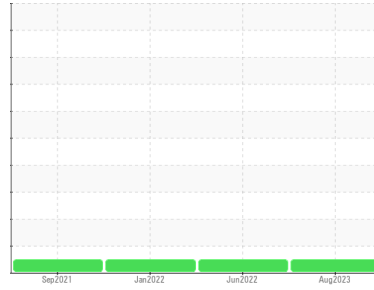




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
[17959]

Machine Id
80-82

Component
Diesel Engine

Fluid
CONOCO PHILLIPS GUARDOL ECT 15W40 (--- 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.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0802386	WC0619340	WC0619488
Sample Date	Client Info	16 Aug 2023	20 Jun 2022	28 Jan 2022
Machine Age	hrs Client Info	6227	5876	5660
Oil Age	hrs Client Info	351	5660	5452
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

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	52	34	35
Chromium	ppm ASTM D5185m >20	2	1	2
Nickel	ppm ASTM D5185m >4	0	<1	0
Titanium	ppm ASTM D5185m	0	<1	<1
Silver	ppm ASTM D5185m >3	0	<1	0
Aluminum	ppm ASTM D5185m >20	4	3	2
Lead	ppm ASTM D5185m >40	2	1	1
Copper	ppm ASTM D5185m >330	<1	<1	<1
Tin	ppm ASTM D5185m >15	<1	<1	<1
Antimony	ppm ASTM D5185m	---	---	<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 85	25	78	66
Barium	ppm ASTM D5185m	0	0	0
Molybdenum	ppm ASTM D5185m	32	8	6
Manganese	ppm ASTM D5185m	<1	<1	<1
Magnesium	ppm ASTM D5185m 350	903	741	607
Calcium	ppm ASTM D5185m 1800	1328	1384	1636
Phosphorus	ppm ASTM D5185m 1000	1060	1039	1034
Zinc	ppm ASTM D5185m 1100	1300	1283	1097
Sulfur	ppm ASTM D5185m 3500	4039	3558	2807

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	8	6	8
Sodium	ppm ASTM D5185m	2	2	0
Potassium	ppm ASTM D5185m >20	7	5	4

INFRA-RED

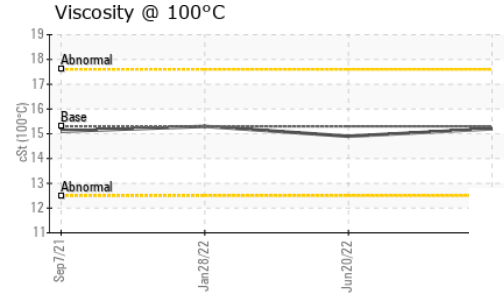
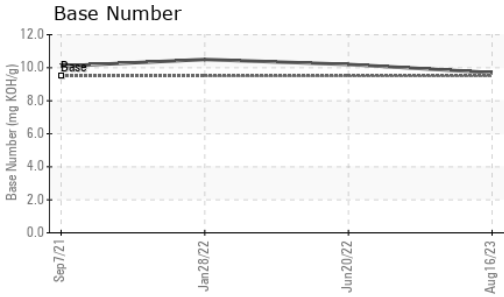
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	1.7	1.2	1.3
Nitration	Abs/cm *ASTM D7624 >20	9.6	9.4	9.5
Sulfation	Abs/.1mm *ASTM D7415 >30	21.2	21.8	22.8

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.3	14.1	14.3
Base Number (BN)	mg KOH/g ASTM D2896 9.5	9.7	10.2	10.5



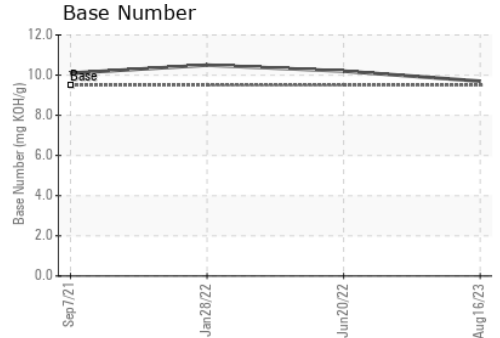
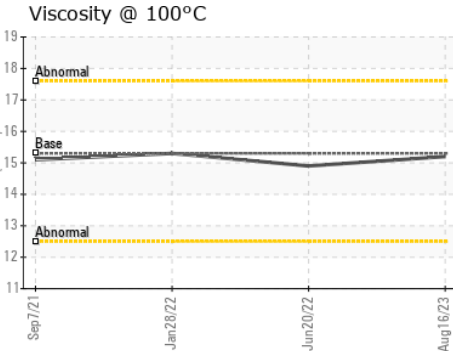
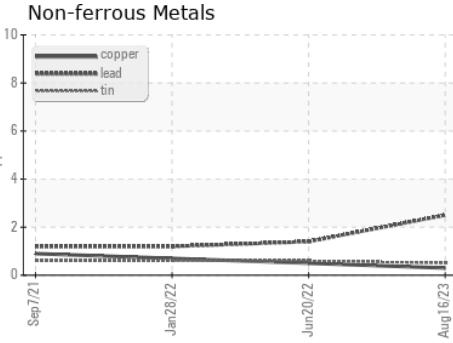
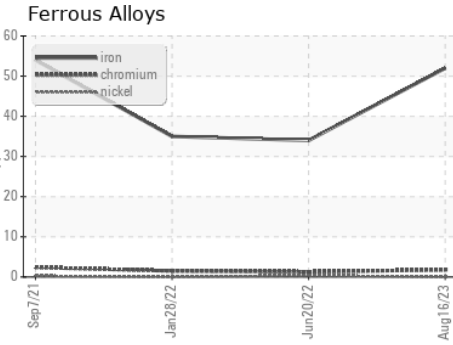
OIL ANALYSIS REPORT



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	15.3	15.2	14.9	15.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0802386 **Received** : 29 Aug 2023
Lab Number : **05937795** **Diagnosed** : 30 Aug 2023
Unique Number : 10628407 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: TBN)

MANHATTAN ROAD AND BRIDGE
 5601 S 122ND E AVE
 TULSA, OK
 US 74146
 Contact: BEN CALDWELL
 kevin.marson@wearcheck.com
 T: (918)728-5749
 F:

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)