

OIL ANALYSIS REPORT

Oxidation

Abs/.1mm *ASTM D7414 >25

Base Number (BN) mg KOH/g ASTM D2896 10.1

Machine Id KENWORTH T800 3904 (S/N KCB42185)

Diesel Engine Fluid

SHELL ROTELLA T 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	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0917138	WC0878904	WC0822283
Sample Date		Client Info		14 Jun 2024	15 Mar 2024	08 Aug 2023
Machine Age	mls	Client Info		86684	70886	25792
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	J	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	30	103	15
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	3	3
Lead	ppm	ASTM D5185m	>40	5	24	2
Copper	ppm	ASTM D5185m	>330	7	30	97
Tin	ppm	ASTM D5185m	>15	1	6	<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	316	6	8	13
Barium	ppm	ASTM D5185m	0.0	0	0	1
Molybdenum	ppm	ASTM D5185m	1.2	30	59	57
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m	24	377	779	701
Calcium	ppm	ASTM D5185m	2292	2101	1347	1243
Phosphorus	ppm	ASTM D5185m	1064	1013	982	961
Zinc	ppm	ASTM D5185m	1160	1218	1260	1139
Sulfur	ppm	ASTM D5185m	4996	3948	2973	2828
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	9	21
Sodium	ppm	ASTM D5185m		6	5	3
Potassium	ppm	ASTM D5185m	>20	5	7	8
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.4	0.7	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.0	9.7	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.9	22.5	19.1
FI LIID DEGRADA		method	limit/base	current	historv1	history2

19.7

6.4

14.2

8.2

13.3

6.5



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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
and a Delevision in the local division in the local division in the local division in the local division in the	the same is the function of the same same and the same same same same same same same sam	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Concession of the local division of the loca		Silt	scalar	*Visual	NONE	NONE	NONE	NONE
		Debris	scalar	*Visual	NONE	NONE	NONE	NONE
LIEBNESS PRODUCED BURGERS		Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
/24 -	/24	Appearance	scalar	*Visual	NORMI	NORMI	NORMI	NORMI
Mar15	Jun14	Odor	scalar	*Visual	NORMI	NORMI	NORMI	NORMI
	,	Emulsified Water	scalar	*\/icual	>0.2	NEG	NEG	NEG
		Eroo Water	coalar	*\/icual	>0.2	NEG	NEG	NEG
1		Tiee Waler	Scalai	visuai		NEG	NEG	NLG
		FLUID PROPER	TIES	method	limit/base	current	history1	history2
		Visc @ 100°C	cSt	ASTM D445	15.7	13.9	13.6	13.7
		GRAPHS						
		Iron (ppm)			10	Lead (ppm)		
- +	v.	Severe		1		Severe		
ar15/2	1.1	150			6			
Z	-	Abnormal			ud ,	Abnormal		
		100 -0				10 T U		
		50	Concentration of the local division of the l					
		/23+		/24	124	123	/23	104
		Apr14		Marlg	Jun14	Apr14	Aug8 Mar15	1 Inul
1		Aluminum (ppm)		_		Chromium (p	pm)	
		50 Sama			5			
		40 - Severe			4	0 - Severe		
4	~	E 30-			E ³	0-		
r15/2	CI F F				2			
Ma	1	10				0-		
		33		24+	24		23	24
		Apr14// Aug8//		/lar15//	Jun14/	Apr14/	Aug8/ Mar15/	14/
		Copper (ppm)		-	,	Silicon (ppm)	_	
		1000			8	0 Severe		
		800			6	0-		
		E 600			E.4			
		^{- 400} attraction				Abnormal		
		200			2			
		23		24	24	04	23 + 23	74
		Apr14/		Mar15/	Jun 14/	Apr14/	Aug8. Mar15./	14/
		Viscosity @ 100°	С			Base Number	, 	
		Abnormal		,		Base	1 1 1 1 1 1 1	
		2 16 Base			DX Bu	.0		
		000 2014			per (r	.0 -		
		Abnormal			4.	.0+		
		10				0		
		4/23 -		5/24 -	4/24	4/23	8/23 -	4/24 -
		Apr1		Mar1	Juni	Apr1	Aug Mar1	-fun
NE LABORATORY	Laboratory Sample No. Lab Number Unique Number Test Package	: WearCheck USA - 50 : WC0917138 : 06211148 : 11084012 : MOB 1 (Additional T	01 Madisc Rece Teste Diagr	on Ave., Cary ived : 14 ed : 19 nosed : 19	y, NC 27513 4 Jun 2024 9 Jun 2024 9 Jun 2024 - Se	ean Felton	JOHNSO 34 R	N BREEDERS 25 HWY 117 OSE HILL, NO US 2845 GBEG JONE
Certificate 12367 o discuss thi - Denotes te	Lab Number Unique Number Test Package is sample report, est methods that	: 06211148 : 11084012 : MOB 1 (Additional T ; contact Customer Serv are outside of the ISO	Teste Diagr ests: TBN vice at 1-8 17025 sco	ed : 19 nosed : 19 N) 800-237-136 ope of accred	9 Jun 2024 9 Jun 2024 - Se 9. ditation.	ean Felton grego	Conta ory.jones@ho	R ict: 0 ouse T: 1

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

Contact/Location: GREG JONES - JOHROSNC

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