

OIL ANALYSIS REPORT

Area OKLAHOMA/102/EG - SCRAPER 76.33L [OKLAHOMA^102^EG - SCRAPER] Diesel Engine



Sample Rating Trend

Fluid MOBIL DELVAC 1300 SUPER 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: 5394 hours)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		method	limit/base	current	riistory i	nistory∠
Sample Number		Client Info		WC0925227	WC0820007	WC0746744
Sample Date		Client Info		29 May 2024	22 Jun 2023	24 Apr 2023
Machine Age	hrs	Client Info		5394	5206	4984
Oil Age	hrs	Client Info		4316	4316	4316
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	ATTENTION
Campie Claudo				Nonmae	NOTIWITE	ATTENTION
CONTAMINATION	١	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	2.2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	historv1	historv2
luna			75	00	01	01
Iron Obransium	ppm		<pre>>/5</pre>	36	31	61
Chromium	ppm	ASTM D5185M	>4	1	1	1
NICKEI	ppm	ASTM D5185m	>5	<1	<1	0
Litanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>54	5	3	4
Lead	ppm	ASTM D5185m	>20	2	3	<1
Copper	ppm	ASTM D5185m	>240	5	4	5
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	28	21	25
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	41	39	40
						-10
Manganese	ppm	ASTM D5185m		<1	<1	1
Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	0	<1 485	<1 518	1 544
Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	<1 485 1651	<1 518 1733	1 544 1837
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	<1 485 1651 676	<1 518 1733 804	1 544 1837 935
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	<1 485 1651 676 872	<1 518 1733 804 995	1 544 1837 935 1161
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	<1 485 1651 676 872 2398	<1 518 1733 804 995 3226	1 544 1837 935 1161 3380
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 limit/base	<1 485 1651 676 872 2398 current	<1 518 1733 804 995 3226 history1	1 544 1837 935 1161 3380 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m	0 limit/base >35	<1 485 1651 676 872 2398 current 10	<1 518 1733 804 995 3226 history1 7	1 544 1837 935 1161 3380 history2 16
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 limit/base >35	<1 485 1651 676 872 2398 <u>current</u> 10 3	<1 518 1733 804 995 3226 history1 7 2	1 544 1837 935 1161 3380 history2 16 3
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 limit/base >35 >20	<1 485 1651 676 872 2398 <u>current</u> 10 3 2	<1 518 1733 804 995 3226 history1 7 2 <1	1 544 1837 935 1161 3380 history2 16 3 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	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 limit/base >35 >20 limit/base	<1 485 1651 676 872 2398 current 10 3 2 2	<1 518 1733 804 995 3226 history1 7 2 <1 history1	1 544 1837 935 1161 3380 history2 16 3 0 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 limit/base >35 >20 limit/base	<1 485 1651 676 872 2398 current 10 3 2 current 0.6	<1 518 1733 804 995 3226 history1 7 2 <1 history1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 544 1837 935 1161 3380 history2 16 3 0 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm 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 limit/base >35 >20 limit/base >3	<1 485 1651 676 872 2398 current 10 3 2 current 0.6 10 5	<1 518 1733 804 995 3226 history1 7 2 <1 history1 0.8 11.4	1 544 1837 935 1161 3380 history2 16 3 0 history2 0.9 10.0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm 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 *ASTM D7844	0 imit/base >35 >20 imit/base >3 >20	<1 485 1651 676 872 2398 current 10 3 2 current 0.6 10.5 20.2	<1 518 1733 804 995 3226 history1 7 2 <1 history1 0.8 11.4 24.7	1 544 1837 935 1161 3380 history2 16 3 0 history2 0.9 10.9
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm 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 ASTM D7844 *ASTM D7844 *ASTM D7624	0 limit/base >35 >20 limit/base >3 >20 >3 >20	<1 485 1651 676 872 2398 current 10 3 2 current 0.6 10.5 22.9	<1 518 1733 804 995 3226 history1 7 2 <1 history1 0.8 11.4 24.7	1 544 1837 935 1161 3380 history2 16 3 0 history2 0.9 10.9 22.6
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm % Abs/cm Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7845	0 limit/base >35 >20 limit/base >3 >20 >30	<1 485 1651 676 872 2398 current 10 3 2 current 0.6 10.5 22.9 current	<1 518 1733 804 995 3226 history1 7 2 <1 history1 0.8 11.4 24.7 history1	1 544 1837 935 1161 3380 history2 16 3 0 history2 0.9 10.9 22.6 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm % Abs/.1mm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7415	0 imit/base >35 >20 imit/base >3 >20 >30 imit/base >25	<1 485 1651 676 872 2398 current 10 3 2 current 0.6 10.5 22.9 current 20.9	<1 518 1733 804 995 3226 history1 7 2 <1 history1 0.8 11.4 24.7 history1 22.7	1 544 1837 935 1161 3380 history2 16 3 0 history2 0.9 10.9 22.6 history2 21.8
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation Sulfation FLUID DEGRADA Oxidation Base Number (BN)	ppm ppm ppm 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 *ASTM D7844 *ASTM D7624 *ASTM D7415 Method ASTM D2896	0 imit/base >35 >20 imit/base >30 >30 imit/base >25 9.4	<1 485 1651 676 872 2398 current 10 3 2 current 0.6 10.5 22.9 current 20.9 8.7	<1 518 1733 804 995 3226 history1 7 2 <1 history1 0.8 11.4 24.7 history1 22.7 8.5	1 544 1837 935 1161 3380 history2 16 3 0 history2 0.9 10.9 22.6 history2 21.8 7.1



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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FI LIID PROPERT	IFS	method	limit/base	current	historv1	history2
		methou		Ganeni	instory i	nistory2
Visc @ 100°C	cSt	ASTM D445	14	12.6	12.6	11.9

Ferrous Alloys





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