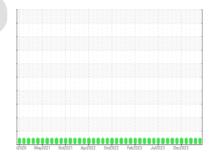


# **OIL ANALYSIS REPORT**

**Ohio Valley** [Ohio Valley] Oil - Starboard Genset

**Starboard Genset** 

**DIESEL ENGINE OIL SAE 15W40 (8 GAL)** 



Sample Rating Trend



## 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

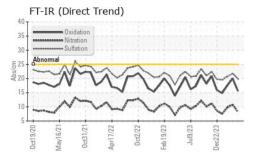
## **Fluid Condition**

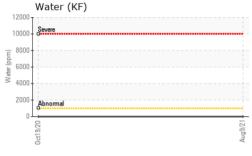
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

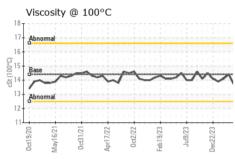
SAMPLE INFORMATION	CAMPLE INFORM	IATION		11 11 11			111
Sample Date		IATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         19433         19243         18856           Oil Age         hrs         Client Info         170         386         451           Oil Changed         Client Info         Not Changd         N/A         Not Changd           Sample Status         normal         Imitibase         current         history1         history2           Fuel         WC Method         >4.0         <1.0	•						
Oil Age         hrs         Client Info         Not Changd         VA         Not Changd           Sample Status         Client Info         Not Changd         N/A         Not Changd           CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         ASTM 05185m         >4.0         <1.0	•				•		
Cilichanged   Cilichange   Norman					10.00		
NORMAL   NORMAL   NORMAL   NORMAL	-	hrs					
CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >4.0         <1.0         <1.0         <1.0         <1.0           Glycol         WC Method         NEG         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         2         10         6           Chromium         ppm         ASTM D5185m         >4         <1         <1         <1           Nickel         ppm         ASTM D5185m         >2         0         <1         0           Silver         ppm         ASTM D5185m         >5         0         <1         0           Aluminum         ppm         ASTM D5185m         >17         0         1         0           Copper         ppm         ASTM D5185m         >17         0         1         0           Copper         ppm         ASTM D5185m         >17         0         1         0           Calcium         ppm         ASTM D5185m         10         <1         0			Client Info			,	Ŭ.
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS	CONTAMINATION	1	method	limit/base	current	history1	history2
Iron	Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >4         <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>50	2	10	6
Titanium	Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Silver         ppm         ASTM D5185m         >5         0         <1         0           Aluminum         ppm         ASTM D5185m         >12         1         2         1           Lead         ppm         ASTM D5185m         >17         0         1         0           Copper         ppm         ASTM D5185m         >70         0         2         1           Tin         ppm         ASTM D5185m         >15         <1         <1         0           Vanadium         ppm         ASTM D5185m         0         <1         0           Cadmium         ppm         ASTM D5185m         0         <1         0           Cadmium         ppm         ASTM D5185m         250         65         57         66           Boron         ppm         ASTM D5185m         250         65         57         66           Barium         ppm         ASTM D5185m         250         65         57         66           Barium         ppm         ASTM D5185m         100         30         30         27           Manganesium         ppm         ASTM D5185m         100         398         951         917 <tr< td=""><th>Nickel</th><td>ppm</td><td>ASTM D5185m</td><td>&gt;2</td><th>0</th><td>&lt;1</td><td>0</td></tr<>	Nickel	ppm	ASTM D5185m	>2	0	<1	0
Aluminum         ppm         ASTM D5185m         >12         1         2         1           Lead         ppm         ASTM D5185m         >17         0         1         0           Copper         ppm         ASTM D5185m         >70         0         2         1           Tin         ppm         ASTM D5185m         >15         <1         <1         0           Vanadium         ppm         ASTM D5185m         0         <1         0         0           Cadmium         ppm         ASTM D5185m         0         <1         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         250         65         57         66           Barium         ppm         ASTM D5185m         10         0         0         0           Molybdenum         ppm         ASTM D5185m         100         30         30         27           Manganese         ppm         ASTM D5185m         450         898         951         917           Calcium         ppm         ASTM D5185m         1150         798         909	Titanium	ppm	ASTM D5185m		<1	<1	<1
Lead         ppm         ASTM D5185m         >17         0         1         0           Copper         ppm         ASTM D5185m         >70         0         2         1           Tin         ppm         ASTM D5185m         >15         <1	Silver	ppm	ASTM D5185m	>5	0	<1	0
Copper         ppm         ASTM D5185m         >70         0         2         1           Tin         ppm         ASTM D5185m         >15         <1         <1         0           Vanadium         ppm         ASTM D5185m         0         <1         0           Cadmium         ppm         ASTM D5185m         0         <1         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         250         65         57         66           Barium         ppm         ASTM D5185m         10         0         0         0           Molybdenum         ppm         ASTM D5185m         100         30         30         27           Manganese         ppm         ASTM D5185m         100         30         30         27           Magnesium         ppm         ASTM D5185m         450         898         951         917           Calcium         ppm         ASTM D5185m         450         898         951         917           Calcium         ppm         ASTM D5185m         1150         798         909         763 <th>Aluminum</th> <th>ppm</th> <th>ASTM D5185m</th> <th>&gt;12</th> <th>1</th> <th>2</th> <th>1</th>	Aluminum	ppm	ASTM D5185m	>12	1	2	1
Tin         ppm         ASTM D5185m         >15         <1	Lead	ppm	ASTM D5185m	>17	0	1	0
Vanadium         ppm         ASTM D5185m         0         <1	Copper	ppm	ASTM D5185m	>70	0	2	1
Cadmium         ppm         ASTM D5185m         0         <1	Tin	ppm	ASTM D5185m	>15	<1	<1	0
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	<1	0
Boron	Cadmium	ppm	ASTM D5185m		0	<1	0
Barium         ppm         ASTM D5185m         10         0         0         0           Molybdenum         ppm         ASTM D5185m         100         30         30         27           Manganese         ppm         ASTM D5185m         100         30         30         27           Magnesium         ppm         ASTM D5185m         450         898         951         917           Calcium         ppm         ASTM D5185m         3000         1425         1624         1619           Phosphorus         ppm         ASTM D5185m         3000         1425         1624         1619           Phosphorus         ppm         ASTM D5185m         1350         909         1035         941           Sulfur         ppm         ASTM D5185m         4250         3533         3648         3211           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >158         2         2         2           Potassium         ppm         ASTM D5185m         >20         2         4         <1           Water         %         ASTM D6	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         100         30         30         27           Manganese         ppm         ASTM D5185m         <1						Thotory	
Manganese         ppm         ASTM D5185m         <1	Boron	ppm					
Magnesium         ppm         ASTM D5185m         450         898         951         917           Calcium         ppm         ASTM D5185m         3000         1425         1624         1619           Phosphorus         ppm         ASTM D5185m         1150         798         909         763           Zinc         ppm         ASTM D5185m         1350         909         1035         941           Sulfur         ppm         ASTM D5185m         1350         909         1035         941           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         4         3           Sodium         ppm         ASTM D5185m         >158         2         2         2           Potassium         ppm         ASTM D5185m         >20         2         4         <1           Water         %         ASTM D6304         >0.1         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20			ASTM D5185m	250	65	57	66
Calcium         ppm         ASTM D5185m         3000         1425         1624         1619           Phosphorus         ppm         ASTM D5185m         1150         798         909         763           Zinc         ppm         ASTM D5185m         1350         909         1035         941           Sulfur         ppm         ASTM D5185m         4250         3533         3648         3211           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         4         3           Sodium         ppm         ASTM D5185m         >158         2         2         2           Potassium         ppm         ASTM D5185m         >20         2         4         <1           Water         %         ASTM D6304         >0.1         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1         0.3         0.2           Nitration         Abs/cm         *ASTM D7415         >30	Barium	ppm	ASTM D5185m ASTM D5185m	250 10	65 0	57 0	66 0
Phosphorus         ppm         ASTM D5185m         1150         798         909         763           Zinc         ppm         ASTM D5185m         1350         909         1035         941           Sulfur         ppm         ASTM D5185m         4250         3533         3648         3211           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         4         3           Sodium         ppm         ASTM D5185m         >158         2         2         2           Potassium         ppm         ASTM D5185m         >20         2         4         <1           Water         %         ASTM D6304         >0.1         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1         0.3         0.2           Nitration         Abs/cm         *ASTM D7624         >20         8.2         10.8         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30 </th <th>Barium Molybdenum</th> <th>ppm ppm</th> <th>ASTM D5185m ASTM D5185m ASTM D5185m</th> <th>250 10</th> <th>65 0 30</th> <th>57 0 30</th> <th>66 0 27</th>	Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	65 0 30	57 0 30	66 0 27
Zinc         ppm         ASTM D5185m         1350         909         1035         941           Sulfur         ppm         ASTM D5185m         4250         3533         3648         3211           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         4         3           Sodium         ppm         ASTM D5185m         >158         2         2         2           Potassium         ppm         ASTM D5185m         >20         2         4         <1           Water         %         ASTM D6304         >0.1         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1         0.3         0.2           Nitration         Abs/cm         *ASTM D7624         >20         8.2         10.8         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.9         21.8         20.7           FLUID DEGRADATION         method         limit/base	Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	65 0 30 <1	57 0 30 <1	66 0 27 <1
Sulfur         ppm         ASTM D5185m         4250         3533         3648         3211           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         4         3           Sodium         ppm         ASTM D5185m         >158         2         2         2           Potassium         ppm         ASTM D5185m         >20         2         4         <1           Water         %         ASTM D6304         >0.1         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1         0.3         0.2           Nitration         Abs/cm         *ASTM D7624         >20         8.2         10.8         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.9         21.8         20.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25 </th <th>Barium Molybdenum Manganese Magnesium</th> <th>ppm ppm ppm</th> <th>ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m</th> <th>250 10 100 450</th> <th>65 0 30 &lt;1 898</th> <th>57 0 30 &lt;1 951</th> <th>66 0 27 &lt;1 917</th>	Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	65 0 30 <1 898	57 0 30 <1 951	66 0 27 <1 917
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         4         3           Sodium         ppm         ASTM D5185m         >158         2         2         2           Potassium         ppm         ASTM D5185m         >20         2         4         <1           Water         %         ASTM D6304         >0.1         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1         0.3         0.2           Nitration         Abs/cm         *ASTM D7624         >20         8.2         10.8         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.9         21.8         20.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.6         20.0         17.6	Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	65 0 30 <1 898 1425	57 0 30 <1 951 1624	66 0 27 <1 917 1619
Silicon         ppm         ASTM D5185m         >25         3         4         3           Sodium         ppm         ASTM D5185m         >158         2         2         2         2           Potassium         ppm         ASTM D5185m         >20         2         4         <1	Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	65 0 30 <1 898 1425 798	57 0 30 <1 951 1624 909	66 0 27 <1 917 1619 763
Sodium         ppm         ASTM D5185m         >158         2         2         2           Potassium         ppm         ASTM D5185m         >20         2         4         <1	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	65 0 30 <1 898 1425 798	57 0 30 <1 951 1624 909 1035	66 0 27 <1 917 1619 763
Potassium         ppm         ASTM D5185m         >20         2         4         <1	Barium 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 ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	65 0 30 <1 898 1425 798 909 3533	57 0 30 <1 951 1624 909 1035 3648	66 0 27 <1 917 1619 763 941 3211
Water         %         ASTM D6304         >0.1         NEG         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1         0.3         0.2           Nitration         Abs/cm         *ASTM D7624         >20         8.2         10.8         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.9         21.8         20.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.6         20.0         17.6	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	65 0 30 <1 898 1425 798 909 3533	57 0 30 <1 951 1624 909 1035 3648 history1	66 0 27 <1 917 1619 763 941 3211 history2
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1         0.3         0.2           Nitration         Abs/cm         *ASTM D7624         >20         8.2         10.8         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.9         21.8         20.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.6         20.0         17.6	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25	65 0 30 <1 898 1425 798 909 3533 current	57 0 30 <1 951 1624 909 1035 3648 history1	66 0 27 <1 917 1619 763 941 3211 history2
Soot %         %         *ASTM D7844         0.1         0.3         0.2           Nitration         Abs/cm         *ASTM D7624         >20         8.2         10.8         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.9         21.8         20.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.6         20.0         17.6	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158	65 0 30 <1 898 1425 798 909 3533 current 3 2	57 0 30 <1 951 1624 909 1035 3648 history1	66 0 27 <1 917 1619 763 941 3211 history2 3
Nitration         Abs/cm         *ASTM D7624         >20         8.2         10.8         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.9         21.8         20.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.6         20.0         17.6	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	65 0 30 <1 898 1425 798 909 3533 current 3 2	57 0 30 <1 951 1624 909 1035 3648 history1 4	66 0 27 <1 917 1619 763 941 3211 history2 3 2 <1
Sulfation         Abs/.1mm         *ASTM D7415         >30         19.9         21.8         20.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.6         20.0         17.6	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >0.1	65 0 30 <1 898 1425 798 909 3533 current 3 2 2 NEG	57 0 30 <1 951 1624 909 1035 3648 history1 4 2 4 NEG	66 0 27 <1 917 1619 763 941 3211 history2 3 2 <1 NEG
Sulfation         Abs/.1mm         *ASTM D7415         >30         19.9         21.8         20.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.6         20.0         17.6	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >0.1	65 0 30 <1 898 1425 798 909 3533 current 3 2 2 NEG	57 0 30 <1 951 1624 909 1035 3648 history1 4 2 4 NEG history1	66 0 27 <1 917 1619 763 941 3211 history2 3 2 <1 NEG history2
Oxidation Abs/.1mm *ASTM D7414 >25 <b>15.6</b> 20.0 17.6	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water INFRA-RED Soot %	ppm	ASTM D5185m ASTM D6304  method  *ASTM D7844	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >0.1 limit/base	65 0 30 <1 898 1425 798 909 3533 current 3 2 2 NEG current 0.1	57 0 30 <1 951 1624 909 1035 3648 history1 4 2 4 NEG history1 0.3	66 0 27 <1 917 1619 763 941 3211 history2 3 2 <1 NEG history2 0.2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304  method  *ASTM D7844  *ASTM D7844	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >0.1 limit/base	65 0 30 <1 898 1425 798 909 3533 current 3 2 2 NEG current 0.1 8.2	57 0 30 <1 951 1624 909 1035 3648 history1 4 2 4 NEG history1 0.3 10.8	66 0 27 <1 917 1619 763 941 3211 history2 3 2 <1 NEG history2 0.2 9.8
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304  method  *ASTM D7844 *ASTM D7624 *ASTM D76145	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >0.1 limit/base	65 0 30 <1 898 1425 798 909 3533 current 3 2 2 NEG current 0.1 8.2 19.9	57 0 30 <1 951 1624 909 1035 3648 history1 4 2 4 NEG history1 0.3 10.8 21.8	66 0 27 <1 917 1619 763 941 3211 history2 3 2 <1 NEG history2 0.2 9.8 20.7
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304  *ASTM D7844  *ASTM D7844  *ASTM D7844  *ASTM D7844	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >0.1 limit/base	65 0 30 <1 898 1425 798 909 3533 current 3 2 2 NEG current 0.1 8.2 19.9 current	57 0 30 <1 951 1624 909 1035 3648 history1 4 2 4 NEG history1 0.3 10.8 21.8 history1	66 0 27 <1 917 1619 763 941 3211 history2 3 2 <1 NEG history2 0.2 9.8 20.7 history2

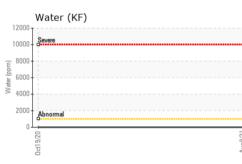


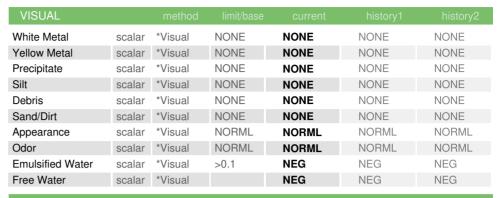
# OIL ANALYSIS REPORT



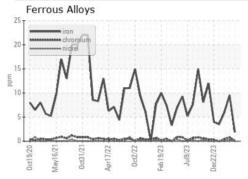


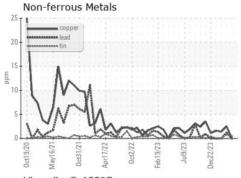


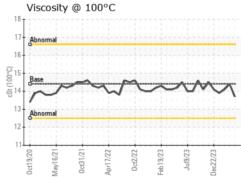


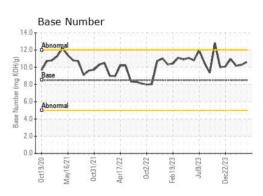


FLUID PROPER	ITIES	method				history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.7	14.4	14.1













Certificate 12367

Laboratory Sample No.

: WC0845943 Lab Number : 06157865 Unique Number : 10993288

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Test Package : IND 2 ( Additional Tests: KF )

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Received : 23 Apr 2024 **Tested** Diagnosed

: 25 Apr 2024

: 25 Apr 2024 - Sean Felton

101 12TH ST CATLETTSBURG, KY US 41169 Contact: CORY GUMBERT

MARATHON PETROLEUM CO.

cagumbert@marathonpetroleum.com T: (606)585-3950

 $^st$  - 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)

F: x: