

OIL ANALYSIS REPORT

Sample Rating Trend



Area OKLAHOMA 3590

Component Diesel Engine Fluid MYSTIK JT-8 SYN SUPER HD 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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.

SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0929933	WC0899613	WC0899618
Sample Date		Client Info		09 Apr 2024	06 Mar 2024	05 Feb 2024
Machine Age	hrs	Client Info		2117	1930	1745
Oil Age	hrs	Client Info		1833	1046	1461
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	48	37	29
Chromium	ppm	ASTM D5185m	>20	2	2	1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	13	10	9
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	3	3	1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 2	history1 <1	history2 2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 2 0	history1 <1 0	history2 2 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 2 0 63	history1 <1 0 60	history2 2 0 58
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 2 0 63 1	history1 <1 0 60 <1	history2 2 0 58 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 2 0 63 1 1045	history1 <1 0 60 <1 1007	history2 2 0 58 <1 941
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 2 0 63 1 1045 1150	history1 <1 0 60 <1 1007 1145	history2 2 0 58 <1 941 1041
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 2 0 63 1 1045 1150 1112	history1 <1 0 60 <1 1007 1145 1056	history2 2 0 58 <1 941 1041 1045
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 2 0 63 1 1045 1150 1112 1370	history1 <1 0 60 <1 1007 1145 1056 1309	history2 2 0 58 <1 941 1041 1045 1283
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	Current 2 0 63 1 1045 1150 1112 1370 3567	history1 <1 0 60 <1 1007 1145 1056 1309 3558	history2 2 0 58 <1 941 1041 1045 1283 3062
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	Current 2 0 63 1 1045 1150 1112 1370 3567 Current	history1 <1 0 60 <1 1007 1145 1056 1309 3558 history1	history2 2 0 58 <1 941 1041 1045 1283 3062 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 2 0 63 1 1045 1150 1112 1370 3567 current 4	history1 <1 0 60 <1 1007 1145 1056 1309 3558 history1 3	history2 2 0 58 <1 941 1041 1045 1283 3062 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 2 0 63 1 1045 1150 1112 1370 3567 current 4 9	<1 0 60 <1 1007 1145 1056 1309 3558 history1 3 8	history2 2 0 58 <1 941 1041 1045 1283 3062 history2 4 6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 2 0 63 1 1045 1150 1112 1370 3567 current 4 9 45	<1 0 60 <1 1007 1145 1056 1309 3558 history1 3 8 35	history2 2 0 58 <1 941 1041 1045 1283 3062 history2 4 6 32
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 2 0 63 1 1045 1150 1112 1370 3567 current 4 9 45	kistory1 <1 0 60 <1 1007 1145 1056 1309 3558 history1 3 8 35 history1	history2 2 0 58 <1 941 1041 1045 1283 3062 history2 4 6 32 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 2 0 63 1 1045 1150 1112 1370 3567 current 4 9 45 current 1.2	<1 0 60 <1 1007 1145 1056 1309 3558 history1 3 8 355 history1 1	history2 2 0 58 <1 941 1041 1045 1283 3062 history2 4 6 32 history2 0.8
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base ////////////////////////////////////	current 2 0 63 1 1045 1150 1112 1370 3567 current 4 9 45 current 1.2 9.7	history1 <1 0 60 <1 1007 1145 1056 1309 3558 history1 3 8 355 history1 1 9.2	history2 2 0 58 <1 941 1041 1045 1283 3062 history2 4 6 32 history2 0.8 8.5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 2 0 63 1 1045 1150 1112 1370 3567 current 4 9 45 current 1.2 9.7 22.2	history1 <1 0 60 <1 1007 1145 1056 1309 3558 history1 3 8 355 history1 1 9.2 21.1	history2 2 0 58 <1 941 1041 1045 1283 3062 history2 4 6 32 history2 0.8 8.5 20.6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m	limit/base 	current 2 0 63 1 1045 1150 1112 1370 3567 current 4 9 45 current 1.2 9.7 22.2 current	kistory1 <1 0 60 <1 1007 1145 1056 1309 3558 history1 3 8 355 history1 1 9.2 21.1 history1	history2 2 0 58 <1 941 1041 1045 1283 3062 history2 4 6 32 history2 0.8 8.5 20.6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D7844 *ASTM D7414	limit/base 	current 2 0 63 1 1045 1150 1112 1370 3567 current 4 9 45 current 1.2 9.7 22.2 current 18.0	history1 <1 0 60 <1 1007 1145 1056 1309 3558 history1 3 8 355 history1 1 9.2 21.1 history1 17.3	history2 2 0 58 <1 941 1041 1045 1283 3062 history2 4 6 32 history2 0.8 8.5 20.6 history2 16.1



OIL ANALYSIS REPORT





VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
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
Free Water	scalar	*Visual		NEG	NEG	NEG
	IFS	method	limit/base	current	history1	history2
		method	11110 0430	ounchi	history	historyz
Visc @ 100°C	cSt	ASTM D445	15.6	13.4	13.6	13.5





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 LIBERTY DISPOSAL Sample No. : WC0929933 6401 S EASTERN AVE Received : 15 Apr 2024 p Lab Number : 06149383 Tested : 16 Apr 2024 OKLAHOMA CITY, OK Unique Number : 10979461 Diagnosed : 16 Apr 2024 - Wes Davis US 73149 Test Package : FLEET Contact: M Rutherford Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. M.Rutherford@ldi89.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F:

Sep11/23

Nov8/23

Jan5/24

Mar6/24

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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Mav6/73

Jul6/23 -

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Contact/Location: M Rutherford - SEAOKL

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