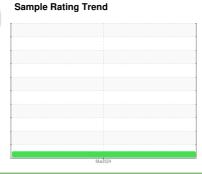


OIL ANALYSIS REPORT



NORMAL



Machine Id **7228** Component **Diesel Engine**

CHEVRON URSA SUPER PLUS EC 15W40

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

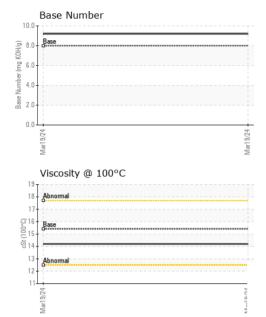
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION							
Client Info	(GAL)				Mar2024		
Sample Date Client Info 19 Mar 2024	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age	Sample Number		Client Info		WC0921987		
Dil Age	Sample Date		Client Info		19 Mar 2024		
Dil Changed Client Info Not Changed NORMAL Not Changed NORMAL NORMAL NORMA	Machine Age	hrs	Client Info		7863		
CONTAMINATION method limit/base current history1 history2	Oil Age	hrs	Client Info		126		
CONTAMINATION method limit/base current history1 history2	Oil Changed		Client Info		Not Changd		
Water WC Method So.2 NEG NEG So.2 NEG	Sample Status				NORMAL		
Water Glycol WC Method WC Method >0.2 NEG	CONTAMINATION	1	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0		
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 7 Chromium ppm ASTM D5185m >20 0 Nickel ppm ASTM D5185m >4 0 Silver ppm ASTM D5185m 3 0 Aluminum ppm ASTM D5185m >20 2 Lead ppm ASTM D5185m >20 2 Lead ppm ASTM D5185m >20 2 Copper ppm ASTM D5185m >20 0 Copper ppm ASTM D5185m 0 Copper ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0	Water		WC Method	>0.2	NEG		
ASTM D5185m ASTM D5185m D Cadmium D D Cadmium D D Cadmium D D Cadmium D Cadmium D D Cadmium D Cadmium D D Cadmium Cadmium D Cadmium D	Glycol		WC Method		NEG		
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Strickel	ron	ppm	ASTM D5185m	>100	7		
Description	Chromium	ppm	ASTM D5185m	>20	0		
Silver	Nickel	ppm	ASTM D5185m	>4	0		
Ast Ast	Γitanium	ppm	ASTM D5185m		0		
December December	Silver	ppm	ASTM D5185m	>3	0		
Copper	Aluminum	ppm	ASTM D5185m	>20	2		
ASTM D5185m STM D5185m D	_ead	ppm	ASTM D5185m	>40	22		
Anadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 125 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 62 Manganese ppm ASTM D5185m 0 Manganesium ppm ASTM D5185m 476 Calcium ppm ASTM D5185m 1968 Phosphorus ppm ASTM D5185m 1200 1167 Phosphorus ppm ASTM D5185m 1300 1430 Cilicon ppm ASTM D5185m >25 5 Colicon ppm ASTM D	Copper	ppm	ASTM D5185m	>330	0		
ADDITIVES	Γin	ppm	ASTM D5185m	>15	0		
ADDITIVES	/anadium	ppm	ASTM D5185m		0		
Soron ppm ASTM D5185m 125	Cadmium	ppm	ASTM D5185m		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 62 Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 476 Calcium ppm ASTM D5185m 1968 Phosphorus ppm ASTM D5185m 1200 1167 Zinc ppm ASTM D5185m 1300 1430 Sulfur ppm ASTM D5185m 4539 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 Sodium ppm ASTM D5185m >20 2 Potassium ppm ASTM D5185m >20 2 Potassium ppm ASTM D7844 >3 0.1	Boron	ppm	ASTM D5185m		125		
Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 476 Calcium ppm ASTM D5185m 1968 Phosphorus ppm ASTM D5185m 1200 1167 Zinc ppm ASTM D5185m 1300 1430 Sulfur ppm ASTM D5185m 4539 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 Sodium ppm ASTM D5185m >20 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 <td>Barium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td>0</td> <td></td> <td></td>	Barium	ppm	ASTM D5185m		0		
Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 476 Calcium ppm ASTM D5185m 1968 Phosphorus ppm ASTM D5185m 1200 1167 Zinc ppm ASTM D5185m 1300 1430 Sulfur ppm ASTM D5185m 4539 CONTAMINANTS method limit/base current history1 history2 Solicon ppm ASTM D5185m >25 5 Solicon ppm ASTM D5185m >20 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 </td <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td>62</td> <td></td> <td></td>	Molybdenum	ppm	ASTM D5185m		62		
Calcium ppm ASTM D5185m 1968 Phosphorus ppm ASTM D5185m 1200 1167 Zinc ppm ASTM D5185m 1300 1430 Sulfur ppm ASTM D5185m 4539 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 Sodium ppm ASTM D5185m >20 2 Potassium ppm ASTM D5185m >20 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 4.8 Sulfation Abs/.1mm *ASTM D7414 >25 14.3	-		ASTM D5185m		0		
Phosphorus ppm ASTM D5185m 1200 1167 Zinc ppm ASTM D5185m 1300 1430 Sulfur ppm ASTM D5185m 4539 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 Bodium ppm ASTM D5185m >20 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/.1mm *ASTM D7414 <th< td=""><td>Magnesium</td><td>ppm</td><td>ASTM D5185m</td><td></td><td>476</td><td></td><td></td></th<>	Magnesium	ppm	ASTM D5185m		476		
Zinc ppm ASTM D5185m 1300 1430 Sulfur ppm ASTM D5185m 4539 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 Sodium ppm ASTM D5185m <1 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 4.8 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/.1mm *ASTM D7414 >25 14.3	Calcium	ppm	ASTM D5185m		1968		
The color of the	Phosphorus	ppm	ASTM D5185m	1200	1167		
Sulfur ppm ASTM D5185m 4539 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 Sodium ppm ASTM D5185m <1 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Sulfation Abs/.1mm *ASTM D7624 >20 4.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3			ASTM D5185m	1300	1430		
Solition ppm ASTM D5185m >25 5	Sulfur		ASTM D5185m		4539		
Sodium ppm ASTM D5185m <1 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 4.8 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/.1mm *ASTM D7414 >25 14.3	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 4.8 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3	Silicon	ppm	ASTM D5185m	>25	5		
INFRA-RED	Sodium	ppm	ASTM D5185m		<1		
Soot %	Potassium	ppm	ASTM D5185m	>20	2		
Nitration Abs/cm *ASTM D7624 >20 4.8 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3	Soot %	%	*ASTM D7844	>3	0.1		
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3	Nitration	Abs/cm	*ASTM D7624	>20	4.8		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8		
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 8.0 9.2	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3		
	Base Number (BN)	mg KOH/g	ASTM D2896	8.0	9.2		

Contact/Location: DAN WILLIS - TARRAL



OIL ANALYSIS REPORT



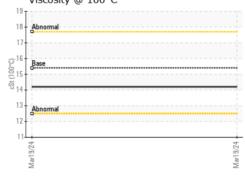
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
FLUID PROPERT	TIES	method	limit/base	current	history1	history2

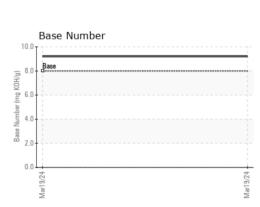
Visc @ 100°C	cSt	ASTM D445	15.4	14.2
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Ferrous Alloys

GRAPHS

25		copper	ì		 	 	 	 	_		
20		lead tin	ļ	 -		 	 	 	-	-	
15-											
표 10-											
5-											
0				 	 	 	 	 	_	_	2.4
M2r19/24	S IBIN										10.01-10







Laboratory Sample No. Lab Number : 06123397

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0921987

Unique Number : 10937548

Received **Tested**

Diagnosed Test Package : CONST (Additional Tests: TBN)

: 21 Mar 2024 : 21 Mar 2024 - Wes Davis

: 20 Mar 2024

MAY HEAVY EQUIPMENT / National Equipment Dealers 555 WISE RD CLAYTON, NC

US 27528 Contact: DAN WILLIS dwillis@nedealers.com

T: (919)773-1424

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) F: (919)355-0161

Contact/Location: DAN WILLIS - TARRAL