

IRON WORKS

0160069187 Component Diesel Engine

DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

All component wear rates are normal.

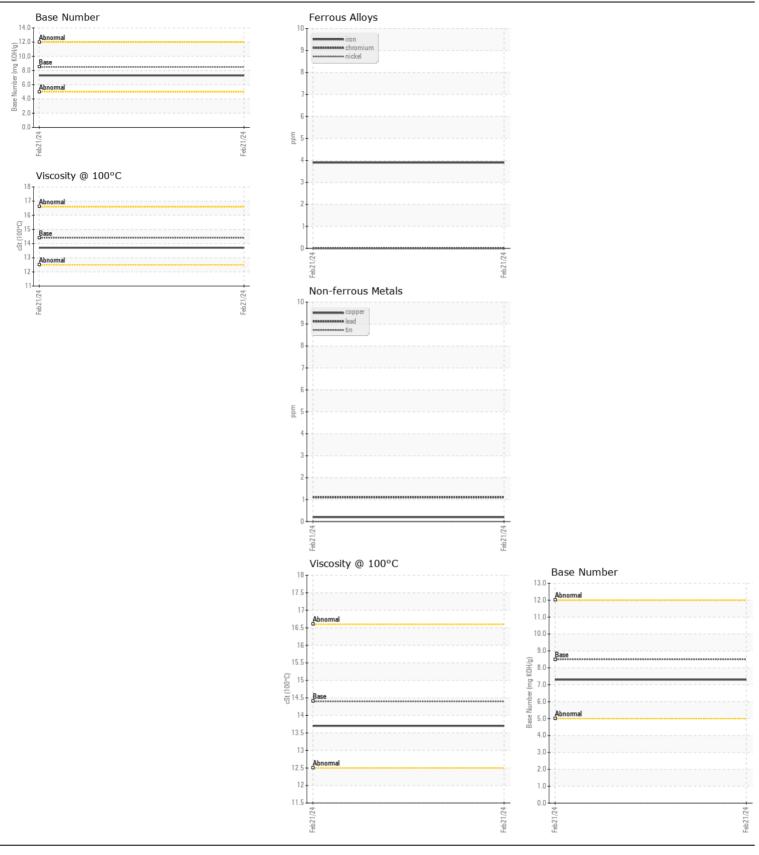
CONTAMINATION

There is no indication of any contamination in the oil.

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0912066		
Sample Date		Client Info		21 Feb 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Filter Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Filter Changed		Client Info		N/A		
Sample Status				NORMAL		
Iron	ppm	ASTM D5185m	>100	4		
Chromium	ppm	ASTM D5185m	>20	0		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	2		
Lead	ppm	ASTM D5185m	>40	1		
Copper	ppm	ASTM D5185m	>330	<1		
Tin	ppm	ASTM D5185m	>15	0		
Vanadium	ppm	ASTM D5185m		<1		
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Silicon	ppm	ASTM D5185m	>25	8		
Potassium	ppm	ASTM D5185m	>20	2		
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
Soot %	%	*ASTM D7844	>3	0.1		
Nitration	Abs/cm	*ASTM D7624	>20	6.6		
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.2		
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		
Co di un			450	•		
Sodium	ppm	ASTM D5185m	>158	2		
Boron	ppm	ASTM D5185m	250	119		
Barium	ppm	ASTM D5185m	10	0		
Molybdenum	ppm	ASTM D5185m	100	88		
Manganese	ppm	ASTM D5185m	450	<1		
Magnesium	ppm	ASTM D5185m	450	123		
Calcium	ppm	ASTM D5185m	3000	1881		
Phosphorus	ppm	ASTM D5185m	1150	1006		
Zinc	ppm	ASTM D5185m	1350	1160		
Sulfur	ppm	ASTM D5185m	4250	3674		
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.7		
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.3		
Visc @ 100°C	cSt	ASTM D445	14.4	13.7		



FORKLIFT SELECT Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0912066 12875 E 42ND AVE, SUITE 50 Sample No. Received : 23 Feb 2024 Lab Number : 06099008 : 26 Feb 2024 DENVER, CO Tested Unique Number : 10897238 : 26 Feb 2024 - Wes Davis US 80239 Diagnosed Test Package : CONST (Additional Tests: TBN) Contact: BYRON CHAPUIS Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. BYRON@FORKLIFTSELECT.COM * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)