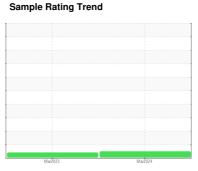


OIL ANALYSIS REPORT



Component **Diesel Engine**

PHILLIPS 66 Fleet Supreme EC 15W40 (--- GAL)





Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

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.

 . - ,			Mar2023	Mar2024		
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0908044	WC0785297	
Sample Date		Client Info		14 Mar 2024	13 Mar 2023	
Machine Age	hrs	Client Info		0	0	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		Not Changd	N/A	
Sample Status				NORMAL	ATTENTION	
CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	3	3	
Chromium	ppm	ASTM D5185m	>20	0	<1	
Nickel	ppm	ASTM D5185m	>4	0	0	
Titanium	ppm	ASTM D5185m		25	<1	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m		1	1	
Lead	ppm	ASTM D5185m	>40	0	0	
Copper	ppm	ASTM D5185m		<1	<1	
Tin	ppm	ASTM D5185m	>15	0	0	
Vanadium	ppm	ASTM D5185m	710	<1	<1	
	ppm	ASTM D5185m		0	0	
	ррііі					
VDDITI\/EC						
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	limit/base	100	80	history2
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	limit/base	100 0	80	history2
Boron Barium Molybdenum		ASTM D5185m	limit/base	100 0 2	80 0 <1	
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	limit/base	100 0	80 0 <1 <1	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	100 0 2	80 0 <1 <1 517	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	100 0 2 0	80 0 <1 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	100 0 2 0 516	80 0 <1 <1 517	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		100 0 2 0 516 1314	80 0 <1 <1 517 1042	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1116	100 0 2 0 516 1314 1012	80 0 <1 <1 517 1042 913	
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	1116	100 0 2 0 516 1314 1012	80 0 <1 <1 517 1042 913 1015	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 D5185m	1116 1250	100 0 2 0 516 1314 1012 1129 4417	80 0 <1 <1 517 1042 913 1015 3964	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1116 1250 limit/base	100 0 2 0 516 1314 1012 1129 4417	80 0 <1 <1 517 1042 913 1015 3964 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1116 1250 limit/base	100 0 2 0 516 1314 1012 1129 4417 current	80 0 <1 <1 517 1042 913 1015 3964 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1116 1250 limit/base >25	100 0 2 0 516 1314 1012 1129 4417 current 2	80 0 <1 <1 517 1042 913 1015 3964 history1 3	history2
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	1116 1250 limit/base >25 >20	100 0 2 0 516 1314 1012 1129 4417 current 2 2 3	80 0 <1 <1 517 1042 913 1015 3964 history1 3 <1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1116 1250 limit/base >25 >20 >5	100 0 2 0 516 1314 1012 1129 4417 current 2 2 3 <1.0	80 0 <1 <1 517 1042 913 1015 3964 history1 3 <1 1.7	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m	1116 1250 limit/base >25 >20 >5 limit/base	100 0 2 0 516 1314 1012 1129 4417 current 2 2 3 <1.0 current	80 0 <1 <1 517 1042 913 1015 3964 history1 3 <1 1.7 history1 0.1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m	1116 1250 limit/base >25 >20 >5 limit/base >3	100 0 2 0 516 1314 1012 1129 4417 current 2 2 3 <1.0 current 0.1	80 0 <1 <1 517 1042 913 1015 3964 history1 3 <1 1.7 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D7844 *ASTM D7844	1116 1250 limit/base >25 >20 >5 limit/base >3 >20	100 0 2 0 516 1314 1012 1129 4417 current 2 2 3 <1.0 current 0.1 6.4	80 0 <1 <1 517 1042 913 1015 3964 history1 3 <1 1.7 history1 0.1 6.7	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADAT	ppm	ASTM D5185m ASTM D78124 *ASTM D7844 *ASTM D7624 *ASTM D7415 method	1116 1250 limit/base >25 >20 >5 limit/base >3 >20 >30 limit/base	100 0 2 0 516 1314 1012 1129 4417 current 2 2 3 <1.0 current 0.1 6.4 17.6 current	80 0 <1 <1 <1 517 1042 913 1015 3964 history1 3 <1 1.7 history1 0.1 6.7 17.3 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADAT Oxidation	ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	1116 1250 limit/base >25 >20 >5 limit/base >3 >20 >30	100 0 2 0 516 1314 1012 1129 4417 current 2 2 3 <1.0 current 0.1 6.4 17.6	80 0 <1 <1 517 1042 913 1015 3964 history1 3 <1 1.7 history1 0.1 6.7 17.3	history2 history2 history2 history2



OIL ANALYSIS REPORT







Laboratory Sample No. Lab Number

: WC0908044 : 06122987 Unique Number: 10937138

Received **Tested**

: 20 Mar 2024 : 20 Mar 2024 - Jonathan Hester Diagnosed Test Package : MOB 1 (Additional Tests: FuelDilution, TBN)

: 19 Mar 2024

5400 INTERNATIONAL BLVD, BLDG 88-20 NORTH CHARLESTON, SC

US 29418 Contact: Maxime Banctel maxime.banctel@aes-gse.com

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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