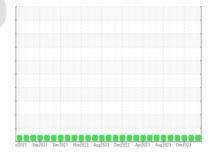


# **OIL ANALYSIS REPORT**

OKLAHOMA
Machine Id
PETERBILT 6789

Diesel Engine

MYSTIK JT-8 SYN SUPER HD 15W40 (--- GAL)



Sample Rating Trend



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil

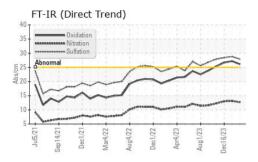
### **Fluid Condition**

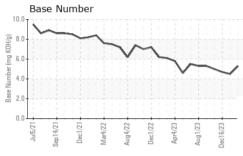
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

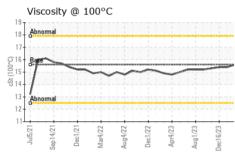
Oil Age   hi Oil Changed   Sample Status    CONTAMINATION   Fuel   Water   Glycol   WEAR METALS   Iron   pi   Chromium   pi   Nickel   pi   Titanium   pi   Silver   pi   Aluminum   pi   Lead   pi   Copper   pi   Tin   pi   Vanadium   pi   ADDITIVES   Boron   pi   Barium   pi   Molybdenum   pi   Manganese   pi	vvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvv	Client Info MC Method MC Method MC Method MC Method MSTM D5185m ASTM D5185m	limit/base >5 >0.2  limit/base >110 >4 >2 >2 >25 >45 >85 >4	WC0857184 01 Apr 2024 5128 200 Not Changd NORMAL	WC0791754 02 Jan 2024 4919 318 Not Changd NORMAL history1 <1.0 NEG NEG history1 55 2 <1 <1 0 3 21 25 2 0	WC0838583 16 Dec 2023 4886 285 Not Changd NORMAL history2 <1.0 NEG NEG history2 58 3 0 <1 0 3 22 24 2 <1
Machine Age hi Oil Age hi Oil Age hi Oil Changed Sample Status  CONTAMINATION  Fuel Water Glycol  WEAR METALS  Iron pi Chromium pi Nickel pi Titanium pi Silver pi Aluminum pi Lead pi Copper pi Tin pi Vanadium pi Cadmium pi ADDITIVES  Boron pi Barium pi Molybdenum pi Manganese pi	vvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvv	Client Info Client Info Client Info Client Info Client Info  MC Method WC Method WC Method WC Method ASTM D5185m	>5	5128 200 Not Changd NORMAL  current  <1.0 NEG NEG  current  54 3 <1 <1 <1 <1 22 21 2 <1	4919 318 Not Changd NORMAL history1 <1.0 NEG NEG 155 2 <1 <1 0 3 21 25 2 0	4886 285 Not Changd NORMAL history2 <1.0 NEG NEG 10 3 22 24 2 <1
Oil Age hi Oil Changed Sample Status  CONTAMINATION  Fuel Water Glycol  WEAR METALS  Iron pi Chromium pi Nickel pi Titanium pi Silver pi Aluminum pi Lead pi Copper pi Tin pi Vanadium pi Cadmium pi ADDITIVES  Boron pi Barium pi Molybdenum pi Manganese pi	PPM AAPPM AA	method WC Method WC Method WC Method WC Method WC Method WSTM D5185m ASTM D5185m	>5	200 Not Changd NORMAL  current  <1.0 NEG NEG  current  54 3 <1 <1 <1 <1 22 21 2 <1	318 Not Changd NORMAL history1 <1.0 NEG NEG history1  55 2 <1 <1 0 3 21 25 2 0	285 Not Changd NORMAL history2 <1.0 NEG NEG history2 58 3 0 <1 0 3 22 24 2 <1
Oil Changed Sample Status  CONTAMINATION  Fuel Water Glycol  WEAR METALS  Iron p Chromium p Nickel p Titanium p Silver p Aluminum p Lead p Copper p Tin p Vanadium p Cadmium p ADDITIVES  Boron p Barium p Molybdenum p Manganese p	V V V V V V V V V V V V V V V V V V V	method WC Method WC Method WC Method WC Method WC Method ASTM D5185m	>5	Not Changd NORMAL  current  <1.0 NEG NEG  current  54 3 <1 <1 <1 22 21 2 <1	Not Changd NORMAL  history1  <1.0  NEG  NEG  history1  55  2  <1  <1  0  3  21  25  2  0	Not Changd NORMAL  history2  <1.0  NEG  NEG  history2  58  3  0  <1  0  3  22  24  2  <1
Oil Changed Sample Status  CONTAMINATION  Fuel Water Glycol  WEAR METALS  Iron p Chromium p Nickel p Titanium p Silver p Aluminum p Lead p Copper p Tin p Vanadium p Cadmium p ADDITIVES  Boron p Barium p Molybdenum p Manganese p	VVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV	method  WC Method  WC Method  WC Method  MC Method  MC Method  MSTM D5185m  ASTM D5185m	>5	NORMAL  current  <1.0  NEG  NEG  current  54  3  <1  <1  <1  21  22  21  2  <1	NORMAL  history1  <1.0  NEG  NEG  history1  55  2  <1  <1  0  3  21  25  2  0	NORMAL  history2  <1.0  NEG  NEG  history2  58  3  0  <1  0  3  22  24  2  <1
Sample Status  CONTAMINATION  Fuel  Water Glycol  WEAR METALS  Iron p Chromium p Nickel p Titanium p Silver p Aluminum p Lead p Copper p Tin p Vanadium p Cadmium p ADDITIVES  Boron p Barium p Molybdenum p Manganese p	VVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV	method  WC Method  WC Method  WC Method  MC Method  MC Method  MSTM D5185m  ASTM D5185m	>5	NORMAL  current  <1.0  NEG  NEG  current  54  3  <1  <1  <1  21  22  21  2  <1	NORMAL  history1  <1.0  NEG  NEG  history1  55  2  <1  <1  0  3  21  25  2  0	NORMAL  history2  <1.0  NEG  NEG  history2  58  3  0  <1  0  3  22  24  2  <1
Fuel Water Glycol  WEAR METALS  Iron p Chromium p Nickel p Titanium p Silver Aluminum p Lead p Copper Tin p Vanadium p Cadmium p ADDITIVES  Boron p Barium p Molybdenum p Manganese p	ppm A	WC Method WC Method WC Method MSTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5	<1.0 NEG NEG Current  54 3 <1 <1 <1 <1 22 21 2 <1	<1.0 NEG NEG NEG history1  55 2 <1 <1 0 3 21 25 2 0	<1.0 NEG NEG NEG history2 58 3 0 <1 0 3 22 24 2 <1
Water Glycol  WEAR METALS  Iron p Chromium p Nickel p Titanium p Silver p Aluminum p Lead p Copper p Tin p Vanadium p Cadmium p ADDITIVES  Boron p Barium p Molybdenum p Manganese p	ppm A	WC Method WC Method MSTM D5185m ASTM D5185m	>0.2  limit/base >110 >4 >2  >2 >2 >45 >85	NEG NEG current 54 3 <1 <1 <1 4 22 21 2 <1	NEG NEG history1 55 2 <1 <1 0 3 21 25 2	NEG NEG history2 58 3 0 <1 0 3 22 24 2 <1
Glycol  WEAR METALS  Iron proper prop	ppm A	MC Method  method  ASTM D5185m	limit/base >110 >4 >2 >2 >2 >25 >45 >85	NEG  current  54  3  <1  <1  <1  4  22  21  2  <1	NEG history1 55 2 <1 <1 0 3 21 25 2 0	NEG history2 58 3 0 <1 0 3 22 24 2 <1
WEAR METALS  Iron proper prope	ppm A	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>110 >4 >2 >2 >2 >2 >25 >45 >85	current  54 3 <1 <1 <1 4 22 21 2 <1	history1  55 2 <1 <1 0 3 21 25 2 0	history2  58  3  0  <1  0  3  22  24  2  <1
Iron p Chromium p Nickel p Nickel p Titanium p Silver p Aluminum p Lead p Copper p Tin p Vanadium p Cadmium p ADDITIVES Boron p Barium p Molybdenum p Manganese p	pm A	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>110 >4 >2 >2 >2 >2 >25 >45 >85	54 3 <1 <1 <1 4 22 21 2 <1	55 2 <1 <1 0 3 21 25 2	58 3 0 <1 0 3 22 24 2 <1
Chromium pi Nickel pi Titanium pi Silver pi Aluminum pi Lead pi Copper pi Tin pi Vanadium pi ADDITIVES Boron pi Barium pi Manganese pi	pm A	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>4 >2 >2 >2 >25 >45 >85	3 <1 <1 <1 <1 4 22 21 2 <1	2 <1 <1 0 3 21 25 2 0	3 0 <1 0 3 22 24 2 <1
Nickel p Titanium p Silver p Aluminum p Lead p Copper p Tin p Vanadium p Cadmium p ADDITIVES Boron p Barium p Molybdenum p Manganese p	pm A	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>2 >2 >25 >45 >85	<1 <1 <1 4 22 21 2 <1	<1 <1 0 3 21 25 2	0 <1 0 3 22 24 2 <1
Nickel p Titanium p Silver p Aluminum p Lead p Copper p Tin p Vanadium p Cadmium p ADDITIVES Boron p Barium p Molybdenum p Manganese p	ppm A	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>2 >25 >45 >85	<1 <1 4 22 21 2 <1	<1 0 3 21 25 2 0	<1 0 3 22 24 2 <1
Titanium p Silver p Aluminum p Lead p Copper p Tin p Vanadium p ADDITIVES Boron p Barium p Molybdenum p Manganese p	pm A	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25 >45 >85	<1 4 22 21 2 <1	<1 0 3 21 25 2 0	0 3 22 24 2 <1
Silver p Aluminum p Lead p Copper p Tin p Vanadium p Cadmium p ADDITIVES Boron p Barium p Molybdenum p Manganese p	pm A pm A pm A pm A pm A pm A	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25 >45 >85	<1 4 22 21 2 <1	0 3 21 25 2	0 3 22 24 2 <1
Aluminum p Lead p Copper p Tin p Vanadium p Cadmium p ADDITIVES Boron p Barium p Molybdenum p Manganese p	pm A pm A pm A pm A pm A	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25 >45 >85	4 22 21 2 <1	3 21 25 2 0	3 22 24 2 <1
Lead pp Copper pp Tin pp Vanadium pp Cadmium pp ADDITIVES Boron pp Barium pp Molybdenum pp Manganese pp	pm A pm A pm A	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>45 >85	22 21 2 <1	21 25 2 0	22 24 2 <1
Copper p Tin p Vanadium p Cadmium p ADDITIVES Boron p Barium p Molybdenum p Manganese p	pm A	ASTM D5185m ASTM D5185m ASTM D5185m	>85	21 2 <1	25 2 0	24 2 <1
Tin p Vanadium p Cadmium p  ADDITIVES  Boron p Barium p Molybdenum p Manganese p	pm A	ASTM D5185m ASTM D5185m		2 <1	2	2 <1
Vanadium p Cadmium p ADDITIVES Boron p Barium p Molybdenum p Manganese p	pm A	ASTM D5185m	>4	<1	0	<1
Cadmium properties ADDITIVES  Boron properties Barium properties Molybdenum properties Manganese properties ADDITIVES	٠.					
ADDITIVES  Boron p Barium p Molybdenum p Manganese p	рт А	MCQ1 CO IN1 CA		4		0
Boron p Barium p Molybdenum p Manganese p				<1	0	0
Barium p Molybdenum p Manganese p		method	limit/base	current	history1	history2
Molybdenum p Manganese p	1-	ASTM D5185m		4	5	4
Manganese p		ASTM D5185m		0	10	0
	pm A	ASTM D5185m		9	4	5
Magnesium p	pm A	ASTM D5185m		<1	<1	<1
	pm A	ASTM D5185m		873	809	873
<b>Calcium</b> p	pm A	ASTM D5185m		1306	1274	1294
Phosphorus p	pm A	ASTM D5185m		1044	1142	977
Zinc p	pm A	ASTM D5185m		1370	1260	1343
Sulfur p	pm A	ASTM D5185m		2762	2982	2542
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon p	pm A	ASTM D5185m	>30	10	9	11
Sodium p	pm A	ASTM D5185m		12	9	12
Potassium p	pm A	ASTM D5185m	>20	6	7	5
INFRA-RED		method	limit/base	current	history1	history2
Soot %	6 * <i>I</i>	ASTM D7844	>3	0.8	0.8	0.8
Nitration A	bs/cm */	ASTM D7624	>20	12.7	13.1	13.0
		ASTM D7415	>30	27.9	28.8	28.4
FLUID DEGRADATION	ON	method	limit/base	current	history1	history2
Oxidation Ab		ACTM D7414	>25	26.1	27.2	26.7
Base Number (BN)	bs/.1mm */	ASTM D7414	/20		<u></u>	



# **OIL ANALYSIS REPORT**





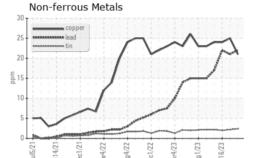


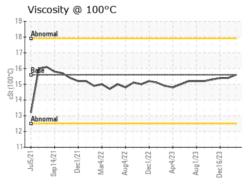
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

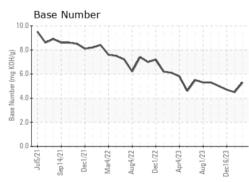
FLUID PROPER	TIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.6	15.6	15.4	15.4

### **GRAPHS**













Certificate 12367

Laboratory Sample No.

: WC0857184 Lab Number : 06156606 Unique Number : 10992029 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 22 Apr 2024 **Tested** : 23 Apr 2024 Diagnosed

: 24 Apr 2024 - Sean Felton

OKLAHOMA CITY, OK US 73149 Contact: CARRIE MARSHALL c.marshall@ldi89.com

LIBERTY DISPOSAL

6401 S EASTERN AVE

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.

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

T:

F: