

Machine Id HITACHI 350LC 1FFDDR70EMF940972 Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		JR0220091	JR0206822	JR0192531
	Sample Date		Client Info		09 Jul 2024	10 Apr 2024	28 Nov 2023
	Machine Age	hrs	Client Info		4032	3495	3135
	Oil Age	hrs	Client Info		537	360	592
	Filter Age	hrs	Client Info		0	0	0
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185m	>100	11	11	16
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>20	0	0	<1
	Nickel	ppm	ASTM D5185m		0	0	0
	Titanium	ppm	ASTM D5185m		0	0	<1
	Silver	ppm	ASTM D5185m	>3	0	0	0
	Aluminum	ppm	ASTM D5185m		9	10	9
	Lead	ppm	ASTM D5185m		0	0	0
	Copper	ppm	ASTM D5185m		<1	6	7
	Tin	ppm	ASTM D5185m	>15	0	<1	<1
	Vanadium	ppm	ASTM D5185m		0	0	<1
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	7	6	8
	Potassium	ppm	ASTM D5185m		<1	0	0
There is no indication of any contamination in the oil.	Fuel	le le	WC Method		<1.0	<1.0	<1.0
	Water		WC Method		NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	*ASTM D7844	>3	0.9	0.6	2
	Nitration	Abs/cm	*ASTM D7624	>20	8.6	7.5	9.5
	Sulfation	Abs/.1mm	*ASTM D7415		22.1	21.0	24.2
	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
FLUID CONDITION	Sodium	ppm	ASTM D5185m	>216	2	2	2
	Boron	ppm	ASTM D5185m		216	248	183
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m		<1	<1	0
	Molybdenum	ppm	ASTM D5185m		251	244	244
	Manganese	ppm	ASTM D5185m		<1	1	1
	Magnesium	ppm	ASTM D5185m	450	817	821	824
	Calcium	ppm			1485	1354	1527
	Phosphorus	ppm	ASTM D5185m		918	928	922
	Zinc	ppm	ASTM D5185m		1047	1061	1096
	Sulfur	ppm	ASTM D5185m		3360	3428	2764
	Oxidation	Abs/.1mm	*ASTM D310311		15.0	14.6	15.8
	Base Number (BN)		ASTM D7414		9.2	9.5	9.2
		nig Koniy		0.0	5.2	0.0	1.2

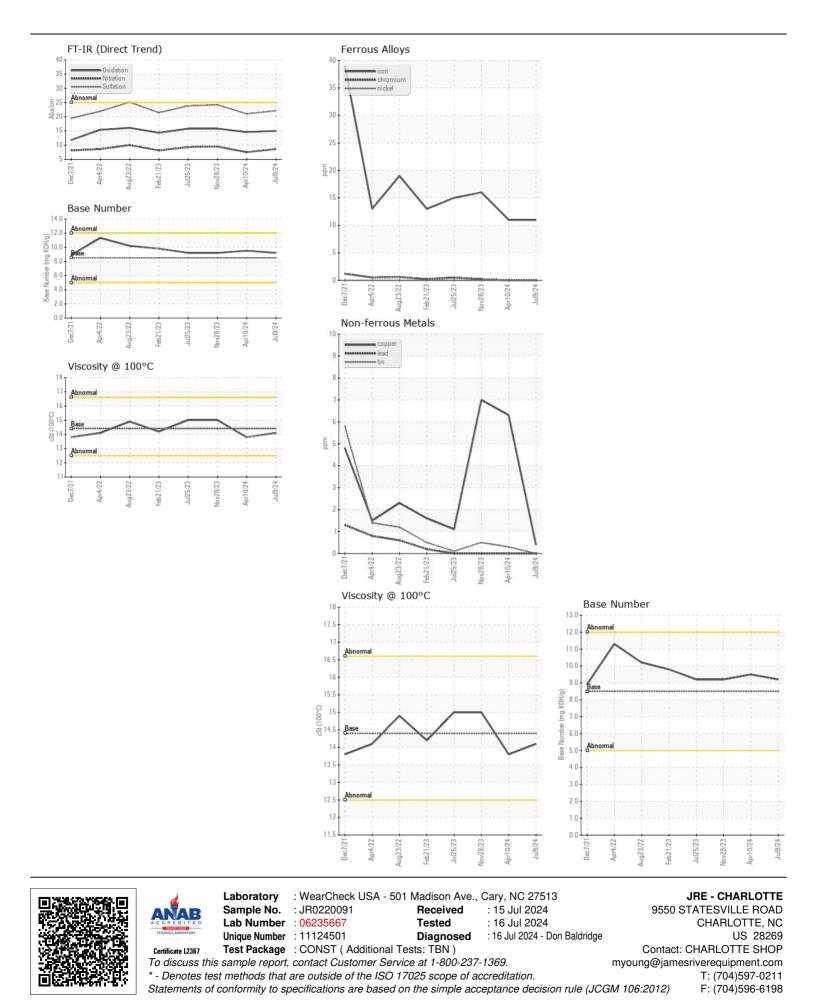
Visc @ 100°C cSt

ASTM D445 14.4

13.8

15.0

14.1



Submitted By: Mike Young - CHARLOTTE SHOP Page 2 of 2