

# **OIL ANALYSIS REPORT**

Sample Rating Trend



CATERPILLAR R1300 SCP228

Rear Right Planetary

{not provided} (--- GAL)

### DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

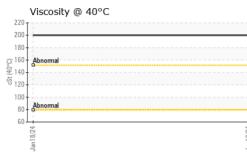
The condition of the oil is acceptable for the time in service.

Sample Date      Client Info      18 Jan 2024          Machine Age      hrs      Client Info      980          Oil Age      hrs      Client Info      0          Oil Changed      Client Info      Not Changd          Sample Status      Imit/base      current      History1      History2        Water      WC Method      >0.2      NEG          WEAR METALS      method      limit/base      current      History1      History2        Iron      ppm      ASTM D5185(m)      >500      61          Chromium      ppm      ASTM D5185(m)      >10      <1          Nickel      ppm      ASTM D5185(m)      >10      5          Aluminum      ppm      ASTM D5185(m)      >25      <1          Aluminum      ppm      ASTM D5185(m)      >5      0          Aluminum      ppm	-)				Jan2024		
Sample Date      Client Info      18 Jan 2024          Machine Age      hrs      Client Info      980          Oil Age      hrs      Client Info      0          Oil Changed      Client Info      Not Changd          Sample Status      NORMAL           CONTAMINATION      method      limit/base      current      history1      history2        Water      WC Method      >0.2      NEG          CONTAMINATION      method      limit/base      current      history1      history2        Water      WC Method      >0.2      NEG          Chromium      ppm      ASTM DS185(m)      >10      <1          Nickel      ppm      ASTM DS185(m)      >25      2          Aluminum      ppm      ASTM DS185(m)      >5      0          Aluminum      ppm      ASTM DS185(m)	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Machine Age      hrs      Client Info      980          Oil Age      hrs      Client Info      0          Sample Status      Client Info      Not Changd          CONTAMINATION      method      imit/base      current      history1      history2        Water      WC Method      >0.2      NEG          WEAR METALS      method      imit/base      current      history1      history2        Iron      ppm      ASTM D5185(m)      >10      <1	Sample Number		Client Info		WC0883845		
Oil Age      hrs      Client Info      0          Oil Changed      Client Info      Not Changd          Sample Status      Imit/base      current      history1      history2        Water      WC Method      >0.2      NEG          WEAR METALS      method      imit/base      current      history1      history2        Iron      ppm      ASTM 05(85(m)      >500      61          WEAR METALS      method      imit/base      current      history1      history2        Iron      ppm      ASTM 05(85(m)      >10      <1	Sample Date		Client Info		18 Jan 2024		
Oli Changed Sample Status      Client Info      Not Changd          Sample Status      method      imit/base      current      history1      history2        Water      WC Method      >0.2      NEG          WEAR METALS      method      imit/base      current      history1      history2        Iron      ppm      ASTM 05185(m)      >500      61          Nickel      ppm      ASTM 05185(m)      >10      <1	Machine Age	hrs	Client Info		980		
Sample Status      Image: Sample Status      NORMAL          CONTAMINATION      method      limit/base      current      history1      history2        Water      WC Method      >0.2      NEG          WEAR METALS      method      limit/base      current      history1      history2        Iron      ppm      ASTM D5185(m)      >10      <1	Oil Age	hrs	Client Info		0		
CONTAMINATION      method      limit/base      current      history1      history2        Water      WC Method      >0.2      NEG          WEAR METALS      method      limit/base      current      history1      history2        Iron      ppm      ASTM D5185(m)      >500      61          Chromium      ppm      ASTM D5185(m)      >10      <1	Oil Changed		Client Info		Not Changd		
Water      WC Method      >0.2      NEG          WEAR METALS      method      limit/base      current      history1      history2        Iron      ppm      ASTM D5185(m)      >500      61          Chromium      ppm      ASTM D5185(m)      >10      <1	Sample Status				NORMAL		
WEAR METALS      method      limit/base      current      history1      history2        Iron      ppm      ASTM 05185(m)      >500      61          Chromium      ppm      ASTM 05185(m)      >10      <1          Nickel      ppm      ASTM 05185(m)      >10      <1          Nickel      ppm      ASTM 05185(m)      >0           Aluminum      ppm      ASTM 05185(m)      >25      2          Lead      ppm      ASTM 05185(m)      >25      2          Copper      ppm      ASTM 05185(m)      >75      2          Manimony      ppm      ASTM 05185(m)      >5      0          Vanadium      ppm      ASTM 05185(m)      0          Cadmium      ppm      ASTM 05185(m)      0          Boron      ppm      ASTM 05185(m)      0	CONTAMINATION		method	limit/base	current	history1	history2
Iron      ppm      ASTM D5185(m)      >500      61          Chromium      ppm      ASTM D5185(m)      >10      <1          Nickel      ppm      ASTM D5185(m)      >10      <1          Titanium      ppm      ASTM D5185(m)      0          Aluminum      ppm      ASTM D5185(m)      >25      2          Aluminum      ppm      ASTM D5185(m)      >25      <1          Lead      ppm      ASTM D5185(m)      >25      <1          Astm D5185(m)      >10      5           Antimony      ppm      ASTM D5185(m)      0          Astm D5185(m)      0            Cadmium      ppm      ASTM D5185(m)      0          Boron      ppm      ASTM D5185(m)      14 <tr< th=""><th>Water</th><th></th><th>WC Method</th><th>&gt;0.2</th><th>NEG</th><th></th><th></th></tr<>	Water		WC Method	>0.2	NEG		
Chromium      ppm      ASTM D5185(m)      > 10      < 1	WEAR METALS		method	limit/base	current	history1	history2
Nickel      ppm      ASTM D5185(m)      >10      <1          Titanium      ppm      ASTM D5185(m)      0           Silver      ppm      ASTM D5185(m)      0           Aluminum      ppm      ASTM D5185(m)      >25      2          Lead      ppm      ASTM D5185(m)      >25      2          Copper      ppm      ASTM D5185(m)      >75      2          Antimony      ppm      ASTM D5185(m)      >10      5          Antimony      ppm      ASTM D5185(m)      0           Antimony      ppm      ASTM D5185(m)      0           Cadmium      ppm      ASTM D5185(m)      0           ADDITIVES      method      limit/base      current      history1      history2        Barium      ppm      ASTM D5185(m)	Iron	ppm	ASTM D5185(m)	>500	61		
Mathem      Ppm      ASTM D5185(m)      O          Silver      ppm      ASTM D5185(m)      >25      2          Aluminum      ppm      ASTM D5185(m)      >25      2          Lead      ppm      ASTM D5185(m)      >25      <1	Chromium	ppm	ASTM D5185(m)	>10	<1		
Silver      ppm      ASTM D5185(m)      0          Aluminum      ppm      ASTM D5185(m)      >25      2          Lead      ppm      ASTM D5185(m)      >25      2          Copper      ppm      ASTM D5185(m)      >75      2          Tin      ppm      ASTM D5185(m)      >10      5          Antimony      ppm      ASTM D5185(m)      >5      0          Vanadium      ppm      ASTM D5185(m)      0           Beryllium      ppm      ASTM D5185(m)      0           ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185(m)      1          Molybdenum      ppm      ASTM D5185(m)      11          Magnesium      ppm      ASTM D5185(m)      3110	Nickel	ppm	ASTM D5185(m)	>10	<1		
Aluminum    ppm    ASTM D5185(m)    >25    2        Lead    ppm    ASTM D5185(m)    >25    <1	Titanium	ppm	ASTM D5185(m)		0		
Lead      ppm      ASTM D5185(m)      >25      <1          Copper      ppm      ASTM D5185(m)      >75      2          Tin      ppm      ASTM D5185(m)      >10      5          Antimony      ppm      ASTM D5185(m)      >5      0          Antimony      ppm      ASTM D5185(m)      >5      0          Vanadium      ppm      ASTM D5185(m)      0          Beryllium      ppm      ASTM D5185(m)      0          Cadmium      ppm      ASTM D5185(m)      0          ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185(m)      14          Molybdenum      ppm      ASTM D5185(m)      0          Magnesium      ppm      ASTM D5185(m)      111          C	Silver	ppm	ASTM D5185(m)		0		
Copper      ppm      ASTM D5185(m)      >75      2          Tin      ppm      ASTM D5185(m)      >10      5          Antimony      ppm      ASTM D5185(m)      >5      0          Vanadium      ppm      ASTM D5185(m)      >5      0          Beryllium      ppm      ASTM D5185(m)      0           Cadmium      ppm      ASTM D5185(m)      0           ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185(m)      14          Molybdenum      ppm      ASTM D5185(m)      0          Magnesium      ppm      ASTM D5185(m)      11          Calcium      ppm      ASTM D5185(m)      1059          Phosphorus      ppm      ASTM D5185(m)      1059     <	Aluminum	ppm	ASTM D5185(m)	>25	2		
Tin      ppm      ASTM D5185(m)      >10      5          Antimony      ppm      ASTM D5185(m)      >5      0          Vanadium      ppm      ASTM D5185(m)      0          Beryllium      ppm      ASTM D5185(m)      0          Cadmium      ppm      ASTM D5185(m)      0          ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185(m)      14          Molybdenum      ppm      ASTM D5185(m)      11          Magnesium      ppm      ASTM D5185(m)      11          Calcium      ppm      ASTM D5185(m)      111          Calcium      ppm      ASTM D5185(m)      1059          Sulfur      ppm      ASTM D5185(m)      1059          Sulfur      ppm	Lead	ppm	ASTM D5185(m)	>25	<1		
Antimony      ppm      ASTM D5185(m)      >5      0          Vanadium      ppm      ASTM D5185(m)      0           Beryllium      ppm      ASTM D5185(m)      0           Cadmium      ppm      ASTM D5185(m)      0           ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185(m)      2          Barium      ppm      ASTM D5185(m)      14          Molybdenum      ppm      ASTM D5185(m)      0          Maganese      ppm      ASTM D5185(m)      11          Calcium      ppm      ASTM D5185(m)      111          Phosphorus      ppm      ASTM D5185(m)      1059          Sulfur      ppm      ASTM D5185(m)      8916          CON	Copper	ppm	ASTM D5185(m)	>75	2		
Vanadium      ppm      ASTM D5185(m)      0          Beryllium      ppm      ASTM D5185(m)      0          Cadmium      ppm      ASTM D5185(m)      0          ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185(m)      2          Barium      ppm      ASTM D5185(m)      14          Molybdenum      ppm      ASTM D5185(m)      0          Magnesium      ppm      ASTM D5185(m)      11          Calcium      ppm      ASTM D5185(m)      3110          Phosphorus      ppm      ASTM D5185(m)      1059          Zinc      ppm      ASTM D5185(m)      1059          Sulfur      ppm      ASTM D5185(m)      8916          CONTAMINANTS      method      limit/base <td< td=""><td>Tin</td><td>ppm</td><td>ASTM D5185(m)</td><td>&gt;10</td><th>5</th><td></td><td></td></td<>	Tin	ppm	ASTM D5185(m)	>10	5		
Beryllium      ppm      ASTM D5185(m)      0          Cadmium      ppm      ASTM D5185(m)      0          ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185(m)      2          Barium      ppm      ASTM D5185(m)      14          Molybdenum      ppm      ASTM D5185(m)      0          Manganese      ppm      ASTM D5185(m)      11          Magnesium      ppm      ASTM D5185(m)      3110          Calcium      ppm      ASTM D5185(m)      1059          Phosphorus      ppm      ASTM D5185(m)      1238          Sulfur      ppm      ASTM D5185(m)      8916          CONTAMINANTS      method      limit/base      current      history1      history2        Solium      ppm      ASTM D5185(m)	Antimony	ppm	ASTM D5185(m)	>5	0		
Cadmium      ppm      ASTM D5185(m)      0          ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185(m)      2          Barium      ppm      ASTM D5185(m)      0          Molybdenum      ppm      ASTM D5185(m)      0          Manganese      ppm      ASTM D5185(m)      0          Magnesium      ppm      ASTM D5185(m)      11          Calcium      ppm      ASTM D5185(m)      3110          Vision      ASTM D5185(m)      1059          Zinc      ppm      ASTM D5185(m)      1238          Sulfur      ppm      ASTM D5185(m)      8916          CONTAMINANTS      method      limit/base      current      history1      history2        Solium      ppm      ASTM D5185(m) >75      9	Vanadium	ppm	ASTM D5185(m)		0		
ADDITIVES      method      limit/base      current      history1      history2        Boron      ppm      ASTM D5185(m)      2          Barium      ppm      ASTM D5185(m)      14          Molybdenum      ppm      ASTM D5185(m)      0          Manganese      ppm      ASTM D5185(m)      <1	Beryllium	ppm	ASTM D5185(m)		0		
Boron      ppm      ASTM D5185(m)      2          Barium      ppm      ASTM D5185(m)      14          Molybdenum      ppm      ASTM D5185(m)      0          Manganese      ppm      ASTM D5185(m)      0          Magnesium      ppm      ASTM D5185(m)      11          Calcium      ppm      ASTM D5185(m)      111          Calcium      ppm      ASTM D5185(m)      3110          Phosphorus      ppm      ASTM D5185(m)      1059          Zinc      ppm      ASTM D5185(m)      1238          Sulfur      ppm      ASTM D5185(m)      8916          Lithium      ppm      ASTM D5185(m)      <<1	Cadmium	ppm	ASTM D5185(m)		0		
Barium      ppm      ASTM D5185(m)      14          Molybdenum      ppm      ASTM D5185(m)      0          Manganese      ppm      ASTM D5185(m)      <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum      ppm      ASTM D5185(m)      0          Manganese      ppm      ASTM D5185(m)      <1          Magnesium      ppm      ASTM D5185(m)      11          Calcium      ppm      ASTM D5185(m)      3110          Calcium      ppm      ASTM D5185(m)      1059          Phosphorus      ppm      ASTM D5185(m)      1238          Zinc      ppm      ASTM D5185(m)      8916          Sulfur      ppm      ASTM D5185(m)      <1          CONTAMINANTS      method      limit/base      current      history1      history2        Silicon      ppm      ASTM D5185(m)      >75      9          Sodium      ppm      ASTM D5185(m)      4	Boron	ppm	ASTM D5185(m)		2		
Manganese      ppm      ASTM D5185(m)      <1          Magnesium      ppm      ASTM D5185(m)      11           Calcium      ppm      ASTM D5185(m)      3110           Phosphorus      ppm      ASTM D5185(m)      1059           Zinc      ppm      ASTM D5185(m)      1238           Sulfur      ppm      ASTM D5185(m)      8916           Lithium      ppm      ASTM D5185(m)           Soliton      ppm      ASTM D5185(m) <t< td=""><td>Barium</td><td>ppm</td><td>ASTM D5185(m)</td><td></td><th>14</th><td></td><td></td></t<>	Barium	ppm	ASTM D5185(m)		14		
Magnesium      ppm      ASTM D5185(m)      11          Calcium      ppm      ASTM D5185(m)      3110          Phosphorus      ppm      ASTM D5185(m)      1059          Zinc      ppm      ASTM D5185(m)      1238          Sulfur      ppm      ASTM D5185(m)      8916          Lithium      ppm      ASTM D5185(m)      <1	Molybdenum	ppm	ASTM D5185(m)		0		
Calcium      ppm      ASTM D5185(m)      3110          Phosphorus      ppm      ASTM D5185(m)      1059          Zinc      ppm      ASTM D5185(m)      1238          Sulfur      ppm      ASTM D5185(m)      8916          Lithium      ppm      ASTM D5185(m)       current      history1      history2        Silicon      ppm      ASTM D5185(m)      >75      9          Sodium      ppm      ASTM D5185(m)      4	Manganese	ppm	ASTM D5185(m)		<1		
Phosphorus      ppm      ASTM D5185(m)      1059          Zinc      ppm      ASTM D5185(m)      1238          Sulfur      ppm      ASTM D5185(m)      8916          Lithium      ppm      ASTM D5185(m)      <1	Magnesium	ppm	ASTM D5185(m)		11		
Zinc      ppm      ASTM D5185(m)      1238          Sulfur      ppm      ASTM D5185(m)      8916          Lithium      ppm      ASTM D5185(m)      <1          CONTAMINANTS      method      limit/base      current      history1      history2        Silicon      ppm      ASTM D5185(m)      >75      9          Sodium      ppm      ASTM D5185(m)      >75      9	Calcium	ppm	ASTM D5185(m)		3110		
Zinc      ppm      ASTM D5185(m)      1238          Sulfur      ppm      ASTM D5185(m)      8916          Lithium      ppm      ASTM D5185(m)      <1          CONTAMINANTS      method      limit/base      current      history1      history2        Silicon      ppm      ASTM D5185(m)      >75      9          Sodium      ppm      ASTM D5185(m)      >75      9	Phosphorus	ppm	ASTM D5185(m)		1059		
Lithium      ppm      ASTM D5185(m)      <1          CONTAMINANTS      method      limit/base      current      history1      history2        Silicon      ppm      ASTM D5185(m)      >75      9          Sodium      ppm      ASTM D5185(m)      >75      9	Zinc		ASTM D5185(m)		1238		
CONTAMINANTS  method  limit/base  current  history1  history2    Silicon  ppm  ASTM D5185(m) >75  9      Sodium  ppm  ASTM D5185(m)  4	Sulfur	ppm	ASTM D5185(m)		8916		
Silicon      ppm      ASTM D5185(m)      >75      9          Sodium      ppm      ASTM D5185(m)      4	Lithium	ppm	ASTM D5185(m)		<1		
Sodium ppm ASTM D5185(m) 4	CONTAMINANTS	5	method	limit/base	current	history1	history2
Sodium ppm ASTM D5185(m) 4	Silicon	ppm	ASTM D5185(m)	>75	9		
	Sodium						
	Potassium		( )	>20	<1		

NORMAL



# **OIL ANALYSIS REPORT**



2		VISUAL		method	limit/base	current	history1	history2
		White Metal	scalar	Visual*	NONE	NONE		
		Yellow Metal	scalar	Visual*	NONE	NONE		
		Precipitate	scalar	Visual*	NONE	NONE		
		Silt	scalar	Visual*	NONE	NONE		
		Debris	scalar	Visual*	NONE	NONE		
		Sand/Dirt	scalar	Visual*	NONE	NONE		
	Jan 18/24	Appearance	scalar	Visual*	NORML	NORML		
	Jar	Odor		Visual*	NORML	NORML		
		Emulsified Water	scalar	Visual*	>0.2	NEG		
		Free Water	scalar	Visual*		NEG		
		FLUID PROPERT	TIES	method	limit/base	current	history1	history2
		Visc @ 40°C	cSt	ASTM D7279(m)		200		
		SAMPLE IMAGES	S	method	limit/base	current	history1	history2
		Color					no image	no image
		Bottom					no image	no image
		GRAPHS						
	200	Iron (ppm)				Lead (ppm)		
	200	Severe			150	Severe		
	톱 100	Abnormal			E 100 -	Abnormal		
		0						
		Jan 18/24			Jan 18/24	Jan 18/24		Jan 18/24
		-			Lai	-		Jai
	10	Aluminum (ppm)		30-	Chromium (ppm)			
		Severe			1	Severe		· · · · · · · · · · · · · · · · · · ·
	udd 5	Abnormal			<sup>20</sup> -	Abnormal G		
						4		5
		Jan 18/24			Jan 18/24	Jan 18/24		Jan 18/24
								L D
	20	Copper (ppm)			300 T	Silicon (ppm)		
	톱 10	Severe			∈ <sup>200</sup>	Severe		
	립지	00 - Abnormal			و200 - ق 100 -	Abnormal		
		25			24	24		24
		Jan 18/24			Jan 18/24	Jan 18/24		Jan 18/24
		¬ Viscosity @ 40°C				Additives		7
	30	00 T			4000 T			
	20 ئى 10 ئى 10	Abnormal				calcium phosphorus		
	रहु 10	00 - Abnormal			E 3000 -	zinc		
		8/24			1000	-		1/24
		Jan 1 8/2 4			Jan 18/24	Jan 1 8/2 4		Jan 18/24
ISO 17025:2017 Lab Accredited Unic Laboratory Tes To discuss this sam	nple No. Number que Number it Package pple report, co	: 02610699	Recieved Diagnose Diagnosti	: 23 d ed : 23 d ician : Kev	Jan 2024 Jan 2024 rin Marson 1.	1350 Gove AEM_KL_m	rnment Rd. W, MAG Kirk Contact: Mitc acassaoilsampleresul	land Lake, ON CA P2N 3J1 h Lamontagne
		on are based on the						(705)567-5228

Contact/Location: Mitch Lamontagne - KIR370KIR