

WEAR	
CONTAMINATION	
FLUID CONDITION	NORMAL

Machine Id **74959512** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 5W40 (--- GAL)**

R	es	ar	np	ole	e a	at	th	ie	n	e	xt	s	е	rv	ic	e	ir	nte	ər	va	al 1	to	r r	no	or	it	or					

WEAR

All component wear rates are normal.

RECOMMENDATION

CONTAMINATION

There is no indication of any contamination in the oil.

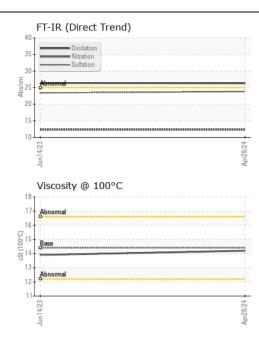
.....

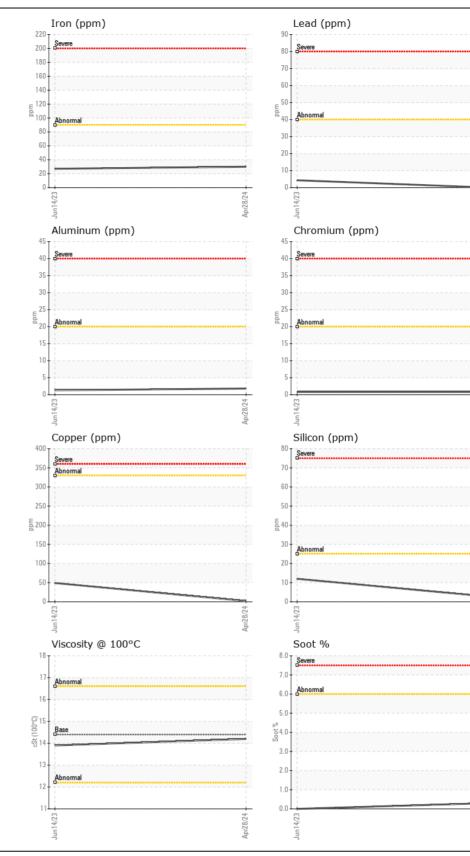
FLUID CONDITION

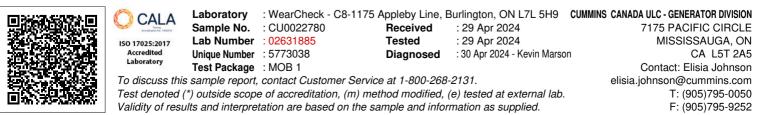
The condition of the oil is acceptable for the time in service.

TestUOMMethodLimit/hnCurrentHistory1History2Sample NumberClient InfoCU0022780CU0019559Sample DateClient InfoZ8 Apr 202414 Jun 2023Machine AgehrsClient Info00Filter AgehrsClient InfoM00Cill ChangedClient InfoM/AChangedFilter ChangedClient InfoN/AChangedFilter ChangedClient InfoN/AChangedSample StatusClient InfoNORMALNORMALNickelppmASTMD5185Im>20C1NickelppmASTMD5185Im>20C1NickelppmASTMD5185Im>20C1AluminumppmASTMD5185Im>20C1AluminumppmASTMD5185Im>20C1VanadumppmASTMD5185Im>20C1SilconppmASTMD5185Im>20C1VanadumppmASTMD5185Im>20C1SilconppmASTMD5185Im>20C1QuepeeppmASTMD5185Im>20C1SilconppmASTMD5185Im>20C1<							
Sample DateClient InfoZ8 Apr 20214 Jun 2023Machine AgehrsClient Info0509Oil AgehrsClient Info00Filter AgehrsClient InfoN/AChangedOil ChangedClient InfoN/AChangedFilter ChangedClient InfoN/AChangedFilter ChangedClient InfoN/AChangedFilter ChangedClient InfoN/AChangedSample StatusVirterNORMALIronppmASTMD5185>20C1NickelppmASTMD5185>20<1NickelppmASTMD5185>20<1AluminumppmASTMD5185>20<1AluminumppmASTMD5185>400<1VanadiumppmASTMD5185>3021NadiumppmASTMD5185>150<1SoliconppmASTMD5185>2312VanadiumppmASTMD5185>2312VanadiumppmASTMD5185>2312VanadiumppmASTMD5185>2312SoliconppmASTMD5185>2312Solicon <t< th=""><th>Test</th><th>UOM</th><th>Method</th><th>Limit/Abn</th><th>Current</th><th>History1</th><th>History2</th></t<>	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgehrsClient Info0509Oil AgehrsClient Info00Filter AgehrsClient InfoN/AChangedOil ChangedClient InfoN/AChangedFilter ChangedClient InfoN/AChangedFilter ChangedClient InfoN/AChangedSample StatusN/AChangedIronppmASTM 05185(m)>903027ChromiumppmASTM 05185(m)>20<1<NickelppmASTM 05185(m)>200<1SilverppmASTM 05185(m)>2021AuminumppmASTM 05185(m)>2021LeadppmASTM 05185(m)>150<1VanadiumppmASTM 05185(m)>202SiliconppmASTM 05185(m)>20<1<1FuelWC Method>.0<1GlycolppmASTM 05185(m)>20<1<1SulfationAbs/cmASTM 05185(m)>20<1<1SulfationAbs/cmASTM 05185(m)>20<1<1SulfationAbs/cmASTM 05185(m)>20<1<1SulfationAbs/cmASTM 05	Sample Number		Client Info		CU0022780	CU0019559	
Oil AgehrsClient Info00Filter AgehrsClient InfoN/AChangedOil ChangedClient InfoN/AChangedFilter ChangedClient InfoN/AChangedSample StatusNORMALNORMALIronppmASTMD5185(m)>20<1<1NickelppmASTMD5185(m)>20<1NickelppmASTMD5185(m)>20<1NickelppmASTMD5185(m)>20<1AtuminumppmASTMD5185(m)>20<1AuminumppmASTMD5185(m)>2021LeadppmASTMD5185(m)>2021VanadiumppmASTMD5185(m)>2021SiliconppmASTMD5185(m)>20<1<1FuelWC Method>3.0<1.0<1.0Wateriw CM Method>3.0<1.0<1.0SoligonppmASTMD5185(m)>20<1<1.0SulfationAbs/rmASTM D5185(m)>20<1.0<1.0SulfationppmASTMD5185(m)>20<1.0<1.0SulfationAbs/rmASTM D5185(m)>20<1.0<1.0SulfationAbs/rmASTM D5185(m) <td< th=""><th>Sample Date</th><th></th><th>Client Info</th><th></th><th>28 Apr 2024</th><th>14 Jun 2023</th><th></th></td<>	Sample Date		Client Info		28 Apr 2024	14 Jun 2023	
Filter AgehrsClient Info00Oil ChangedClient InfoN/AChangedFilter ChangedClient InfoN/AChangedSample StatusNORMALNORMALIronppmASTM D5185(m)>903027ChromiumppmASTM D5185(m)>20<1<1NickelppmASTM D5185(m)>20<1NickelppmASTM D5185(m)>20<1AtuminumppmASTM D5185(m)>20<1AtuminumppmASTM D5185(m)>2021LeadppmASTM D5185(m)>3302499YanadiumppmASTM D5185(m)>20<1VanadiumppmASTM D5185(m)>20<1<1SiliconppmASTM D5185(m)>20<1<1FuelWC Method>0<1<1WC Method>0<1<1<1SoliconppmASTM D5185(m)>20<1<1<1FuelWC Method>0<1<1<1SoliconppmASTM D5185(m)>20<1<1<1<1FuelWC Method>0<1<1<1<1<1SoliconppmASTM D5185(m)20<	Machine Age	hrs	Client Info		0	509	
Oil ChangedClient InfoN/AChangedFilter ChangedClient InfoN/AChangedSample StatusNORMALNORMALNORMALIronppmASTM D5185(m)>90302.7ChromiumppmASTM D5185(m)>20<1<1NickelppmASTM D5185(m)>20<1TitaniumppmASTM D5185(m)>20<1SilverppmASTM D5185(m)>20<1AluminumppmASTM D5185(m)>2021<LeadppmASTM D5185(m)>20249.9VanadiumppmASTM D5185(m)>10<1VanadiumppmASTM D5185(m)>20<1<1SiliconppmASTM D5185(m)>20<1<1YanadiumppmASTM D5185(m)>20<1<1WatervmMC Method>0.2NEGNEGGlycolvmMC Method>0.2NEGNEGSotifwinscalaVisual*>0.2NEGNEGSotifwinAbs/tmASTM D7844>60.30SotifwinAbs/tmASTM D7845>3023.823.4SotifwinAbs/tmASTM D7845>3023.823.4	Oil Age	hrs	Client Info		0	0	
Filter Changed Sample Status Client Info N/A Changed NORMAL Iron ppm ASTM D5185(m) >90 30 27 Chromium ppm ASTM D5185(m) >20 <1 <1 Nickel ppm ASTM D5185(m) >20 <1 <1 Nickel ppm ASTM D5185(m) >20 0 <1 Silver ppm ASTM D5185(m) >20 0 <1 Auminum ppm ASTM D5185(m) >20 0 <1 Lead ppm ASTM D5185(m) >20 2 1 Vanadium ppm ASTM D5185(m) >30 2 49 Silicon ppm ASTM D5185(m) >15 0 <1 Vanadium ppm ASTM D5185(m) >20 <1 <1 Silicon ppm ASTM D5185(m) >20 <th>Filter Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>0</th> <th>0</th> <th></th>	Filter Age	hrs	Client Info		0	0	
Sample Status NORMAL NORMAL Iron ppm ASTMD5185(m) >90 30 27 Chromium ppm ASTMD5185(m) >20 <1 <1 Nickel ppm ASTMD5185(m) >22 0 <1 Titanium ppm ASTMD5185(m) >2 0 <1 Aluminum ppm ASTMD5185(m) >2 0 <1 Aluminum ppm ASTMD5185(m) >2 0 <1 Lead ppm ASTMD5185(m) >20 2 1 Vanadium ppm ASTMD5185(m) >20 2 49 Vanadium ppm ASTMD5185(m) >20 2 1 Vanadium ppm ASTMD5185(m) >20 2 1 Vanadium ppm ASTMD5185(m) >20 2 1 -	Oil Changed		Client Info		N/A	Changed	
Iron ppm ASTM D5185(m) >90 30 277 Chromium ppm ASTM D5185(m) >20 <1 <1 Nickel ppm ASTM D5185(m) >2 0 <1 Titanium ppm ASTM D5185(m) >2 0 <1 Aluminum ppm ASTM D5185(m) >2 0 <1 Aluminum ppm ASTM D5185(m) >2 0 <1 Lead ppm ASTM D5185(m) >20 2 1 Copper ppm ASTM D5185(m) >30 2 49 Vanadium ppm ASTM D5185(m) >20 <1 < Vanadium ppm ASTM D5185(m) >20 <1 < Vanadium ppm ASTM D5185(m) >20 <1 <1< < Silicon ppm ASTM D5185(m) >20 <1<	Filter Changed		Client Info		N/A	Changed	
Chromium ppm ASTM D5185(m) >20 <1	Sample Status				NORMAL	NORMAL	
Chromium ppm ASTM D5185(m) >20 <1						~=	
Nickel ppm ASTM D5185(m) >2 0 <1	-		. ,				
Titanium ppm ASTM D5185(m) >2 0 <1							
Silver ppm ASTM D5185(m) >2 0 0 Aluminum ppm ASTM D5185(m) >20 2 1 Lead ppm ASTM D5185(m) >40 0 4 Copper ppm ASTM D5185(m) >30 2 49 Tin ppm ASTM D5185(m) >15 0 <1 Vanadium ppm ASTM D5185(m) >25 3 12 Silicon ppm ASTM D5185(m) >20 <1 <1 Fuel WC Method >3.0 <1.0 <1.0 Glycol WC Method >0.2 NEG NEG Soot % % ASTM D7624' >20 12.3 12.3 Sulfation Abs/cm ASTM D7624' >20 12.3 12.3 Sodium ppm ASTM D5185(m)							
Aluminum ppm ASTM D5185(m) >20 2 1 Lead ppm ASTM D5185(m) >40 0 4 Copper ppm ASTM D5185(m) >330 2 49 Tin ppm ASTM D5185(m) >15 0 <1 Vanadium ppm ASTM D5185(m) >25 3 12 Vanadium ppm ASTM D5185(m) >20 <1 <1 Vanadium ppm ASTM D5185(m) >20 <1 <1 Silicon ppm ASTM D5185(m) >20 <1 <1 Fuel WC Method >3.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG Soot % % ASTM D71624* >20 12.3 12.3 Sulfation Abs/:m ASTM D5185(m) </th <th></th> <th></th> <th>· · ·</th> <th></th> <th></th> <th></th> <th></th>			· · ·				
Lead ppm ASTM D5185(m) >40 0 4 Copper ppm ASTM D5185(m) >330 2 49 Tin ppm ASTM D5185(m) >15 0 <1						-	
Copper ppm ASTM D5185(m) >330 2 49 Tin ppm ASTM D5185(m) >15 0 <1 Vanadium ppm ASTM D5185(m) >25 3 12 Silicon ppm ASTM D5185(m) >20 <1		ppm	· · /				
Tin ppm ASTM D5185(m) >15 0 <1			. ,				
Vanadium ppm ASTM D5185(m) 0 0 Silicon ppm ASTM D5185(m) >25 3 12 Potassium ppm ASTM D5185(m) >20 <1 <1 Fuel WC Method >3.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG Glycol WC Method >0.2 NEG NEG Soot % % ASTM D7844* >6 0.3 0 Sulfation Abs/.m ASTM D7624* >20 12.3 12.3 Sulfation Abs/.m ASTM D7614* >30 23.8 23.4 Sodium ppm ASTM D5185(m) 24 4 6 Sodium ppm ASTM D5185(m) 10 0 5 Molybdenum ppm ASTM D5185(m) 100 66 58			· · /			-	
Silicon ppm ASTM D5185(m) >25 3 12 Potassium ppm ASTM D5185(m) >20 <1 <1 Fuel WC Method >3.0 <1.0 <1.0 Water Image: MC Method >0.2 NEG NEG Glycol WC Method >0.2 NEG NEG Soot % % ASTM D7844* >6 0.3 0 Soot % % ASTM D7844* >6 0.3 0 Sulfation Abs/:rm ASTM D7624* >20 12.3 12.3 Sulfation Abs/:rm ASTM D71415* >30 23.8 23.4 Sodium ppm ASTM D5185(m) >44 4 6 Boron ppm ASTM D5185(m) 100 0 5 Molybdenum ppm ASTM D5185(m) 100 66 <		ppm		>15			
Potassium ppm ASTM D5185(m) >20 <1	Vanadium	ppm	ASTM D5185(m)		0	0	
Potassium ppm ASTM D5185(m) >20 <1	Silicon	maa	ASTM D5185(m)	>25	3	12	
Fuel WC Method >3.0 <1.0							
GlycolWC MethodNEGNEGSoot %%ASTM D7844*>60.30NitrationAbs/cmASTM D7624*>2012.312.3SulfationAbs/.1mmASTM D7624*>3023.823.4Emulsified WaterscalarVisual*>0.2NEGNEGSodiumppmASTM D5185(m)>4446BoronppmASTM D5185(m)2503939BariumppmASTM D5185(m)1005MolybdenumppmASTM D5185(m)10066588ManganeseppmASTM D5185(m)30009438822PhosphorusppmASTM D5185(m)1150955977ZincppmASTM D5185(m)135011701141SulfurppmASTM D5185(m)25302527SulfurAbs/.1mmASTM D5185(m)25626.326.4	Fuel		· · /	>3.0	<1.0	<1.0	
Soot % % ASTM D7844* >6 0.3 0 Nitration Abs/cm ASTM D7624* >20 12.3 12.3 Sulfation Abs/.1mm ASTM D7624* >30 23.8 23.4 Sulfation Abs/.1mm ASTM D7415* >30 23.8 23.4 Emulsified Water scalar Visual* >0.2 NEG NEG Sodium ppm ASTM D5185(m) >44 4 6 Sodium ppm ASTM D5185(m) 250 39 39 Boron ppm ASTM D5185(m) 10 0 5 Molybdenum ppm ASTM D5185(m) 100 66 58 Manganese ppm ASTM D5185(m) 450 1116 1074 Calcium ppm ASTM D5185(m) 3000 943 882 Phosphorus	Water		WC Method	>0.2	NEG	NEG	
NitrationAbs/cmASTM D7624*>2012.312.3SulfationAbs/.1mmASTM D7415*>3023.823.4Emulsified WaterscalarVisual*>0.2NEGNEGSodiumppmASTM D5185(m)>4446BoronppmASTM D5185(m)2503939BariumppmASTM D5185(m)1005MolybdenumppmASTM D5185(m)10066658MagnesiumppmASTM D5185(m)45011161074CalciumppmASTM D5185(m)3000943882PhosphorusppmASTM D5185(m)11509559777ZincppmASTM D5185(m)135011701141SulfurppmASTM D5185(m)425025302527OxidationAbs/.1mmASTM D7144*>2526.326.4	Glycol		WC Method		NEG	NEG	
SulfationAbs/.1mmASTM D7415*>3023.823.4Emulsified WaterscalarVisual*>0.2NEGNEGSodiumppmASTM D5185(m)>4446BoronppmASTM D5185(m)2503939BariumppmASTM D5185(m)1005MolybdenumppmASTM D5185(m)100666588ManganeseppmASTM D5185(m)45011161074CalciumppmASTM D5185(m)3000943882PhosphorusppmASTM D5185(m)1150955977ZincppmASTM D5185(m)135011701141SulfurppmASTM D5185(m)425025302527OxidationAbs/.1mmASTM D7141*>2526.326.4	Soot %	%	ASTM D7844*	>6	0.3	0	
Emulsified WaterscalarVisual*>0.2NEGNEGSodiumppmASTM D5185(m)>4446BoronppmASTM D5185(m)2503939BariumppmASTM D5185(m)1005MolybdenumppmASTM D5185(m)1006658ManganeseppmASTM D5185(m)1006658MagnesiumppmASTM D5185(m)45011161074CalciumppmASTM D5185(m)3000943882PhosphorusppmASTM D5185(m)1150955977ZincppmASTM D5185(m)135011701141SulfurppmASTM D5185(m)425025302527OxidationAbs/.1mmASTM D7141*>2526.326.4	Nitration	Abs/cm	ASTM D7624*	>20	12.3	12.3	
Sodium ppm ASTM D5185(m) >44 4 6 Boron ppm ASTM D5185(m) 250 39 39 Barium ppm ASTM D5185(m) 10 0 5 Molybdenum ppm ASTM D5185(m) 100 66 58 Manganese ppm ASTM D5185(m) 100 66 58 Magnesium ppm ASTM D5185(m) 450 1116 1074 Calcium ppm ASTM D5185(m) 3000 943 882 Phosphorus ppm ASTM D5185(m) 1150 955 9777 Zinc ppm ASTM D5185(m) 1350 1170 1141 Sulfur ppm ASTM D5185(m) 4250 2530 2527	Sulfation	Abs/.1mm	ASTM D7415*	>30	23.8	23.4	
Boron ppm ASTM D5185(m) 250 39 39 Barium ppm ASTM D5185(m) 10 0 5 Molybdenum ppm ASTM D5185(m) 100 66 58 Manganese ppm ASTM D5185(m) 100 66 58 Magnesium ppm ASTM D5185(m) 450 1116 1074 Calcium ppm ASTM D5185(m) 3000 943 882 Phosphorus ppm ASTM D5185(m) 1150 955 977 Zinc ppm ASTM D5185(m) 1350 1170 1141 Sulfur ppm ASTM D5185(m) 4250 2530 2527 Oxidation Abs/.1mm ASTM D71414' >25 26.3 26.4	Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	
Boron ppm ASTM D5185(m) 250 39 39 Barium ppm ASTM D5185(m) 10 0 5 Molybdenum ppm ASTM D5185(m) 100 66 58 Manganese ppm ASTM D5185(m) 100 66 58 Magnesium ppm ASTM D5185(m) 450 1116 1074 Calcium ppm ASTM D5185(m) 3000 943 882 Phosphorus ppm ASTM D5185(m) 1150 955 977 Zinc ppm ASTM D5185(m) 1350 1170 1141 Sulfur ppm ASTM D5185(m) 4250 2530 2527 Oxidation Abs/.1mm ASTM D71414' >25 26.3 26.4							
Barium ppm ASTM D5185(m) 10 0 5 Molybdenum ppm ASTM D5185(m) 100 66 58 Manganese ppm ASTM D5185(m) 100 66 44 Magnesium ppm ASTM D5185(m) 450 1116 1074 Calcium ppm ASTM D5185(m) 3000 943 882 Phosphorus ppm ASTM D5185(m) 1150 955 977 Zinc ppm ASTM D5185(m) 1350 1170 1141 Sulfur ppm ASTM D5185(m) 4250 2530 2527 Oxidation Abs/.1mm ASTM D7144* >25 26.3 26.4		ppm	. ,		4		
Molybdenum ppm ASTM D5185(m) 100 66 58 Manganese ppm ASTM D5185(m) <1 4 Magnesium ppm ASTM D5185(m) 450 1116 1074 Calcium ppm ASTM D5185(m) 3000 943 882 Phosphorus ppm ASTM D5185(m) 1150 955 977 Zinc ppm ASTM D5185(m) 1350 1170 1141 Sulfur ppm ASTM D5185(m) 4250 2530 2527 Oxidation Abs/.1mm ASTM D71414* >25 26.3 26.4		ppm					
Manganese ppm ASTM D5185(m) <		ppm					
Magnesium ppm ASTM D5185(m) 450 1116 1074 Calcium ppm ASTM D5185(m) 3000 943 882 Phosphorus ppm ASTM D5185(m) 1150 955 977 Zinc ppm ASTM D5185(m) 1350 1170 1141 Sulfur ppm ASTM D5185(m) 4250 2530 2527 Oxidation Abs/.1mm ASTM D7414* >25 26.3 26.4		ppm	(/	100			
Calcium ppm ASTM D5185(m) 3000 943 882 Phosphorus ppm ASTM D5185(m) 1150 955 977 Zinc ppm ASTM D5185(m) 1350 1170 1141 Sulfur ppm ASTM D5185(m) 4250 2530 2527 Oxidation Abs/.1mm ASTM D7141* >25 26.3 26.4	0	ppm					
Phosphorus ppm ASTM D5185(m) 1150 955 977 Zinc ppm ASTM D5185(m) 1350 1170 1141 Sulfur ppm ASTM D5185(m) 4250 2530 2527 Oxidation Abs/.tmm ASTM D7414* >25 26.3 26.4	-						
Zinc ppm ASTM D5185(m) 1350 1170 1141 Sulfur ppm ASTM D5185(m) 4250 2530 2527 Oxidation Abs/.1mm ASTM D7141* >25 26.3 26.4			()				
Sulfur ppm ASTM D5185(m) 4250 2530 2527 Oxidation Abs/.1mm ASTM D7414* >25 26.3 26.4	•	ppm	, ,				
Oxidation Abs/.1mm ASTM D7414* >25 26.3 26.4		ppm					
			ASTM D5185(m)	4250		2527	
Visc @ 100°C cSt ASTM D7279(m) 14.4 14.2 13.9				>25			
	Visc @ 100°C	cSt	ASTM D7279(m)	14.4	14.2	13.9	

Contact/Location: Elisia Johnson - CUMMISGEN







Contact/Location: Elisia Johnson - CUMMISGEN Page 2 of 2