



OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>MARGINAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**P-0010 2-02 Injection Pump**  
Component  
**Tank Diesel Engine**  
Fluid  
**CHEVRON DELO 400 SDE SAE 15W40 (--- GAL)**

**RECOMMENDATION**

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>HLC0002305</b>	HLC0001352	HLC04758576
Sample Date		Client Info		<b>25 Sep 2023</b>	18 Aug 2021	06 Jun 2019
Machine Age	hrs	Client Info		<b>0</b>	86	80
Oil Age	hrs	Client Info		<b>0</b>	0	17
Filter Age	hrs	Client Info		<b>0</b>	0	17
Oil Changed		Client Info		<b>N/A</b>	Changed	Not Changd
Filter Changed		Client Info		<b>N/A</b>	Changed	Not Changd
Sample Status				<b>MARGINAL</b>	MARGINAL	SEVERE

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>11</b>	2	2
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>10</b>	1	2
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

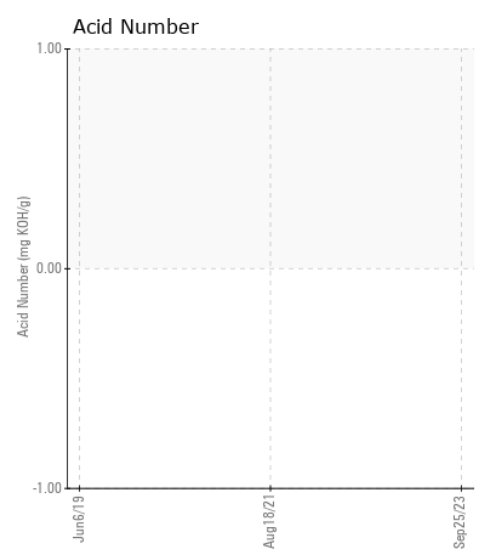
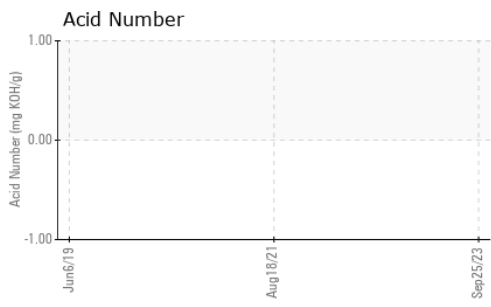
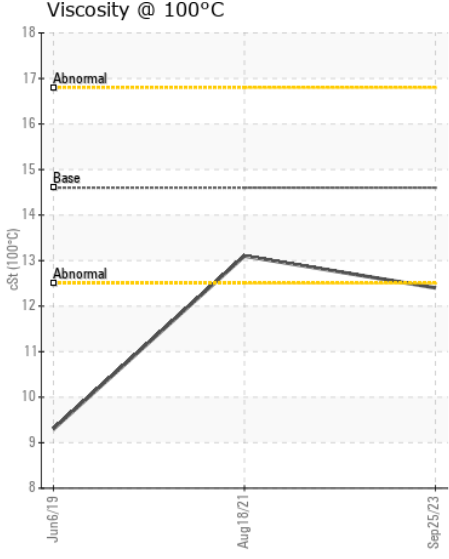
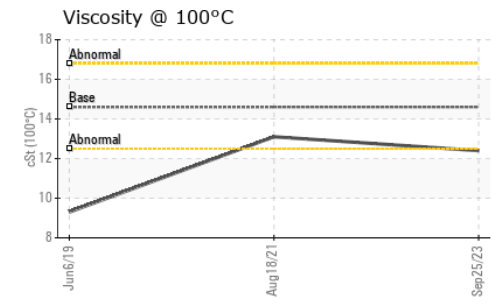
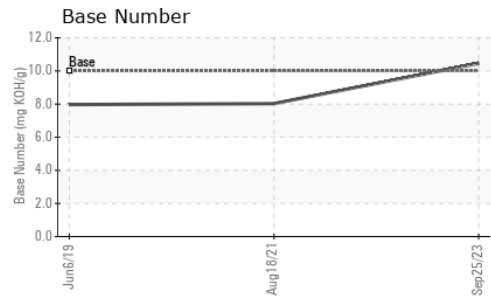
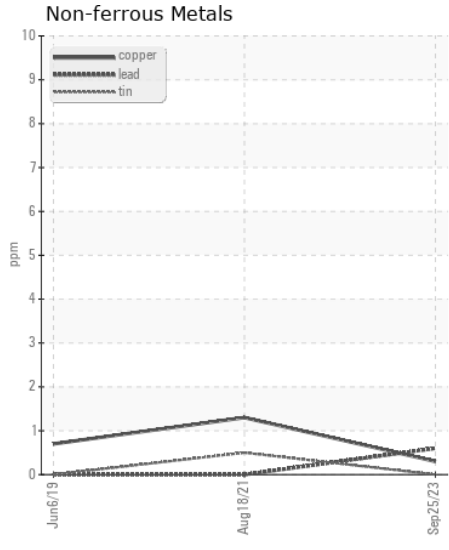
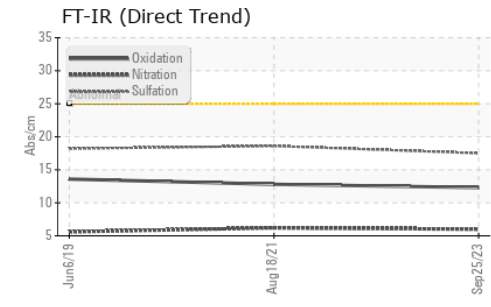
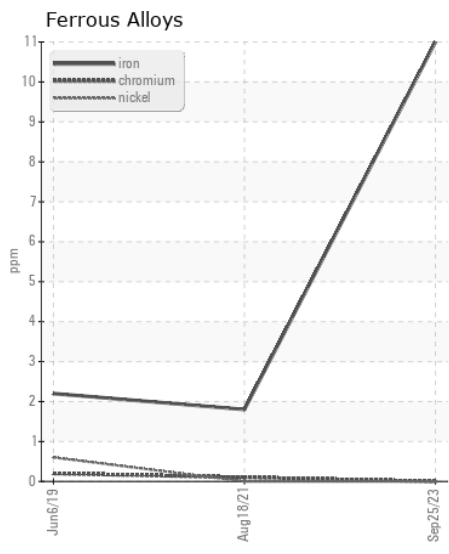
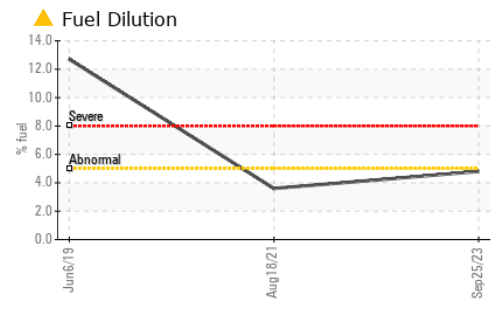
Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	11	19
Fuel	%	ASTM D3524	>5	<b>▲ 4.8</b>	▲ 3.6	▲ 12.7
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0</b>	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.0</b>	6.2	5.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.5</b>	18.6	18.2
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**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.

Sodium	ppm	ASTM D5185m		<b>2</b>	2	2
Boron	ppm	ASTM D5185m		<b>206</b>	170	411
Barium	ppm	ASTM D5185m		<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m		<b>22</b>	18	86
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>617</b>	628	378
Calcium	ppm	ASTM D5185m		<b>1296</b>	1368	1586
Phosphorus	ppm	ASTM D5185m	760	<b>742</b>	702	912
Zinc	ppm	ASTM D5185m	800	<b>903</b>	747	984
Sulfur	ppm	ASTM D5185m	3000	<b>3423</b>	2400	2606
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.3</b>	12.8	13.6
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>10.46</b>	8.03	7.97
Visc @ 100°C	cSt	ASTM D445	14.6	<b>12.4</b>	13.1	▲ 9.3



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : HLC0002305  
**Lab Number** : 05972311  
**Unique Number** : 10684261  
**Test Package** : IND 2 ( Additional Tests: FuelDilution, KV40, PercentFuel, TAN Man )

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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)