

Potential Source of Spectrometry Metals

Wear Metals
 Contaminants & Additives

Revised Oct. 3, 2008

Aluminum (Al)	Antimony (Sb)	Barium (Ba)	Beryllium (Be)	Boron (B)	Cadmium (Cd)
<p>Wear Metals:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Bearings <input type="checkbox"/> Blocks <input type="checkbox"/> Blowers <input type="checkbox"/> Bushings <input type="checkbox"/> Clutches <input type="checkbox"/> Cylinders <input type="checkbox"/> Housings <input type="checkbox"/> Pistons <input type="checkbox"/> Pump Bushings <input type="checkbox"/> Motor Housing <input type="checkbox"/> Rotors <input type="checkbox"/> Thrust Bearings <input type="checkbox"/> Thrust Washers <p>Abrasives:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Alumina <input type="checkbox"/> Bauxite <input type="checkbox"/> Catalyst <input type="checkbox"/> Coal <input type="checkbox"/> Fly Ash <input type="checkbox"/> Foundry Dust <input type="checkbox"/> Granite <input checked="" type="checkbox"/> Grease Thickener <input checked="" type="checkbox"/> Paint <input checked="" type="checkbox"/> Road Dust 	<ul style="list-style-type: none"> <input type="checkbox"/> Alloy Steel <input checked="" type="checkbox"/> Ceramic Products <input checked="" type="checkbox"/> Paint 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Fuel Additive <input checked="" type="checkbox"/> Grease Thickener <input checked="" type="checkbox"/> Oil Additive: Detergent 	<ul style="list-style-type: none"> <input type="checkbox"/> Alloy Steel 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Coolant Inhibitor <input checked="" type="checkbox"/> Oil Additive <ul style="list-style-type: none"> <input type="checkbox"/> Anti Wear <input type="checkbox"/> Detergent <input type="checkbox"/> Extreme Pressure <input checked="" type="checkbox"/> Oil Drum Cleaning <input checked="" type="checkbox"/> Water Treatment 	<ul style="list-style-type: none"> <input type="checkbox"/> Journal Bearings <input type="checkbox"/> Plating
Calcium (Ca)	Chromium (Cr)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Magnesium (Mg)
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Cement Dust <input checked="" type="checkbox"/> Fuller's Earth <input checked="" type="checkbox"/> Grease Thickener <input checked="" type="checkbox"/> Gypsum <input checked="" type="checkbox"/> Hard Water <input checked="" type="checkbox"/> Lignite <input checked="" type="checkbox"/> Limestone <input checked="" type="checkbox"/> Mining Dust <input checked="" type="checkbox"/> Oil Additive: Detergent, Rust Inhibitor <input checked="" type="checkbox"/> Road Dust <input checked="" type="checkbox"/> Rubber <input checked="" type="checkbox"/> Salt Water <input checked="" type="checkbox"/> Slag 	<p>Wear Metals</p> <ul style="list-style-type: none"> <input type="checkbox"/> Exhaust Valves <input type="checkbox"/> Liners <input type="checkbox"/> Low Alloy Steel <input type="checkbox"/> Oil Coolers <input type="checkbox"/> Rings <input type="checkbox"/> Rods <input type="checkbox"/> Roller/Taper Bearings <input type="checkbox"/> Stainless Steel <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Water Treatment <input checked="" type="checkbox"/> Other Chemicals <input checked="" type="checkbox"/> Paint 	<p>Wear Metals:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Oil Pumps <input type="checkbox"/> Babbitt Bearings (underlay) <input type="checkbox"/> Bearing Cage <input type="checkbox"/> Brass <input type="checkbox"/> Bronze <input type="checkbox"/> Cam Bushings <input type="checkbox"/> Clutches <input type="checkbox"/> Governor <input type="checkbox"/> Guides <input type="checkbox"/> Oil Cooler <ul style="list-style-type: none"> <input type="checkbox"/> Pump Pistons & Thrust Plates <input type="checkbox"/> Steering Discs <input type="checkbox"/> Valve Train Bushings <input type="checkbox"/> Wear Plates <input type="checkbox"/> Wrist Pin Bushings <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Oil Additive <ul style="list-style-type: none"> <input type="checkbox"/> Anti Wear <input checked="" type="checkbox"/> Paint 	<p>Wear Metals:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Bearings <input type="checkbox"/> Blocks <input type="checkbox"/> Brake Bands <input type="checkbox"/> Camshaft <input type="checkbox"/> Cast Iron <input type="checkbox"/> Crankshafts <input type="checkbox"/> Cylinders <input type="checkbox"/> Discs <input type="checkbox"/> Gears <input type="checkbox"/> Housing <ul style="list-style-type: none"> <input type="checkbox"/> Hydraulic Pump <ul style="list-style-type: none"> <input type="checkbox"/> Vanes <input type="checkbox"/> Gears <input type="checkbox"/> Pistons <input type="checkbox"/> Liners <input type="checkbox"/> Oil Pump <input type="checkbox"/> PTO <input type="checkbox"/> Rings <input type="checkbox"/> Screws <input type="checkbox"/> Shafts 	<p>Wear Metals:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Babbitt <input type="checkbox"/> Journal Bearing Overlay <input type="checkbox"/> Bronze alloy <input type="checkbox"/> Solder <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Gasoline Additive <input checked="" type="checkbox"/> Paint <input checked="" type="checkbox"/> Road Dust <ul style="list-style-type: none"> <input type="checkbox"/> Balancing Weights 	<ul style="list-style-type: none"> <input type="checkbox"/> Turbine Metallurgy <input checked="" type="checkbox"/> Hard Water <input checked="" type="checkbox"/> Oil Additive: Detergent <input checked="" type="checkbox"/> Road Dust <input checked="" type="checkbox"/> Seawater <input checked="" type="checkbox"/> Fuller's Earth
Molybdenum (Mo)	Nickel (Ni)	Phosphorous (P)	Potassium (K)	Silicon (Si)	Silver (Ag)
<p>Wear Metals:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Alloy Steel <input type="checkbox"/> Rings <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Oil Additive: Extreme Pressure 	<p>Wear Metals:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Hardened Steels <input type="checkbox"/> Stainless Steels <input type="checkbox"/> Plating 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Oil Additive, <ul style="list-style-type: none"> <input type="checkbox"/> Anti Wear <input type="checkbox"/> Extreme Pressure <input checked="" type="checkbox"/> Cleaning Detergent 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Coolant Inhibitor <input checked="" type="checkbox"/> Fly Ash <input checked="" type="checkbox"/> Fuel Element <input checked="" type="checkbox"/> Granite <input checked="" type="checkbox"/> Paper Mill Dust <input checked="" type="checkbox"/> Road Dust 	<ul style="list-style-type: none"> <input type="checkbox"/> Alloy Steel <input checked="" type="checkbox"/> Asbestos <input checked="" type="checkbox"/> Cement Dust <input checked="" type="checkbox"/> Fly Ash <input checked="" type="checkbox"/> Coolant Additive <input checked="" type="checkbox"/> Glass <input checked="" type="checkbox"/> Granite <input checked="" type="checkbox"/> Grease <input checked="" type="checkbox"/> Limestone <input checked="" type="checkbox"/> Oil Additive Antifoam <input checked="" type="checkbox"/> Road Dust <input checked="" type="checkbox"/> Synthetic Lubricant <input checked="" type="checkbox"/> Slag <input checked="" type="checkbox"/> Sealant 	<p>Wear Metals:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Bearing Overlay <input type="checkbox"/> Needle Bearings <input type="checkbox"/> Oil Coolers (Solder) <input type="checkbox"/> Wrist Pin Bushings (EMD Engines)
Sodium (Na)	Tin (Sn)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)	<p>If you have any questions about this chart, call one our locations below:</p> <p>9321 - 48 Street Edmonton, AB T6B 2R4 Phone: (780) 462-2400 Fax: (780) 462-2420 Toll Free: 1-877-962-2400</p> <p>95 Copernicus Blvd. Brantford, Ontario N3P 1N4 Phone: (519) 720-9700 Fax: (519) 720-9705</p>
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Activated Alumina <input checked="" type="checkbox"/> Coolant Inhibitor <input checked="" type="checkbox"/> Dirt <input checked="" type="checkbox"/> Fly Ash <input checked="" type="checkbox"/> Grease <input checked="" type="checkbox"/> Oil Additives <input checked="" type="checkbox"/> Paper Mill Dust <input checked="" type="checkbox"/> Road Salt 	<p>Wear Metals:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Bearing Cage <input type="checkbox"/> Babbitt <input type="checkbox"/> Bearing Flashing <input type="checkbox"/> Piston Overlay <input type="checkbox"/> Solder 	<ul style="list-style-type: none"> <input type="checkbox"/> Gas Turbine Bearings <input type="checkbox"/> Turbine Blades <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Paint 	<ul style="list-style-type: none"> <input type="checkbox"/> Turbine Blades <input type="checkbox"/> Valves <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Bunker Oil 	<ul style="list-style-type: none"> <input type="checkbox"/> Brass <input type="checkbox"/> Plating <input checked="" type="checkbox"/> Cathodic Protection <input checked="" type="checkbox"/> Galvanizing <input checked="" type="checkbox"/> Grease <input checked="" type="checkbox"/> Oil Additive, Antiwear 	