

(BL29648)

## **OIL ANALYSIS REPORT**

Sample Rating Trend

WEAR



**ISUZU RO366948** Component **Diesel Engine** SAE 5W30 (--- GAL)

#### DIAGNOSIS

#### Recommendation

We advise that you check for visible metal particles in the oil. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

### **Wear**

PQ levels are severe. Aluminum and iron ppm levels are abnormal. Light concentration of visible metal present. Piston, ring and cylinder wear is indicated. Cylinder, crank, or cam shaft wear is indicated. Piston wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring.

#### Contamination

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

#### Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sample Number   Client Info   28 Mar 2024       Sample Date   Client Info   28 Mar 2024       Machine Age   kms   Client Info   8000       Oil Age   kms   Client Info   8000       Oil Changed   Client Info   Not Changd       CONTAMINATION   method   Imil/base       CONTAMINATION   WC Method   >D.2   NEG       Vater   WC Method   >D.2   NEG       Water   WC Method   >D.2   NEG       NetAge   Math   4   633       Notekel   ppm   ASTM 05165   >20   4       Notekel   ppm   ASTM 05165   >20   4       Silver   ppm   ASTM 05165   >20   4       Notekel   ppm   ASTM 05165   >20	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age     Kms     Client Info     48202         Oil Age     Kms     Client Info     8000         Sample Status     I     Imit/base     current     History1        CONTAMINATION     method     SEVERE          Glycol     Imit/base     current     History1     History2       Water     WC Method     >0.2     NEG         WEAR METALS     method     Imit/base     current     History1     History2       PQ     ASTM D5185(m     >20     16          Nickel     ppm     ASTM D5185(m     >20     4     4         Aluminum     ppm     ASTM D5185(m     >20     4     91         Copper     ppm     ASTM D5185(m     >30     16         Copper     ppm     ASTM D5185(m     >26	Sample Number		Client Info		WC0908219		
Oil Age     kms     Client Info     8000         Oil Changed     Client Info     Not Changed         Sample Status     I     Imit/base     current     History1     History2       Water     WC Method     O     NEG         WEAR METALS     method     Imit/base     current     History1     History2       PQ     ASTM DB184/     A 633          WEAR METALS     method     Imit/base     current     History1     History2       PQ     ASTM DB186/m     >100     A 141          Nickel     ppm     ASTM DB186/m     >20     16         Nickel     ppm     ASTM DB186/m     >4          Silver     ppm     ASTM DB186/m     >4          Copper     ppm     ASTM DB186/m     >40     0         An	Sample Date		Client Info		28 Mar 2024		
Oil Changed     Client Info     Not Changed         Sample Status     Image of the status       CONTAMINATION     method     imit/base     current     History1     History2       Water     WC Method     >0.2     NEG         WEAR METALS     method     imit/base     current     History1     History2       PQ     ASTM 05165(m)     >100     4 633         Iron     ppm     ASTM 05155(m)     >20     16         Silver     ppm     ASTM 05155(m)     >20     911         Silver     ppm     ASTM 05155(m)     >20     911	Machine Age	kms	Client Info		48202		
Sample Status     Image: status     SEVERE      Initional status       CONTAMINATION     method     imil/base     current     History1     History2       Water     WC Method     >0.2     NEG         Glycol     WC Method     NEG         WEAR METALS     method     Imil/base     current     History1     history2       PQ     ASTM D5185(m)     >100     414         Chromium     ppm     ASTM D5185(m)     >20     16         Nickel     ppm     ASTM D5185(m)     >20     91         Lead     ppm     ASTM D5185(m)     >33     16         Autimonu     ppm     ASTM D5185(m)     >30     16         Autimony     ppm     ASTM D5185(m)     >10          Autimony     ppm     ASTM D5185(m)     0	Oil Age	kms	Client Info		8000		
CONTAMINATION     method     limit/base     current     history1     history2       Water     WC Method     >0.2     NEG         Glycol     WC Method     NEG         WEAR METALS     method     Imit/base     current     history1     history2       PQ     ASTM D8184/m     633         Iron     ppm     ASTM D8185/m     >20     16         Nickel     ppm     ASTM D8185/m     >20     16         Silver     ppm     ASTM D8185/m     >20     4     4         Lead     ppm     ASTM D8185/m     >20     4     91         Copper     ppm     ASTM D8185/m     >20     6     91         Lead     ppm     ASTM D8185/m     >30     16          Copper     ppm     ASTM D8185/m     >30     0	Oil Changed		Client Info		Not Changd		
Water     WC Method     >0.2     NEG         Glycol     WC Method     Imit/base     current     history1     history2       PQ     ASTM DB184'     ASTM Db185(m)     >100     414         Iron     ppm     ASTM Db185(m)     >20     16         Nickel     ppm     ASTM Db185(m)     >20     16         Nickel     ppm     ASTM Db185(m)     >20     16         Silver     ppm     ASTM Db185(m)     >20     4     4         Glycer     ppm     ASTM Db185(m)     >30     0         Silver     ppm     ASTM Db185(m)     >30     16         Lead     ppm     ASTM Db185(m)     >30     16         Copper     ppm     ASTM Db185(m)     0         Attmony     ppm     ASTM Db185(m)     0 <th< th=""><th>Sample Status</th><th></th><th></th><th></th><th>SEVERE</th><th></th><th></th></th<>	Sample Status				SEVERE		
Caligood     WC Method     NEC         WEAR METALS     method     Imit/base     current     history1     history2       PQ     ASTM D8184//     633         Iron     ppm     ASTM D5185(m)     >100     4     414         Chromium     ppm     ASTM D5185(m)     >20     16         Nickel     ppm     ASTM D5185(m)     >20     16         Nickel     ppm     ASTM D5185(m)     >20     4     91         Aluminum     ppm     ASTM D5185(m)     >30     16         Lead     ppm     ASTM D5185(m)     >30     16         Aluminum     ppm     ASTM D5185(m)     >10          Antimony     ppm     ASTM D5185(m)     0          Antimony     ppm     ASTM D5185(m)     0	CONTAMINATION	١	method	limit/base	current	history1	history2
WEAR METALS     method     limit/base     current     history1     history2       PQ     ASTM D8184'     ▲ 633          Chromium     ppm     ASTM D5185(m)     >20     16         Nickel     ppm     ASTM D5185(m)     >4     4         Nickel     ppm     ASTM D5185(m)     >4     4         Nickel     ppm     ASTM D5185(m)     >4     4         Aluminum     ppm     ASTM D5185(m)     >20     ▲ 91         Lead     ppm     ASTM D5185(m)     >20     ▲ 91         Antimony     ppm     ASTM D5185(m)     0          Vanadium     ppm     ASTM D5185(m)     0          Vanadium     ppm     ASTM D5185(m)     0          Beryllium     ppm     ASTM D51	Water		WC Method	>0.2	NEG		
PQ   ASTM D8184'   ▲ 633       Iron   ppm   ASTM D6185(m)   >100   ▲ 114       Nickel   ppm   ASTM D5185(m)   >20   16       Nickel   ppm   ASTM D5185(m)   >4   4       Silver   ppm   ASTM D5185(m)   >3   0       Lead   ppm   ASTM D5185(m)   >20   ▲ 91       Lead   ppm   ASTM D5185(m)   >20   ▲ 91       Lead   ppm   ASTM D5185(m)   >330   16       Copper   ppm   ASTM D5185(m)   0        Antimony   ppm   ASTM D5185(m)   0         Antimony   ppm   ASTM D5185(m)   0                  <	Glycol		WC Method		NEG		
Iron     ppm     ASTM D5185(m)     >100     ▲ 414         Chromium     ppm     ASTM D5185(m)     >20     16         Nickel     ppm     ASTM D5185(m)     >4     4         Titanium     ppm     ASTM D5185(m)     >3     0         Aluminum     ppm     ASTM D5185(m)     >3     0         Lead     ppm     ASTM D5185(m)     >30     16         Copper     ppm     ASTM D5185(m)     >30     16         Antimony     ppm     ASTM D5185(m)     0          Vanadium     ppm     ASTM D5185(m)     0          Cadmium     ppm     ASTM D5185(m)     0          ASTM D5185(m)     Imit/base     current     history1     history2       Boron     ppm     ASTM D5185(m)     2	WEAR METALS		method	limit/base	current	history1	history2
Chromium     ppm     ASTM D5185(m)     >20     16         Nickel     ppm     ASTM D5185(m)     >4     4         Silver     ppm     ASTM D5185(m)     >3     0         Aluminum     ppm     ASTM D5185(m)     >20     ▲ 91         Lead     ppm     ASTM D5185(m)     >20     ▲ 91         Copper     ppm     ASTM D5185(m)     >33     16         Copper     ppm     ASTM D5185(m)     >30     16         Antimony     ppm     ASTM D5185(m)     0          Vanadium     ppm     ASTM D5185(m)     0          Cadmium     ppm     ASTM D5185(m)     0          Rom     ppm     ASTM D5185(m)     70          Magnesium     ppm     ASTM D5185(	PQ		ASTM D8184*		<b>633</b>		
Nickel     ppm     ASTM D5185(m)     >4     4         Titanium     ppm     ASTM D5185(m)     >3     0         Silver     ppm     ASTM D5185(m)     >3     0         Aluminum     ppm     ASTM D5185(m)     >20     ▲     91         Lead     ppm     ASTM D5185(m)     >20     ▲     91         Copper     ppm     ASTM D5185(m)     >330     16         Antimony     ppm     ASTM D5185(m)     >15     26         Antimony     ppm     ASTM D5185(m)     0          Servinum     ppm     ASTM D5185(m)     0          Cadmium     ppm     ASTM D5185(m)     0          Magname     ppm     ASTM D5185(m)     70          Magnaesium	Iron	ppm	ASTM D5185(m)	>100	<u> </u>		
TitaniumppmASTM D5185(m)2SilverppmASTM D5185(m)>30AluminumppmASTM D5185(m)>2091LeadppmASTM D5185(m)>400CopperppmASTM D5185(m)>33016TinppmASTM D5185(m)>1526VanadiumppmASTM D5185(m)0VanadiumppmASTM D5185(m)0BerylliumppmASTM D5185(m)0CadmiumppmASTM D5185(m)0ADDITVESmethodImit/basecurrenthistory1history2BoronppmASTM D5185(m)70MalganeseppmASTM D5185(m)70MarganeseppmASTM D5185(m)498CalciumppmASTM D5185(m)651SulfurppmASTM D5185(m)2261SulfurppmASTM D5185(m)2261SulfurppmASTM D5185(m)2261SulfurppmASTM D5185(m)2261SulfurppmASTM D5185(m)>254SulfurppmA	Chromium	ppm	ASTM D5185(m)	>20	16		
Silver     ppm     ASTM D5188(m)     >3     0         Aluminum     ppm     ASTM D5185(m)     >20     Image: Silver         Lead     ppm     ASTM D5185(m)     >20     Image: Silver         Copper     ppm     ASTM D5185(m)     >330     16         Tin     ppm     ASTM D5185(m)     >15     26         Antimony     ppm     ASTM D5185(m)     0         Vanadium     ppm     ASTM D5185(m)     0         Vanadium     ppm     ASTM D5185(m)     0         Cadmium     ppm     ASTM D5185(m)     0         ADDITVES     method     Imit/base     current     history1     history2       Boron     ppm     ASTM D5185(m)     70         Maganese     ppm     ASTM D5185(m)     498	Nickel	ppm	ASTM D5185(m)	>4	4		
Aluminum     ppm     ASTM D5185(m)     >20     ▲ 91         Lead     ppm     ASTM D5185(m)     >40     0         Copper     ppm     ASTM D5185(m)     >330     16         Tin     ppm     ASTM D5185(m)     >15     26         Antimony     ppm     ASTM D5185(m)     0         Vanadium     ppm     ASTM D5185(m)     0         Beryllium     ppm     ASTM D5185(m)     0         ADDITIVES     method     Imit/base     current     history1     history2       Boron     ppm     ASTM D5185(m)     57         Molybdenum     ppm     ASTM D5185(m)     70         Manganese     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     651         Sulfur <t< td=""><td>Titanium</td><td>ppm</td><td>ASTM D5185(m)</td><td></td><th>2</th><td></td><td></td></t<>	Titanium	ppm	ASTM D5185(m)		2		
Lead     ppm     ASTM D5185(m)     >40     0         Copper     ppm     ASTM D5185(m)     >330     16         Tin     ppm     ASTM D5185(m)     >15     26         Antimony     ppm     ASTM D5185(m)     0         Vanadium     ppm     ASTM D5185(m)     0         Beryllium     ppm     ASTM D5185(m)     0         Cadmium     ppm     ASTM D5185(m)     0         ADDITIVES     method     Imit/base     current     history1     history2       Boron     ppm     ASTM D5185(m)     57         Malganese     ppm     ASTM D5185(m)     70         Magnesium     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     2261         Sulfur     ppm<	Silver	ppm	ASTM D5185(m)	>3	0		
Copper     ppm     ASTM D5185(m)     >330     16         Tin     ppm     ASTM D5185(m)     >15     26         Antimony     ppm     ASTM D5185(m)     0         Vanadium     ppm     ASTM D5185(m)     0         Beryllium     ppm     ASTM D5185(m)     0         Cadmium     ppm     ASTM D5185(m)     0         ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185(m)     57         Magnaese     ppm     ASTM D5185(m)     70         Magnesium     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     651         Yance     ppm     ASTM D5185(m)     2261         Sulfur     ppm <t< td=""><td>Aluminum</td><td>ppm</td><td>ASTM D5185(m)</td><td>&gt;20</td><th><b>4</b> 91</th><td></td><td></td></t<>	Aluminum	ppm	ASTM D5185(m)	>20	<b>4</b> 91		
Tim D P P AP P AASTM D5185(m)>1526Antimony VanadiumppmASTM D5185(m)0VanadiumppmASTM D5185(m)0BerylliumppmASTM D5185(m)0CadmiumppmASTM D5185(m)0ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185(m)57MalybdenumppmASTM D5185(m)70ManganeseppmASTM D5185(m)498CalciumppmASTM D5185(m)498MagnesiumppmASTM D5185(m)651PhosphorusppmASTM D5185(m)2261ZincppmASTM D5185(m)2261SulfurppmASTM D5185(m)>2261SulfurppmASTM D5185(m)>201SodiumppmASTM D5185(m)>201SodiumppmASTM D5185(m)>201SodiumppmASTM D5185(m)>201Fuel%ASTM D5185(m)>201SodiumppmASTM D5185(m)>201<	Lead	ppm	ASTM D5185(m)	>40	0		
Antimony     ppm     ASTM D5185(m)     0         Vanadium     ppm     ASTM D5185(m)     0         Beryllium     ppm     ASTM D5185(m)     0         Cadmium     ppm     ASTM D5185(m)     0         Cadmium     ppm     ASTM D5185(m)     0         ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185(m)     57         Malganese     ppm     ASTM D5185(m)     70         Magnesium     ppm     ASTM D5185(m)     4         Magnesium     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     651         Vinc     ppm     ASTM D5185(m)     2261         Sulfur     ppm     ASTM D5185(m)     >25     54	Copper	ppm	ASTM D5185(m)	>330	16		
Vanadium     ppm     ASTM D5185(m)     0         Beryllium     ppm     ASTM D5185(m)     0         Cadmium     ppm     ASTM D5185(m)     0         ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185(m)     57         Barium     ppm     ASTM D5185(m)     70         Molybdenum     ppm     ASTM D5185(m)     4         Magnesse     ppm     ASTM D5185(m)     498         Magnesium     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     498         Sulfur     ppm     ASTM D5185(m)     1195         Sulfur     ppm     ASTM D5185(m)     2261         Sulfur     ppm     ASTM D5185(m)     >25 </td <td>Tin</td> <td>ppm</td> <td>ASTM D5185(m)</td> <td>&gt;15</td> <th>26</th> <td></td> <td></td>	Tin	ppm	ASTM D5185(m)	>15	26		
Beryllium     ppm     ASTM D5185(m)     0         Cadmium     ppm     ASTM D5185(m)     0         ADDITIVES     method     limil/base     current     history1     history2       Boron     ppm     ASTM D5185(m)     57         Barium     ppm     ASTM D5185(m)     2         Molybdenum     ppm     ASTM D5185(m)     70         Magnesium     ppm     ASTM D5185(m)     44         Magnesium     ppm     ASTM D5185(m)     4988         Calcium     ppm     ASTM D5185(m)     4988         Calcium     ppm     ASTM D5185(m)     651         Sulfur     ppm     ASTM D5185(m)     2261         Sulfur     ppm     ASTM D5185(m)     >225     54         Sodium     ppm     ASTM D5185(m)	Antimony	ppm	ASTM D5185(m)		0		
Cadmium     ppm     ASTM D5185(m)     0         ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185(m)     57         Barium     ppm     ASTM D5185(m)     2         Molybdenum     ppm     ASTM D5185(m)     70         Manganese     ppm     ASTM D5185(m)     44         Magnesium     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     651         Value     ppm     ASTM D5185(m)     22611         Sulfur     ppm     ASTM D5185(m)     22611         Sulfur     ppm     ASTM D5185(m)     >25     54         Sulfur     ppm     ASTM D5185(m)     >20     1         Sodium     ppm     <	Vanadium	ppm	ASTM D5185(m)		0		
ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185(m)     57         Barium     ppm     ASTM D5185(m)     2         Molybdenum     ppm     ASTM D5185(m)     70         Manganese     ppm     ASTM D5185(m)     44         Magnesium     ppm     ASTM D5185(m)     4988         Calcium     ppm     ASTM D5185(m)     4988         Calcium     ppm     ASTM D5185(m)     651         Vinc     ppm     ASTM D5185(m)     2261         Sulfur     ppm     ASTM D5185(m)     <21	Beryllium	ppm	ASTM D5185(m)		0		
Boron     ppm     ASTM D5185(m)     57         Barium     ppm     ASTM D5185(m)     2         Molybdenum     ppm     ASTM D5185(m)     70         Manganese     ppm     ASTM D5185(m)     4         Magnesium     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     1195         Zinc     ppm     ASTM D5185(m)     651         Sulfur     ppm     ASTM D5185(m)     2261         Sulfur     ppm     ASTM D5185(m)     >25     54         Sodium     ppm     ASTM D5185(m)     >20     1         Fuel     %     ASTM D5185(m) <td>Cadmium</td> <td>ppm</td> <td>ASTM D5185(m)</td> <td></td> <th>0</th> <td></td> <td></td>	Cadmium	ppm	ASTM D5185(m)		0		
Barium     ppm     ASTM D5185(m)     2         Molybdenum     ppm     ASTM D5185(m)     70         Manganese     ppm     ASTM D5185(m)     4         Magnesium     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     1195         Zinc     ppm     ASTM D5185(m)     2261         Sulfur     ppm     ASTM D5185(m)     2261         Lithium     ppm     ASTM D5185(m)     >25     54         Solicon     ppm     ASTM D5185(m)     >20     1            Fuel     %     ASTM D7593*	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum     ppm     ASTM D5185(m)     70         Manganese     ppm     ASTM D5185(m)     4         Magnesium     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     651         Phosphorus     ppm     ASTM D5185(m)     651         Zinc     ppm     ASTM D5185(m)     2261         Sulfur     ppm     ASTM D5185(m)     2261         Lithium     ppm     ASTM D5185(m)           Solicon     ppm     ASTM D5185(m)     >25     54         Solicon     ppm     ASTM D5185(m)     >20     1         Fuel     %     ASTM D5185(m)     >20     1    INFRA-RED     method <td< td=""><td>Boron</td><td>ppm</td><td>ASTM D5185(m)</td><td></td><th>57</th><td></td><td></td></td<>	Boron	ppm	ASTM D5185(m)		57		
Manganese     ppm     ASTM D5185(m)     4         Magnesium     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     1195         Calcium     ppm     ASTM D5185(m)     651         Phosphorus     ppm     ASTM D5185(m)     651         Zinc     ppm     ASTM D5185(m)     2261         Sulfur     ppm     ASTM D5185(m)     2261         Lithium     ppm     ASTM D5185(m)     >25     54         Solicon     ppm     ASTM D5185(m)     >20     1         Sodium     ppm     ASTM D5185(m)     >20     1         Fuel     %     ASTM D5185(m)     >20     1         Fuel     %     ASTM D7593*     >5     Image: Aster ASTM D7624*	Barium	ppm	ASTM D5185(m)		2		
Magnesium     ppm     ASTM D5185(m)     498         Calcium     ppm     ASTM D5185(m)     1195         Phosphorus     ppm     ASTM D5185(m)     651         Zinc     ppm     ASTM D5185(m)     651         Sulfur     ppm     ASTM D5185(m)     2261         Lithium     ppm     ASTM D5185(m)     2261         Solicon     ppm     ASTM D5185(m)     >25     54         Solicon     ppm     ASTM D5185(m)     >25     54         Solicon     ppm     ASTM D5185(m)     >20     1         Solium     ppm     ASTM D5185(m)     >20     1         Fuel     %     ASTM D7593*     >5     4.3         INFRA-RED     method     limit/base     current     history1     history2	Molybdenum	ppm	ASTM D5185(m)		70		
Calcum     ppm     ASTM D5185(m)     1195         Phosphorus     ppm     ASTM D5185(m)     651         Zinc     ppm     ASTM D5185(m)     744         Sulfur     ppm     ASTM D5185(m)     2261         Lithium     ppm     ASTM D5185(m)     2261         Lithium     ppm     ASTM D5185(m)     2261         Solicon     ppm     ASTM D5185(m)     <	Manganese	ppm	ASTM D5185(m)		4		
Phosphorus     ppm     ASTM D5185(m)     651         Zinc     ppm     ASTM D5185(m)     744         Sulfur     ppm     ASTM D5185(m)     2261         Lithium     ppm     ASTM D5185(m)      <1	Magnesium	ppm	ASTM D5185(m)		498		
Zinc     ppm     ASTM D5185(m)     744         Sulfur     ppm     ASTM D5185(m)     2261         Lithium     ppm     ASTM D5185(m)     <1	Calcium	ppm	ASTM D5185(m)		1195		
Sulfur     ppm     ASTM D5185(m)     2261         Lithium     ppm     ASTM D5185(m)     <1	Phosphorus	ppm	ASTM D5185(m)		651		
Lithium     ppm     ASTM D5185(m)     <1         CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185(m)     >25     54         Sodium     ppm     ASTM D5185(m)     >25     54         Sodium     ppm     ASTM D5185(m)     >20     1         Potassium     ppm     ASTM D5185(m)     >20     1         Fuel     %     ASTM D7593*     >5     ▲ 4.3         INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     ASTM D7844*     >3     0         Nitration     Abs/cm     ASTM D7624*     >20     11.7	Zinc	ppm	ASTM D5185(m)		744		
CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185(m)     >25     54         Sodium     ppm     ASTM D5185(m)     >25     54         Sodium     ppm     ASTM D5185(m)     >20     13         Potassium     ppm     ASTM D5185(m)     >20     1         Fuel     %     ASTM D7593*     >5     ▲ 4.3         INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     ASTM D7844*     >3     0         Nitration     Abs/cm     ASTM D7624*     >20     11.7	Sulfur	ppm	ASTM D5185(m)		2261		
Silicon     ppm     ASTM D5185(m)     >25     54         Sodium     ppm     ASTM D5185(m)     13         Potassium     ppm     ASTM D5185(m)     >20     1         Fuel     %     ASTM D7593*     >5     ▲ 4.3         INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     ASTM D7844*     >3     0         Nitration     Abs/cm     ASTM D7624*     >20     11.7	Lithium	ppm	ASTM D5185(m)		<1		
Sodium     ppm     ASTM D5185(m)     13         Potassium     ppm     ASTM D5185(m)     >20     1         Fuel     %     ASTM D7593*     >5     ▲ 4.3         INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     ASTM D7844*     >3     0         Nitration     Abs/cm     ASTM D7624*     >20     11.7	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium     ppm     ASTM D5185(m)     >20     1         Fuel     %     ASTM D7593*     >5     ▲ 4.3         INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     ASTM D7844*     >3     0         Nitration     Abs/cm     ASTM D7624*     >20     11.7	Silicon	ppm	ASTM D5185(m)	>25	54		
Fuel     %     ASTM D7593*     >5     ▲ 4.3         INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     ASTM D7844*     >3     0         Nitration     Abs/cm     ASTM D7624*     >20     11.7	Sodium	ppm	ASTM D5185(m)		13		
INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%ASTM D7844*>30NitrationAbs/cmASTM D7624*>2011.7	Potassium	ppm	ASTM D5185(m)	>20	1		
Soot %     %     ASTM D7844*     >3     0         Nitration     Abs/cm     ASTM D7624*     >20     11.7	Fuel	%	ASTM D7593*	>5	<b>4</b> .3		
Nitration     Abs/cm     ASTM D7624*     >20     11.7	INFRA-RED		method	limit/base	current	history1	history2
	Soot %	%	ASTM D7844*	>3	0		
Sulfation     Abs/.1mm     ASTM D7415*     >30     23.4	Nitration	Abs/cm	ASTM D7624*	>20	11.7		
	Sulfation	Abs/.1mm	ASTM D7415*	>30	23.4		



# **OIL ANALYSIS REPORT**

