

# **OIL ANALYSIS REPORT**

## **VIS DEBRIS**

# PIERCE ENGINE 2 - 6845

**Hydraulic System** 

AW HYDRAULIC OIL ISO 46 (--- GAL)

### **DIAGNOSIS**

### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

Moderate concentration of visible dirt/debris present in the oil.

### **Fluid Condition**

The condition of the oil is acceptable for the time in

SIS REPORT	Sampl	e Rating Trend		
0.0				
	AugŽ	018 Sep2019	Feb2024	
SAMPLE INFORMATION	method	limit/base	current	hi

Sample Number		Client Info		WC0890655	WC0348922	WCM1393097
Sample Date		Client Info		22 Feb 2024	13 Sep 2019	22 Aug 2018
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed	1110	Client Info		N/A	Not Changd	Not Changd
Sample Status		Oliciti IIIIo		ABNORMAL	NORMAL	NORMAL
CONTAMINATION	VI.	method	limit/base	-	history1	
	V			current		history2
Water		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	0	<1	<1
Chromium	ppm	ASTM D5185m		0	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	<1	1
Lead	ppm	ASTM D5185m	>10	0	<1	<1
Copper	ppm	ASTM D5185m	>75	0	<1	<1
Tin	ppm	ASTM D5185m	>10	0	0	<1
Antimony	ppm	ASTM D5185m			0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
						<1
Boron	ppm	ASTM D5185m	5	0	0	< 1
Davidous	10.10.100	ACTM DE10E	Г	•	^	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	0	<1	0
Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	5	0	<1	0 <1
Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5 25	0 0 0	<1 0 0	0 <1 0
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 25 200	0 0 0 19	<1 0 0 22	0 <1 0 18
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 25 200 300	0 0 0 19 257	<1 0 0 22 303	0 <1 0 18 282
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 25 200 300 370	0 0 0 19 257 315	<1 0 0 0 22 303 394	0 <1 0 18 282 359
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 25 200 300	0 0 0 19 257	<1 0 0 22 303	0 <1 0 18 282
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 25 200 300 370	0 0 0 19 257 315	<1 0 0 0 22 303 394	0 <1 0 18 282 359
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 25 200 300 370 2500	0 0 0 19 257 315 1439	<1 0 0 22 303 394 1392	0 <1 0 18 282 359 1522
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	5 25 200 300 370 2500 limit/base	0 0 0 19 257 315 1439	<1 0 0 22 303 394 1392 history1	0 <1 0 18 282 359 1522 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m	5 25 200 300 370 2500 limit/base	0 0 0 19 257 315 1439 current	<1 0 0 22 303 394 1392 history1	0 <1 0 18 282 359 1522 history2 3
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	5 25 200 300 370 2500 limit/base >20	0 0 0 19 257 315 1439 current 2 <1	<1 0 0 22 303 394 1392 history1 4	0 <1 0 18 282 359 1522 history2 3 <1
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  METhod ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 25 200 300 370 2500  limit/base >20 >20	0 0 0 19 257 315 1439 current 2 <1	<1 0 0 22 303 394 1392 history1 4 0	0 <1 0 18 282 359 1522 history2 3 <1 <1
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	5 25 200 300 370 2500  limit/base >20  >20  limit/base	0 0 0 19 257 315 1439 current 2 <1 3	<1 0 0 22 303 394 1392 history1 4 0 0	0 <1 0 18 282 359 1522 history2 3 <1 <1 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  Method  *Visual	5 25 200 300 370 2500  limit/base >20  >20  limit/base NONE	0 0 0 19 257 315 1439 current 2 <1 3	<1 0 0 22 303 394 1392 history1 4 0 0 history1 NONE	0 <1 0 18 282 359 1522 history2 3 <1 <1 NONE
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m	5 25 200 300 370 2500 limit/base >20	0 0 0 19 257 315 1439 current 2 <1 3 current NONE	<1 0 0 22 303 394 1392 history1 4 0 0 history1 NONE	0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method ASTM D5185m ASTM D5185m  Method *Visual *Visual	5 25 200 300 370 2500 limit/base >20 limit/base NONE NONE NONE	0 0 0 19 257 315 1439 current 2 <1 3 current NONE NONE	<1 0 0 22 303 394 1392 history1 4 0 0 history1 NONE NONE NONE	0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m  *Visual *Visual *Visual *Visual *Visual *Visual	5 25 200 300 370 2500  limit/base >20  >20  limit/base NONE NONE NONE NONE NONE	0 0 0 19 257 315 1439 current 2 <1 3 current NONE NONE NONE NONE NONE MODER	<1 0 0 22 303 394 1392 history1 4 0 0 history1 NONE NONE NONE NONE NONE LIGHT	0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m  *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	5 25 200 300 370 2500  limit/base >20 >20 limit/base NONE NONE NONE NONE NONE NONE NONE	0 0 0 19 257 315 1439 current 2 <1 3 current NONE NONE NONE NONE NONE NONE NONE NON	<1 0 0 22 303 394 1392 history1 4 0 0 history1 NONE NONE NONE NONE NONE NONE NONE NON	0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m  *Visual *Visual *Visual *Visual *Visual *Visual	5 25 200 300 370 2500  limit/base >20  >20  limit/base NONE NONE NONE NONE NONE	0 0 0 19 257 315 1439 current 2 <1 3 current NONE NONE NONE NONE NONE MODER	<1 0 0 22 303 394 1392 history1 4 0 0 history1 NONE NONE NONE NONE NONE LIGHT	0 <1 0 18 282 359 1522 history2 3 <1 <1 NONE NONE NONE NONE NONE NONE NONE NON

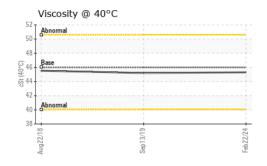
Suldimitted By: RANNEGPRICE

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scalar \*Visual

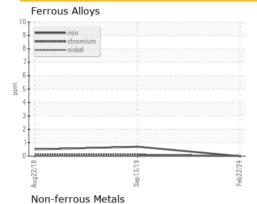


# **OIL ANALYSIS REPORT**



FLUID PROPER	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	45.3	45.2	45.53
SAMPLE IMAGE	ES	method	limit/base	current	history1	history2
Color				no image	no image	no image
Bottom				no image	no image	no image
CDADUC						

### **GRAPHS**



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Aug22/18	Sep13/19 -	



Certificate L2367

Laboratory

**Sample No.** : WC0890655 Lab Number : 06121265 Unique Number : 10930098

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 18 Mar 2024 Tested : 19 Mar 2024 Diagnosed

: 20 Mar 2024 - Don Baldridge

**GREENVILLE FIRE DEPARTMENT** PO BOX 7207 GREENVILLE, NC

US 27835 Contact: JESSE HARRIS

jjharris@greenvillenc.gov T: (252)933-2200

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)