

OIL ANALYSIS REPORT

NORMAL

Sample Rating Trend





Area OKLAHOMA/3/EG - TRUCK-OFF-HWY-HEAVY HAUL 69.12 [OKLAHOMA^3^EG - TRUCK-OFF-HWY-HEAVY HAUL] Diesel Engine Fluid MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

SAMPLE INFORMATION metho

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.

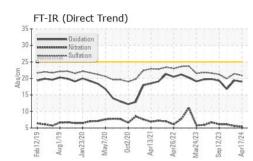
Fluid Condition

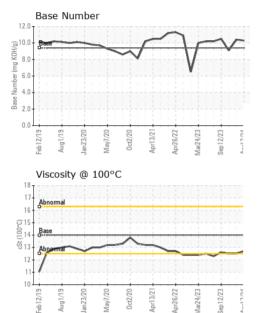
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM		method	limit/base	current	history1	history2
Sample Number		Client Info		WC0914452	WC0887015	WC0886972
Sample Date		Client Info		17 Apr 2024	02 Feb 2024	02 Jan 2024
Machine Age	hrs	Client Info		11066	10847	10581
Oil Age	hrs	Client Info		18966	10847	18966
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
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CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	0	2	3
Chromium	ppm	ASTM D5185m	>20	0	0	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	1	2
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	0	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method				history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 72	history1 62	history2 53
	ppm ppm	ASTM D5185m				
Boron		ASTM D5185m	0	72	62	53
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	72 <1	62 0	53 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	72 <1 41	62 0 38	53 0 38
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	72 <1 41 0	62 0 38 <1	53 0 38 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	72 <1 41 0 572	62 0 38 <1 472	53 0 38 <1 467
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	72 <1 41 0 572 1848	62 0 38 <1 472 1529	53 0 38 <1 467 1640
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	72 <1 41 0 572 1848 866	62 0 38 <1 472 1529 711	53 0 38 <1 467 1640 791
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	72 <1 41 0 572 1848 866 1005	62 0 38 <1 472 1529 711 839	53 0 38 <1 467 1640 791 849
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	0 0 0 0 0 limit/base	72 <1 41 0 572 1848 866 1005 3200	62 0 38 <1 472 1529 711 839 2300	53 0 38 <1 467 1640 791 849 2509
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	0 0 0 0 0 limit/base	72 <1 41 0 572 1848 866 1005 3200 current	62 0 38 <1 472 1529 711 839 2300 history1	53 0 38 <1 467 1640 791 849 2509 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	0 0 0 0 ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !	72 <1 41 0 572 1848 866 1005 3200 current 4	62 0 38 <1 472 1529 711 839 2300 history1 3	53 0 38 <1 467 1640 791 849 2509 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !	72 <1 41 0 572 1848 866 1005 3200 Current 4 2	62 0 38 <1 472 1529 711 839 2300 history1 3 3 3	53 0 38 <1 467 1640 791 849 2509 history2 5 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	72 <1 41 0 572 1848 866 1005 3200 Current 4 2 2	62 0 38 <1 472 1529 711 839 2300 history1 3 3 3 1	53 0 38 <1 467 1640 791 849 2509 history2 5 2 2 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 limit/base >25 >20 limit/base >3	72 <1 41 0 572 1848 866 1005 3200 current 4 2 2 2	62 0 38 <1 472 1529 711 839 2300 history1 3 3 1 1 history1	53 0 38 <1 467 1640 791 849 2509 history2 5 2 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	0 0 0 0 limit/base >25 >20 limit/base >3	72 <1 41 0 572 1848 866 1005 3200 current 4 2 2 2 2 current 0.1	62 0 38 <1 472 1529 711 839 2300 history1 3 3 1 1 history1 0.1	53 0 38 <1 467 1640 791 849 2509 history2 5 2 0 history2 0.1
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 ASTM D5185m	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	72 <1 41 0 572 1848 866 1005 3200 current 4 2 2 2 current 0.1 5.4	62 0 38 <1 472 1529 711 839 2300 history1 3 3 3 1 history1 0.1 5.6	53 0 38 <1 467 1640 791 849 2509 history2 5 2 2 0 history2 0 history2 0.1 6.1
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 ASTM D5185m	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	72 <1 41 0 572 1848 866 1005 3200 <u>current</u> 4 2 2 2 <u>current</u> 0.1 5.4 20.9	62 0 38 <1 472 1529 711 839 2300 history1 3 3 3 1 1 history1 0.1 5.6 21.4	53 0 38 <1 467 1640 791 849 2509 history2 5 2 0 history2 0.1 6.1 19.9
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 ASTM D7844 *ASTM D7844 *ASTM D7844	0 0 0 0 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0	72 <1 41 0 572 1848 866 1005 3200 Current 4 2 2 2 Current 0.1 5.4 20.9 Current	62 0 38 <1 472 1529 711 839 2300 history1 3 3 3 1 history1 0.1 5.6 21.4 history1	53 0 38 <1 467 1640 791 849 2509 history2 5 2 0 history2 0.1 6.1 19.9 history2



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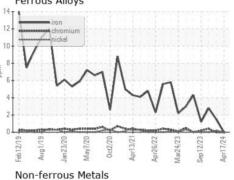


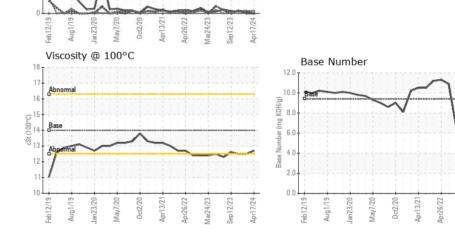
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14	12.7	12.5	12.5
GRAPHS						

Ferrous Alloys

lead

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SHERWOOD CONSTRUCTION CO INC Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : WC0914452 Received : 25 Apr 2024 3219 WEST MAY ST Lab Number : 06160088 Tested : 26 Apr 2024 WICHITA, KS Unique Number : 10995511 Diagnosed : 26 Apr 2024 - Wes Davis US 67213 Test Package : CONST (Additional Tests: TBN) Contact: DOUG KING Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. doug.king@sherwood.net * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (316)617-3161 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: x:

Report Id: SHEWIC [WUSCAR] 06160088 (Generated: 04/26/2024 07:59:00) Rev: 1

Submitted By: GARRETT ADAMS

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