

## Machine Id 937799 Component Diesel Engine Fluid CHEVRON DELO 400 XLE 15W40 (--- QTS)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.	Sample Number		Client Info		RY0123428		
	Sample Date		Client Info		06 Dec 2023		
	Machine Age	mls	Client Info		0		
	Oil Age	mls	Client Info		0		
	Filter Age	mls	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				ABNORMAL		
WEAR	Iron	ppm	ASTM D5185m		35		
The aluminum level is abnormal. Piston wear is indicated.	Chromium	ppm	ASTM D5185m		2		
	Nickel	ppm	ASTM D5185m	>4	<1		
	Titanium	ppm	ASTM D5185m		0		
	Silver	ppm	ASTM D5185m		0		
	Aluminum	ppm	ASTM D5185m	>20	<mark>/</mark> 92		
	Lead	ppm	ASTM D5185m		<1		
	Copper	ppm	ASTM D5185m	>330	2		
	Tin	ppm	ASTM D5185m	>15	<1		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION Fuel content negligible. There is no indication of any contamination in the oil.	Silicon	ppm	ASTM D5185m		7		
	Potassium	ppm	ASTM D5185m		24		
	Fuel	%	ASTM D3524		0.8		
	Water		WC Method	>0.2	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844	>3	0.4		
	Nitration	Abs/cm	*ASTM D7624	>20	8.1		
	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.1		
	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		
FLUID CONDITION	~ "						
	Sodium	ppm	ASTM D5185m		16		
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.	Boron	ppm	ASTM D5185m		125		
	Barium	ppm	ASTM D5185m		0		
	Molybdenum	ppm	ASTM D5185m		35		
	Manganese	ppm	ASTM D5185m		<1		
	Magnesium	ppm	ASTM D5185m		544		
	Calcium	ppm	ASTM D5185m		1349		
	Phosphorus	ppm	ASTM D5185m		790		
	Zinc	ppm	ASTM D5185m	830	892		
	Sulfur	ppm	ASTM D5185m		3321		
	Oxidation	Abs/.1mm	*ASTM D7414		12.8		
	Base Number (BN)	mg KOH/g	ASTM D2896	10.7	7.6		
	Vier @ 10000	- 01	AOTA DAAF	110			

Visc @ 100°C cSt

10.8

ASTM D445 14.9



