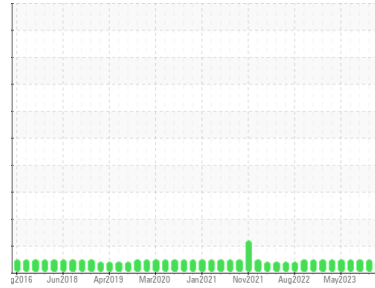




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Area
[886746]
 Machine Id
LCL-9 ENGINE 1
 Component
Front Diesel Engine
 Fluid
PHILLIPS 66 Fleet Supreme EC 15W40 (9 GAL)

DIAGNOSIS

▲ Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

▲ Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0803187	WC0865377	WC0843458
Sample Date	Client Info		03 Jan 2024	08 Nov 2023	12 Sep 2023
Machine Age	hrs	Client Info	4845	4819	4770
Oil Age	hrs	Client Info	0	69	110
Oil Changed	Client Info		N/A	Not Changd	Not Changd
Sample Status			ATTENTION	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
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	3	2	1
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	1
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	<1	<1	0
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	<1	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		87	88	95
Barium	ppm	ASTM D5185m		0	12	0
Molybdenum	ppm	ASTM D5185m		87	94	90
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		34	34	35
Calcium	ppm	ASTM D5185m		2232	2214	2300
Phosphorus	ppm	ASTM D5185m	1116	985	1055	1100
Zinc	ppm	ASTM D5185m	1250	1214	1214	1259
Sulfur	ppm	ASTM D5185m		4503	3896	4850

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	4	4	4
Sodium	ppm	ASTM D5185m		0	0	3
Potassium	ppm	ASTM D5185m	>20	2	2	1
Fuel	%	ASTM D3524	>5	0.4	<1.0	<1.0

INFRA-RED

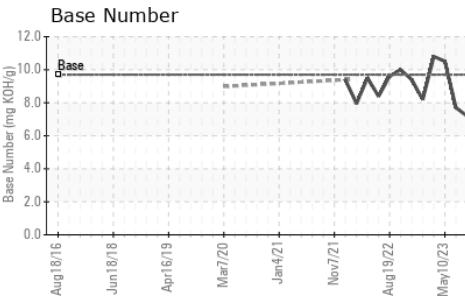
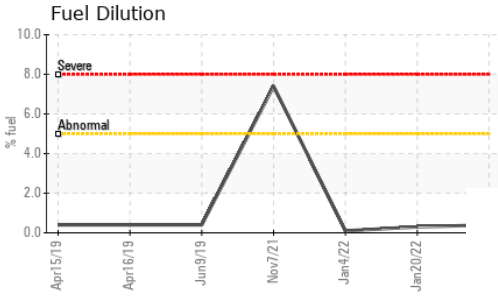
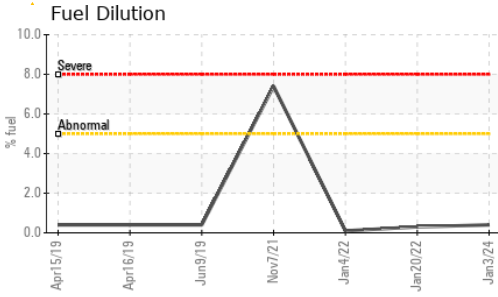
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.5	7.5	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.7	16.7	16.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.0	12.7	12.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.7	10.71	7.3	7.2



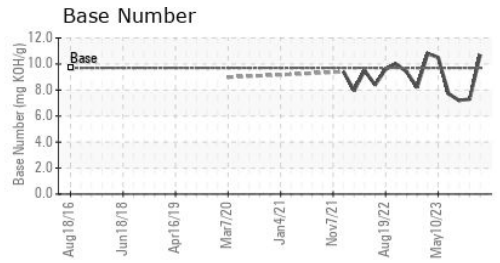
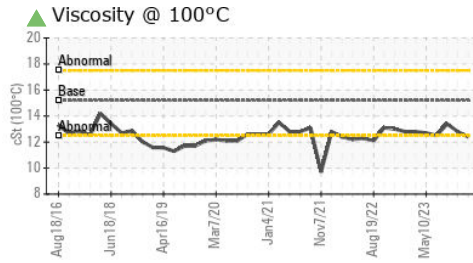
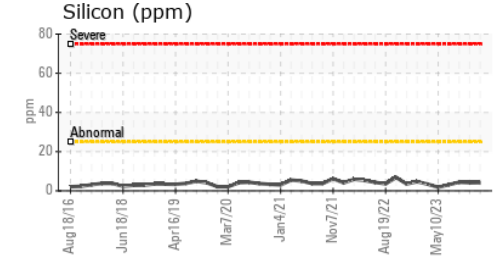
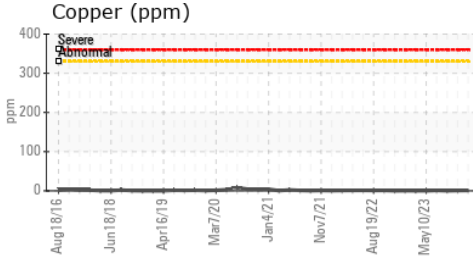
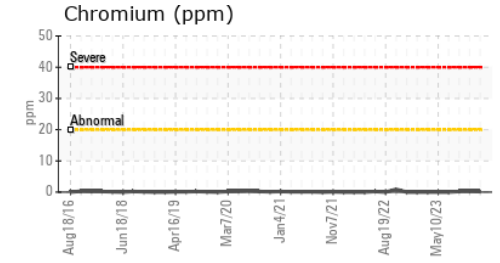
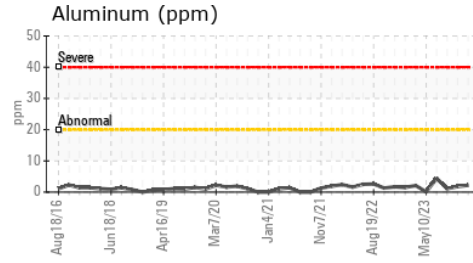
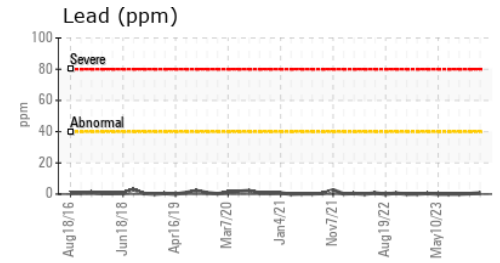
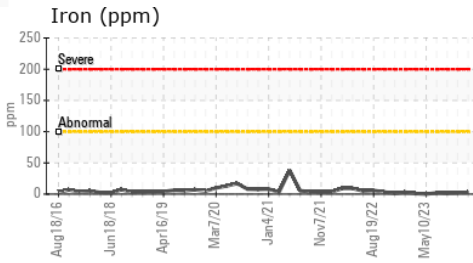
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.2	▲ 12.4	12.8

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0803187 **Received** : 08 Jan 2024
Lab Number : 06055058 **Diagnosed** : 14 Jan 2024
Unique Number : 10821007 **Diagnostician** : Don Baldrige
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

AES USA - NORTH CHARLESTON
 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)

T:
F: x