

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Diesel Engine

Fluid CONOCO PHILLIPS GUARDOL ECT 15W40 (--- Oz)

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.

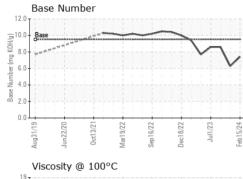
Fluid Condition

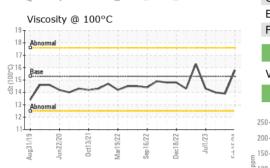
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

0 (Oz)											
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2					
Sample Number		Client Info		PCA0083463	PCA0083464	PCA0083483					
Sample Date		Client Info		15 Feb 2024	15 Jan 2024	13 Sep 2023					
Machine Age	mls	Client Info		0	639085	626602					
Dil Age	mls	Client Info		0	10000	10000					
Dil Changed		Client Info		Changed	Changed	Changed					
Sample Status				NORMAL	ATTENTION	NORMAL					
CONTAMINAT	ION	method	limit/base	current	history1	history2					
uel		WC Method	>2.0	<1.0	<1.0	<1.0					
Vater		WC Method	>0.2	NEG	NEG	NEG					
Glycol		WC Method		NEG	NEG	NEG					
WEAR METAL	S	method	limit/base	current	history1	history2					
ron	ppm	ASTM D5185m	>100	5	8	8					
Chromium	ppm	ASTM D5185m	>20	<1	1	<1					
lickel	ppm	ASTM D5185m	>4	<1	<1	0					
ītanium	ppm	ASTM D5185m		71	9	<1					
Silver	ppm	ASTM D5185m	>3	0	<1	0					
Aluminum	ppm	ASTM D5185m	>20	1	1	1					
ead	ppm	ASTM D5185m	>40	1	2	2					
Copper	ppm	ASTM D5185m	>330	2	3	3					
īn	ppm	ASTM D5185m	>15	1	1	<1					
/anadium	ppm	ASTM D5185m		1	<1	<1					
Cadmium	ppm	ASTM D5185m		<1	<1	0					
ADDITIVES		method	limit/base	current	history1	history2					
Boron	ppm	ASTM D5185m	85	121	2 0	6					
Barium	ppm	ASTM D5185m		0	0	0					
lolybdenum	ppm	ASTM D5185m		13	52	59					
langanese	ppm	ASTM D5185m		<1	<1	<1					
lagnesium	ppm	ASTM D5185m	350	447	▲ 885	1083					
Calcium	ppm	ASTM D5185m	1800	1403	1 071	1189					
hosphorus	ppm	ASTM D5185m	1000	863	950	1073					
linc	ppm	ASTM D5185m	1100	1068	1158	1354					
Sulfur	ppm	ASTM D5185m	3500	3793	3535	3935					
CONTAMINAN	TS	method	limit/base	current	history1	history2					
Silicon	ppm	ASTM D5185m	>25	5	6	7					
Sodium	ppm	ASTM D5185m		0	0	2					
Potassium	ppm	ASTM D5185m	>20	4	2	3					
INFRA-RED		method	limit/base	current	history1	history2					
Soot %	%	*ASTM D7844	>3	0.1	0.2	0.1					
litration	Abs/cm	*ASTM D7624	>20	7.1	6.8	6.2					
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8	16.6	18.5					
FLUID DEGRAD	DATION	method	limit/base	current	history1	history2					
Dxidation	Abs/.1mm	*ASTM D7414	>25	13.7	12.8	14.5					



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VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
		*Visual	NONE	NONE	NONE	NONE
						NONE
						NONE
						NONE
				-		
						NONE
Appearance		*Visual		-		NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	ERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.3	15.8	13.9	14.0
GRAPHS						
Iron (ppm)				Lead (ppm)		
Severe				Samara		
200 4						
150			Ľ			
100 - Abnormal			[−] 40	- O		
50			20			
	2	2			2	33
11/1 122/2	r19/2 16/2	c18/2 ul1/2;	015/2	1/1 122/2 13/2	r19/2	Dec18/22 Jul1/23 Feb15/24
Aug Jun Oc	Sep	Dec	-B-	Jun Oct	Sep	L Ji Pec
Aluminum (ppm)					m)	
50				Sminn		
40 - Severe						
g ³⁰			≡ ³⁰			
20 Abnormal			² 20	- Abnormal		
10-			10			
0						
31/19	19/22	18/22	15/24	31/19 22/20	19/22	Dec18/22 Jul1/23 Feb15/24
Jun2 Octi	Mari Sep1	Deci	Feb	Aug; Jun2 Octi	Mar' Sep1	Deci Ju Feb1
Copper (ppm)				Silicon (ppm)		
500 T			80			
400 - Severe	4-4-4-4-		60			
a 200			ā.40	Abnormal		
			20			N
						$ \rightarrow $
g31/19 n22/20 ct13/21	ar19/22 p16/22	sc18/22 Jul1/23	b15/24	g31/19 n22/20 ct13/21	ar19/22 p16/22	Dec18/22 Jul1/23 Feb15/24
		De	£		Sel	Fei , De
²⁰	-			1 3000000000000000000000000000000000000		
18 - Abnormal			H 10.0	and the lot of the lot		~
Base		$\neg \land$	- E 6.0			
Automa			4.0			
10			0.0	4		
Aug31/19 Jun22/20 Oct13/21	Mar19/22 Sep16/22	Dec18/22 Jul1/23	Feb15/24	Aug31/19 Jun22/20 Oct13/21	Mar19/22 Sep16/22	Dec18/22 Jul1/23 Feb15/24
Aug: Juni Oct	Sep	Dec	Feb	Aug Jun.	Mar	Ju
: WearCheck USA - 5(: PCA0083463 : 06092138 : 10884991	Rece Teste Diagr	ived : 16 ed : 19 nosed : 19	r, NC 27513 6 Feb 2024 9 Feb 2024 9 Feb 2024 - W		767 E	OIL HILL ROAD EL DORADO, KS US 67042
: PCA0083463 : 06092138	Rece Teste Diagr ests: TBN	ived : 16 ed : 19 nosed : 19 I)	6 Feb 2024 9 Feb 2024 9 Feb 2024 - W		767 E Contad	OIL HILL ROAD EL DORADO, K
	Emulsified Water Free Water FLUID PROPE Visc @ 100°C GRAPHS Iron (ppm)	Yellow Metal scalar Precipitate scalar Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar Free Water scalar FLUID PROPERTIES Visc @ 100°C Visc @ 100°C cSt GRAPHS Iron (ppm) Jood Jood Jood Jood	Yellow Metal scalar *Visual Precipitate scalar *Visual Silt scalar *Visual Debris scalar *Visual Sand/Dirt scalar *Visual Appearance scalar *Visual Odor scalar *Visual Emulsified Water scalar *Visual Free Water scalar *Visual Free Water scalar *Visual GRAPHS Iron (ppm) Copper (ppm) Aluminum (ppm) Copper (ppm) Copper (ppm) Viscosity @ 100°C Copper (ppm) Copper (ppm) Anormal Copper (ppm) Copper (ppm)	Yellow Metal scalar *Visual NONE Precipitate scalar *Visual NONE Silt scalar *Visual NONE Debris scalar *Visual NONE Sand/Dirt scalar *Visual NONE Appearance scalar *Visual NORML Odor scalar *Visual NORML Odor scalar *Visual NORML Odor scalar *Visual NORML Emulsified Water scalar *Visual >0.2 Free Water scalar *Visual >0.2 FLUID PROPERTIES method limit/base Visc @ 100°C cSt ASTM D445 15.3 GRAPHS Iron (ppm) 40 40 40 20 content content 40 40 20	Yellow Metal scalar 'Visual NONE NONE Precipitate scalar 'Visual NONE NONE Silt scalar 'Visual NONE NONE Debris scalar 'Visual NONE NONE Sand/Dirt scalar 'Visual NONE NONE Appearance scalar 'Visual NORML NORML Odor scalar 'Visual NORML NORML Nor scalar 'Visual NORML NORML Odor scalar 'Visual NOR NEG FLUID PROPERTIES method imit/base current Visc @ 100°C cSt ASTM D445 15.3 15.8 Opport Copper (ppm) copper (ppm) copper (ppm) copper (ppm) copper (ppm) Opport Stilicon (ppm) coppe	Yellow Metal scalar *Visual NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE Sitt scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Cdor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG Free Water scalar *Visual NORML NORML NORML Visc @ 100°C cSt ASTM D445 15.3 15.8 13.9 GRAPHS Iron (ppm) Gopper (ppm) Gopper (ppm) Gopper (ppm) Gopper (ppm) Graphic for the scalar for

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Contact/Location: LOREN JACK - OILELD