



# Lubricant Analysis Report

North America: +1-866-341-0487

Z10-1  
MAY

0	1	2	3	4
NORMAL		ABNORMAL		CRITICAL

Overall report severity based on comments.

Account Information		Component Information		Sample Information	
Account Number: LUB307-0037-0000 Company Name: PIDHERNEY'S Contact: CARLA MERKLIN Address: RANGE RD 70 PO BOX 940 ROCKY MOUNTAIN HOUSE, AB T4T 1A7 CA Phone Number: 403-845-3072		Component ID: 4543 E Secondary ID: 1DW772GPPNF713399 Component Type: DIESEL ENGINE Manufacturer: JOHN DEERE Model: 6090H Application: CONSTRUCTION Sump Capacity: 31 L		Tracking Number: 25288L97482 Lab Number: E-059511 Lab Location: Edmonton Data Analyst: ZXH Sampled: 24-Feb-2026 Submitted: 05-Mar-2026 Received: 11-Mar-2026 Completed: 13-Mar-2026	
Filter Information		Miscellaneous Information		Product Information	
Filter Type: Information Requested Micron Rating: 0		Wildcard 1: Your Rep.: Cary Maxwell Wildcard 2: Ph:(403) 861-9957		Product Manufacturer: CHEVRON Product Name: DELO 400 XSP Viscosity Grade: SAE 5W40	
Comments	Suggest checking compression and for engine breather passing oil (blow-by) or similar diagnostics and monitoring engine fault codes. LUBRICANT CHANGE is suggested if not done at sampling time. Cylinder region metals (pistons, rings, liners etc.) are at a SIGNIFICANT LEVEL; Molybdenum is slightly high for this lubricant. Resample at half interval.				

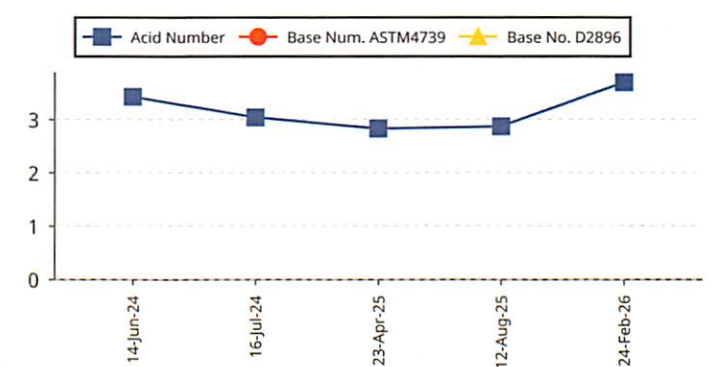
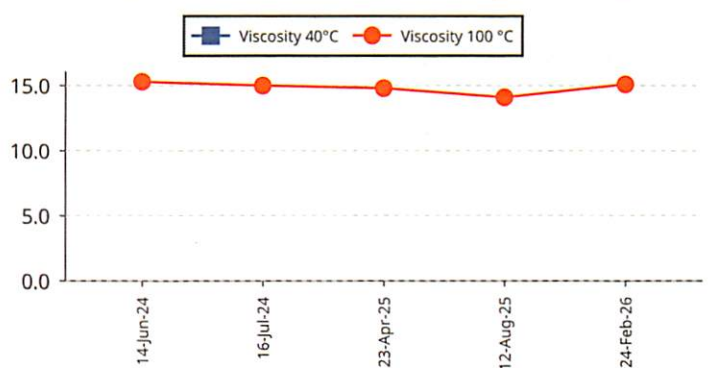
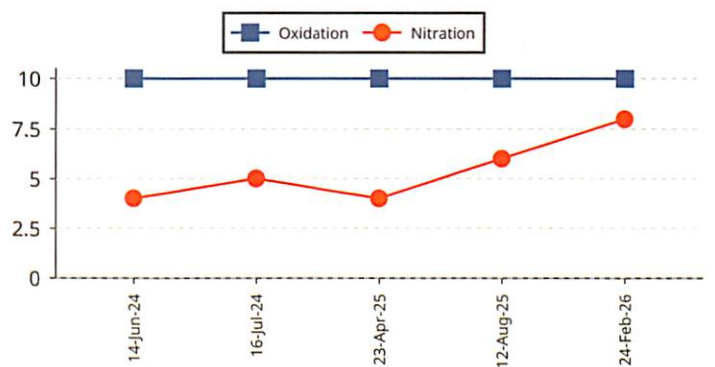
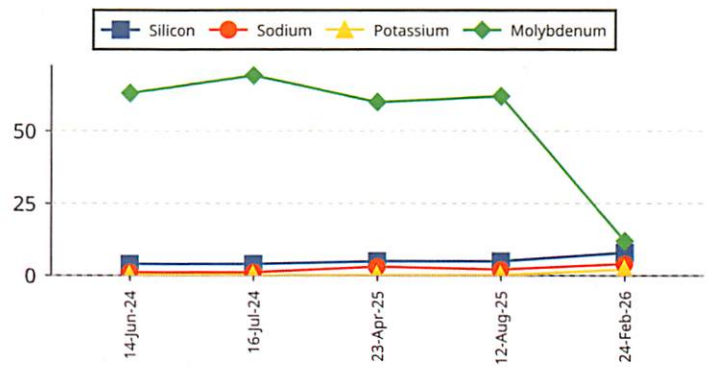
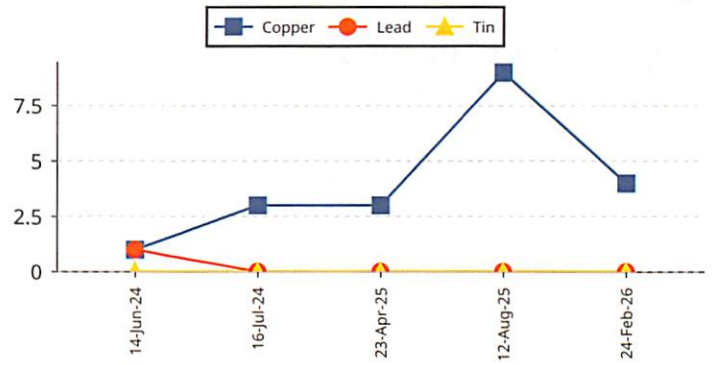
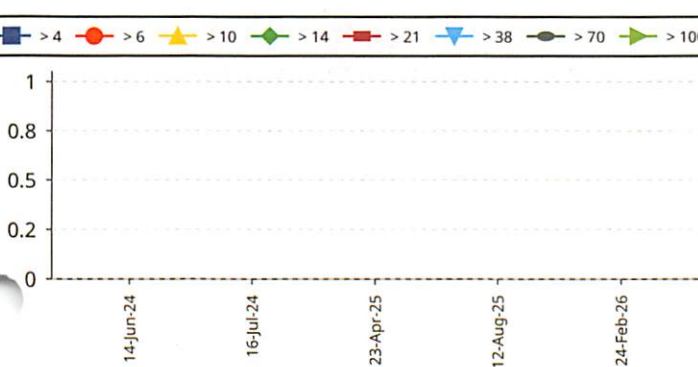
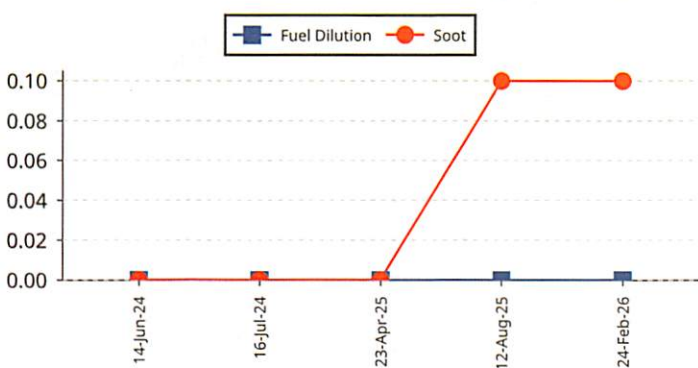
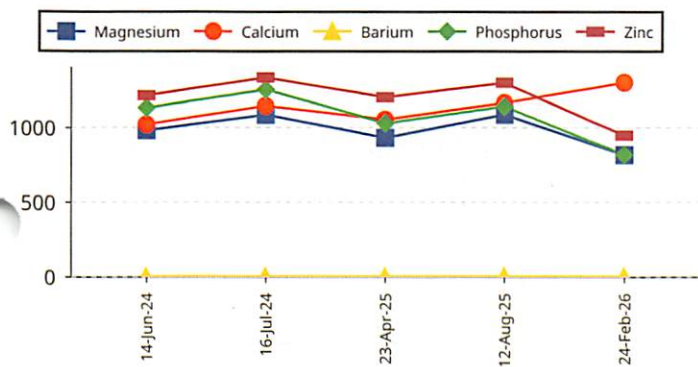
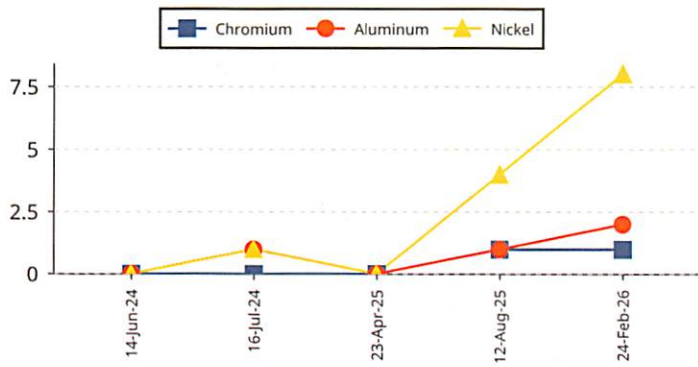
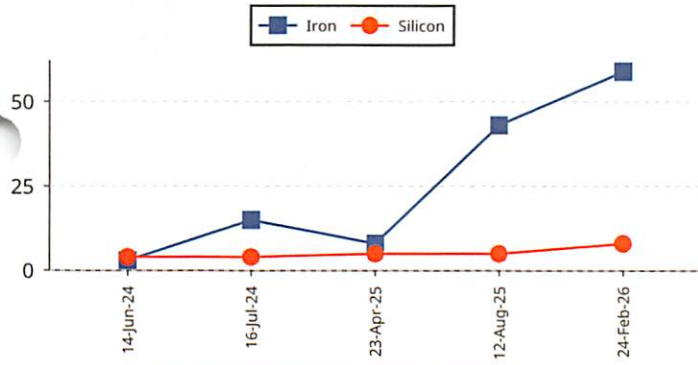
Sample #	Wear Metals (ppm)										Contaminant Metals (ppm)			Multi-Source Metals (ppm)					Additive Metals (ppm)					
	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
BL	3	0	0	1	0	1	0	0	0	0	6	3	3	1	0	0	0	1	98	775	1323	0	768	869
3	0	0	0	0	1	1	0	0	0	0	4	1	0	0	63	0	0	0	1	981	1021	0	1131	1213
4	15	0	1	1	3	0	0	0	0	0	4	1	0	0	69	1	0	0	2	1086	1144	0	1252	1332
5	8	0	0	0	3	0	0	0	0	0	5	3	0	0	60	0	0	0	4	932	1054	0	1029	1201
6	43	1	4	1	9	0	0	0	0	0	5	2	0	0	62	0	0	0	4	1088	1165	0	1140	1298
7	59	1	8	2	4	0	0	0	0	0	8	4	2	0	12	0	1	0	61	818	1299	0	819	948

Sample #	Sample Information							Contaminants			Fluid Properties					
	Date Sampled	Date Received	Lube Time	Unit Time	Lube Change	Lube Added	Filter Change	Fuel Dilution	Soot	Water	Viscosity 40°C	Viscosity 100°C	Acid Number	Base Num. ASTM4739	Oxidation	Nitration
			h	h	Lube Change	L	Filter Change	%	%	%	cSt	cSt	mg KOH / g	mg KOH / g	abs / cm	abs / 0.1mm
BL	01-Jan-2023	18-Sep-2023	0	0	Unk	0	Unk			<.1 - FTIR		15.3		6.21	10	7
3	14-Jun-2024	19-Jun-2024	334	3842	No	0	No	<2 - Estimate	<.1	<.1 - FTIR		15.3	3.43		10	4
4	16-Jul-2024	01-Aug-2024	450	3956	Yes	0	Yes	<2 - Estimate	<.1	<.1 - FTIR		15.0	3.04		10	5
5	23-Apr-2025	30-Apr-2025	671	4627	Yes	0	Yes	<2 - Estimate	<.1	<.1 - FTIR		14.8	2.83		10	4
6	12-Aug-2025	18-Aug-2025	329	4956	Yes	0	Yes	<2 - Estimate	0.1 - E2412	<.1 - FTIR		14.1	2.87		10	6
7	24-Feb-2026	11-Mar-2026	345	5301	No	0	No	<2 - Estimate	.1 - E2412	<.1 - FTIR		15.1	3.70		10	8

Sample #	ISO Code	Particle Count (particles/mL)								Test Method	Additional Testing
		> 4 particles / mL	> 6 particles / mL	> 10 particles / mL	> 14 particles / mL	> 21 particles / mL	> 38 particles / mL	> 70 particles / mL	> 100 particles / mL		
BL	/ /										
3	/ /										
4	/ /										
5	/ /										
6	/ /										
7	/ /										

Comments are advisory only and are based on the sample information provided by the customer being valid. Results related only to the items tested. Missing fluid or component information limits the evaluation. No warranty is expressed or implied. Measurement uncertainty available upon request.

Historical Comments	3	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Flagged additive levels are different than what should be present for the identified lubricant. This may have been topped off with a different lubricant, the fluid may be misidentified, or a different lubricant or formulation may have been in use prior to a recent change.
	4	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Iron is at a MINOR LEVEL. IRON SOURCES in engines can be cylinder liners, iron pistons, hardened steel camshafts, crankshafts, gears, hardened rocker arms, valve bridges, alloyed steel cam follower rollers, etc. Flagged additive levels are different than what should be present for the identified lubricant. This may have been topped off with a different lubricant, the fluid may be misidentified, or a different lubricant or formulation may have been in use prior to a recent change. Lubricant and filter change acknowledged.
	5	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Flagged additive levels are different than what should be present for the identified lubricant. This may have been topped off with a different lubricant, the fluid may be misidentified, or a different lubricant or formulation may have been in use prior to a recent change. Lubricant and filter change acknowledged.
	6	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Cylinder region metals (pistons, rings, liners etc.) are at a MODERATE LEVEL; Copper is at a MINOR LEVEL; COPPER is most likely LEACHING into the oil via the OIL COOLER core tubing. This typically DOES NOT REQUIRE MAINTENANCE ACTION unless there is evidence of COOLANT in the oil. Flagged additive levels are different than what should be present for the identified lubricant. This may have been topped off with a different lubricant, the fluid may be misidentified, or a different lubricant or formulation may have been in use prior to a recent change. Lubricant and filter change acknowledged.





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Historical Comments	1	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Flagged additives do not match current baseline reference for the specified product (this does not imply the lubricant does not meet proper API, SAE, or ISO classifications). LUBRICANT TIME was not provided for this sample. Please provide this units sump capacity with next sample. Lubricant and filter change acknowledged.
	2	Viscosity is SIGNIFICANTLY LOW. Causes include contamination, incorrectly identified viscosity grade, or adding a different viscosity grade to the component. Increased component wear possible. If grade is misidentified, it can be updated in HORIZON. Flagged additives do not match current baseline reference for the specified product (this does not imply the lubricant does not meet proper API, SAE, or ISO classifications). Is the PRODUCT MANUFACTURER, PRODUCT NAME and/or PRODUCT GRADE correctly identified? If so, LUBRICANT CHANGE is suggested if not done at sampling time. Chrome is at a MODERATE LEVEL; CHROMIUM in hydraulic systems can be from piston/rods, hydraulic motor component, valves, and other chrome-plated surfaces (as applicable). Significantly elevated chromium content with low contamination and low acid number/oxidation can indicate a cavitation issue. Resample at half interval.

