

OIL ANALYSIS REPORT

Sample Rating Trend





Area Bridgewater CATERPILLAR 5148 Swing Drive

GEAR OIL LS 80W90 (--- QTS)

DIAGNOSIS

Recommendation

We advise that you check for a possible overheat condition. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

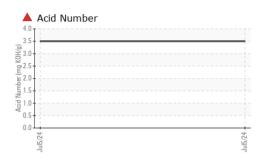
The AN level is above the recommended limit. The oil is no longer serviceable.

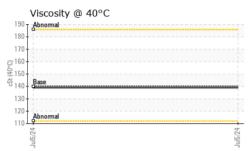
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0875281		
Sample Date		Client Info		05 Jul 2024		
Machine Age	hrs	Client Info		14058		
Oil Age	hrs	Client Info		1000		
Oil Changed		Client Info		N/A		
Sample Status				SEVERE		
CONTAMINATION	J	method	limit/base	current	history1	history2
Water	•	WC Method	>0.2	NEG		
					historyd	biotory ()
WEAR METALS		method	limit/base	current	history1	history2
ron	ppm	ASTM D5185m	>400	8		
Chromium	ppm	ASTM D5185m	>10	0		
Nickel	ppm	ASTM D5185m	>10	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m		0		
Aluminum	ppm	ASTM D5185m	>25	0		
_ead	ppm	ASTM D5185m	>50	0		
Copper	ppm	ASTM D5185m	>200	<1		
Tin	ppm	ASTM D5185m	>10	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	150	223		
Barium	ppm	ASTM D5185m		0		
Molybdenum	ppm	ASTM D5185m		0		
Vanganese	ppm	ASTM D5185m		0		
Magnesium	ppm	ASTM D5185m	10	0		
Calcium	ppm	ASTM D5185m	70	165		
Phosphorus	ppm	ASTM D5185m	2000	1302		
Zinc	ppm	ASTM D5185m	50	32		
Sulfur	ppm	ASTM D5185m	20000	911		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	2		
Sodium	ppm	ASTM D5185m		2		
Potassium	ppm	ASTM D5185m	>20	0		
FLUID DEGRADA		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		3.50		



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VISUAL





White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water Free Water Visc @ 40°C SAMPLE IMAGE	cSt	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	NONE NONE NONE NONE NORML NORML >0.2	NONE NONE NONE NONE NONE NORML NORML NEG NEG		
Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPER Visc @ 40°C SAMPLE IMAGE	scalar scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	NONE NONE NONE NONE NORML NORML >0.2	NONE NONE NONE NONE NORE NORML NORML NEG	 	
Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPER Visc @ 40°C SAMPLE IMAGE	scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	NONE NONE NONE NORML NORML >0.2	NONE NONE NONE NORML NORML NEG	 	
Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPER Visc @ 40°C SAMPLE IMAGE	scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual method	NONE NONE NORML NORML >0.2	NONE NONE NORE NORML NORML NEG	 	
Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPER Visc @ 40°C SAMPLE IMAGE	scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual method	NONE NORML NORML >0.2	NONE NONE NORML NORML NEG	 	
Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPER Visc @ 40°C SAMPLE IMAGE	scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual method	NONE NORML NORML >0.2	NONE NORML NORML NEG		
Appearance Odor Emulsified Water Free Water FLUID PROPER Visc @ 40°C SAMPLE IMAGE	scalar scalar scalar scalar TIES cSt	*Visual *Visual *Visual *Visual method	NORML NORML >0.2	NORML NORML NEG		
Odor Emulsified Water Free Water FLUID PROPER Visc @ 40°C SAMPLE IMAGE	scalar scalar scalar TIES cSt	*Visual *Visual *Visual method	NORML >0.2	NORML NEG		
Emulsified Water Free Water FLUID PROPER Visc @ 40°C SAMPLE IMAGE	scalar scalar TIES cSt	*Visual *Visual method	>0.2	NEG		
Free Water FLUID PROPER Visc @ 40°C SAMPLE IMAGE	scalar TIES cSt	*Visual method				
FLUID PROPER Visc @ 40°C SAMPLE IMAGE	TIES cSt	method	limit/base	NEG		
Visc @ 40°C SAMPLE IMAGE	cSt		limit/base			
SAMPLE IMAGE		ASTM D445		current	history1	history
	S		140	139		
Color		method	limit/base	current	history1	history
Color						
00101				no image	no image	no image
				no inago	nomago	no imag
Bottom				no image	no image	no imag
GRAPHS						
Iron (ppm)				Lead (ppm)		
			20	0 т		
500 - Abnormal			<u>§</u> 10	n 1 🗄		
0				Autorina		
5/24						
lul.			Jul	lul		
Aluminum (ppm)				Chromium (p	pm)	
100 Severe				C. C		
. 50			<u> </u>	0 - Abnormal		
Abnormal				1		
74						
Jul5			Jul5	Jul5		
Copper (ppm)				Silicon (nnm)		
600 T			15	⁰ Severe		
Abnormal				Abnormal		
200 -				U - 9		
o/24						
Jul			Jul£	2 nn		
Viscosity @ 40°C			(B)	Acid Number		
200 T Abnormal			HOX 4			
150 - Base			ر الله الله الله الله الله الله الله الل	0		
			, mpe			
100 12			24	24+10 54		
Jul5/			Jul5/	Jul5/		
	Iron (ppm)	Iron (ppm) Severe Abnormal Aluminum (ppm) Severe Abnormal Abnormal Copper (ppm) Copper (ppm) Severe Abnormal Severe Abnormal Severe Severe Abnormal Severe Abnormal Severe Severe Abnormal Severe Abnormal Severe Severe Abnormal Severe Severe Abnormal Severe Severe Abnormal Severe Abnormal Severe Severe Abnormal Severe Severe Abnormal Severe Severe Severe Severe Abnormal Severe Severe Abnormal Severe Abnormal Severe Severe Abnormal Severe Severe Severe Severe Abnormal Severe	Iron (ppm) Severe Abnomal Aluminum (ppm) Severe Anormal Anormal Copper (ppm) Severe Abnomal Severe Severe Abnomal Severe Severe Abnomal Severe Seve	Iron (ppm) 20 Severe ud Abnomal 600 Auminum (ppm) 300 Severe 600 Abnomal 600 Abnomal 600 Severe 600 Abnomal 600 Severe 600 Abnomal 600 Severe 600	Iron (ppm) Lead (ppm) Severe Anormal Aluminum (ppm) Chromium (p Monormal Aluminum (ppm) Severe Anormal Anormal Anormal Severe Anormal Abnormal Anormal Severe Anormal Severe Anormal Severe Anormal Severe Silicon (ppm) Severe Silicon (ppm) Severe Silicon (ppm) Severe Silicon (ppm) Severe Severe Abnormal Severe Severe Severe	Iron (ppm) Lead (ppm) Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal Image: Series and Anomal

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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