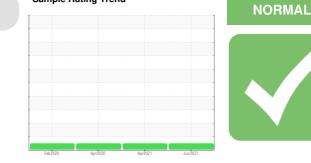


OIL ANALYSIS REPORT

NOG SON [CONHER] **TRACTORREMOLQUES AMSA TR-89** Component

Front Diesel Engine

CHEVRON DELO 400 MULTIGRADE 15W40 (--- LTR)



Sample Rating Trend



SAMPLE INFORI Sample Number Sample Date Machine Age Dil Age Dil Changed Sample Status CONTAMINATIO Fuel Water Glycol WEAR METALS	kms kms	method Client Info Client Info Client Info Client Info Method	limit/base	Current KL0007459 01 Jun 2021 2128567 222193 Changed NORMAL current	history1 KL0006050 15 Apr 2021 2098868 192494 Not Changd NORMAL	history2 KL0004281 28 Apr 2020 2010146 103772 Not Change NORMAL
Sample Date Machine Age Dil Age Dil Changed Sample Status CONTAMINATIO Fuel Water Glycol WEAR METALS	kms	Client Info Client Info Client Info Client Info method		01 Jun 2021 2128567 222193 Changed NORMAL	15 Apr 2021 2098868 192494 Not Changd NORMAL	28 Apr 2020 2010146 103772 Not Change
Machine Age Dil Age Dil Changed Sample Status CONTAMINATIO Fuel Water Glycol WEAR METALS	kms	Client Info Client Info Client Info method		2128567 222193 Changed NORMAL	2098868 192494 Not Changd NORMAL	2010146 103772 Not Change
Dil Age Dil Changed Sample Status CONTAMINATIO Fuel Water Glycol WEAR METALS	kms	Client Info Client Info method		222193 Changed NORMAL	192494 Not Changd NORMAL	103772 Not Change
Dil Changed Sample Status CONTAMINATIO Fuel Water Glycol WEAR METALS		Client Info method		Changed NORMAL	Not Changd NORMAL	Not Change
Sample Status CONTAMINATIO Fuel Water Glycol WEAR METALS	N	method		NORMAL	NORMAL	0
CONTAMINATIO Fuel Water Glycol WEAR METALS	N			-	-	NORMAL
Fuel Water Glycol WEAR METALS	N			current		
Water Glycol WEAR METALS		WC Method		- Carrona	history1	history2
Glycol WEAR METALS			>5	<1.0	<1.0	<1.0
WEAR METALS		WC Method	>0.2	NEG	NEG	NEG
		WC Method		NEG	NEG	NEG
		method	limit/base	current	history1	history
ron	ppm	ASTM D5185m	>100	75	64	33
Chromium	ppm	ASTM D5185m	>20	5	4	2
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m		4	0	4
Lead	ppm	ASTM D5185m	>40	11	9	4
Copper	ppm	ASTM D5185m	>330	2	2	<1
Tin	ppm	ASTM D5185m		2	1	<1
Antimony	ppm	ASTM D5185m		<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	151	39	36	146
Barium	ppm	ASTM D5185m	0.4	0	0	0
Volybdenum	ppm	ASTM D5185m	250	52	56	71
Vanganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	0	1051	892	684
Calcium	ppm	ASTM D5185m	2046	1708	1592	1670
Phosphorus	ppm	ASTM D5185m	1043	1009	900	775
Zinc	ppm	ASTM D5185m	943	1257	1095	889
Sulfur	ppm	ASTM D5185m	5012	2601	2417	2243
CONTAMINANTS	5	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	4	6
	ppm	ASTM D5185m		3	2	2
Sodium	0000	ASTM D5185m	>20	1	1	1
Sodium Potassium	ppm					history2
	phu	method	limit/base	current	history1	TIStOry2
Potassium	ppm %	method *ASTM D7844	limit/base >3	current 2	history1 1.8	1.1
Potassium INFRA-RED						
Potassium INFRA-RED Soot %	%	*ASTM D7844	>3	2	1.8	1.1
Potassium INFRA-RED Soot % Nitration	% Abs/cm Abs/.1mm	*ASTM D7844 *ASTM D7624	>3 >20	2 10.6	1.8 10.1	1.1 8.2 22.1
Potassium INFRA-RED Soot % Nitration Sulfation	% Abs/cm Abs/.1mm	*ASTM D7844 *ASTM D7624 *ASTM D7415	>3 >20 >30	2 10.6 25.5	1.8 10.1 24.5	1.1 8.2

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

DIAGNOSIS

There is no indication of any contamination in the oil.

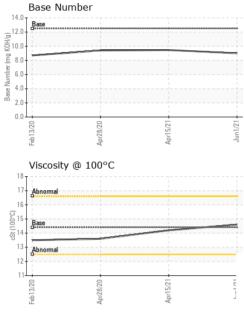
Fluid Condition

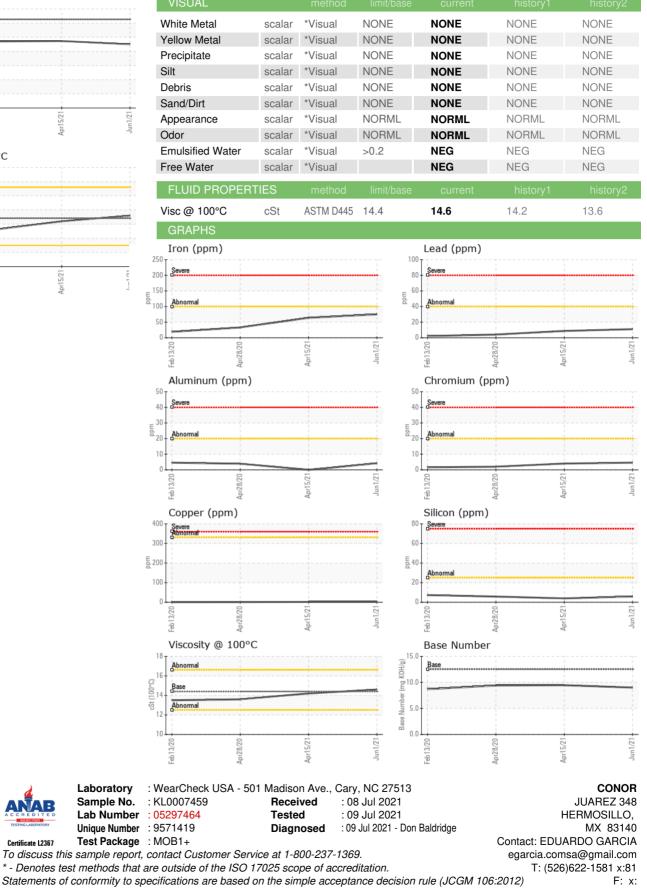
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Submitted By: EDUARDO GARCIA



OIL ANALYSIS REPORT





Certificate L2367

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