

## Machine Id **139-231** Component **Diesel Engine** Fluid **CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)**

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.	Sample Number		Client Info		RPL0007748	RPL0007239	
	Sample Date		Client Info		29 Jun 2023	19 Oct 2022	
	Machine Age	mls	Client Info		325492	325492	
	Oil Age	mls	Client Info		325492	0	
	Filter Age	mls	Client Info		325492	0	
	Oil Changed		Client Info		Changed	Not Changd	
	Filter Changed		Client Info		Changed	Not Changd	
	Sample Status				ATTENTION	ATTENTION	
WEAR	Iron	ppm	ASTM D5185m	>100	16	17	
All component wear rates are normal.	Chromium	ppm	ASTM D5185m		<1	<1	
	Nickel	ppm	ASTM D5185m		0	0	
	Titanium	ppm	ASTM D5185m	~7	0	0	
	Silver		ASTM D5185m	-3	ہ <1	0	
	Aluminum	ppm ppm	ASTM D5185m		3	8	
	Lead	ppm	ASTM D5185m		0	0	
	Copper	ppm	ASTM D5185m		26	2	
	Tin	ppm	ASTM D5185m		1	0	
	Vanadium	ppm	ASTM D5185m	210	0	0	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
		304141	VISUAI	INCINE		NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	10	9	
	Potassium	ppm	ASTM D5185m	>20	6	69	
Fuel content negligible. There is no indication of any contamination in	Fuel	%	ASTM D3524	>5	0.3	<1.0	
the oil.	Water		WC Method	>0.2	NEG	NEG	
	Glycol		WC Method		NEG	0.0	
	Soot %	%	*ASTM D7844	>3	0.3	0.5	
	Nitration	Abs/cm	*ASTM D7624	>20	10.1	12.9	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	25.2	28.9	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
	0					404	
FLUID CONDITION	Sodium	ppm	ASTM D5185m	151	15	121	
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		47	22	
	Barium	ppm	ASTM D5185m ASTM D5185m		0 57	0	
	Molybdenum	ppm	ASTM D5185m	250		116 <1	
	Manganese Magnesium	ppm	ASTM D5185m	0	1 516	618	
	Calcium	ppm	ASTM D5185m		1594	1438	
	Phosphorus	ppm	ASTM D5185m		980	574	
	Zinc	ppm	ASTM D5185m		980 1235	751	
	Sulfur	ppm	ASTM D5185m		3532	2887	
	Oxidation	ppm Abs/.1mm	*ASTM D5185111		23.6	27.0	
	Base Number (BN)				8.8	5.5	
	Visc @ 100°C	cSt	ASTM D2090 ASTM D445		• 12.1	13.8	
		601	A0 I M D440	14.4	<u> </u>	10.0	



