

GUAY SON [CONHER] PERKINS Cozar I Aux-1 IBACO Component Diesel Engine

RALOY 15W40 (8 LTR)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. (Customer Sample Comment: Fluid: Raloy 15W40)

WEAR

All component wear rates are normal.

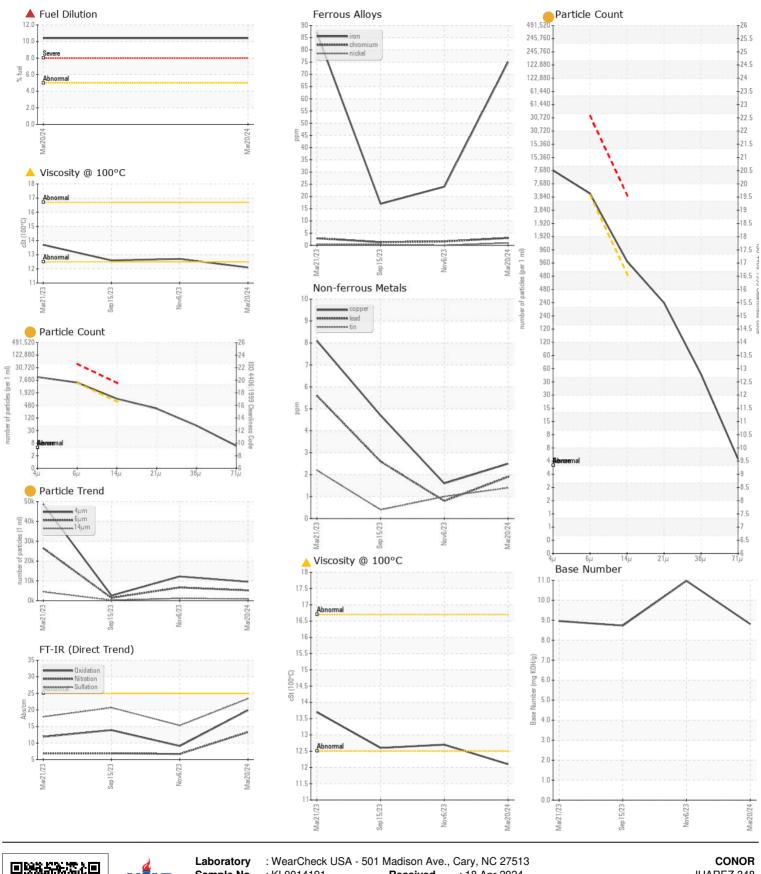
CONTAMINATION

There is a moderate amount of particulates present in the oil. There is a high amount of fuel present in the oil.

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0014191	KL0013370	KL0012790
Sample Date		Client Info		20 Mar 2024	06 Nov 2023	15 Sep 2023
Machine Age	hrs	Client Info		0	0	7822
Oil Age	hrs	Client Info		0	200	60
Filter Age	hrs	Client Info		0	200	60
Oil Changed	1110	Client Info		N/A	Changed	Not Changd
Filter Changed		Client Info		N/A	Changed	Not Changd
Sample Status				SEVERE	ATTENTION	NORMAL
Sample Status					ATTENTION	NOTIVIAL
Iron	ppm	ASTM D5185m	>250	75	24	17
Chromium	ppm	ASTM D5185m	>10	3	2	1
Nickel	ppm	ASTM D5185m	>5	1	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>35	7	4	<1
Lead	ppm	ASTM D5185m	>100	2	<1	3
Copper	ppm	ASTM D5185m	>60	2	2	5
Tin	ppm	ASTM D5185m	>5	1	1	<1
Vanadium	ppm	ASTM D5185m	-0	<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Jouran	viodai			NONE	NONE
Silicon	ppm	ASTM D5185m	>35	15	21	21
Potassium	ppm	ASTM D5185m	>20	2	4	3
Fuel	%	ASTM D3524	>5	10.4	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.8	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	13.3	6.7	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.4	15.3	20.7
Particles >4µm		ASTM D7647		9517	12197	2601
Particles >6µm		ASTM D7647	>5000	<u> </u>	6644	1417
Particles >14µm		ASTM D7647	>640	882	1131	241
Particles >21µm		ASTM D7647	>160	<u> </u>	381	81
Particles >38µm		ASTM D7647	>40	- 46	59	13
Particles >71µm		ASTM D7647	>10	5	6	1
Oil Cleanliness		ISO 4406 (c)	>19/16	— 20/17	20/17	18/15
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		5	2	1
Boron	ppm	ASTM D5185m		0	0	212
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		5	<1	68
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m		6	0	306
Calcium	ppm	ASTM D5185m		2855	2731	2074
Phosphorus	ppm	ASTM D5185m		1034	1159	952
Zinc	ppm	ASTM D5185m		1242	1408	1146
Sulfur	ppm	ASTM D5185m		3878	3490	4233
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.9	9.1	13.9
Base Number (BN)		ASTM D2896		8.81	10.97	8.73
Visc @ 100°C	cSt	ASTM D445		▲ 12.1	12.7	12.6
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