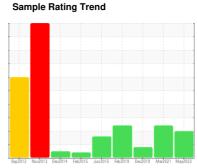


# **OIL ANALYSIS REPORT**

LCP 6 (S/N 4056)

Hydraulic System

**ZD-10 (55 GAL)** 





### DIAGNOSIS

#### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is a high amount of particulates present in the oil.

#### **Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sep2012 Nov2013 Dec2014 Feb2015 Jun2015 Feb2019 Dec2019 Mac2021 May2023						
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0561928	WCM2316159	WCM2316154
Sample Date		Client Info		23 May 2023	03 Mar 2021	16 Dec 2019
Machine Age	hrs	Client Info		2583	41719	40318
Oil Age	hrs	Client Info		0	0	2352
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ATTENTION
CONTAMINATION	٧	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	0	<1	<1
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>10	<1	0	0
Lead	ppm	ASTM D5185m	>10	6	<u> </u>	3
Copper	ppm	ASTM D5185m	>75	6	19	4
Tin	ppm	ASTM D5185m	>10	0	0	0
Antimony	ppm	ASTM D5185m			0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1	history2 <1
	ppm ppm		limit/base			
Boron		ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0	1	<1 0 <1
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	limit/base	0 0	1	<1 0 <1 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 0 78	1 0 <1 0 73	<1 0 <1 0 80
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 0 78 88	1 0 <1 0 73 80	<1 0 <1 0 80
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 0 78 88 329	1 0 <1 0 73 80 322	<1 0 <1 0 80 86 323
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 0 78 88 329 398	1 0 <1 0 73 80 322 423	<1 0 <1 0 80 86 323 429
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 0 0 78 88 329	1 0 <1 0 73 80 322 423 5213	<1 0 <1 0 80 86 323 429 5458
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 0 78 88 329 398	1 0 <1 0 73 80 322 423 5213	<1 0 <1 0 80 86 323 429
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m		0 0 0 0 78 88 329 398 7160 current	1 0 <1 0 73 80 322 423 5213 history1	<1 0 <1 0 80 86 323 429 5458 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20	0 0 0 0 78 88 329 398 7160 current <1	1 0 <1 0 73 80 322 423 5213 history1 0	<1 0 <1 0 80 86 323 429 5458 history2 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20 >20	0 0 0 0 78 88 329 398 7160 current	1 0 <1 0 73 80 322 423 5213 history1 0 0 <1	<1 0 <1 0 80 86 323 429 5458 history2 <1 0 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20	0 0 0 0 78 88 329 398 7160 current <1 <1 0	1 0 <1 0 73 80 322 423 5213 history1 0 0 <1	<1 0 <1 0 80 86 323 429 5458 history2 <1 0 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m	limit/base >20 >20 limit/base >5000	0 0 0 0 78 88 329 398 7160 current <1 <1 0 current	1 0 <1 0 73 80 322 423 5213 history1 0 0 <1 history1	<1 0 <1 0 80 86 323 429 5458 history2 <1 0 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m	limit/base >20 >20 limit/base >5000 >1300	0 0 0 78 88 329 398 7160 current <1 <1 0 current ▲ 15808 ▲ 4761	1 0 <1 0 73 80 322 423 5213 history1 0 0 <1 history1  17024 3340	<1 0 <1 0 80 86 323 429 5458 history2 <1 0 <1 history2  ▲ 7323 ▲ 1485
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m ASTM D7647 ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160	0 0 0 78 88 329 398 7160 current <1 <1 0 current ▲ 15808 ▲ 4761 ▲ 271	1 0 <1 0 73 80 322 423 5213 history1 0 0 <1 history1  17024 3340 187	<1 0 <1 0 80 86 323 429 5458 history2 <1 0 <1 history2  ▲ 7323 ▲ 1485 48
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m ASTM D7647 ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160 >40	0 0 0 78 88 329 398 7160 current <1 <1 0 current △ 15808 △ 4761 △ 271 △ 58	1 0 <1 0 73 80 322 423 5213 history1 0 0 <1 history1 △ 17024 △ 3340 △ 187 △ 47	<1 0 <1 0 80 86 323 429 5458 history2 <1 0 <1 history2  ▲ 7323 ▲ 1485 48 11
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160 >40 >10	0 0 0 78 88 329 398 7160 current <1 <1 0 current △ 15808 △ 4761 △ 271 △ 58 5	1 0 <1 0 73 80 322 423 5213 history1 0 <1 history1  ^ 17024 ^ 3340 ^ 187 ^ 47 4	<1 0 <1 0 80 86 323 429 5458 history2 <1 0 <1 history2  ▲ 7323 ▲ 1485 48 11 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m ASTM D7647 ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160 >40 >10	0 0 0 78 88 329 398 7160 current <1 <1 0 current △ 15808 △ 4761 △ 271 △ 58	1 0 <1 0 73 80 322 423 5213 history1 0 0 <1 history1 △ 17024 △ 3340 △ 187 △ 47	<1 0 <1 0 80 86 323 429 5458 history2 <1 0 <1 history2  ▲ 7323 ▲ 1485 48 11



## **OIL ANALYSIS REPORT**



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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