

# **OIL ANALYSIS REPORT**



Machine Id **873** Component

**Diesel Engine** 

**DIESEL ENGINE OIL SAE 10W30 (--- QTS)** 

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the

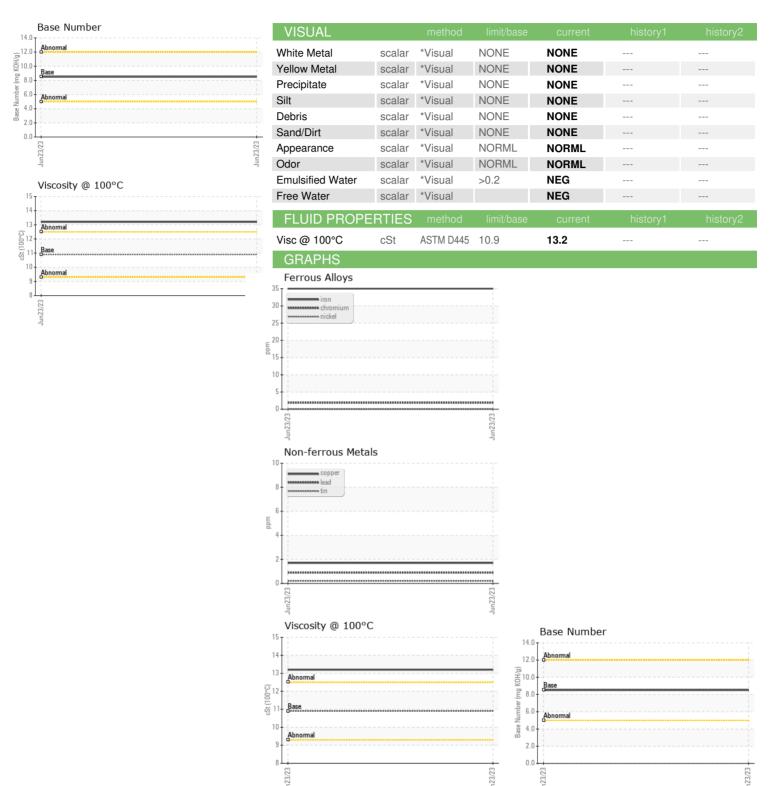
## **Fluid Condition**

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

SAMPLE INFORMATION   method   limit/base   current   history1   history1   Sample Number   Client Info   PCA0099804							
Sample Number					Jun 2023		
Sample Date   Client Info   23 Jun 2023           Machine Age   mls   Client Info   145887         Oil Age   mls   Client Info   5800         Oil Changed   Client Info   Changed         Oil Changed   Client Info   Changed         Sample Status   NORMAL         CONTAMINATION   method   Imit/base   current   history1   history1     Fuel   WC Method   NEG         Glycol   WC Method   NEG         WEAR METALS   method   limit/base   current   history1   history1     Iron   ppm   ASTM D5185m   >100   35         Chromium   ppm   ASTM D5185m   >20   2         Titanium   ppm   ASTM D5185m   >20   2         Titanium   ppm   ASTM D5185m   >3   0         Caleud   ppm   ASTM D5185m   >20   6         Lead   ppm   ASTM D5185m   >20   6         Lead   ppm   ASTM D5185m   >330   2         Tin   ppm   ASTM D5185m   >330   2         Tin   ppm   ASTM D5185m   >0         Cadmium   ppm   ASTM D5185m   0         Cadmium   ppm   ASTM D5185m   0         ADDITIVES   method   limit/base   current   history1   history1     ADDITIVES   method   limit/base   current   history1   history1     ASTM D5185m   250   16           ADDITIVES   method   limit/base   current   history1   history1     ASTM D5185m   250   16           ASTM D5185m   250   16         ASTM D5185m   250   16         ASTM D5185m   250   16         ASTM D5185m   250   16         ASTM	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age   mls   Client Info   145887	Sample Number		Client Info		PCA0099804		
Oil Age         mls         Client Info         5800	Sample Date		Client Info		23 Jun 2023		
Contamped   Client Info   Changed   Client Info   NORMAL   Contamped   Client Info   NORMAL   Contamped   Contam	Machine Age	mls	Client Info		145887		
CONTAMINATION	Oil Age	mls	Client Info		5800		
CONTAMINATION	Oil Changed		Client Info		Changed		
WEAR METALS	Sample Status				NORMAL		
WEAR METALS	CONTAMINATION	ON	method	limit/base	current	history1	history2
WEAR METALS         method         limit/base         current         history1         history1           Iron         ppm         ASTM D5185m         >100         35	Fuel		WC Method	>5	<1.0		
Chromium	Glycol		WC Method		NEG		
Chromium	WEAR METALS	5	method	limit/base	current	history1	history2
Chromium	Iron	mag	ASTM D5185m	>100	35		
Nickel	Chromium		ASTM D5185m	>20	2		
Silver	Nickel			>4	0		
Silver		• •					
Aluminum				>3			
Lead							
Copper					•		
Tin	Copper	• •					
Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history           Boron         ppm         ASTM D5185m         250         16             Barium         ppm         ASTM D5185m         10         0             Molybdenum         ppm         ASTM D5185m         100         58             Manganese         ppm         ASTM D5185m         100         58             Magnesium         ppm         ASTM D5185m         450         994             Calcium         ppm         ASTM D5185m         3000         1510             Phosphorus         ppm         ASTM D5185m         1350         1490             Zinc         ppm         ASTM D5185m         250         4184             CONTAMINANTS         method         limit/base         current         hist					<1		
Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         250         16             Barium         ppm         ASTM D5185m         10         0             Molybdenum         ppm         ASTM D5185m         100         58             Manganese         ppm         ASTM D5185m         100         58             Magnesium         ppm         ASTM D5185m         450         994             Calcium         ppm         ASTM D5185m         3000         1510             Phosphorus         ppm         ASTM D5185m         1150         1186             Zinc         ppm         ASTM D5185m         4250         4184             Sulfur         ppm         ASTM D5185m         >25         12             Sodium         ppm         ASTM D5185m         >20				7.0			
ADDITIVES         method         limit/base         current         history1         history           Boron         ppm         ASTM D5185m         250         16             Barium         ppm         ASTM D5185m         10         0             Molybdenum         ppm         ASTM D5185m         100         58             Manganese         ppm         ASTM D5185m         450         994             Magnesium         ppm         ASTM D5185m         3000         1510             Calcium         ppm         ASTM D5185m         1350         1490             Phosphorus         ppm         ASTM D5185m         4250         4184             Sulfur         ppm         ASTM D5185m         4250         4184             CONTAMINANTS         method         limit/base         current         history1         history           Solium         ppm         ASTM D5185m         >25         12             Potassium         ppm         ASTM D5185m <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td>					-		
Boron   ppm   ASTM D5185m   250   16		PP		11 11 11			
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         100         58             Manganese         ppm         ASTM D5185m         450         994             Calcium         ppm         ASTM D5185m         3000         1510             Phosphorus         ppm         ASTM D5185m         1150         1186             Zinc         ppm         ASTM D5185m         1350         1490             Sulfur         ppm         ASTM D5185m         4250         4184             CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >25         12             Sodium         ppm         ASTM D5185m         >20         3             Potassium         ppm         ASTM D5185m         >20         3             Soot %         %         *ASTM D7844         >3         0.5             Silicon         Abs/cmm         *ASTM D7624<	Boron	ppm	ASTM D5185m	250	16		
Manganese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         450         994             Calcium         ppm         ASTM D5185m         3000         1510             Phosphorus         ppm         ASTM D5185m         1150         1186             Zinc         ppm         ASTM D5185m         1350         1490             Sulfur         ppm         ASTM D5185m         4250         4184             CONTAMINANTS         method         limit/base         current         history1         history           Silicon         ppm         ASTM D5185m         >25         12             Sodium         ppm         ASTM D5185m         3             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7624         >20         9.3	Barium	ppm	ASTM D5185m	10	0		
Magnesium         ppm         ASTM D5185m         450         994             Calcium         ppm         ASTM D5185m         3000         1510             Phosphorus         ppm         ASTM D5185m         1150         1186             Zinc         ppm         ASTM D5185m         1350         1490             Sulfur         ppm         ASTM D5185m         4250         4184             Silicon         ppm         ASTM D5185m         >25         12             Sodium         ppm         ASTM D5185m         >25         12             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7844         >3         0.5             Sulfation         Abs/.1mm         *ASTM D7624         >20         9.3             FLUID DEGRADATION         method         l	Molybdenum	ppm	ASTM D5185m	100	58		
Calcium         ppm         ASTM D5185m         3000         1510             Phosphorus         ppm         ASTM D5185m         1150         1186             Zinc         ppm         ASTM D5185m         1350         1490             Sulfur         ppm         ASTM D5185m         4250         4184             CONTAMINANTS         method         limit/base         current         history1         history           Silicon         ppm         ASTM D5185m         >25         12             Sodium         ppm         ASTM D5185m         >20         3             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7844         >3         0.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         19.3             FLUID DEGRADATION         method         limi	Manganese	ppm	ASTM D5185m		<1		
Phosphorus         ppm         ASTM D5185m         1150         1186             Zinc         ppm         ASTM D5185m         1350         1490             Sulfur         ppm         ASTM D5185m         4250         4184             CONTAMINANTS         method         limit/base         current         history1         history           Silicon         ppm         ASTM D5185m         >25         12             Sodium         ppm         ASTM D5185m         3              Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7844         >3         0.5             Nitration         Abs/cm         *ASTM D7624         >20         9.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         19.3             FLUID DEGRADATION         method         l	Magnesium	ppm	ASTM D5185m	450	994		
Zinc         ppm         ASTM D5185m         1350         1490             Sulfur         ppm         ASTM D5185m         4250         4184             CONTAMINANTS         method         limit/base         current         history1         history           Silicon         ppm         ASTM D5185m         >25         12             Sodium         ppm         ASTM D5185m         3              Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7844         >3         0.5             Nitration         Abs/cm         *ASTM D7624         >20         9.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         19.3             FLUID DEGRADATION         method         limit/base         current         history1         history           Oxidation         Abs/.1mm         *ASTM D7	Calcium	ppm	ASTM D5185m	3000	1510		
Sulfur         ppm         ASTM D5185m         4250         4184             CONTAMINANTS         method         limit/base         current         history1         history           Silicon         ppm         ASTM D5185m         >25         12             Sodium         ppm         ASTM D5185m         3             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7844         >3         0.5             Nitration         Abs/cm         *ASTM D7624         >20         9.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         19.3             FLUID DEGRADATION         method         limit/base         current         history1         history           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4	Phosphorus	ppm	ASTM D5185m	1150	1186		
CONTAMINANTS         method         limit/base         current         history1         history           Silicon         ppm         ASTM D5185m         >25         12             Sodium         ppm         ASTM D5185m         3             Potassium         ppm         ASTM D5185m         >20         3            INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7844         >3         0.5             Nitration         Abs/cm         *ASTM D7624         >20         9.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         19.3             FLUID DEGRADATION         method         limit/base         current         history1         history           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4	Zinc	ppm	ASTM D5185m	1350	1490		
Silicon   ppm   ASTM D5185m   >25   12	Sulfur	ppm	ASTM D5185m	4250	4184		
Sodium	CONTAMINANT	ΓS	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7844         >3         0.5             Nitration         Abs/cm         *ASTM D7624         >20         9.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         19.3             FLUID DEGRADATION         method         limit/base         current         history1         history1           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4	Silicon	ppm	ASTM D5185m	>25	12		
INFRA-RED	Sodium	ppm	ASTM D5185m		3		
Soot %         %         *ASTM D7844         >3         0.5             Nitration         Abs/cm         *ASTM D7624         >20         9.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         19.3             FLUID DEGRADATION         method         limit/base         current         history1         history           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4	Potassium	ppm	ASTM D5185m	>20	3		
Nitration         Abs/cm         *ASTM D7624         >20         9.3             Sulfation         Abs/.1mm         *ASTM D7615         >30         19.3             FLUID DEGRADATION         method         limit/base         current         history1         history           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         19.3             FLUID DEGRADATION         method         limit/base         current         history1         history1           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4	Soot %	%	*ASTM D7844	>3	0.5		
Sulfation         Abs/.1mm         *ASTM D7415         >30         19.3             FLUID DEGRADATION         method         limit/base         current         history1         history1           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4	Nitration	Abs/cm	*ASTM D7624	>20	9.3		
Oxidation							
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.4		
Dasc Namber (DIN) highering Activide 2000 0.5	Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.5		



# **OIL ANALYSIS REPORT**







Certificate L2367

Laboratory Sample No. Lab Number Unique Number Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0099804 Received : 14 Aug 2023 : 05923908 : 15 Aug 2023 Diagnosed : Don Baldridge : 10603855 Diagnostician

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) **GAS FIELD SPECIALISTS** 

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