Date	Qty Provided	Maintenance Comments
Span Drive Machinery	North Span Drive Motor	Roller Bearing	10314-L2	Mobil Polyrex EM Chevron SRI 2	Grease Gun	Annual	0.5 oz		
	South Span Drive Motor	Roller Bearing	10314-L2	Mobil Polyrex EM Chevron SRI 2	Grease Gun	Annual	0.5 oz		
	North Motor Coupling ⁵	Double Engagement Grid Coupling	10314-L2	Mobilux EP 111, Mobilux EP 1, Falk LTG, P66 Dynalife L-EP Grease 1	Grease Gun	Annual	0.38 lb.		
	South Motor Coupling ⁵	Double Engagement Grid Coupling	10314-L2	Mobilux EP 111, Mobilux EP 1, Falk LTG, P66 Dynalife L-EP Grease 1	Grease Gun	Annual	0.38 lb.		
	North-OB Floating Shaft Coupling ⁵	Single Engagement Gear Coupling	10314-L2	Mobilux EP 0, Falk LTG, P66 Dynalife L-EP Grease 0	Grease Gun	6 Months	1.03 lb.		
	North-IB Floating Shaft Coupling ⁵	Single Engagement Gear Coupling	10314-L2	Mobilux EP 0, Falk LTG, P66 Dynalife L-EP Grease 0	Grease Gun	6 Months	1.03 lb.		
	South-OB Floating Shaft Coupling ⁵	Single Engagement Gear Coupling	10314-L2	Mobilux EP 0, Falk LTG, P66 Dynalife L-EP Grease 0	Grease Gun	6 Months	1.03 lb.		
	South-IB Floating Shaft Coupling ⁵	Single Engagement Gear Coupling	10314-L2	Mobilux EP 0, Falk LTG, P66 Dynalife L-EP Grease 0	Grease Gun	6 Months	1.03 lb.		
	North Secondary Reducer Output Coupling ⁵	Double Engagement Gear Coupling	10314-L3	Mobilux EP 0, Falk LTG, P66 Dynalife L-EP Grease 0	Grease Gun	6 Months	6.3 lb.		
	South Secondary Reducer Output Coupling ⁵	Double Engagement Gear Coupling	10314-L3	Mobilux EP 0, Falk LTG, P66 Dynalife L-EP Grease 0	Grease Gun	6 Months	6.3 lb.		
	Motor Brake Thrusters	Brake Thruster	10314-L2	Shell Morlina 10	Reservoir	As Needed ⁴	0.5 gal		
	Machinery Brake Thruster	Brake Thruster	10314-L2	Shell Morlina 10	Reservoir	As Needed ⁴	0.5 gal		
	Primary Gear Reducer	Parallel Shaft Speed Reducer	10314-L2	Mobil SHC 632 Phillips 66 Syncon R&O Oil 320	Reservoir	Test Annually Replace As-Needed	36 gal.		
	North Secondary Reducer	Right Angle Speed Reducer	10314-L2	Mobil SHC 632 Phillips 66 Syncon R&O Oil 320	Reservoir	Test Annually Replace As-Needed	76 gal.		
	South Secondary Reducer	Right Angle Speed Reducer	10314-L2	Mobil SHC 632 Phillips 66 Syncon R&O Oil 320	Reservoir	Test Annually Replace As-Needed	76 gal.		
	Position Indication Reducer	Span Position In-Line Reducer	10314-L2	Mobil SHC 630 Phillips 66 Syncon R&O Oil 220	Reservoir	Test Annually Replace As-Needed	1.37 qt.		
	Primary Gear Reducer Seals	Seals for Reducer	10314-L2	Phillips 66 Multiplex 600 #2, SKG LGHB 2, Mobilux EP 2	Grease Gun	6 Months	Pump to Purge		
	North Secondary Reducer Lower Seal	Seal Cavity at Output Shaft	10314-L3	Phillips 66 Multiplex 600 #2, SKG LGHB 2, Mobilux EP 2	Grease Gun	6 Months	Pump to Purge		
South Secondary Reducer Lower Seal	Seal Cavity at Output Shaft	10314-L3	Phillips 66 Multiplex 600 #2, SKG LGHB 2, Mobilux EP 2	Grease Gun	6 Months	Pump to Purge			

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 5. To lubricate the couplings, remove two pipe plugs in the coupling covers. Insert a lubrication fitting into one of the ports and leave the other port open to function as a vent. Pump in new lubricant until all old lubricant has drained from the vent port and new lubricant begins to drain.
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Item Name	Description	Drawing	Lubricant ¹	Application Method	Baseline Frequency ^{2,3}	Capacity	Date	Qty Provided	Maintenance Comments
Span Drive Machinery	Primary Reducer Breather	Desiccant Breather	SMC R8-24-E1	Desiccant Breather	Replace	When Dessicant Turns Pink	-		
	North Secondary Reducer Breather	Desiccant Breather	SMC R8-24-E1	Desiccant Breather	Replace	When Dessicant Turns Pink	-		
	South Secondary Reducer Breather	Desiccant Breather	SMC R8-25-1	Desiccant Breather	Replace	When Dessicant Turns Pink	-		
	North Secondary Reducer Top Bearing	Roller Bearing	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2	Grease Gun	3 Months	2 oz.		
	South Secondary Reducer Top Bearing	Roller Bearing	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2	Grease Gun	3 Months	2 oz.		
	North Pinion Bearings (2 Fittings)	Plain Bearings	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2, Mobilux EP 2	Grease Gun	Monthly	Pump to Purge		
	North Pinion Shaft Thrust Flange (2 Fittings)	Plain Bearings	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2, Mobilux EP 2	Grease Gun	Monthly	Pump to Purge		
	South Pinion Bearings (2 Fittings)	Plain Bearings	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2, Mobilux EP 2	Grease Gun	Monthly	Pump to Purge		
	South Pinion Shaft Thrust Flange (2 Fittings)	Plain Bearings	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2, Mobilux EP 2	Grease Gun	Monthly	Pump to Purge		
	Ring Gear	Open Gear	10314-L3	Lubriplate Gear Shield Heavy Chevron Open Gear Lube	Brush or Swab	Monthly	Cover Contact Area		
	North Rack Pinion	Open Gear	10314-L3	Lubriplate Gear Shield Heavy Chevron Open Gear Lube	Brush or Swab	Monthly	Cover Contact Area		
	South Rack Pinion	Open Gear	10314-L3	Lubriplate Gear Shield Heavy Chevron Open Gear Lube	Brush or Swab	Monthly	Cover Contact Area		
	Position Indication Open Gears	Open Gear	10314-L2	Lubriplate Gear Shield Heavy Chevron Open Gear Lube	Brush or Swab	Monthly	Cover Contact Area		
Supports	Slewing Bearing (48 Fittings) ⁶	Roller Bearing	10314-L2	Mobilux EP 2	Grease Gun	Monthly	Pump to Purge		
	NW End Lift Actuator Front End Cap	Actuator	10314-L3	Mobilith SHC 460	Grease Gun	Annual	9 oz.		
	NW End Lift Actuator Rod End	Plain Bearing	10314-L3	Mobilith SHC 460	Grease Gun	Monthly	Pump to Purge		
	NW End Lift Actuator Trunnion Brackets	Plain Bearing	10314-L3	Mobilith SHC 460	Grease Gun	Monthly	Pump to Purge		
	NW End Lift Roller Stop Pin	Plain Bearing	10314-L3	Mobilith SHC 460	Grease Gun	Monthly	Pump to Purge		
	NW End Lift Truss Bearings IB and OB	Roller Bearing	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2	Grease Gun	3 Months	2 oz.		
	NW End Lift Track Frame	Track Frame	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2	Brush or Swab	Monthly	Cover Contact Area		
	NW End Lift Strike Plate	Strike Plate	10314-L3	Lubriplate Gear Shield Heavy Chevron Open Gear Lube	Brush or Swab	Monthly	Cover Contact Area		
	SW End Lift Actuator Front End Cap	Actuator	10314-L3	Mobilith SHC 460	Grease Gun	Annual	9 oz.		
	SW End Lift Actuator Rod End	Plain Bearing	10314-L3	Mobilith SHC 460	Grease Gun	Monthly	Pump to Purge		
	SW End Lift Actuator Trunnion Brackets	Plain Bearing	10314-L3	Mobilith SHC 460	Grease Gun	Monthly	Pump to Purge		
SW End Lift Roller Stop Pin	Plain Bearing	10314-L3	Mobilith SHC 460	Grease Gun	Monthly	Pump to Purge			

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Item Name	Description	Drawing	Lubricant ¹	Application Method	Baseline Frequency ^{2,3}	Capacity	Date	Qty Provided	Maintenance Comments
Supports	SW End Lift Truss Bearings IB and OB	Roller Bearing	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2	Grease Gun	3 Months	2 oz.		
	SW End Lift Track Frame	Track Frame	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2	Brush or Swab	Monthly	Cover Contact Area		
	SW End Lift Strike Plate	Strike Plate	10314-L3	Lubriplate Gear Shield Heavy Chevron Open Gear Lube	Brush or Swab	Monthly	Cover Contact Area		
	NE End Lift Actuator	Actuator Front End Cap	10314-L3	Mobilith SHC 460	Grease Gun	Annual	9 oz.		
	NE End Lift Actuator Rod End	Plain Bearing	10314-L3	Mobilith SHC 460	Grease Gun	Monthly	Pump to Purge		
	NE End Lift Actuator Trunnion Brackets	Plain Bearing	10314-L3	Mobilith SHC 460	Grease Gun	Monthly	Pump to Purge		
	NE End Lift Roller Stop Pin	Plain Bearing	10314-L3	Mobilith SHC 460	Grease Gun	Monthly	Pump to Purge		
	NE End Lift Truss Bearings IB and OB	Roller Bearing	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2	Grease Gun	3 Months	2 oz.		
	NE End Lift Track Frame	Track Frame	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2	Brush or Swab	Monthly	Cover Contact Area		
	NE End Lift Strike Plate	Strike Plate	10314-L3	Lubriplate Gear Shield Heavy Chevron Open Gear Lube	Brush or Swab	Monthly	Cover Contact Area		
	SE End Lift Actuator	Actuator Front End Cap	10314-L3	Mobilith SHC 460	Grease Gun	Annual	9 oz.		
	SE End Lift Actuator Rod End	Plain Bearing	10314-L3	Mobilith SHC 460	Grease Gun	Monthly	Pump to Purge		
	SE End Lift Actuator Trunnion Brackets	Plain Bearing	10314-L3	Mobilith SHC 460	Grease Gun	Monthly	Pump to Purge		
	SE End Lift Roller Stop Pin	Plain Bearing	10314-L3	Mobilith SHC 460	Grease Gun	Monthly	Pump to Purge		
	SE End Lift Truss Bearings IB and OB	Roller Bearing	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2	Grease Gun	3 Months	2 oz.		
	SE End Lift Track Frame	Track Frame	10314-L3	Phillips 66 Multiplex 600#2, SKF LGHB 2	Brush or Swab	Monthly	Cover Contact Area		
SE End Lift Strike Plate	Strike Plate	10314-L3	Lubriplate Gear Shield Heavy Chevron Open Gear Lube	Brush or Swab	Monthly	Cover Contact Area			
Traffic Gates	Northwest Warning Gate	Traffic gate manufacturer and model information has not provided and recommendations are therefore not made here. These assemblies typically include roller bearings, chains, spherical plain rod ends, and enclosed reducers. These components should be lubricated per the manufacturer's recommendations. Ensure that provided lubricants are compatible with the existing.							
	Southwest Warning Gate								
	West Barrier Gate								
	Northeast Warning Gate								
	Southeast Warning Gate								
	East Barrier Gate								