

OIL ANALYSIS REPORT

Sample Rating Trend



Area [17959] Machine Id 80-82 Component

Diesel Engine

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

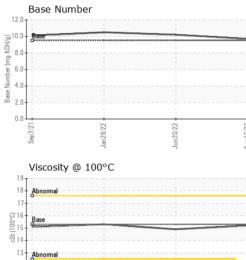
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	ATION	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
CONTAMINATIO	N	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		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		<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
Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	0 history1	0 history2
	ppm ppm		limit/base 85			
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m		current 25	history1 78	history2 66
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m		current 25 0	history1 78 0	history2 66 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m		current 25 0 32	history1 78 0 8	history2 66 0 6
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	85	current 25 0 32 <1	history1 78 0 8 <1	history2 66 0 6 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	85 350 1800 1000	current 25 0 32 <1 903	history1 78 0 8 <1 741	history2 66 0 6 <1 607
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	85 350 1800	current 25 0 32 <1 903 1328	history1 78 0 8 <1 741 1384	history2 66 0 6 <1 607 1636
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	85 350 1800 1000	Current 25 0 32 <1 903 1328 1060	history1 78 0 8 <1 741 1384 1039	history2 66 0 6 <1 607 1636 1034
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	85 350 1800 1000 1100	Current 25 0 32 <1 903 1328 1060 1300	history1 78 0 8 <1 741 1384 1039 1283	history2 66 0 6 <1 607 1636 1034 1097
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	85 350 1800 1000 1100 3500	Current 25 0 32 <1 903 1328 1060 1300 4039	history1 78 0 8 <1 741 1384 1039 1283 3558 history1 6	history2 66 0 6 <1 607 1636 1034 1097 2807 history2 8
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	85 350 1800 1000 1100 3500	Current 25 0 32 <1 903 1328 1060 1300 4039 Current	history1 78 0 8 <1 741 1384 1039 1283 3558 history1	history2 66 0 6 <1 607 1636 1034 1097 2807 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	85 350 1800 1000 1100 3500 imit/base >25	current 25 0 32 <1 903 1328 1060 1300 4039 current 8	history1 78 0 8 <1 741 1384 1039 1283 3558 history1 6	history2 66 0 6 <1 607 1636 1034 1097 2807 history2 8
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	85 350 1800 1000 1100 3500 imit/base >25	current 25 0 32 <1 903 1328 1060 1300 4039 current 8 2	history1 78 0 8 <1 741 1384 1039 1283 3558 history1 6 2	history2 66 0 6 <1 607 1636 1034 1097 2807 history2 8 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	85 350 1800 1000 1100 3500 limit/base >25 >20	current 25 0 32 <1 903 1328 1060 1300 4039 current 8 2 7	history1 78 0 8 <1 741 1384 1039 1283 3558 history1 6 2 5	history2 66 0 6 <1 607 1636 1034 1097 2807 history2 8 0 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	85 350 1800 1000 1100 3500 limit/base >25 20 limit/base	current 25 0 32 <1 903 1328 1060 1300 4039 current 8 2 7 current	history1 78 0 8 <1 741 1384 1039 1283 3558 history1 6 2 5 history1	history2 66 0 6 <1 607 1636 1034 1097 2807 history2 8 0 4 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	85 350 1800 1000 1100 3500 limit/base >25 >20 limit/base >3	current 25 0 32 <1 903 1328 1060 1300 4039 current 8 2 7 current 1.7	history1 78 0 8 <1 741 1384 1039 1283 3558 history1 6 2 5 history1 1.2	history2 66 0 6 <1 607 1636 1034 1097 2807 history2 8 0 4 history2 1.3
ADDITIVES 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	method ASTM D5185m	85 350 1800 1000 1100 3500 imit/base >25 >20 imit/base >3 >20	current 25 0 32 <1 903 1328 1060 1300 4039 current 8 2 7 current 1.7 9.6	history1 78 0 8 <1 741 1384 1039 1283 3558 history1 6 2 5 history1 1.2 9.4	history2 66 0 6 <1 607 1636 1034 1097 2807 history2 8 0 4 history2 1.3 9.5
ADDITIVES 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	method ASTM D5185m ASTM D5185m	85 350 1800 1000 1100 3500 imit/base >25 20 imit/base >3 >20 >30	current 25 0 32 <1 903 1328 1060 1300 4039 current 8 2 7 current 1.7 9.6 21.2	history1 78 0 8 <1 741 1384 1039 1283 3558 history1 6 2 5 history1 1.2 9.4 21.8	history2 66 0 6 <1 607 1636 1034 1097 2807 history2 8 0 4 history2 1.3 9.5 22.8



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OIL ANALYSIS REPORT



Jan 28/22

	+	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
20/22	Jun 20/22 Aug 16/23	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
	Bud	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
		Emulsified Wate	r scalar	*Visual	>0.2	NEG	NEG	NEG
		Free Water	scalar	*Visual		NEG	NEG	NEG
		FLUID PROPI	ERTIES	method	limit/base	current	history1	history2
		Visc @ 100°C	cSt	ASTM D445	15.3	15.2	14.9	15.3
		GRAPHS						
		Ferrous Alloys						
. 20,02 mil	77/07	50 - chromium			/			
		40						
		톱 30						
		20						
		10-						
		0						
		Sep7/21	Jan 20/22	Jun20/22	Aug 16/23			
			,	Jun	Aug			
		Non-ferrous M	etals					
		copper						
		8 - Internet lead						
		6						
		udd.						
		4						
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				and the rest of the local division of the lo				
		0	7	2+				
		Sep7/21	an 20/22	Jun20/22	lug 16/23			
		viscosity @ 10		η	Au			
		¹⁹			12.0	Base Number		
		18 - Abnormal			10.0	Base		
		17-			B/H03			
					y Bu			
		0 16 Base						
		()-16 Base 15 15 15				1		
		Base 3 14 12			la 6.0 N as			
		13 - Abnormal)		
		12			2.0)-		
		13 - Abnormal 12 -	27/8	0/22	2.0)	8/22	770
		13 - Abnormal 12 -		Jun20/22	2.0)		77707100
	Laboratory Sample No. Lab Number Unique Number	: WearCheck USA : WC0802386 : 05937795		son Ave., Ca d : 29 / ed : 30 /	0.0 4n816/23	Sep 7/21	IATTAN ROAD	
CARGONICAT	Sample No. Lab Number Unique Number Test Package	: WearCheck USA : WC0802386 : 05937795 : 10628407	A - 501 Madia Received Diagnos Diagnos onal Tests: T	son Ave., Ca d : 29 / ed : 30 / tician : Dor BN)	ry, NC 27513 Aug 2023 Aug 2023 Baldridge	Sep 7/21	IATTAN ROAL 5601 S	AND BRID 5 122ND E A TULSA, (

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: JAMES STEELMON

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