



# Lubricant Analysis Report

North America: +1-866-341-0487

208-1  
BLUE-MAR

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: 5696 LFD Secondary ID: 1FF350GXHMF815003 Component Type: FINAL DRIVE Manufacturer: JOHN DEERE Model: 350G LC Application: CONSTRUCTION Sump Capacity:		Tracking Number: 24319C02941 Lab Number: E-045029 Lab Location: Edmonton Data Analyst: FLG Sampled: 21-Nov-2025 Submitted: 10-Dec-2025 Received: <b>12-Dec-2025</b> Completed: 15-Dec-2025	
Filter Information		Miscellaneous Information		Product Information	
Filter Type: <b>Information Requested</b> Micron Rating: 0		Wildcard 1: Your Rep.: Cary Maxwell Wildcard 2: Ph:(403) 861-9957		Product Manufacturer: CHEVRON Product Name: MULTIGEAR EP-5 Viscosity Grade: SAE 80W90	
Comments		Maintenance action indicated at time of submission (fluid/filter change, filtration, etc.) will have corrected the issue this system is exhibiting. No further maintenance action is recommended at this time. However; 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? Please provide this units sump capacity with next sample. LUBRICANT TIME was not provided for this sample. Lubricant change acknowledged.			

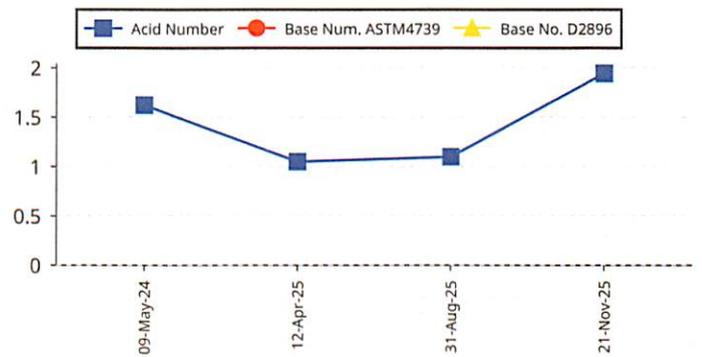
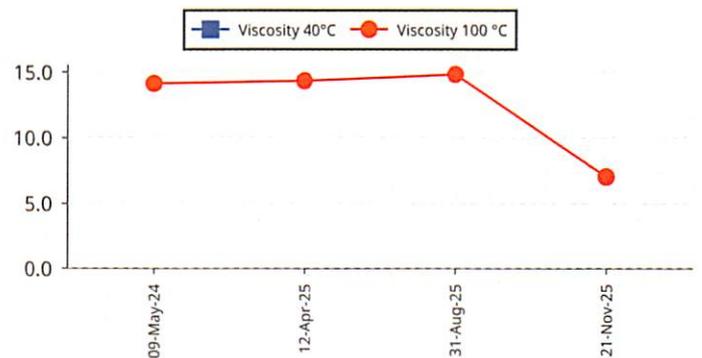
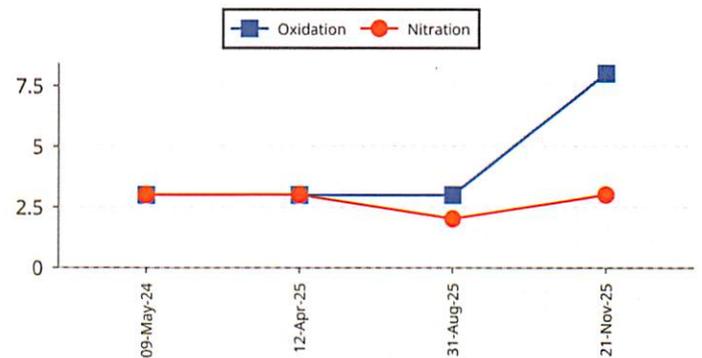
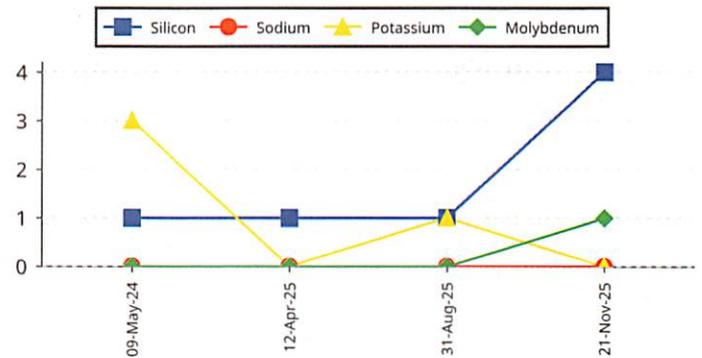
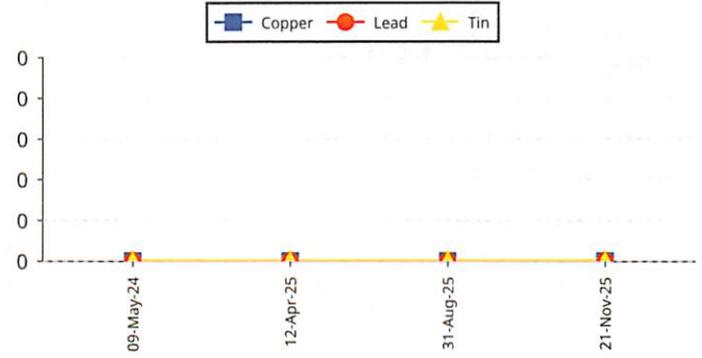
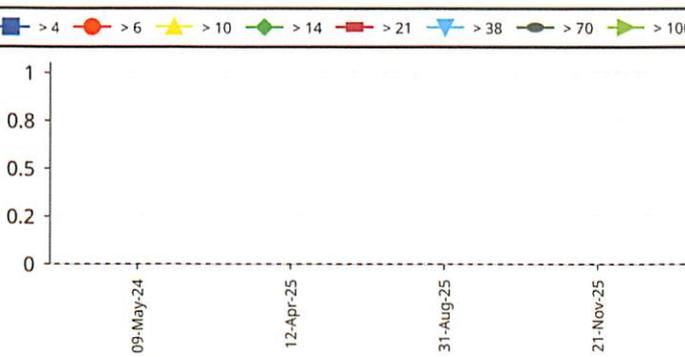
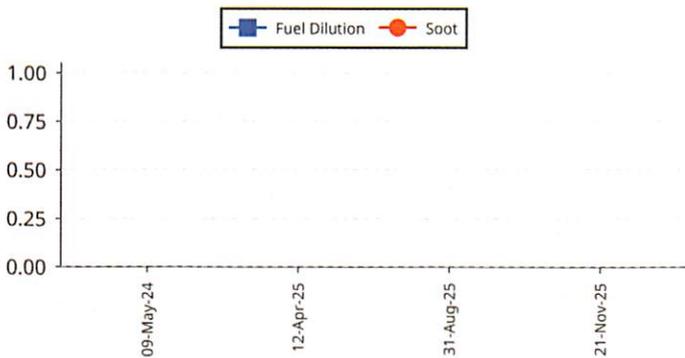
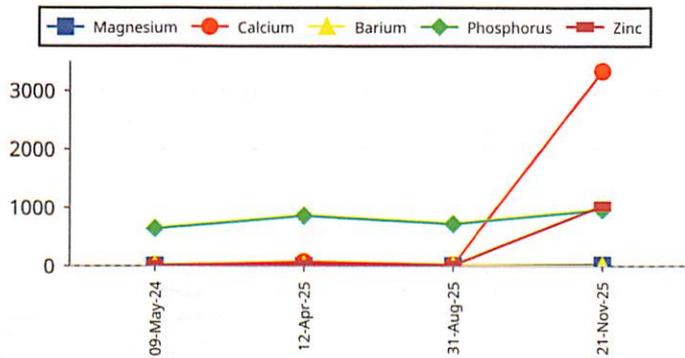
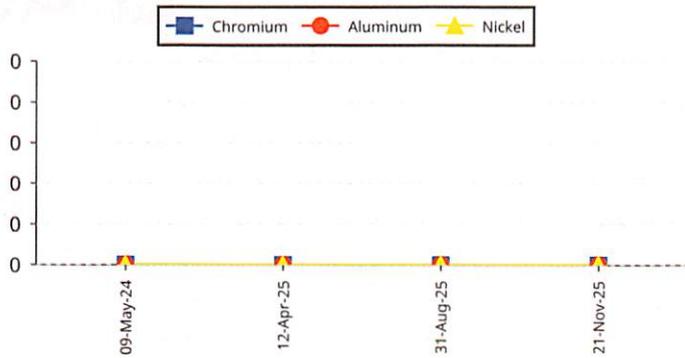
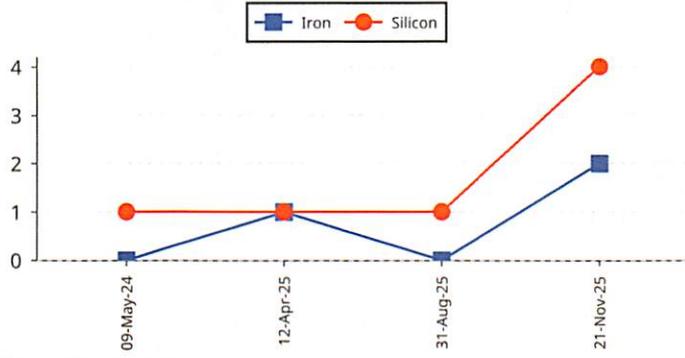
Sample #	Wear Metals (ppm)										Contaminant Metals (ppm)			Multi-Source Metals (ppm)					Additive Metals (ppm)						
	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc	
BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133	1	2	0	0	775	3
1	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	1	0	0	2	0	0	0	0	639	0
2	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	149	0	63	0	0	856	16
3	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	113	1	9	0	0	716	5
4	2	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0	0	2	19	3321	0	0	960	1019

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		%	%	%	cSt	cSt	mg KOH / g	mg KOH / g	abs / cm	abs / 0.1mm
BL	N/A	18-Sep-2017	0	0	Unk	0	Unk			<.1 - FTIR		14.1	1.59		3	2
1	09-May-2024	04-Jun-2024	1930	3925	Yes	0	No			<.1 - FTIR		14.1	1.62		3	3
2	12-Apr-2025	09-May-2025	542	4467	Yes	0	No			<.1 - FTIR		14.3	1.05		3	3
3	31-Aug-2025	19-Sep-2025	0	4945	Yes	0	No			<.1 - FTIR		14.8	1.10		3	2
4	21-Nov-2025	12-Dec-2025	0	5357	Yes	0	No			<.1 - FTIR		7.0	1.94		8	3

Sample #	ISO Code	Particle Count (particles/mL)								Test Method	Additional Testing
		> 4	> 6	> 10	> 14	> 21	> 38	> 70	> 100		
BL	4/6/14	particles/mL	particles/mL	particles/mL	particles/mL	particles/mL	particles/mL	particles/mL	particles/mL		
1	//										
2	//										
3	//										
4	//										

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	1	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Boron is slightly low for this lubricant. Boron levels may naturally decline with use so this is not a cause for concern. Lubricant change acknowledged.
	2	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Calcium is slightly high for this lubricant. Lubricant change acknowledged.
	3	Data indicates no abnormal findings. Resample at normal interval. Lubricant change acknowledged. LUBRICANT TIME was not provided for this sample.



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: 5696 SWING Secondary ID: 1FF350GXHMF815003 Component Type: SWING GEAR BOX Manufacturer: JOHN DEERE Model: 350G LC Application: CONSTRUCTION Sump Capacity:		Tracking Number: 25007M22928 Lab Number: E-045016 Lab Location: Edmonton Data Analyst: FLG Sampled: 21-Nov-2025 Submitted: 10-Dec-2025 Received: <b>12-Dec-2025</b> Completed: 12-Dec-2025	
Filter Information		Miscellaneous Information		Product Information	
Filter Type: <b>Information Requested</b> Micron Rating: 0		Wildcard 1: Your Rep.: Cary Maxwell Wildcard 2: Ph:(403) 861-9957		Product Manufacturer: CHEVRON Product Name: MULTIGEAR EP-5 Viscosity Grade: SAE 80W90	
Comments		Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. OXIDATION is at a MODERATE level, which may be due to extended drain interval or high operating temperature. Calcium is slightly high for this lubricant. Please provide this units sump capacity with next sample.			

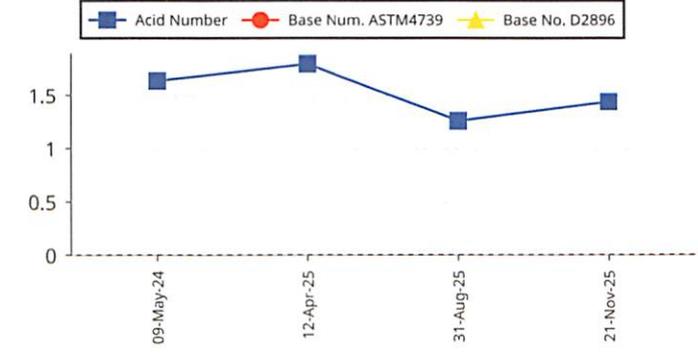
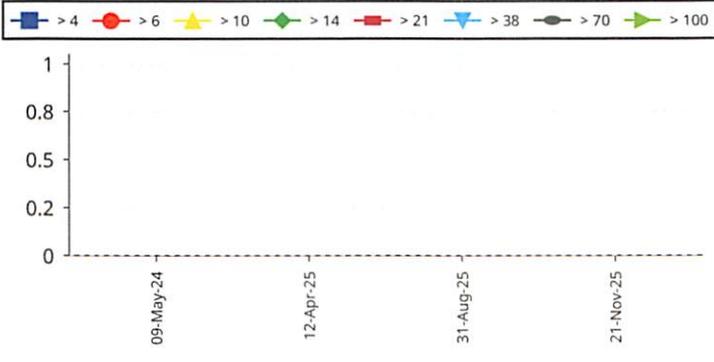
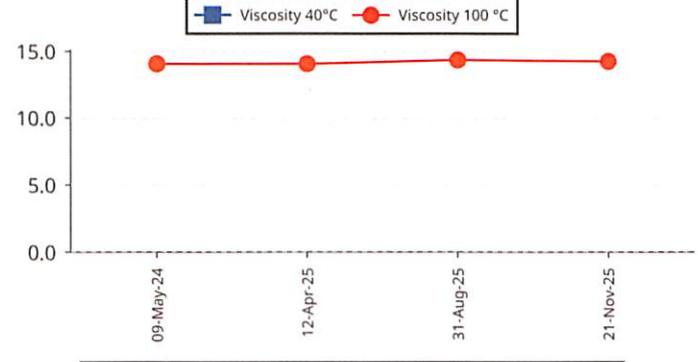
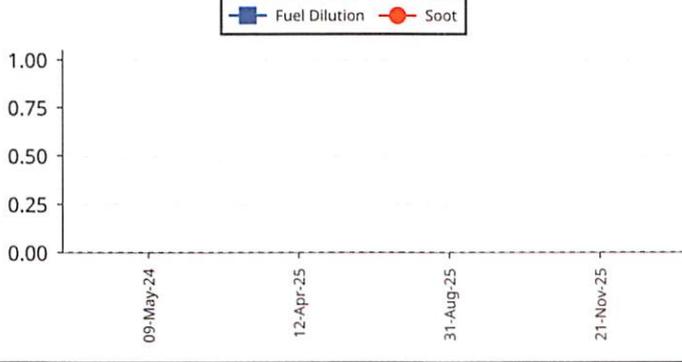
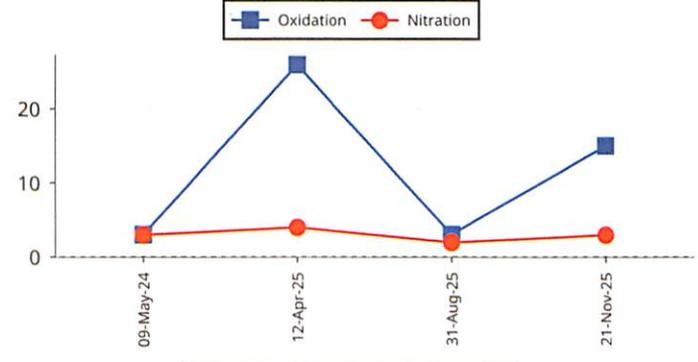
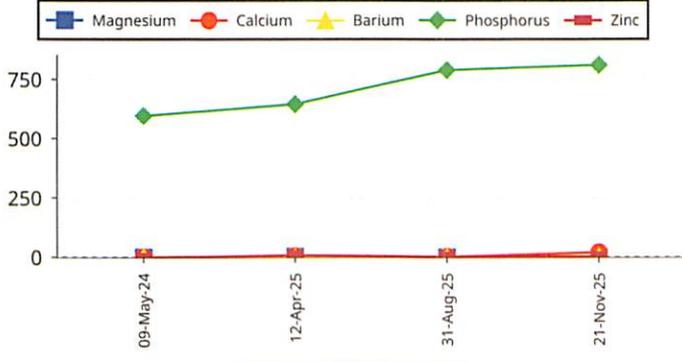
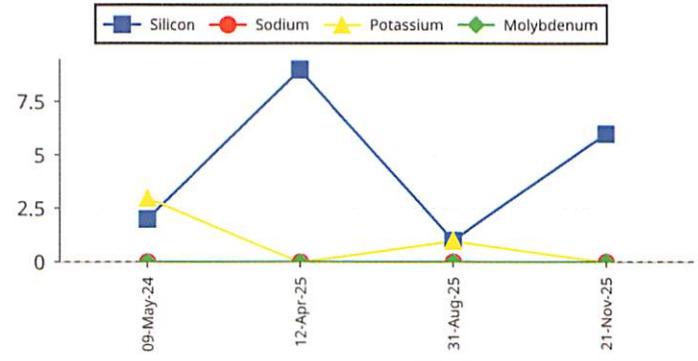
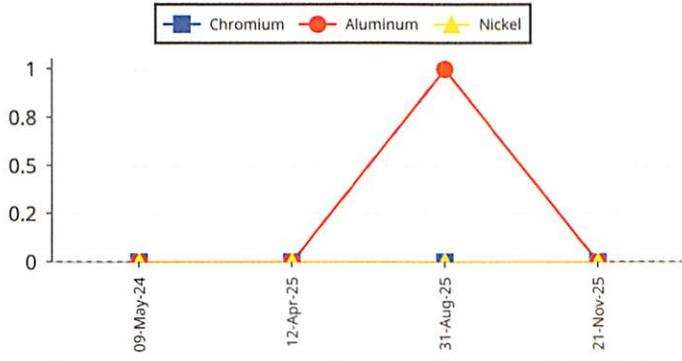
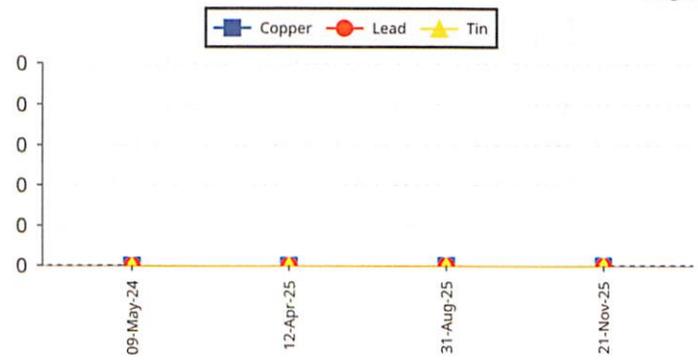
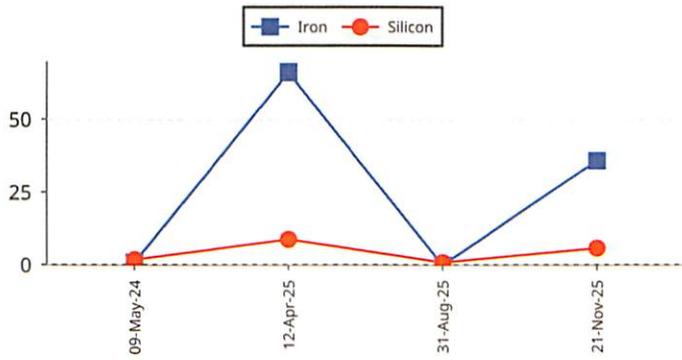
Sample #	Wear Metals (ppm)										Contaminant Metals (ppm)			Multi-Source Metals (ppm)					Additive Metals (ppm)					
	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133	1	2	0	775	3
1	1	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	2	0	2	0	598	0
2	66	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	35	3	7	0	647	10
3	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	123	0	4	0	791	4
4	36	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	88	0	22	0	812	5

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	N/A	18-Sep-2017	0	0	Unk	0	Unk								3	2
1	09-May-2024	04-Jun-2024	1930	3925	Yes	0	No			<.1 - FTIR		14.1	1.59		3	2
2	12-Apr-2025	09-May-2025	542	4467	No	0	No			<.1 - FTIR		14.1	1.64		3	3
3	31-Aug-2025	19-Sep-2025	0	4945	Yes	0	No			<.1 - FTIR		14.1	1.80		26	4
4	21-Nov-2025	12-Dec-2025	412	5357	No	0	No			<.1 - FTIR		14.4	1.26		3	2
												14.3	1.44		15	3

Sample #	Particle Count (particles/mL)									Test Method	Additional Testing	
	ISO Code	> 4	> 6	> 10	> 14	> 21	> 38	> 70	> 100			
	Based On 4/6/14	particles / mL										
BL	//											
1	//											
2	//											
3	//											
4	//											

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	1	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Boron is slightly low for this lubricant. Boron levels may naturally decline with use so this is not a cause for concern. Lubricant change acknowledged.
	2	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Gear and/or bearing metal is at a MINOR LEVEL; Boron is slightly low for this lubricant. Boron levels may naturally decline with use so this is not a cause for concern.
	3	Data indicates no abnormal findings. Resample at normal interval. Lubricant change acknowledged. LUBRICANT TIME was not provided for this sample.





# Lubricant Analysis Report

North America: +1-866-341-0487

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: 5696 H Secondary ID: 1FF350GXHMF815003 Component Type: HYDRAULIC Manufacturer: JOHN DEERE Model: 350G LC Application: CONSTRUCTION Sump Capacity: 290 L	Tracking Number: 25062Y44238 Lab Number: E-044992 Lab Location: Edmonton Data Analyst: FLG Sampled: 21-Nov-2025 Submitted: 10-Dec-2025 Received: <b>12-Dec-2025</b> Completed: 15-Dec-2025
Filter Information	Miscellaneous Information	Product Information
Filter Type: <a href="#">Information Requested</a> Micron Rating: 0	Wildcard 1: Your Rep.: Cary Maxwell Wildcard 2: Ph:(403) 861-9957	Product Manufacturer: JOHN DEERE Product Name: SUPER EX Viscosity Grade: ISO 46
Comments	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Zinc is slightly high for this lubricant.	

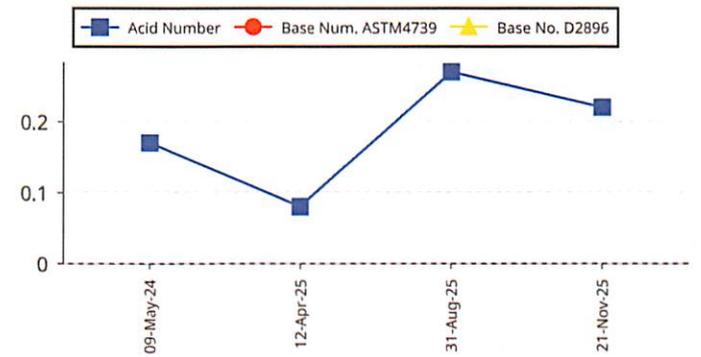
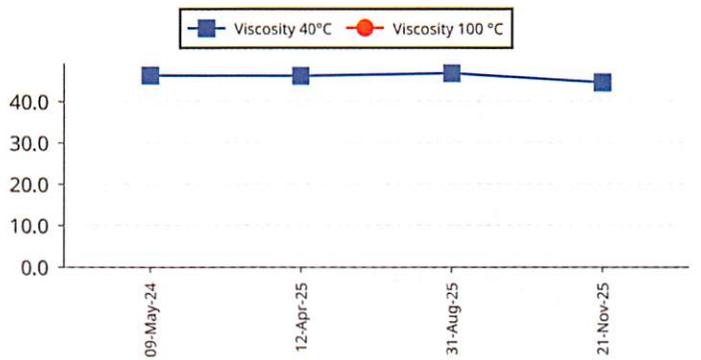
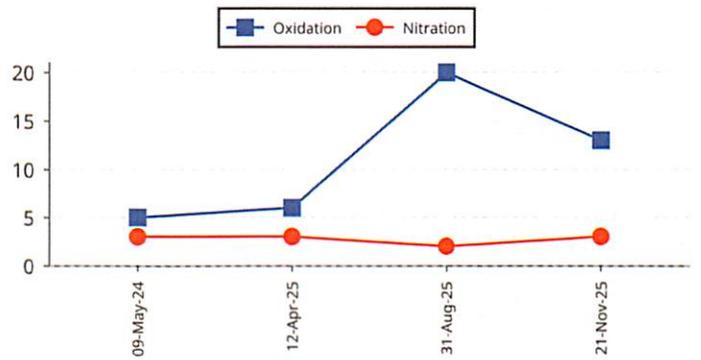
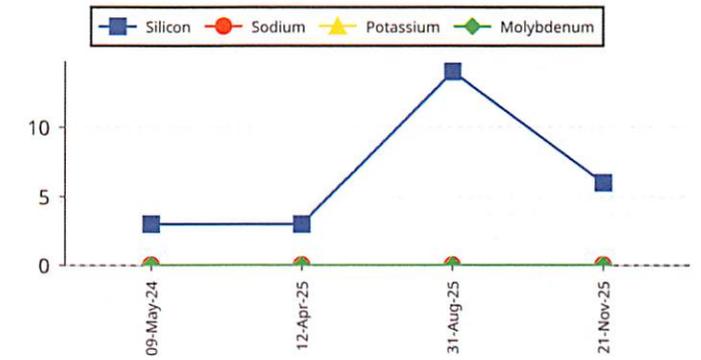
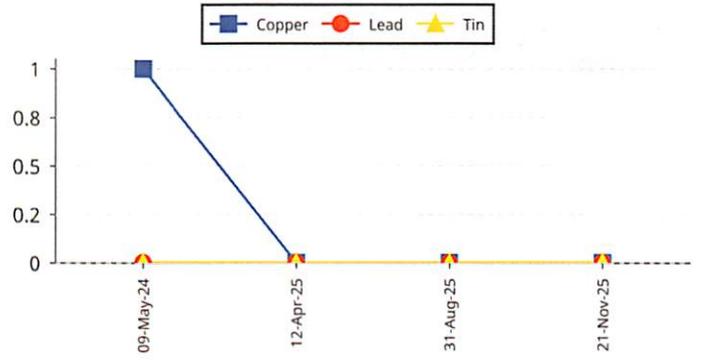
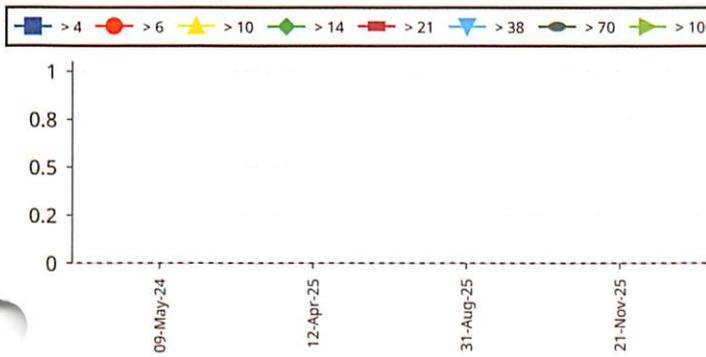
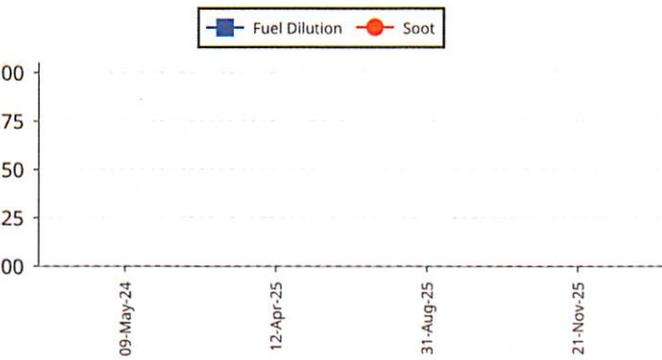
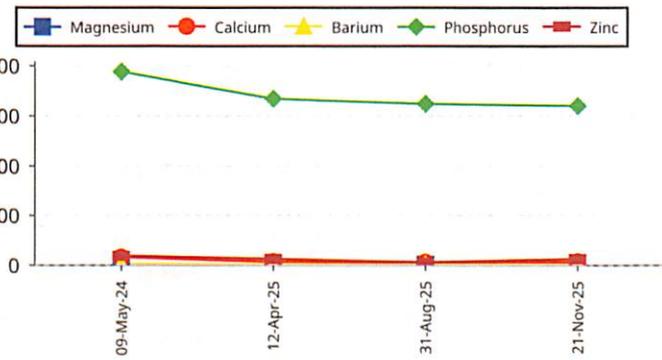
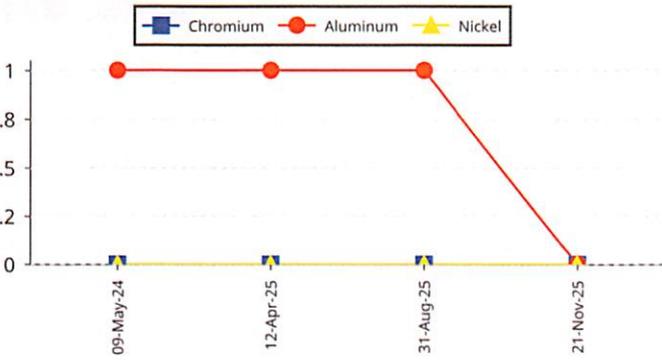
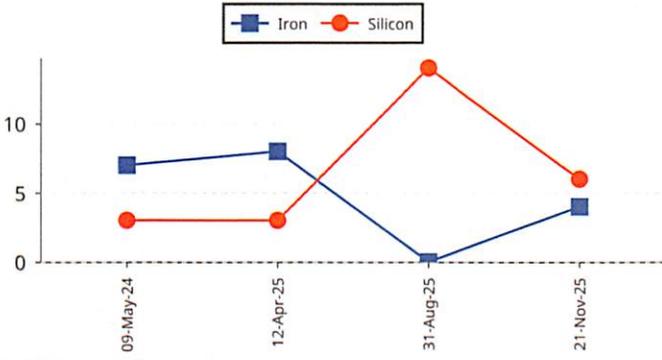
Sample #	Wear Metals (ppm)										Contaminant Metals (ppm)			Multi-Source Metals (ppm)					Additive Metals (ppm)					
	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	11	0	448	4
1	7	0	0	1	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	15	0	388	18
2	8	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0	6	0	334	12
3	0	0	0	1	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	1	5	0	324	5
4	4	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	4	6	0	320	12

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	10-Jan-2024	12-Jan-2024	0	1	No	0	No			<.1 - FTIR	45.3		0.56		12	2	
1	09-May-2024	04-Jun-2024	1930	3925	No	0	Yes			<.1 - FTIR	46.3		0.17		5	3	
2	12-Apr-2025	09-May-2025	0	4467	No	0	No			<.1 - FTIR	46.2		0.08		6	3	
3	31-Aug-2025	19-Sep-2025	0	4945	Yes	0	Yes			<.1 - FTIR	46.8		0.27		20	2	
4	21-Nov-2025	12-Dec-2025	412	5357	No	0	No			<.1 - FTIR	44.6		0.22		13	3	

Sample #	Particle Count (particles/mL)									Test Method	Additional Testing	
	ISO Code	> 4	> 6	> 10	> 14	> 21	> 38	> 70	> 100			
	Based On	particles / mL										
BL	//											
1	//											
2	//											
3	//											
4	//											

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	1	Data indicates no abnormal findings. Resample at normal interval. Filter change acknowledged.
	2	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Phosphorus is slightly low for this lubricant. LUBRICANT TIME was not provided for this sample.
	3	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Phosphorus is slightly low for this lubricant. LUBRICANT TIME was not provided for this sample. Lubricant and filter change acknowledged.





# Lubricant Analysis Report

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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: 5696 RFD Secondary ID: 1FF350GXHMF815003 Component Type: FINAL DRIVE Manufacturer: JOHN DEERE Model: 350G LC Application: CONSTRUCTION Sump Capacity:		Tracking Number: 25062Y43837 Lab Number: E-045018 Lab Location: Edmonton Data Analyst: FLG Sampled: 21-Nov-2025 Submitted: 10-Dec-2025 Received: <b>12-Dec-2025</b> Completed: 15-Dec-2025	
Filter Information		Miscellaneous Information		Product Information	
Filter Type: <b>Information Requested</b> Micron Rating: 0		Wildcard 1: Your Rep.: Cary Maxwell Wildcard 2: Ph:(403) 861-9957		Product Manufacturer: CHEVRON Product Name: MULTIGEAR EP-5 Viscosity Grade: SAE 80W90	
Comments		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). Please provide this units sump capacity with next sample. LUBRICANT TIME was not provided for this sample. Lubricant change acknowledged.			

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133	1	2	0	0	775	3
1	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0	2	0	0	0	0	595	0
2	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	148	1	59	0	0	840	17
3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	120	0	9	0	0	755	4
4	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	138	0	37	0	0	804	12

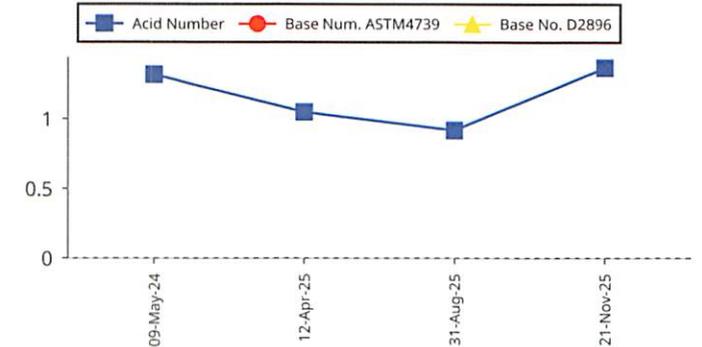
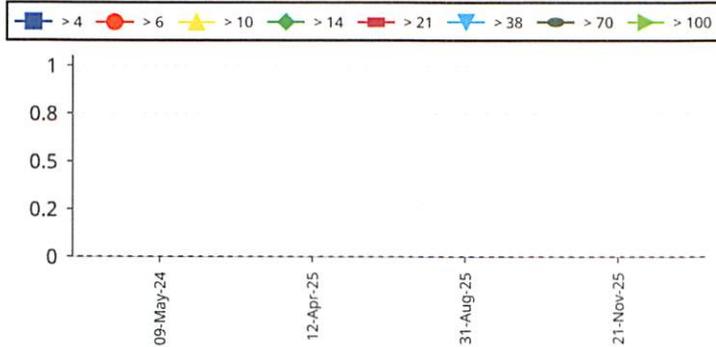
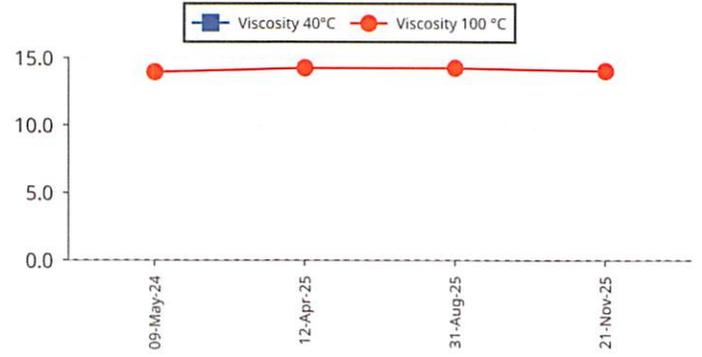
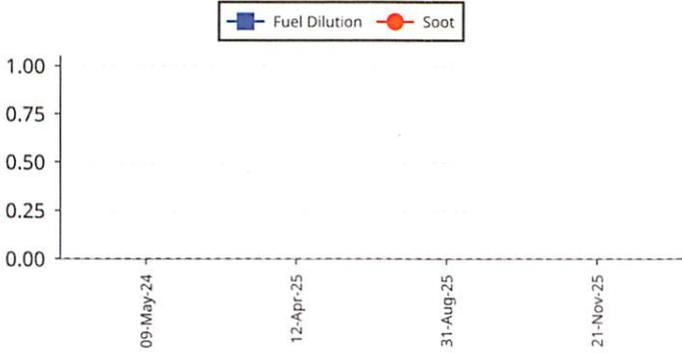
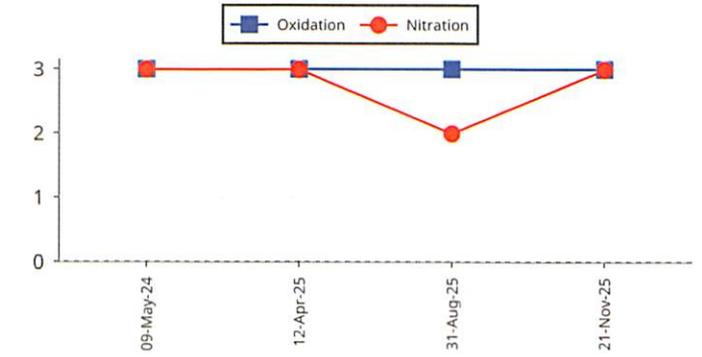
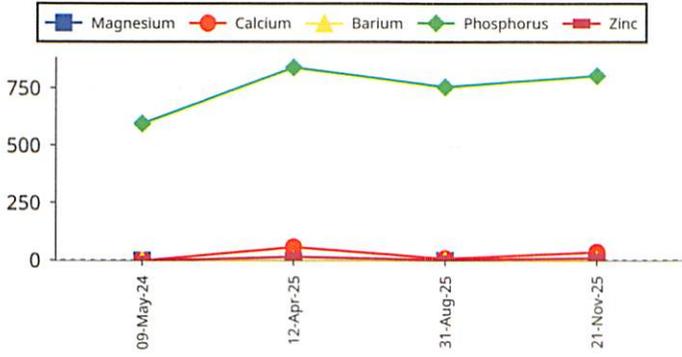
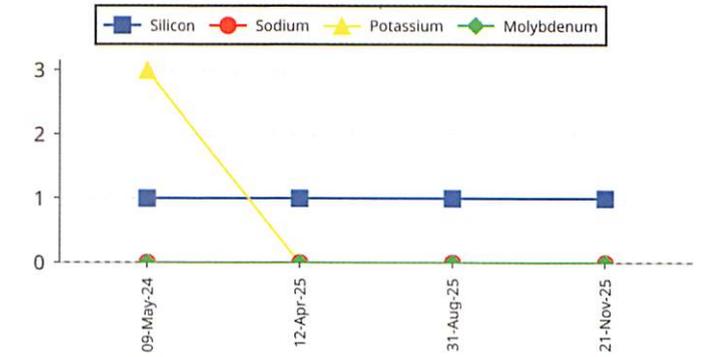
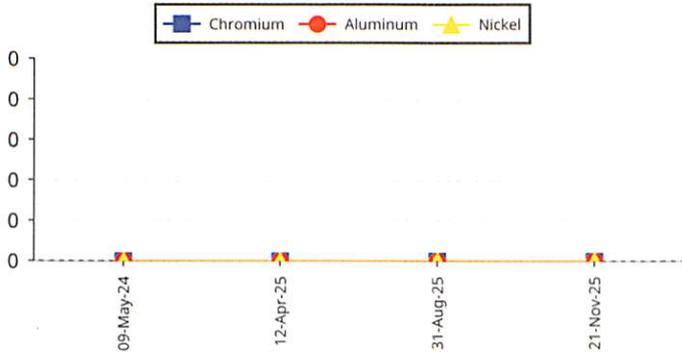
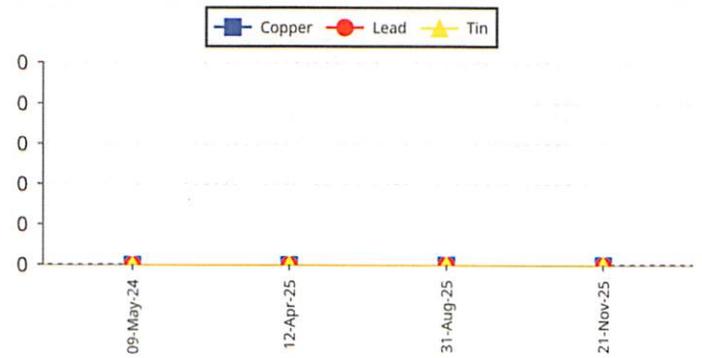
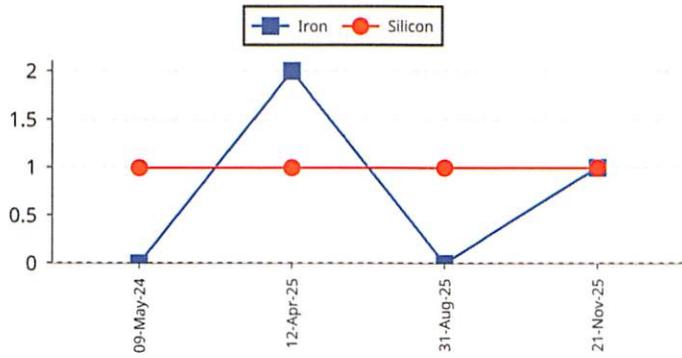
Sample #	Sample Information							Contaminants			Fluid Properties					
	Date Sampled	Date Received	Lube Time	Unit Time	Lube Change	Lube Added	Filter Change	Fuel Dilution	Soot	Water	Viscosity 40°C	Viscosity 100 °C	Acid Number	Base Num. ASTM4739	Oxidation	Nitration
			h	h	L		%	%	%	cSt	cSt	mg KOH / g	mg KOH / g	abs / cm	abs / 0.1mm	
BL	N/A	18-Sep-2017	0	0	Unk	0	Unk			<.1 - FTIR		14.1	1.59		3	2
1	09-May-2024	04-Jun-2024	1930	3925	Yes	0	No			<.1 - FTIR		14.0	1.32		3	3
2	12-Apr-2025	09-May-2025	542	4467	Yes	0	No			<.1 - FTIR		14.3	1.05		3	3
3	31-Aug-2025	19-Sep-2025	0	4945	Yes	0	No			<.1 - FTIR		14.3	0.92		3	2
4	21-Nov-2025	12-Dec-2025	0	5357	Yes	0	No			<.1 - FTIR		14.1	1.37		3	3

Sample #	Particle Count (particles/mL)									Test Method	Additional Testing	
	ISO Code	> 4	> 6	> 10	> 14	> 21	> 38	> 70	> 100			
	Based On 4/6/14	particles / mL										
BL	//											
1	//											
2	//											
3	//											
4	//											

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	1	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Boron is slightly low for this lubricant. Boron levels may naturally decline with use so this is not a cause for concern. Lubricant change acknowledged.
	2	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Calcium is slightly high for this lubricant. Lubricant change acknowledged.
	3	Data indicates no abnormal findings. Resample at normal interval. Lubricant change acknowledged. LUBRICANT TIME was not provided for this sample.





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	4	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.
	5	Data indicates no abnormal findings. Resample at normal interval.
	6	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. 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. Boron is slightly low for this lubricant. Boron levels may naturally decline with use so this is not a cause for concern. Lubricant and filter change acknowledged.
	7	Data indicates no abnormal findings. Resample at normal interval.

