



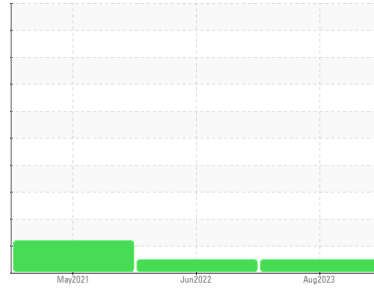
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
[18626]
 Machine Id
50-72
 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		WC0818653	WC0709399	WC0549112
Sample Date	Client Info		07 Aug 2023	10 Jun 2022	05 May 2021
Machine Age	hrs	Client Info	4388	4168	4069
Oil Age	hrs	Client Info	220	99	250
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	ABNORMAL

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	8	6	9
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	0	0	<1
Titanium	ppm	ASTM D5185m >2	<1	<1	<1
Silver	ppm	ASTM D5185m >2	<1	0	0
Aluminum	ppm	ASTM D5185m >25	2	2	2
Lead	ppm	ASTM D5185m >40	<1	<1	<1
Copper	ppm	ASTM D5185m >330	2	2	3
Tin	ppm	ASTM D5185m >15	<1	0	<1
Antimony	ppm	ASTM D5185m	---	---	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 85	68	87	62
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	11	2	1
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m 350	736	690	747
Calcium	ppm	ASTM D5185m 1800	1540	1291	1413
Phosphorus	ppm	ASTM D5185m 1000	1074	1055	1113
Zinc	ppm	ASTM D5185m 1100	1275	1244	1275
Sulfur	ppm	ASTM D5185m 3500	4423	3874	3429

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	5	5	5
Sodium	ppm	ASTM D5185m	5	4	10
Potassium	ppm	ASTM D5185m >20	10	22	▲ 50

INFRA-RED

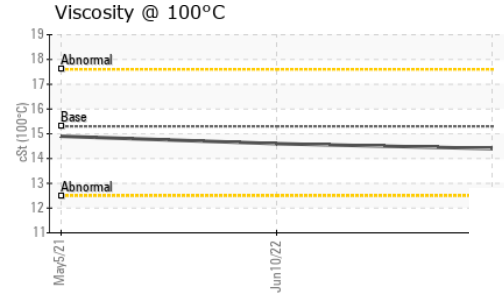
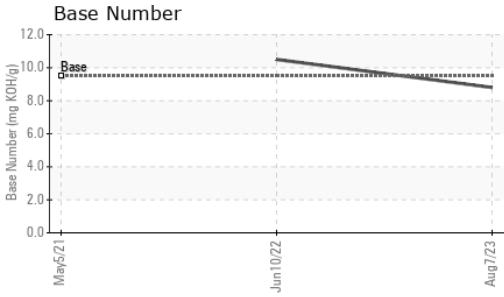
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0.2	0.5
Nitration	Abs/cm	*ASTM D7624 >20	7.7	8.0	9.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.3	20.9	22.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.1	13.6	15.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.5	8.8	10.5	---



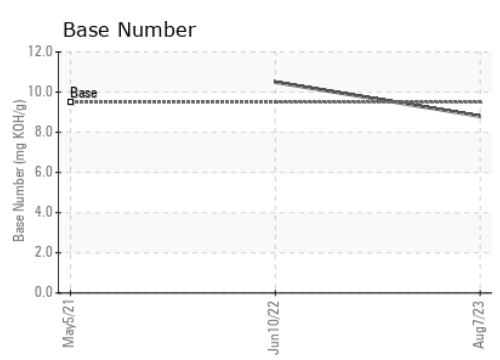
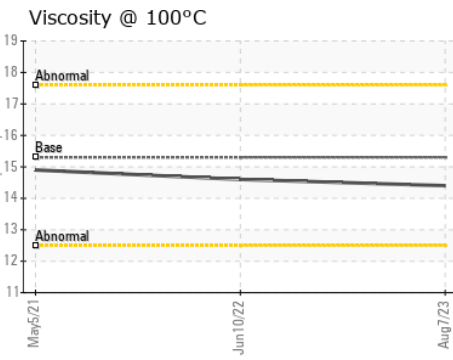
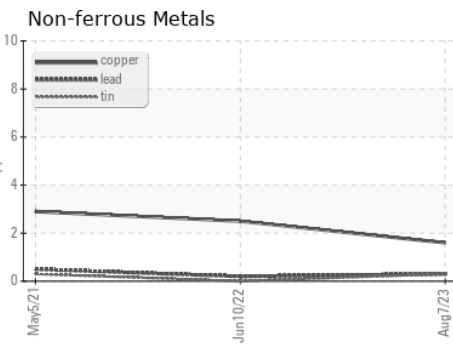
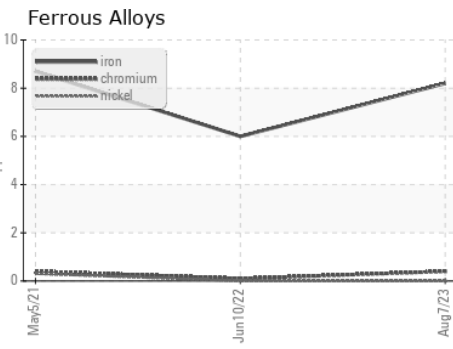
OIL ANALYSIS REPORT



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	14.4	14.6	14.9

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0818653 **Received** : 18 Aug 2023
Lab Number : 05928691 **Diagnosed** : 20 Aug 2023
Unique Number : 10608638 **Diagnostician** : Wes Davis
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:

Certificate L2367
 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)