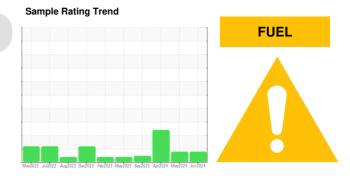


OIL ANALYSIS REPORT

Area KANSAS/44/HY - SKID STEER 53.157L [KANSAS^44^HY - SKID STEER] **Diesel Engine**

Fluid MOBIL DELVAC 1300 SUPER15W40 (2 GAL)



D	A	G١	NO	S	IS
_		····	•••	~	· •

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

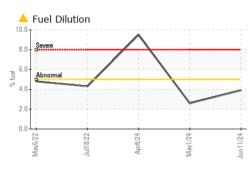
Fluid Condition

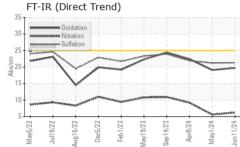
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

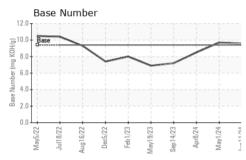
Sample NumberClient InfoWC0918270WC0918270WC0918270WC0918270WC0918270WC0918270WC0918270W08472024Sample DatehrsClient InfoIIIMarceWarceWarceValueVal	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 1937 1918 1836 Oil Age hrs Client Info 1 1836 467 Oil Changed Client Info Changed N/A Changed Sample Status Client Info Current history1 history2 Water WC Method >0.2 NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG Water WC Method >0.2 NEG NEG NEG Mickel ppm ASTM D5185m >100 1 2 7 Chromium ppm ASTM D5185m >2 0 0 0 Nickel ppm ASTM D5185m >2 0 0 0 Auminum ppm ASTM D5185m >2 0 0 0 Auminum ppm ASTM D5185m >2 0 0 0 Vanadium ppm ASTM D5185m 0 </td <td>Sample Number</td> <td></td> <td>Client Info</td> <td></td> <th>WC0918270</th> <td>WC0918221</td> <td>WC0918157</td>	Sample Number		Client Info		WC0918270	WC0918221	WC0918157
Oil Age Ins Client Info Instance Changed AFA Oil Changed Client Info Changed N/A Changed Sample Status Image Cuint Info Changed N/A SevErse CONTAMINATION method Imit/base current history1 history2 Water WC Method >0.2 NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG WEAR METALS method Imit/base current history1 history2 Iron ppm ASTM D5185m >20 0 0 <1	Sample Date		Client Info		11 Jun 2024	01 May 2024	08 Apr 2024
Oli Changed Client Info Changed N/A Changed Sample Status Image Image Current Nistory1 SEVERE CONTAMINATION Wet Method 0.2 NEG NEG NEG Water WC Method 0.2 NEG NEG NEG Giyool Image Current History1 History2 WEAR METALS method Imil/base current History1 History2 Iron ppm ASTM D518m >20 0 0 0 Nickel ppm ASTM D518m >2 0 0 0 Nickel ppm ASTM D518m >2 0 0 0 Aluminum ppm ASTM D518m >2 0 0 0 Aluminum ppm ASTM D518m >2 0 0 0 Adaminum ppm ASTM D518m >2 0 0 0 Vanadium ppm ASTM D518m >330 0 1 0 Vanadium ppm ASTM D518m 0 S3 S9 38 Baron ppm ASTM D518m 0 S3 S9 38	Machine Age	hrs	Client Info		1937	1918	1836
Sample Statusimate initial mit/baseMARGINALMARGINALSEVERECONTAMINATIONmethodimit/basecurrenthistory1history2WaterWC Method>0.2NEGNEGNEGGlycolImit/basecurrenthistory1history1WEAR METALSmethodimit/basecurrenthistory1history1IronppmASTM D5185>100127ChromiumppmASTM D5185>2000NickelppmASTM D5185>2000SilverppmASTM D5185>2000AuminumppmASTM D5185>25112LeadppmASTM D5185>40000CopperppmASTM D5185>40000VanadiumppmASTM D5185>15000VanadiumppmASTM D51850000ADDITIVESmethodImit/basecurrenthistory1history2BoronppmASTM D5185033333333BariumppmASTM D51850333333ManganeseppmASTM D51850353839ManganeseppmASTM D51850441485488CalciumppmASTM D518511181630163Phosphorus <td>Oil Age</td> <td>hrs</td> <td>Client Info</td> <td></td> <th>1</th> <td>1836</td> <td>467</td>	Oil Age	hrs	Client Info		1	1836	467
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 0 0 <1	Oil Changed		Client Info		Changed	N/A	Changed
Water WC Method >0.2 NEG NEG NEG Glycol WC Method Imit/base current history1 history2 Iron ppm ASTM D5185m >20 0 0 <1 Nickel ppm ASTM D5185m >20 0 0 <1 Silver ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Auminum ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >40 0 0 0 Cadmium ppm ASTM D5185m >15 0 0 0 Adminum ppm ASTM D5185m 0 53 59 38 Barum ppm ASTM D5185m 0 35 38 39	Sample Status				MARGINAL	MARGINAL	SEVERE
GlycolWC MethodNEGNEGNEGWEAR METALSmethodlimit/basecurrenthistory1history2IronppmASTM D5185m>2000<	CONTAMINATION	N	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 0 0 <1 Chromium ppm ASTM D5185m >20 0 0 <1 Nickel ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 <1 0 Aluminum ppm ASTM D5185m >2 0 <1 0 Aluminum ppm ASTM D5185m >2 0 <1 0 Cadadium ppm ASTM D5185m >40 0 0 0 Cadadium ppm ASTM D5185m >40 0 0 0 Cadadium ppm ASTM D5185m >15 0 0 0 Cadadium ppm ASTM D5185m 0 53 59 38 Barium ppm ASTM D5185m 0 38 39	Water		WC Method	>0.2	NEG	NEG	NEG
Inn ppm ASTM D5185m >100 1 2 7 Chromium ppm ASTM D5185m >20 0 0 <1	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 0 0 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >2 0 0 0 Titanium ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 <1	Iron	ppm	ASTM D5185m	>100	1	2	7
Titanium ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 <1	Chromium	ppm	ASTM D5185m	>20	0	0	<1
SilverppmASTM D5185m>20<10AluminumppmASTM D5185m>25112LeadppmASTM D5185m>40000CopperppmASTM D5185m>330016TinppmASTM D5185m>15000VanadiumppmASTM D5185m>15000CadmiumppmASTM D5185m0000ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m0533839ManganeseppmASTM D5185m0353839ManganeseppmASTM D5185m0481485488CalciumppmASTM D5185m0481485488CalciumppmASTM D5185m0481485488CalciumppmASTM D5185m0481485488CalciumppmASTM D5185m7497322788SulfurppmASTM D5185m20284328482365SulfurppmASTM D5185m>20244SodiumppmASTM D5185m>20222PotassiumppmASTM D5185m>202244SodiumppmASTM D5185m>202222NFRA-	Nickel		ASTM D5185m	>2	0	0	0
AluminumppmASTM D5185m>25112LeadppmASTM D5185m>40000CopperppmASTM D5185m>330016TinppmASTM D5185m>15000VanadiumppmASTM D5185m>15000CadmiumppmASTM D5185m00<1	Titanium	ppm	ASTM D5185m	>2	0	0	0
Lead ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >330 0 1 6 Tin ppm ASTM D5185m >15 0 0 0 Vanadium ppm ASTM D5185m >15 0 0 0 Cadmium ppm ASTM D5185m 0 0 <10 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 53 59 38 Barium ppm ASTM D5185m 0 35 38 39 Maganese ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 749 732 788 Zinc ppm ASTM D5185m 749 32 2643 2365 CONTAMINANTS method limit/base current history1 history	Silver	ppm	ASTM D5185m	>2	0	<1	0
Copper ppm ASTM D5185m >330 0 1 6 Tin ppm ASTM D5185m >15 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 53 59 38 Barium ppm ASTM D5185m 0 35 38 39 Marganese ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 749 732 788 Zinc ppm ASTM D5185m 26 5 4 4 Solium ppm ASTM D5185m 22 2 2 2 <	Aluminum	ppm	ASTM D5185m	>25	1	1	2
Tin ppm ASTM D5185m >15 0 0 0 Vanadium ppm ASTM D5185m Imit/base current history1 0 Cadmium ppm ASTM D5185m 0 53 59 38 Boron ppm ASTM D5185m 0 53 59 38 Barium ppm ASTM D5185m 0 35 38 39 Malganese ppm ASTM D5185m 0 35 38 39 Manganese ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 0 4865 879 913 Sulfur ppm ASTM D5185m 2843 2848 2365 CONTAMINANTS method limit/base current history1 history2 Sulfur ppm ASTM D5185m 20 2	Lead	ppm	ASTM D5185m	>40	0	0	0
Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 53 59 38 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 35 38 39 Manganese ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 1589 1618 1630 Sulfur ppm ASTM D5185m 2643 2848 2365 </td <td>Copper</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>330</td> <th>0</th> <td>1</td> <td>6</td>	Copper	ppm	ASTM D5185m	>330	0	1	6
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 53 59 38 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 35 38 39 Manganese ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 0 481 485 488 Salifur ppm ASTM D5185m 0 481 485 2365 ContrAdMINANTS ppm ASTM D5185m 225 5 4 4 Sodium ppm ASTM D5185m 220 2 <td>Tin</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>15</td> <th>0</th> <td>0</td> <td>0</td>	Tin	ppm	ASTM D5185m	>15	0	0	0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 53 59 38 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 35 38 39 Manganese ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 0 4865 879 913 Sulfur ppm ASTM D5185m 749 732 788 Sulfur ppm ASTM D5185m 2843 2843 2365 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m >20 2.6	Vanadium	ppm	ASTM D5185m		0	<1	0
Boron ppm ASTM D5185m 0 53 59 38 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 35 38 39 Manganese ppm ASTM D5185m 0 35 38 39 Magnesium ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 749 732 788 Zinc ppm ASTM D5185m 2843 2848 2365 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 <1 2 Potassium ppm ASTM D5185m >20 2.6 9.5	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 35 38 39 Manganese ppm ASTM D5185m <1 0 0 Magnesium ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 749 732 788 Zinc ppm ASTM D5185m 2843 2848 2365 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m >20 2 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 35 38 39 Manganese ppm ASTM D5185m <1							
Maganese ppm ASTM D5185m <1 0 0 Magnesium ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 0 481 485 488 Phosphorus ppm ASTM D5185m 749 732 788 Zinc ppm ASTM D5185m 749 732 788 Sulfur ppm ASTM D5185m 2843 2848 2365 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 <1	Boron	ppm	ASTM D5185m	0	53		38
Magnesium ppm ASTM D5185m 0 481 485 488 Calcium ppm ASTM D5185m 1589 1618 1630 Phosphorus ppm ASTM D5185m 749 732 788 Zinc ppm ASTM D5185m 865 879 913 Sulfur ppm ASTM D5185m 2843 2848 2365 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m >20 2 <1						59	
Calcium ppm ASTM D5185m 1589 1618 1630 Phosphorus ppm ASTM D5185m 749 732 788 Zinc ppm ASTM D5185m 865 879 913 Sulfur ppm ASTM D5185m 2843 2848 2365 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m >20 2 <1	Barium	ppm	ASTM D5185m	0	0 35	59 0	0 39
PhosphorusppmASTM D5185m749732788ZincppmASTM D5185m865879913SulfurppmASTM D5185m284328482365CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25544SodiumppmASTM D5185m>202<1	Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0	0 35 <1	59 0 38 0	0 39 0
Zinc ppm ASTM D5185m 865 879 913 Sulfur ppm ASTM D5185m 2843 2848 2365 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m >20 2 <1	Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	0 35 <1	59 0 38 0 485	0 39 0 488
SulfurppmASTM D5185m284328482365CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25544SodiumppmASTM D5185m>202<1	Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	0 35 <1 481 1589	59 0 38 0 485 1618	0 39 0 488 1630
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25544SodiumppmASTM D5185m>202<1	Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	0 35 <1 481 1589 749	59 0 38 0 485 1618 732	0 39 0 488 1630 788
Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m >20 3 2 2 Potassium ppm ASTM D5185m >20 2 <1 2 Fuel % ASTM D3524 >5 ▲ 3.9 ▲ 2.6 ▲ 9.5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 6.2 5.6 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 21.3 21.2 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.7 19.1 22.4	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	0	0 35 <1 481 1589 749 865	59 0 38 0 485 1618 732 879	0 39 0 488 1630 788 913
Sodium ppm ASTM D5185m 3 2 2 Potassium ppm ASTM D5185m >20 2 <1 2 Fuel % ASTM D5185m >20 2 <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	0	0 35 <1 481 1589 749 865	59 0 38 0 485 1618 732 879	0 39 0 488 1630 788 913
Potassium ppm ASTM D5185m >20 2 <1	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0	0 35 <1 481 1589 749 865 2843	59 0 38 0 485 1618 732 879 2848	0 39 0 488 1630 788 913 2365
Fuel % ASTM D3524 >5 ▲ 3.9 ▲ 2.6 ▲ 9.5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 6.2 5.6 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 21.3 21.2 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.7 19.1 22.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 Imit/base	0 35 <1 481 1589 749 865 2843 current	59 0 38 0 485 1618 732 879 2848 history1	0 39 0 488 1630 788 913 2365 history2
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 6.2 5.6 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 21.3 21.2 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.7 19.1 22.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 0 Imit/base	0 35 <1 481 1589 749 865 2843 current 5	59 0 38 0 485 1618 732 879 2848 history1 4 2	0 39 0 488 1630 788 913 2365 history2 4 2
Soot % % *ASTM D7844 >3 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 6.2 5.6 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 21.3 21.2 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.7 19.1 22.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 limit/base >25 >20	0 35 <1 481 1589 749 865 2843 <u>current</u> 5 3 2	59 0 38 0 485 1618 732 879 2848 history1 4 2 2 <1	0 39 0 488 1630 788 913 2365 history2 4 2 2
Nitration Abs/cm *ASTM D7624 >20 6.2 5.6 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 21.3 21.2 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.7 19.1 22.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 limit/base >25 >20	0 35 <1 481 1589 749 865 2843 <u>current</u> 5 3 2	59 0 38 0 485 1618 732 879 2848 history1 4 2 2 <1	0 39 0 488 1630 788 913 2365 history2 4 2 2
Sulfation Abs/.1mm *ASTM D7415 >30 21.3 21.2 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.7 19.1 22.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1 1 1 1 1 1 1 1 1 1 2 1 1 1 1 2 1	0 35 <1 481 1589 749 865 2843 <u>current</u> 5 3 2 2 3 3 2 2 3.9	59 0 38 0 485 1618 732 879 2848 history1 4 2 2 4 2 2 <1 ▲ 2.6	0 39 0 488 1630 788 913 2365 history2 4 2 2 2 2 9.5
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.7 19.1 22.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 35 <1 481 1589 749 865 2843 <i>current</i> 5 3 2 2 3 2 3.9 <i>current</i>	59 0 38 0 485 1618 732 879 2848 history1 4 2 2 4 2 2 4 2 2 4 2 2 4 2 2 6 history1 0.1	0 39 0 488 1630 788 913 2365 history2 4 2 2 2 2 1 4 2 2 9.5
Oxidation Abs/.1mm *ASTM D7414 >25 19.7 19.1 22.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 35 <1 481 1589 749 865 2843 <u>current</u> 5 3 2 3 2 3.9 <u>current</u> 0.1	59 0 38 0 485 1618 732 879 2848 history1 4 2 2 4 2 2 4 2 2 4 2 2 4 2 2 6 history1 0.1	0 39 0 488 1630 788 913 2365 history2 4 2 2 2 3 4 2 2 9.5 history2 0.1
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5244 *ASTM D7844 *ASTM D7844	0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 35 <1 481 1589 749 865 2843 <u>current</u> 5 3 2 3 2 ▲ 3.9 <u>current</u> 0.1 6.2	59 0 38 0 485 1618 732 879 2848 history1 4 2 2 <1 2 .6 × 1 2.6 ×	0 39 0 488 1630 788 913 2365 history2 4 2 2 2 2 9.5 history2 0.1 9.2
Base Number (BN) mg KOH/g ASTM D2896 9.4 9.6 9.7 8.5	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D51854 *ASTM D7844 *ASTM D7824	0 0 0 1 0 2 5 2 5 1 1 1 1 1 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2	0 35 <1 481 1589 749 865 2843 <u>current</u> 5 3 2 3.9 <u>current</u> 0.1 6.2 21.3	59 0 38 0 485 1618 732 879 2848 history1 4 2 2 4 2 2 4 2 2 4 2 2 6 history1 0.1 5.6 21.2	0 39 0 488 1630 788 913 2365 history2 4 2 2 9.5 history2 0.1 9.2 21.9
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 method *ASTM D7844 *ASTM D7844 *ASTM D7615	0 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	0 35 <1 481 1589 749 865 2843 current 5 3 2 3 2 3.9 current 0.1 6.2 21.3 current	59 0 38 0 485 1618 732 879 2848 history1 4 2 2 4 2 2 4 2 2 4 2 2 4 2 6 history1 0.1 5.6 21.2 history1	0 39 0 488 1630 788 913 2365 history2 4 2 2 9.5 history2 0.1 9.2 21.9

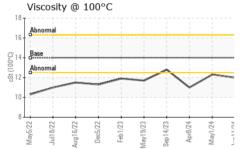


OIL ANALYSIS REPORT



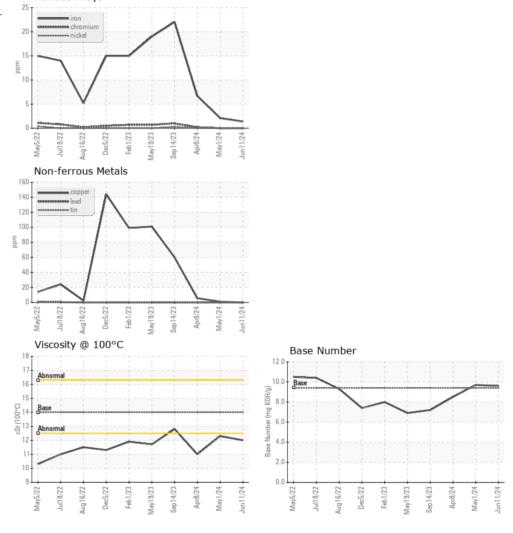


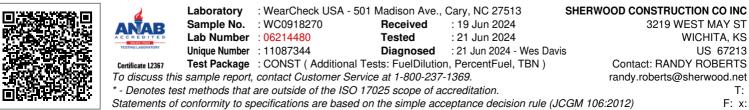




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	TIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14	12.0	12.3	▲ 11.0
GRAPHS						

Ferrous Alloys





Report Id: SHEWIC [WUSCAR] 06214480 (Generated: 06/21/2024 16:50:12) Rev: 1

Submitted By: JAMES MOORE

Page 2 of 2