

OIL ANALYSIS REPORT

Sample Rating Trend



Area [18467] Machine Id 20-86 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.

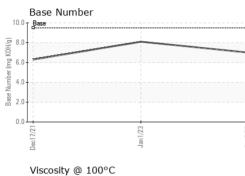
Fluid Condition

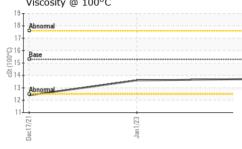
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample NumberClient InfoWC0818609WC0754778WC0601424Sample DateIClient Info08 Sep 202301 Jan 202317 Dec 2021Machine AgehrsClient Info586655675304Oil AgehrsClient Info2992610Oil ChangedClient InfoChangedChangedChangedSample StatusIINORMALNORMALATTENTIONCONTAMINATIONmethodlimit/basecurrenthistory1history2FuelWC Method>3.0<1.0<1.02.0GlycolWWC Method>3.0<1.0<1.02.0WEAR METALSmethodlimit/basecurrenthistory1history2IronppmASTM D5185m>909117ChromiumppmASTM D5185m>20<1<10NickelppmASTM D5185m>200<1SilverppmASTM D5185m>232<1AluminumppmASTM D5185m>2032<1LeadppmASTM D5185m>400<10CopperppmASTM D5185m>330<<<1<1<10
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Chromium ppm ASTM D5185m >20 <1
Nickel ppm ASTM D5185m >2 <1
Titanium ppm ASTM D5185m >2 <1
Silver ppm ASTM D5185m >2 0 0 <1
Aluminum ppm ASTM D5185m >20 3 2 <1
Lead ppm ASTM D5185m >40 0 <1
Copper ppm ASTM D5185m >330 <1
TinASTM D5185m \15 -1 1 0
Antimony ppm ASTM D5185m O
Vanadium ppm ASTM D5185m <1
Cadmium ppm ASTM D5185m 0 0 0
ADDITIVES method limit/base current history1 history2
Boron ppm ASTM D5185m 85 72 83 52
Barium ppm ASTM D5185m 0 0 0
Molybdenum ppm ASTM D5185m 30 4 35
Manganese ppm ASTM D5185m <1
Magnesium ppm ASTM D5185m 350 491 692 533
Calcium ppm ASTM D5185m 1800 1549 1330 1705
Phosphorus ppm ASTM D5185m 1000 1072 1056 1054 Total ASTM D5185m 10000 100
Zinc ppm ASTM D5185m 1100 1246 1219 1161
Sulfur ppm ASTM D5185m 3500 4020 4502 2646
CONTAMINANTS method limit/base current history1 history2
Silicon ppm ASTM D5185m >25 5 6 4
Silicon ppm ASTM D5185m >25 5 6 4 Sodium ppm ASTM D5185m 3 2 2
Silicon ppm ASTM D5185m >25 5 6 4 Sodium ppm ASTM D5185m 3 2 2 Potassium ppm ASTM D5185m >20 3 4 0
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Silicon ppm ASTM D5185m >25 5 6 4 Sodium ppm ASTM D5185m 3 2 2 Potassium ppm ASTM D5185m >20 3 4 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.1 0.1 0.3 Nitration Abs/cm *ASTM D7624 >20 8.5 8.3 9.2
Silicon ppm ASTM D5185m >25 5 6 4 Sodium ppm ASTM D5185m 3 2 2 Potassium ppm ASTM D5185m >20 3 4 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.1 0.1 0.3
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	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
Jan 1/23	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Jan	S Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROPER	TIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	15.3	13.7	13.6	1 2.4
	GRAPHS						
	Ferrous Alloys						
	12 iron	~					
Jan 1/23	10 - nicke			Concession of the local division of the loca			
	8						
	E. 6						
	4						
	2 -						
	Dec17/2	Jan 1/23		Sep 8/23			
	Dec	La		Se			
	Non-ferrous Met	als					
	10 copper						
	8 - tip						
	6- E						
	E 6 4						
	2						
	2						
	2	1/23		9/23			
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Jan 1/23 - 1		Sep 8/23			
				Sep 8/23	Raso Number		
	Dec17/21			8000000 800000 10.0	Base Number ∂ _{T. ₿sse}		
	Viscosity @ 100°						
	Viscosity @ 100°			10.0	Base		
	Viscosity @ 100°			10.0	Base		
	Viscosity @ 100°			10.0	Base		
	Viscosity @ 100°			10.0	Base		
	Viscosity @ 100°			10.0 (D)HO X (D)HO X (D) (D)HO X (D)HO X (D) (D)HO X (D)HO X (D)HO X (D) (D)HO X (D)HO X (- Base		
	Viscosity @ 100°			10.0	- Base		
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	Viscosity @ 100° Viscosity @ 100° Abnormal 17 16 Base Abnormal 17 16 14 13 14 13 14 14 14 14 14 14 14 14 14 14	C		10.0 (6,0) (6,0) (0,0) (D T Base	an 1/23	
	Viscosity @ 100° 19 Abnormal 17 0.16 Base 13 14 13 12			10.0 (0)HOX bul) a quinny see 2.0	D T Base	Jan 1/23	
Laboratory	Viscosity @ 100° Viscosity @ 100° Abnormal 17 16 Base Abnormal 17 16 14 13 14 13 14 14 14 14 14 14 14 14 14 14	C EZILUER 501 Madia	son Ave., Ca	10.0 (0)HOX Bdu Jane 4.0 Base Munber 4.0 Base S			
Sample No.	Viscosity @ 100° Viscosity @ 100° Abnormal 17 50 16 8-8 4 4 17 50 16 8-8 10 10 10 10 10 10 10 10 10 10	C EZILIEN 501 Madia Received	d : 03 (10.0 (0)HOX bul 39 (0)HOX bul		HATTAN ROA	AD AND BRIDG S 122ND E AV
Sample No. Lab Number	Viscosity @ 100° Viscosity @ 100° Abnormal	C EZULIEN 501 Madia Received Diagnos	d : 03 (ed : 04 (10.0 (0)HOX bul 34 (0)HOX bul		HATTAN ROA	A D AND BRIDG S 122ND E AV TULSA, C
Sample No. Lab Number Unique Number	Viscosity @ 100°	C EZULUEY 501 Madia Received Diagnost	d : 03 (ed : 04 (tician : We	10.0 (0)HOX bul 39 (0)HOX bul		HATTAN ROA 5601	A D AND BRIDG S 122ND E AV TULSA, C US 7414
Sample No. Lab Number Unique Number Test Packag	Viscosity @ 100° bnomal bnomal bnomal bnomal bnomal control broken control broken cont	501 Madia Received Diagnost Diagnost al Tests: T	d : 03 (ed : 04 (tician : We BN)	10.0 (6)(HO) bu) aquun (6.0 (6)(HO) bu) aquun (4.0 (6)(HO) bu) aquun (4.0 (6)(HO) bu) aquun (4.0 (6)(HO) bu) aquun (4.0 (6)(HO) bu) aquun (4.0) (6)(HO) bu) aquun (4.0) (7)(HO) bu) aquun (4.0) (7)(HO	Base 10 10 10 10 10 10 10 10 10 10	HATTAN ROA 5601 Contact: I	A D AND BRIDG S 122ND E AV TULSA, C

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