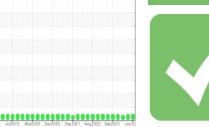


Area [1048795]

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Sample NumberClient InfoWC0935312WC0926842WC0908044Sample DateClient Info19 Jun 202410 May 202404 Mar 202Machine AgehrsClient Info296029272902Oil AgehrsClient Info5225100Oil ChangedClient InfoN/ANot ChangdNot ChangeSample StatusImageNORMALNORMALMARGINAL							
Sample Date Client Info 19 Jun 2024 10 May 2024 04 Mar 202 Machine Age hrs Client Info 2960 2927 2902 Oil Age hrs Client Info 52 25 100 Oil Changed Client Info 52 25 100 Sample Status Not Change Not Change Not Change GONTAMINATION method limit/base current history1 Fuel WC Method >5 <1.0 <1.0 0.5 Water WC Method >5 <1.0 <1.0 0.5 WEAR METALS method limit/base current history1 Iron ppm ASTM 05165m >20 <1 0 3 Chromium ppm ASTM 05165m >20 <1 0 <1 Nickel ppm ASTM 05165m >3 0 <1 0 Sliver ppm ASTM 05165m >30 0 <1 0	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 2960 2927 2902 Oil Age hrs Client Info 52 25 100 Oil Changed Client Info N/A Not Changed Not Changed Sample Status NORMAL NORMAL MARGINAL CONTAMINATION method Imit/base current history1 history1 Fuel WC Method >5 <1.0							WC090804
Oil Age hrs Client Info 52 25 100 Oil Changed Client Info N/A Not Changed Not Changed Sample Status Imilibase ourrent historyl historyl Fuel WC Method >5 <1.0	Sample Date		Client Info		19 Jun 2024	10 May 2024	04 Mar 202
Oil Changed Client Info N/A Not Changed Not Changed Sample Status Imathematical Status Normat MARGINAL CONTAMINATION method limit/base current history1 history1 Fuel WC Method >5.5 <1.0 <1.0 0.5 Water WC Method >0.2 NEG NEG NEG Glycol WC Method NEG NEG NEG NEG Iron ppm ASTM D5185m >100 <1 0 3 Chromium ppm ASTM D5185m >20 <1 0 <1 Nickel ppm ASTM D5185m >20 3 1 10 0 Auminum ppm ASTM D5185m >20 3 0 <1 1 Copper ppm ASTM D5185m S30 0 <1 1 Vanadium ppm ASTM D5185m S30 3 0 <1 2	Machine Age	hrs	Client Info		2960	2927	2902
Sample Status NORMAL NORMAL MARGINAL CONTAMINATION method imil/base current history1 history1 Fuel WC Method >5 <1.0	-	hrs	Client Info		52	25	100
CONTAMINATION method limit/base current history1 history1 Fuel WC Method >5 <1.0	Oil Changed		Client Info		N/A	Not Changd	Not Chango
Fuel WC Method >5 <1.0 <1.0 0.5 Water WC Method >0.2 NEG NEG NEG Glycol WC Method NEG NEG NEG NEG Iron ppm ASTM D5185m >100 <1	Sample Status				NORMAL	NORMAL	MARGINAL
Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method NEG NEG NEG NEG Wear ppm ASTM D5185m >100 <1 0 3 Iron ppm ASTM D5185m >20 <1	CONTAMINATIO	DN	method	limit/base	current	history1	history2
Glycol WC Method NEG NEG NEG WeAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >100 <1	Fuel		WC Method	>5	<1.0	<1.0	0.5
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >100 <1	Water		WC Method	>0.2	NEG	NEG	NEG
Iron ppm ASTM D5185m >100 <1 0 3 Chromium ppm ASTM D5185m >20 <1	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 <1 0 <1 Nickel ppm ASTM D5185m 3 0 0 0 Titanium ppm ASTM D5185m 3 0 0 <1	WEAR METALS		method	limit/base	current	history1	history
Nickel ppm ASTM D5185m >4 0 0 0 Titanium ppm ASTM D5185m 3 1 10 Silver ppm ASTM D5185m >3 0 0 <1	Iron	ppm	ASTM D5185m	>100	<1	0	3
Titanium ppm ASTM D5185m 3 1 10 Silver ppm ASTM D5185m >3 0 0 <1	Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Silver ppm ASTM D5185m >3 0 0 <1 Aluminum ppm ASTM D5185m >20 3 2 2 Lead ppm ASTM D5185m >40 0 0 <1 Copper ppm ASTM D5185m >330 3 0 <1 Tin ppm ASTM D5185m >15 0 <1 <1 Vanadium ppm ASTM D5185m 0 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0 <1 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 79 88 101 Barium ppm ASTM D5185m 89 86 92 Manganese ppm ASTM D5185m 31 23 85 Calcium ppm ASTM D5185m 116 1001 106 1086 <tr< td=""><td>Nickel</td><td>ppm</td><td>ASTM D5185m</td><td>>4</td><th>0</th><td>0</td><td>0</td></tr<>	Nickel	ppm	ASTM D5185m	>4	0	0	0
Aluminum ppm ASTM D5185m >20 3 2 2 Lead ppm ASTM D5185m >40 0 0 <1	Titanium	ppm	ASTM D5185m		3	1	10
Lead ppm ASTM D5185m >40 0 0 <1 Copper ppm ASTM D5185m >330 3 0 <1	Silver	ppm	ASTM D5185m	>3	0	0	<1
Copper ppm ASTM D5185m >330 3 0 <1 Tin ppm ASTM D5185m >15 0 <1	Aluminum	ppm	ASTM D5185m	>20	3	2	2
Copper ppm ASTM D5185m >330 3 0 <1 Tin ppm ASTM D5185m >15 0 <1	Lead	ppm	ASTM D5185m	>40	0	0	<1
Tin ppm ASTM D5185m >15 0 <1 <1 Vanadium ppm ASTM D5185m 0 0 0 <1 Cadmium ppm ASTM D5185m 0 0 0 <1 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 79 88 101 Barium ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 89 86 92 Manganese ppm ASTM D5185m 31 23 85 Calcium ppm ASTM D5185m 2247 2226 2262 Phosphorus ppm ASTM D5185m 1116 1001 1106 1086 Zinc ppm ASTM D5185m 3984 4374 4008 Contraktina ppm ASTM D5185m >25 2 4 4 Sodium ppm <	Copper		ASTM D5185m	>330	3	0	<1
Vanadium ppm ASTM D5185m 0 0 <1 Cadmium ppm ASTM D5185m 0 0 <1 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 79 88 101 Barium ppm ASTM D5185m 0 0 0 0 Maganese ppm ASTM D5185m 89 86 92 Magnesium ppm ASTM D5185m 31 23 85 Calcium ppm ASTM D5185m 1116 1001 1106 1086 Zinc ppm ASTM D5185m 1250 1279 1216 1216 Sulfur ppm ASTM D5185m 1250 1279 1216 1216 Sulfur ppm ASTM D5185m 25 2 4 4 Sodium ppm ASTM D5185m 20 2 0 2 Inistory1 M			ASTM D5185m	>15	0	<1	<1
ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 79 88 101 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 89 86 92 Maganese ppm ASTM D5185m 0 <1	Vanadium		ASTM D5185m		0	0	<1
Boron ppm ASTM D5185m 79 88 101 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 89 86 92 Manganese ppm ASTM D5185m 0 <1	Cadmium		ASTM D5185m		0	0	<1
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 89 86 92 Manganese ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history
Molybdenum ppm ASTM D5185m 89 86 92 Manganese ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m		79	88	101
Manganese ppm ASTM D5185m 0 <1 0 Magnesium ppm ASTM D5185m 31 23 85 Calcium ppm ASTM D5185m 2247 2226 2262 Phosphorus ppm ASTM D5185m 1116 1001 1106 1086 Zinc ppm ASTM D5185m 1250 1279 1216 1216 Sulfur ppm ASTM D5185m 1250 1279 1216 1216 Sulfur ppm ASTM D5185m 3984 4374 4008 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 2 4 4 Sodium ppm ASTM D5185m >20 2 0 2 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 >3 0.1 0.1 0.1	Barium	ppm	ASTM D5185m		0	0	0
Manganese ppm ASTM D5185m 0 <1 0 Magnesium ppm ASTM D5185m 31 23 85 Calcium ppm ASTM D5185m 2247 2226 2262 Phosphorus ppm ASTM D5185m 1116 1001 1106 1086 Zinc ppm ASTM D5185m 1250 1279 1216 1216 Sulfur ppm ASTM D5185m 1250 1279 1216 1216 Sulfur ppm ASTM D5185m 3984 4374 4008 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 2 4 4 Sodium ppm ASTM D5185m >20 2 0 2 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 >3 0.1 0.1 0.1	Molybdenum	ppm	ASTM D5185m		89	86	92
Magnesium ppm ASTM D5185m 31 23 85 Calcium ppm ASTM D5185m 2247 2226 2262 Phosphorus ppm ASTM D5185m 1116 1001 1106 1086 Zinc ppm ASTM D5185m 1250 1279 1216 1216 Sulfur ppm ASTM D5185m 25 2 4 4 Sodium ppm ASTM D5185m >20 2 0 2 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm<*ASTM D7624	Manganese		ASTM D5185m		0	<1	0
Calcium ppm ASTM D5185m 2247 2226 2262 Phosphorus ppm ASTM D5185m 1116 1001 1106 1086 Zinc ppm ASTM D5185m 1250 1279 1216 1216 Sulfur ppm ASTM D5185m 1250 1279 1216 1216 Sulfur ppm ASTM D5185m 1250 1279 1216 1216 Sulfur ppm ASTM D5185m 1250 1279 1216 1216 Solicon ppm ASTM D5185m 3984 4374 4008 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 2 0 2 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 <	Magnesium		ASTM D5185m		31	23	85
Zinc ppm ASTM D5185m 1250 1279 1216 1216 Sulfur ppm ASTM D5185m 3984 4374 4008 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 2 4 4 Sodium ppm ASTM D5185m <1	Calcium	ppm	ASTM D5185m		2247	2226	2262
Zinc ppm ASTM D5185m 1250 1279 1216 1216 Sulfur ppm ASTM D5185m 3984 4374 4008 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 2 4 4 Sodium ppm ASTM D5185m >25 2 4 4 Sodium ppm ASTM D5185m >20 2 0 2 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 7.3 7.1 7.6 Sulfation Abs/.1mm *ASTM D7415 >30 16.5 16.2 16.9 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm< *ASTM D7414	Phosphorus		ASTM D5185m	1116	1001	1106	1086
Sulfur ppm ASTM D5185m 3984 4374 4008 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m<>25 2 4 4 Sodium ppm ASTM D5185m >25 2 4 4 Sodium ppm ASTM D5185m <<1			ASTM D5185m	1250	1279	1216	1216
Silicon ppm ASTM D5185m >25 2 4 4 Sodium ppm ASTM D5185m <1 21 1 Potassium ppm ASTM D5185m >20 2 0 2 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 7.3 7.1 7.6 Sulfation Abs/cm *ASTM D7415 >30 16.5 16.2 16.9 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/Imm *ASTM D7414 >25 12.4 12.1 12.9	Sulfur		ASTM D5185m		3984	4374	4008
Sodium ppm ASTM D5185m <1 2 1 Potassium ppm ASTM D5185m >20 2 0 2 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 7.3 7.1 7.6 Sulfation Abs/.1mm *ASTM D7415 >30 16.5 16.2 16.9 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 12.4 12.1 12.9	CONTAMINANT	S	method	limit/base	current	history1	history
Potassium ppm ASTM D5185m >20 2 0 2 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 7.3 7.1 7.6 Sulfation Abs/.1mm *ASTM D7415 >30 16.5 16.2 16.9 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 12.4 12.1 12.9	Silicon	ppm	ASTM D5185m	>25	2	4	4
INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 7.3 7.1 7.6 Sulfation Abs/.1mm *ASTM D7615 >30 16.5 16.2 16.9 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 12.4 12.1 12.9	Sodium	ppm	ASTM D5185m		<1	2	1
Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 7.3 7.1 7.6 Sulfation Abs/.1mm *ASTM D7415 >30 16.5 16.2 16.9 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 12.4 12.1 12.9		ppm	ASTM D5185m	>20	2	0	2
Nitration Abs/cm *ASTM D7624 >20 7.3 7.1 7.6 Sulfation Abs/.1mm *ASTM D7615 >30 16.5 16.2 16.9 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 12.4 12.1 12.9			method	limit/base	current	history1	history
Sulfation Abs/.1mm *ASTM D7415 >30 16.5 16.2 16.9 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 12.4 12.1 12.9	Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Sulfation Abs/.1mm *ASTM D7415 >30 16.5 16.2 16.9 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 12.4 12.1 12.9	Nitration	Abs/cm	*ASTM D7624	>20	7.3	7.1	7.6
Oxidation Abs/.1mm *ASTM D7414 >25 12.4 12.1 12.9	Sulfation	Abs/.1mm		>30			
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history
Base Number (BN) mg KOH/g ASTM D2896 9.7 10.08 6.9 6.7	Oxidation	Abs/.1mm	*ASTM D7414	>25	12.4	12.1	12.9
	Base Number (BN)	mg KOH/g	ASTM D2896	9.7	10.08	6.9	6.7

LCT-4 Component Rear Diesel Engine Fluid

PHILLIPS 66 Fleet Supreme EC 15W40 (--- GAL)

Recommendation

Resample at the next service interval to me

Wear

All component wear rates are normal.

Contamination

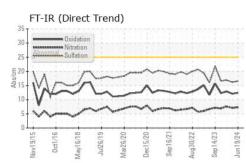
There is no indication of any contamination oil.

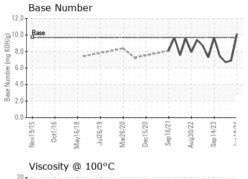
Fluid Condition

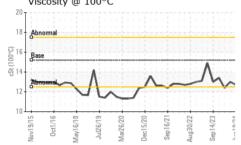
The BN result indicates that there is suitab alkalinity remaining in the oil. The condition oil is suitable for further service.



OIL ANALYSIS REPORT







	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	*Visual	NONE	LIGHT	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
M.	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
N	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
-	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
4/23 3/24	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Sep14/23 Jun19/24	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
	Free Water	scalar	*Visual	20.2	NEG	NEG	NEG
$\overline{\Lambda}$	FLUID PROPERT	IES	method	limit/base	current	history1	history2
V	Visc @ 100°C	cSt	ASTM D445	15.2	12.7	13.0	▲ 12.4
	GRAPHS						
	Iron (ppm) ²⁵⁰ T and a standard standard			e e e e e e e e e e e e e e e e e e e	Lead (ppm)		
Sep 14/23	200 - Severe			8	0 - Severe		
1	E 150 100 - Abnormal			udd 6	0 0 Abnormal		
	50				10		
				_	0		
	Nov19/15 Oct1/16 May16/18 Jul26/19	Mar26/20 Dec15/20	Sep16/21 Aug30/22 Sep14/23	Jun 19/24	Nov19/15 - Oct1/16 - May16/18 -	Jui26/19 . Mar26/20 . Dec15/20 .	Sep16/21 Aug30/22 Sep14/23 Jun19/24
	May Du	Dec	Seg	վոր	Nov May	Mai	Sep Sep
	Aluminum (ppm)			5	Chromium (p	opm)	
-	40 - Severe				0 Severe		
V.C.	and a second sec			E 2	Abnormal		
ACL 0 11	10						
			m		0		
	Nov19/15 - Oct1/16 - May16/18 - Jul26/19	Mar26/20	Sep 16/21. Aug 30/22 Sep 14/23	Jun19/24	Nov19/15 - Oct1/16 - May16/18 -	Jul26/19 Mar26/20	Sep16/21 Aug30/22 Sep14/23 Jun19/24
	Nov1 Oct Jul2	Mar2 Dec1	Sep1 Sep1	Jun1	Nov1 Oct May1	Jul2 Mar2 Dec1	Sep1 Aug3 Sep1 Jun1
	Copper (ppm)				Silicon (ppm))	
	300			6			
	틆 200 -			Ed.4	+0		
	100-				Abnormal		
	Nov19/15	Mar26/20	Sep16/21 - Aug30/22 - Sep14/23 -	Jun19/24	Nov19/15 0 Oct1/16 0	Jui26/19	Sep16/21 Aug30/22 Sep14/23
	Base 1		Sep Aug Sep	Jun			Sep Sep
	Viscosity @ 100°C	e Nanapra			Base Numbe	adoret toochet. L	120000120001000
	18 Abnormal			(b)H0) Barse Number Base Numbe	0 - Base		1 4 444
	0 16 Base			st (mg	-=	Name and Address of the second second	-vvvV
	Abnormal A	~		A mage	0		
	12	S		2 as 2.	.0		
		+ 0	21	0.	0		21-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-
	Nov19/15 Oct1/16 May16/18 Jul26/19	Mar26/20 Dec15/20	Sep 16/21 Aug 30/22 Sep 14/23	Jun 19/24	Nov19/15 - Oct1/16 - May16/18 -	Jul26/19 Mar26/20 Dec15/20	Sep 16/21 Aug 30/22 Sep 14/23 Jun 19/24
	No Ma	De	Se Au Se	ηr	No Ma	U. M.	Se See Ju
	: WearCheck USA - 50 ⁻ : WC0935312 : 06221434 : 11099631	1 Madiso Recei Teste Diagr	ved : 26 d : 27	, NC 27513 3 Jun 2024 7 Jun 2024 Jun 2024 - Se	5400 IN	ITERNATIONAL	I CHARLESTON BLVD, BLDG 88-20 IARLESTON, SC US 29418

Unique Number : 1109963 Test Package : MOB 2

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)

Report Id: TLDNOR [WUSCAR] 06221434 (Generated: 06/27/2024 16:18:14) Rev: 1

Certificate L2367

Contact/Location: Maxime Banctel - TLDNOR

T:

F: x:

Contact: Maxime Banctel

maxime.banctel@aes-gse.com