POWER GENERATION PRODUCTS

OIL ANALYSIS REPORT

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

[86126] Machine Id 6200 STEELES AVE WOODBRIDGE 407 ETR 3001958405 Component Right Natural Gas Engine

ESSO XD-3 EXTRA 15W40 (90 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid. this testkit includes BN to determine the suitability of the oil for continued use.

WEAR

Area

Metal levels are typical for a new component breaking in. Component wear rates appear to be normal (unconfirmed).

CONTAMINATION

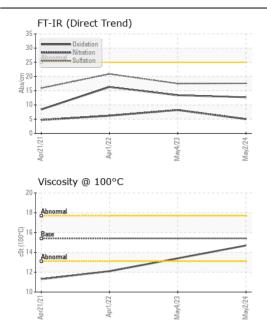
There is no indication of any contamination in the oil.

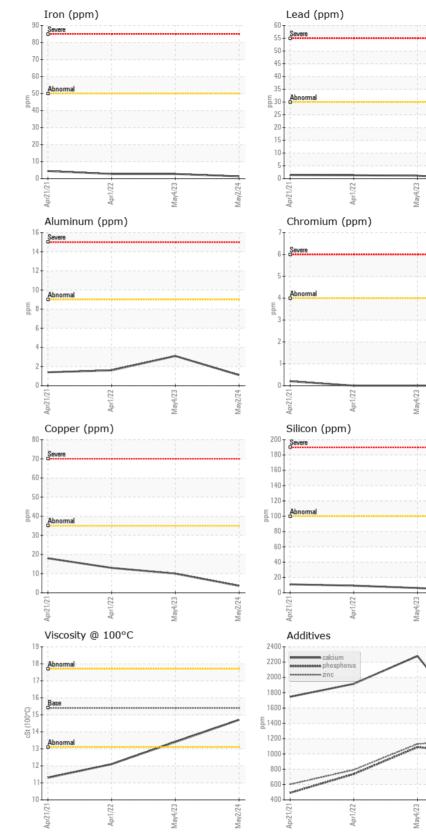
TestUOMMethodLumt/AnCurrentHistory1History2Sample NumberClient InfoPN0006059PN0004228PN0003441Sample DateClient InfoU2 May 202404 May 202301 Apr 2022Machine AgehrsClient Info15114443Oil AgehrsClient Info81019Filter AgehrsClient InfoChangedChangedChangedFilter ChangedClient InfoChangedNorRMALABNORMALSample StatusClient InfoChangedNorRMALABNORMALIronppmASTMD5185m>50133ChromiumppmASTMD5185m>22<1<1< <td><1</td> TitaniumppmASTMD5185m>300<1<1SilverppmASTMD5185m>300<11CopperppmASTMD5185m>300111TinppmASTMD5185m>40000SiliconppmASTMD5185m>40011VanadiumppmASTMD5185m>40011WC Method>0<1NEGNEGNEG1SiliconppmASTMD5185m>40000SiliconppmASTMD5185m>20S.08.26.21Soti %ASTMD5185m>20S.0<	<1						<i>.</i>	
Sample DateClient InfoQ2 May 202004 May 202301 Apr 2022Machine AgehrsClient InfoIs114443Oil AgehrsClient Info81019Filter AgehrsClient InfoChangedChangedChangedFilter ChangedIClient InfoChangedNot ChangedChangedSample StatusClient InfoMORMALNORMALABNORMALIronppmASTM D5185(m>50133ChromiumppmASTM D5185(m>2<1<1<1TitaniumppmASTM D5185(m>2<1<1<1SilverppmASTM D5185(m>300<133AuminumppmASTM D5185(m>3001132LeadppmASTM D5185(m>300113133TinoppmASTM D5185(m>300113131313TinoppmASTM D5185(m>3001131313131313131313131313131313131313131313131313131313131313131313131313131313131313131313131313131313 <th>Test</th> <th>UOM</th> <th>Method</th> <th>Limit/Abn</th> <th>Current</th> <th>History1</th> <th>History2</th>	Test	UOM	Method	Limit/Abn	Current	History1	History2	
Machine AgehrsClient InfoIs114443Oil AgehrsClient Info81019Filter AgehrsClient InfoKChangedChangedOil ChangedIClient InfoChangedNot ChangedChangedFilter ChangedIClient InfoNor MALLNorMALLABNORMALLSample StatusINorMALNorMALABNORMALLIronppmASTM DS185(m)>50133ChromiumppmASTM DS185(m)>4000NickelppmASTM DS185(m)>4001<	•							
Oil AgehrsClient Info81019Filter AgehrsClient Info81019Oil ChangedClient InfoChangedChangedChangedFilter ChangedIClient InfoChangedNot ChangedSample StatusClient InfoMoRMALNORMALABNORMALIronppmASTMD5185m>50133ChromiumppmASTMD5185m>2133NickelppmASTMD5185m>2133SilverppmASTMD5185m>3004SilverppmASTMD5185m>30011CopperppmASTMD5185m>34100131TinnppmASTMD5185m>40111VanadiumppmASTMD5185m>40000SiliconppmASTMD5185m>400011VaterWC Method>011111VaterWC Method>0000011SolitonppmASTMD5185m>4000011VaterWC Method>01NEGNEGNEGNEGNEGNEGNEGNEGNEGNEGNEGNEGNEGNEGNEGNEGNEGNEGNEGNEG </th <th></th> <th></th> <th></th> <th></th> <th>-</th> <th></th> <th></th>					-			
Filter Age Filter AgeInsClient Info81019Oil ChangedClient InfoChangedChangedChangedFilter ChangedIClient InfoChangedNot ChangedSample StatusClient InfoNORMALNORMALABNORMALIronppmASTM D5185(m)>50133ChromiumppmASTM D5185(m)>2<1<1<1NickelppmASTM D5185(m)>2<1<1<1TitaniumppmASTM D5185(m)>300<1<1SilverppmASTM D5185(m)>300111CopperppmASTM D5185(m)>300113131TinnppmASTM D5185(m)>300<1<11VanadiumppmASTM D5185(m)>400001SiliconppmASTM D5185(m)>20<10111VaterWC Method>03691311VaterWC MethodNCS.08.26.21311SotifationAbs/mASTM D5185(m)>20S.08.26.220311WaterWC MethodNCS.0S.2S.08.26.22033333333333	0				-			
Oil ChangedClient InfoChangedChangedChangedNot ChangedNot ChangedFilter ChangedClient InfoMo ChangedNot ChangedNot ChangedNot ChangedNot ChangedSample StatusFilter ChangedNORMALNORMALABNORMALABNORMALIronppmASTM D5185(m)>0133ChromiumppmASTM D5185(m)>2<1<1<1NickelppmASTM D5185(m)>2<1<1<1TitaniumppmASTM D5185(m)>30<1<1SilverppmASTM D5185(m)>3011CopperppmASTM D5185(m)>30113TinppmASTM D5185(m)>40<1<1VanadiumppmASTM D5185(m)>4000SiliconppmASTM D5185(m)>10369PotassiumppmASTM D5185(m)>20<101WaterWC Method>0.1NEGNEGNEGSoliycolMoASTM D784*0000SoliycolppmASTM D5185(m)>1017.520.9BoronppmASTM D785(m)>3017.617.520.9BariumppmASTM D785(m)>10<1<1MolybdenumppmASTM D5185(m)<10<1.4<1MolybdenumppmAST	Ū				-			
Filter Changed Sample StatusClient InfoChanged NoRMALNot Changed NoRMALNor Changed ABNORMALIronppmASTM D5185(m)>50133ChromiumppmASTM D5185(m)>2<1<1<1TitaniumppmASTM D5185(m)>2<1<1<1TitaniumppmASTM D5185(m)>30<1<1<1SilverppmASTM D5185(m)>30<111<1CopperppmASTM D5185(m)>30011113<1CopperppmASTM D5185(m)>40<1<11<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1 <t< th=""><th>-</th><th>hrs</th><th></th><th></th><th>-</th><th></th><th></th></t<>	-	hrs			-			
Sample StatusNORMALNORMALABNORMALIronppmASTM D5185(m)>50133ChromiumppmASTM D5185(m)>4000NickelppmASTM D5185(m)>2<1<1<1TitaniumppmASTM D5185(m)>2<1<1<1SilverppmASTM D5185(m)>300▲ 7AluminumppmASTM D5185(m)>9132LeadppmASTM D5185(m)>30011CopperppmASTM D5185(m)>40<1<11VanadiumppmASTM D5185(m)>4000SiliconppmASTM D5185(m)>+100369PotassiumppmASTM D5185(m)>+100369PotassiumppmASTM D5185(m)>+100369SoliconppmASTM D5185(m)>20<101WaterWC Method>0.1NEGNEGNEGGlycolMS/Lm D7644*>205.08.26.2SulfationAbs/cmASTM D5185(m)>1922937BoronppmASTM D5185(m)>1922937BoronppmASTM D5185(m)<135939BariumppmASTM D5185(m)0<1<1MaganesiumppmASTM D5185(m)0<	0				U U	Ū	0	
Iron ppm ASTM D5185(m) >50 1 3 3 Chromium ppm ASTM D5185(m) >4 0 0 0 Nickel ppm ASTM D5185(m) >2 <1 <1 <1 Titanium ppm ASTM D5185(m) >2 <1 <1 <1 Silver ppm ASTM D5185(m) >3 0 0 <1 <1 Aluminum ppm ASTM D5185(m) >30 0 1 1 <1 Copper ppm ASTM D5185(m) >30 0 1 13 <1 Tin ppm ASTM D5185(m) >4 0 <1 <1 <1 Vanadium ppm ASTM D5185(m) >4 0 <1 <1 <1 Vanadium ppm ASTM D5185(m) >4 0 <1 <1 <1 Vanadium ppm ASTM D5185(m) >20 <1 0 <1 <1<	_		Client Info		Ű	0	0	
Chromium ppm ASTM D5185(m) >4 0 0 0 Nickel ppm ASTM D5185(m) >2 <1 <1 <1 Titanium ppm ASTM D5185(m) >2 <1 <1 <1 Silver ppm ASTM D5185(m) >3 0 0 ▲ 7 Aluminum ppm ASTM D5185(m) >3 0 0 1 1 Copper ppm ASTM D5185(m) >30 0 1 13 Tin ppm ASTM D5185(m) >4 0 <1 <1 Vanadium ppm ASTM D5185(m) >4 0 <1 <1 Vanadium ppm ASTM D5185(m) >4 0 <1 <1 Vanadium ppm ASTM D5185(m) >20 <1 0 1 Vater WC Method >0.1 NEG NEG NEG Glycol MStm MS7105185(m) >10 1.5 </th <th>Sample Status</th> <th></th> <th></th> <th></th> <th>NORMAL</th> <th>NORMAL</th> <th>ABNORMAL</th>	Sample Status				NORMAL	NORMAL	ABNORMAL	
Nickel ppm ASTM D5185(m) >2 <1	Iron	ppm	ASTM D5185(m)	>50	1	3	3	
Titanium ppm ASTM D5185(m) 0 <1	Chromium	ppm	ASTM D5185(m)	>4	0	0	0	
Silver ppm ASTM D5185(m) >3 0 0 ▲ 7 Aluminum ppm ASTM D5185(m) >9 1 3 2 Lead ppm ASTM D5185(m) >30 0 1 1 Copper ppm ASTM D5185(m) >35 4 100 13 Tin ppm ASTM D5185(m) >4 0 <1	Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1	
Aluminum ppm ASTM D5165(m) >9 1 3 2 Lead ppm ASTM D5165(m) >30 0 1 1 Copper ppm ASTM D5165(m) >35 4 10 13 Tin ppm ASTM D5165(m) >4 0 <1 <1 Vanadium ppm ASTM D5165(m) >4 0 <1 <1 Vanadium ppm ASTM D5165(m) >+100 3 6 9 Potassium ppm ASTM D5165(m) >20 <1 0 1 Water WC Method >0.1 NEG NEG NEG Glycol WC Method 0.0 0 Nitration Abs/cm ASTM D7624* >20 5.0 8.2 6.2 Sulfation Abs/cm ASTM D7624* >20 5.0 8.2 9 37 Boron ppm ASTM D5165(m) >192 2	Titanium	ppm	ASTM D5185(m)		0	<1	<1	
Lead ppm ASTM D5185(m) >30 0 1 1 Copper ppm ASTM D5185(m) >35 4 100 13 Tin ppm ASTM D5185(m) >4 0 <1	Silver	ppm	ASTM D5185(m)	>3	0	0	▲ 7	
Line ppm ASTM D5185(m) >35 4 10 13 Tin ppm ASTM D5185(m) >4 0 <1	Aluminum	ppm	ASTM D5185(m)	>9	1	3	2	
Tin ppm ASTM D5185(m) >4 0 <1	Lead	ppm	ASTM D5185(m)	>30	0	1	1	
VanadiumppmASTM D5185(m) 0 0 0 SiliconppmASTM D5185(m)>+100 3 6 9 PotassiumppmASTM D5185(m)>20 $\mathbf{<1}$ 0 1 WaterWC Method>0.1NEGNEGNEGGlycolWC Method $$ $$ 0.0 Soot %%ASTM D7844* 0 0 0 NitrationAbs/cmASTM D7624*>20 5.0 8.2 6.2 SulfationAbs/cmASTM D7624*>20 5.0 8.2 6.2 SulfationAbs/cmASTM D7624*>20 5.0 8.2 6.2 SulfationAbs/cmASTM D7145*>30 17.6 17.5 20.9 Emulsified WaterscalarVisual*>0.1NEGNEGNEGSodiumppmASTM D5185(m)>192 2 9 37 BoronppmASTM D5185(m) 0 41 2 MolybdenumppmASTM D5185(m) 0 63 844 52 MagnesiumppmASTM D5185(m) 3780 1244 2279 1916 PhosphorusppmASTM D5185(m) 3780 1244 2279 1916 PhosphorusppmASTM D5185(m) 370 1183 1130 792 SulfurppmASTM D5185(m) <th>Copper</th> <th>ppm</th> <th>ASTM D5185(m)</th> <th>>35</th> <th>4</th> <th>10</th> <th>13</th>	Copper	ppm	ASTM D5185(m)	>35	4	10	13	
Silicon ppm ASTM D5185(m) >+100 3 6 9 Potassium ppm ASTM D5185(m) >20 <1 0 1 Water WC Method >0.1 NEG NEG NEG Glycol Image: MC Method Image: MEG NEG NEG Soot % % ASTM D7844* 0 0 0 Nitration Abs/cm ASTM D7624* >20 5.0 8.2 6.2 Sulfation Abs/rm ASTM D7154* >30 17.6 17.5 20.9 Emulsified Water scalar Visual* >0.1 NEG NEG NEG Sodium ppm ASTM D5185(m) >192 2 9 37 Boron ppm ASTM D5185(m) >192 2 9 39 Barium ppm ASTM D5185(m) >10 <1 2 Molybdenum ppm ASTM D5185(m) G 384 52 M	Tin	ppm	ASTM D5185(m)	>4	0	<1	<1	
Potassium ppm ASTM D5185(m) >20 <1	Vanadium	ppm	ASTM D5185(m)		0	0	0	
Water WC Method >0.1 NEG NEG NEG Glycol WC Method 0.0 Soot % % ASTM D7844* 0 0 0 Nitration Abs/cm ASTM D7624* >20 5.0 8.2 6.2 Sulfation Abs/.1mm ASTM D7624* >20 17.6 17.5 20.9 Emulsified Water scalar Visual* >0.1 NEG NEG NEG Sodium ppm ASTM D5185(m) >192 2 9 37 Boron ppm ASTM D5185(m) >192 2 9 37 Barium ppm ASTM D5185(m) >192 2 9 37 Magnaese ppm ASTM D5185(m) >192 2 9 37 Magnesium ppm ASTM D5185(m) 0 <11 2 Magnesium ppm ASTM D5185(m) 3780 1244 2279 1916	Silicon	ppm	ASTM D5185(m)	>+100	3	6	9	
GlycolWC Method0.0Soot %%ASTM D7844*000NitrationAbs/cmASTM D7624*>205.08.26.2SulfationAbs/cmASTM D7415*>3017.617.520.9Emulsified WaterscalarVisual*>0.1NEGNEGNEGSodiumppmASTM D5185(m)>1922937BoronppmASTM D5185(m)>1922937BariumppmASTM D5185(m)0<135939BariumppmASTM D5185(m)0<12MolybdenumppmASTM D5185(m)0<1<1MagnesiumppmASTM D5185(m)0<1<1PhosphorusppmASTM D5185(m)3780124422791916PhosphorusppmASTM D5185(m)137010091089738ZincppmASTM D5185(m)150011831130792SulfurppmASTM D5185(m)3800267532112575OxidationAbs/.1mmASTM D5185(m)38002675321116.3	Potassium	ppm	ASTM D5185(m)	>20	<1	0	1	
Soot %%ASTM D7844*000NitrationAbs/cmASTM D7624*>205.08.26.2SulfationAbs/.1mmASTM D7415*>3017.617.520.9Emulsified WaterscalarVisual*>0.1NEGNEGNEGSodiumppmASTM D5185(m)>1922937BoronppmASTM D5185(m)>1922937BariumppmASTM D5185(m)0<12MolybdenumppmASTM D5185(m)0<12MagnesiumppmASTM D5185(m)0<1<1MagnesiumppmASTM D5185(m)3780124422791916PhosphorusppmASTM D5185(m)137010091089738ZincppmASTM D5185(m)150011831130792SulfurppmASTM D5185(m)3800267532112575OxidationAbs/.1mmASTM D5185(m)38002675321116.3	Water		WC Method	>0.1	NEG	NEG	NEG	
Nitration Abs/cm ASTM D7624* >20 5.0 8.2 6.2 Sulfation Abs/.1mm ASTM D7415* >30 17.6 17.5 20.9 Emulsified Water scalar Visual* >0.1 NEG NEG NEG Sodium ppm ASTM D5185(m) >192 2 9 37 Boron ppm ASTM D5185(m) >192 2 9 39 Barium ppm ASTM D5185(m) 0 <11 2 Molybdenum ppm ASTM D5185(m) 0 <1 <1 Manganese ppm ASTM D5185(m) 0 <1 <1 Magnesium ppm ASTM D5185(m) 3780 1244 2279 1916 Phosphorus ppm ASTM D5185(m) 1370 1009 1089 738 Zinc ppm ASTM D5185(m) 1370 1009 1089 738 Zinc ppm ASTM D5185(m) 1370 <td< th=""><th>Glycol</th><th></th><th>WC Method</th><th></th><th></th><th></th><th>0.0</th></td<>	Glycol		WC Method				0.0	
SulfationAbs/.1mmASTM D7415*>3017.617.520.9Emulsified WaterscalarVisual*>0.1NEGNEGNEGSodiumppmASTM D5185(m)>1922937BoronppmASTM D5185(m)>1922937BariumppmASTM D5185(m)<0	Soot %	%	ASTM D7844*		0	0	0	
Emulsified Water scalar Visual* >0.1 NEG NEG NEG Sodium ppm ASTM D5185(m) >192 2 9 37 Boron ppm ASTM D5185(m) >192 2 9 37 Boron ppm ASTM D5185(m) 13 59 39 Barium ppm ASTM D5185(m) 0 <1 2 Molybdenum ppm ASTM D5185(m) 63 84 52 Manganese ppm ASTM D5185(m) 0 <1 <1 Magnesium ppm ASTM D5185(m) 3780 1244 2279 1916 Phosphorus ppm ASTM D5185(m) 3780 1244 2279 1916 Phosphorus ppm ASTM D5185(m) 1370 1009 1089 738 Zinc ppm ASTM D5185(m) 1500 1183 1130 792 Sulfur ppm ASTM D5185(m) 3800 2675 <th>Nitration</th> <th>Abs/cm</th> <th>ASTM D7624*</th> <th>>20</th> <th>5.0</th> <th>8.2</th> <th>6.2</th>	Nitration	Abs/cm	ASTM D7624*	>20	5.0	8.2	6.2	
SodiumppmASTM D5185(m)>1922937BoronppmASTM D5185(m) \sim 135939BariumppmASTM D5185(m)0<13	Sulfation	Abs/.1mm	ASTM D7415*	>30	17.6	17.5	20.9	
Boron ppm ASTM D5185(m) 13 59 39 Barium ppm ASTM D5185(m) 0 <1 2 Molybdenum ppm ASTM D5185(m) 0 <1	Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG	
Boron ppm ASTM D5185(m) 13 59 39 Barium ppm ASTM D5185(m) 0 <1 2 Molybdenum ppm ASTM D5185(m) 0 <1 2 Manganese ppm ASTM D5185(m) 63 84 52 Magnesium ppm ASTM D5185(m) 0 <1 <1 Magnesium ppm ASTM D5185(m) 0 <1 <1 Calcium ppm ASTM D5185(m) 3780 1244 2279 1916 Phosphorus ppm ASTM D5185(m) 1370 1009 1089 738 Zinc ppm ASTM D5185(m) 1500 1183 1130 792 Sulfur ppm ASTM D5185(m) 3800 2675 3211 2575 Oxidation Abs/.1mm ASTM D7414* >25 12.7 13.4 16.3	Sodium	mag	ASTM D5185(m)	>192	2	9	37	
BariumppmASTM D5185(m)0<1	Boron	ppm	ASTM D5185(m)		13	59	39	
Manganese ppm ASTM D5185(m) 0 <1	Barium	ppm	ASTM D5185(m)		0	<1	2	
Magnesium ppm ASTM D5185(m) 841 63 27 Calcium ppm ASTM D5185(m) 3780 1244 2279 1916 Phosphorus ppm ASTM D5185(m) 3780 1244 2279 1916 Zinc ppm ASTM D5185(m) 1370 1009 1089 738 Sulfur ppm ASTM D5185(m) 1500 1183 1130 792 Sulfur ppm ASTM D5185(m) 3800 2675 3211 2575 Oxidation Abs/.1mm ASTM D71414* >25 12.7 13.4 16.3	Molybdenum	ppm	ASTM D5185(m)		63	84	52	
Calcium ppm ASTM D5185(m) 3780 1244 2279 1916 Phosphorus ppm ASTM D5185(m) 1370 1009 1089 738 Zinc ppm ASTM D5185(m) 1500 1183 1130 792 Sulfur ppm ASTM D5185(m) 3800 2675 3211 2575 Oxidation Abs/.1mm ASTM D7414* >25 12.7 13.4 16.3	Manganese	ppm	ASTM D5185(m)		0	<1	<1	
Phosphorus ppm ASTM D5185(m) 1370 1009 1089 738 Zinc ppm ASTM D5185(m) 1500 1183 1130 792 Sulfur ppm ASTM D5185(m) 3800 2675 3211 2575 Oxidation Abs/.1mm ASTM D7414* >25 12.7 13.4 16.3	Magnesium	ppm	ASTM D5185(m)		841	63	27	
Zinc ppm ASTM D5185(m) 1500 1183 1130 792 Sulfur ppm ASTM D5185(m) 3800 2675 3211 2575 Oxidation Abs/.1mm ASTM D7414* >25 12.7 13.4 16.3	Calcium	ppm	ASTM D5185(m)	3780	1244	2279	1916	
Sulfur ppm ASTM D5185(m) 3800 2675 3211 2575 Oxidation Abs/.1mm ASTM D7414* >25 12.7 13.4 16.3	Phosphorus	ppm	ASTM D5185(m)	1370	1009	1089	738	
Oxidation Abs/.1mm ASTM D7414* >25 12.7 13.4 16.3	Zinc	ppm	ASTM D5185(m)	1500	1183	1130	792	
	Sulfur	ppm	ASTM D5185(m)	3800	2675	3211	2575	
Visc @ 100°C cSt ASTM D7279(m) 15.4 (14.7) 13.4 ▲ 12.1	Oxidation	Abs/.1mm	ASTM D7414*	>25	12.7	13.4	16.3	
	Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.7	13.4	▲ 12.1	

FLUID CONDITION

The condition of the oil is acceptable for the time in service (unconfirmed).

Contact/Location: Brett Kinkley - POWMIS





Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA Sample No. : PN0006059 Received :07 May 2024 Lab Number : 02633804 :07 May 2024 Tested ISO 17025:2017 Accredited Laboratory Unique Number : 5774957 : 07 May 2024 - Kevin Marson Diagnosed Test Package : MOB 1 To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

POWER STATION INC. 1050 JAYSON COURT MISSISSAUGA, ON CA L4W 2V5 Contact: Brett Kinkley Bkinkley@pwrstn.com T: F: (905)565-8544

Mav2/24

Report Id: POWMIS [WCAMIS] 02633804 (Generated: 05/07/2024 13:40:48) Rev: 1

Contact/Location: Brett Kinkley - POWMIS Page 2 of 2