

OIL ANALYSIS REPORT

Sample Rating Trend

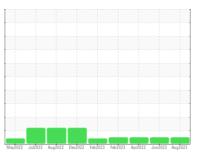
NORMAL



OKLAHOMA/102 Machine Id 74.30 [OKLAHOMA^102]

Diesel Engine

MOBIL DELVAC 1300 SUPER15W40 (--- GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

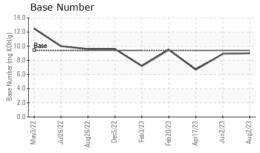
Fluid Condition

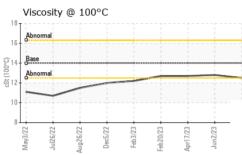
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

`		,	2022 Aug2022 Dec2022	Feb 2023 Feb 2023 Apr 2023 Jun 20		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0834024	WC0808061	WC0800874
Sample Date		Client Info		02 Aug 2023	02 Jun 2023	17 Apr 2023
Machine Age	hrs	Client Info		1990	1745	1653
Oil Age	hrs	Client Info		245	445	329
Oil Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	18	37	44
Chromium	ppm	ASTM D5185m	>20	<1	1	1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	2	2
Lead	ppm	ASTM D5185m	>40	<1	1	0
Copper	ppm	ASTM D5185m	>330	22	80	119
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
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		current 31	history1	history2 21
	ppm ppm		0			
Boron		ASTM D5185m	0	31	25	21
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	31 0	25 0	21
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	31 0 40	25 0 42	21 0 45
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	31 0 40 <1	25 0 42 <1	21 0 45 1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	31 0 40 <1 469	25 0 42 <1 541	21 0 45 1 544
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	31 0 40 <1 469 1617	25 0 42 <1 541 1830	21 0 45 1 544 1677
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	0 0 0	31 0 40 <1 469 1617 725	25 0 42 <1 541 1830 789	21 0 45 1 544 1677 755
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0	31 0 40 <1 469 1617 725 875	25 0 42 <1 541 1830 789 971	21 0 45 1 544 1677 755 984
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0	31 0 40 <1 469 1617 725 875 2423 current 6	25 0 42 <1 541 1830 789 971 2865 history1	21 0 45 1 544 1677 755 984 2537 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base	31 0 40 <1 469 1617 725 875 2423	25 0 42 <1 541 1830 789 971 2865 history1 8	21 0 45 1 544 1677 755 984 2537 history2 8 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base	31 0 40 <1 469 1617 725 875 2423 current 6	25 0 42 <1 541 1830 789 971 2865 history1	21 0 45 1 544 1677 755 984 2537 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base >25	31 0 40 <1 469 1617 725 875 2423 current 6	25 0 42 <1 541 1830 789 971 2865 history1 8	21 0 45 1 544 1677 755 984 2537 history2 8 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 limit/base >25 >20	31 0 40 <1 469 1617 725 875 2423 current 6 0 <1	25 0 42 <1 541 1830 789 971 2865 history1 8 3	21 0 45 1 544 1677 755 984 2537 history2 8 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 0 limit/base >25 >20 limit/base >3	31 0 40 <1 469 1617 725 875 2423 current 6 0 <1	25 0 42 <1 541 1830 789 971 2865 history1 8 3 0	21 0 45 1 544 1677 755 984 2537 history2 8 3 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	0 0 0 0 0 limit/base >25 >20 limit/base >3	31 0 40 <1 469 1617 725 875 2423 current 6 0 <1 current	25 0 42 <1 541 1830 789 971 2865 history1 8 3 0 history1 0.5	21 0 45 1 544 1677 755 984 2537 history2 8 3 0 history2
Boron Barium Molybdenum 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 method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 limit/base >25 >20 limit/base >3 >20	31 0 40 <1 469 1617 725 875 2423 current 6 0 <1 current 0.3 7.8	25 0 42 <1 541 1830 789 971 2865 history1 8 3 0 history1 0.5 10.6	21 0 45 1 544 1677 755 984 2537 history2 8 3 0 history2 0.4 10.7
Boron Barium Molybdenum 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 method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 0 0 0 limit/base >25 >20 limit/base >3 >20 >30	31 0 40 <1 469 1617 725 875 2423 current 6 0 <1 current 0.3 7.8 22.2	25 0 42 <1 541 1830 789 971 2865 history1 8 3 0 history1 0.5 10.6 24.3	21 0 45 1 544 1677 755 984 2537 history2 8 3 0 history2 0.4 10.7 22.5



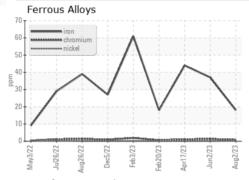
OIL ANALYSIS REPORT

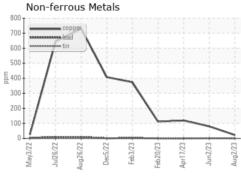


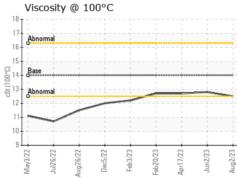


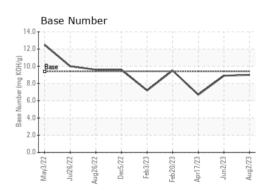
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

FLUID PROPER	RTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	14	12.5	12.8	12.7













Laboratory Sample No. Lab Number Unique Number : 10606483

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

: WC0834024 : 05926536

Received Diagnosed

: 16 Aug 2023 : 17 Aug 2023

Diagnostician : Sean Felton

Test Package : CONST (Additional Tests: TBN)

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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Contact: SHAWN SOUTH shawn.south@sherwood.net

> T: x: F: x: