

Machine Id **DFA28086** Component **Diesel Engine** Filuid **DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Description of the next service interaction of the service Discovery of the	Sample Number		Client Info		WC0925976	WC0879587	WC0820967
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.	Sample Date		Client Info		23 May 2024	08 Dec 2023	27 Jul 2023
	Machine Age	mls	Client Info		384302	321412	287048
	Oil Age	mls	Client Info		0	0	0
	Filter Age	mls	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	8	4	11
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>20	0	<1	<1
	Nickel	ppm	ASTM D5185m		0	0	0
	Titanium	ppm	ASTM D5185m		0	0	0
	Silver	ppm	ASTM D5185m	>3	0	0	0
	Aluminum	ppm	ASTM D5185m		4	2	2
	Lead	ppm	ASTM D5185m		0	<1	<1
	Copper	ppm	ASTM D5185m		4	6	10
	Tin	ppm	ASTM D5185m		<1	<1	1
	Vanadium	ppm	ASTM D5185m		0	<1	<1
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
		ooulu					
CONTAMINATION	Silicon	ppm	ASTM D5185m	. 25	=	4	4
	Olifoott	ppin	ASTIVI DOTODITI	>20	5	4	4
	Potassium	ppm	ASTM D5185m		1	4 <1	3
There is no indication of any contamination in the oil.				>20			
	Potassium		ASTM D5185m	>20 >5	1	<1	3
	Potassium Fuel		ASTM D5185m WC Method	>20 >5	1 <1.0	<1 <1.0	3 <1.0
	Potassium Fuel Water		ASTM D5185m WC Method WC Method	>20 >5 >0.2	1 <1.0 NEG	<1 <1.0 NEG	3 <1.0 NEG
	Potassium Fuel Water Glycol	ppm	ASTM D5185m WC Method WC Method WC Method	>20 >5 >0.2 >3	1 <1.0 NEG NEG	<1 <1.0 NEG NEG	3 <1.0 NEG NEG
	Potassium Fuel Water Glycol Soot %	ppm %	ASTM D5185m WC Method WC Method WC Method *ASTM D7844	>20 >5 >0.2 >3 >20	1 <1.0 NEG NEG 0.5	<1 <1.0 NEG NEG 0.3	3 <1.0 NEG NEG 0.6
	Potassium Fuel Water Glycol Soot % Nitration	ppm % Abs/cm	ASTM D5185m WC Method WC Method WC Method *ASTM D7844 *ASTM D7624	>20 >5 >0.2 >3 >20	1 <1.0 NEG NEG 0.5 8.3	<1 <1.0 NEG NEG 0.3 6.9	3 <1.0 NEG 0.6 9.1
	Potassium Fuel Water Glycol Soot % Nitration Sulfation	ppm % Abs/cm Abs/.1mm	ASTM D5185m WC Method WC Method *ASTM D7844 *ASTM D7624 *ASTM D7415	>20 >5 >0.2 >3 >20 >30	1 <1.0 NEG NEG 0.5 8.3 23.5	<1 <1.0 NEG 0.3 6.9 19.8	3 <1.0 NEG NEG 0.6 9.1 21.9
	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt	ppm % Abs/cm Abs/.1mm scalar	ASTM D5185m WC Method WC Method *ASTM D7844 *ASTM D7624 *ASTM D7415 *Visual	>20 >5 >0.2 >3 >20 >30 NONE	1 <1.0 NEG 0.5 8.3 23.5 NONE	<1 <1.0 NEG 0.3 6.9 19.8 NONE	3 <1.0 NEG 0.6 9.1 21.9 NONE
	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris	ppm % Abs/cm Abs/1mm scalar scalar	ASTM D5185m WC Method WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual	>20 >5 >0.2 >3 >20 >30 NONE NONE	1 <1.0 NEG 0.5 8.3 23.5 NONE NONE	<1 <1.0 NEG 0.3 6.9 19.8 NONE NONE	3 <1.0 NEG 0.6 9.1 21.9 NONE NONE
	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt	ppm % Abs/cm Abs/.1mm scalar scalar scalar	ASTM D5185m WC Method WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual	>20 >5 >0.2 >3 >20 >30 NONE NONE NONE	1 <1.0 NEG 0.5 8.3 23.5 NONE NONE NONE	<1 <1.0 NEG 0.3 6.9 19.8 NONE NONE NONE	3 <1.0 NEG NEG 0.6 9.1 21.9 NONE NONE NONE
	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance	9% Abs/cm Abs/.1mm scalar scalar scalar scalar scalar	ASTM D5185m WC Method WC Method *ASTM D7844 *ASTM D7624 *ASTM D7415 *Visual *Visual *Visual *Visual	>20 >5 >0.2 >3 >20 >30 NONE NONE NONE NORM	1 <1.0 NEG 0.5 8.3 23.5 NONE NONE NONE NONE NORML	<1 <1.0 NEG 0.3 6.9 19.8 NONE NONE NONE NONE NONE	3 <1.0 NEG NEG 0.6 9.1 21.9 NONE NONE NONE NONE NORML
There is no indication of any contamination in the oil.	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water	9% Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar	ASTM D5185m WC Method WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>20 >5 >0.2 >30 >30 NONE NONE NONE NORML NORML >0.2	1 <1.0 NEG 0.5 8.3 23.5 NONE NONE NONE NORML NORML NEG	<1 <1.0 NEG 0.3 6.9 19.8 NONE NONE NONE NONE NORML NORML NEG	3 <1.0 NEG 0.6 9.1 21.9 NONE NONE NONE NORML NORML NEG
	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m WC Method WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>20 >5 >0.2 >30 >30 NONE NONE NONE NORML NORML >0.2 >158	1 <1.0 NEG 0.5 8.3 23.5 NONE NONE NONE NORML NORML NEG	<1 <1.0 NEG 0.3 6.9 19.8 NONE NONE NONE NORML NORML NEG 0	3 <1.0 NEG 0.6 9.1 21.9 NONE NONE NONE NORML NORML NEG
There is no indication of any contamination in the oil.	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar scalar gcalar	ASTM D5185m WC Method WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>20 >5 >0.2 >30 >30 NONE NORME NORML >0.2 >158 250	1 <1.0 NEG 0.5 8.3 23.5 NONE NONE NONE NORML NORML NEG 1 214	<1 <1.0 NEG 0.3 6.9 19.8 NONE NONE NONE NORML NORML NEG 0 0	3 <1.0 NEG 0.6 9.1 21.9 NONE NONE NORML NORML NORML NEG 1 0
There is no indication of any contamination in the oil.	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar scalar gcalar	ASTM D5185m WC Method WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>20 >5 >0.2 >30 >30 NONE NONE NORML NORML >0.2 >158 250 10	1 <1.0 NEG 0.5 8.3 23.5 NONE NONE NONE NORML NORML NEG 1 214 0	<1 <1.0 NEG 0.3 6.9 19.8 NONE NONE NONE NORML NORML NEG 0 0 0	3 <1.0 NEG 0.6 9.1 21.9 NONE NONE NONE NORML NORML NEG 1 0 0
There is no indication of any contamination in the oil. FLUID CONDITION The BN result indicates that there is suitable alkalinity remaining in the	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	ppm % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar gcalar	ASTM D5185m WC Method WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>20 >5 >0.2 >30 >30 NONE NONE NORML NORML >0.2 >158 250 10	1 <1.0 NEG 0.5 8.3 23.5 NONE NONE NORE NORML NORML NEG 1 214 0 85	<1 <1.0 NEG 0.3 6.9 19.8 NONE NONE NONE NORML NORML NEG 0 0 0 0 0 60	3 <1.0 NEG 0.6 9.1 21.9 NONE NONE NORML NORML NORML NEG 1 0 0 63
There is no indication of any contamination in the oil. FLUID CONDITION The BN result indicates that there is suitable alkalinity remaining in the	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	ppm % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar gpm ppm ppm ppm	ASTM D5185m WC Method WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >5 >0.2 >3 >20 >30 NONE NONE NORML NORML >0.2 >158 250 10 100	1 <1.0 NEG 0.5 8.3 23.5 NONE NONE NONE NORML NORML NEG 1 214 0 85 <1	<1 <1.0 NEG 0.3 6.9 19.8 NONE NONE NONE NORML NORML NEG 0 0 0 0 0 60 0	3 <1.0 NEG 0.6 9.1 21.9 NONE NONE NONE NORML NORML NEG 1 0 0 63 <1
There is no indication of any contamination in the oil. FLUID CONDITION The BN result indicates that there is suitable alkalinity remaining in the	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	ppm % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185m WC Method WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >5 >0.2 >3 >20 >30 NONE NONE NORML NORML >0.2 >158 250 10 100 100	1 <1.0 NEG 0.5 8.3 23.5 NONE NONE NONE NORML NORML NEG 1 214 0 85 <1 435	<1 <1.0 NEG 0.3 6.9 19.8 NONE NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 <1.0 NEG 0.6 9.1 21.9 NONE NONE NONE NORML NORML NEG 1 0 0 63 <1 1024
There is no indication of any contamination in the oil. FLUID CONDITION The BN result indicates that there is suitable alkalinity remaining in the	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	ppm % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar gcalar ppm ppm ppm	ASTM D5185m WC Method WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >5 >0.2 >30 >30 NONE NONE NONE NORML NORML >0.2 >158 250 10 100 100 100 3000	1 <1.0 NEG 0.5 8.3 23.5 NONE NONE NONE NORML NORML NEG 1 214 0 85 <1	<1 <1.0 NEG 0.3 6.9 19.8 NONE NONE NONE NORML NORML NEG 0 0 0 0 0 60 0	3 <1.0 NEG 0.6 9.1 21.9 NONE NONE NONE NORML NORML NEG 1 0 0 63 <1

Zinc

Sulfur

Oxidation

Visc @ 100°C cSt

1264

3225

15.1 9.6

13.8

1332

3462

17.0

8.7

14.2

1298

3455

17.7

6.5

14.2

ASTM D5185m 1350

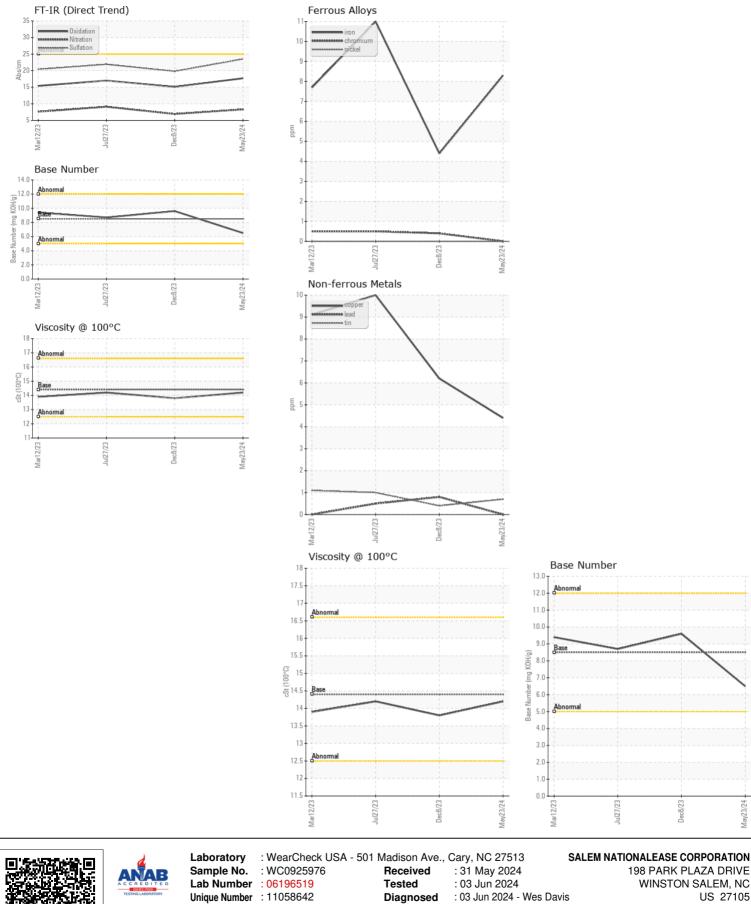
ASTM D445 14.4

ppm ASTM D5185m 4250

Abs/.1mm *ASTM D7414 >25

ppm

Base Number (BN) mg KOH/g ASTM D2896 8.5



Test Package : FLEET Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

US 27105 **Contact: Audrey Hopkins** Audrey.Hopkins@salemcorp.com T: (336)767-9642 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: x:

Contact/Location: Audrey Hopkins - SALWIN Page 2 of 2