

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id ISUZU 190178 Component

Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (11 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

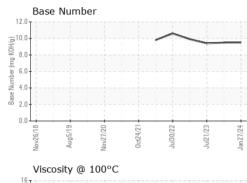
Fluid Condition

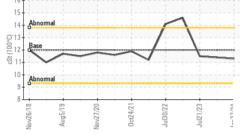
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

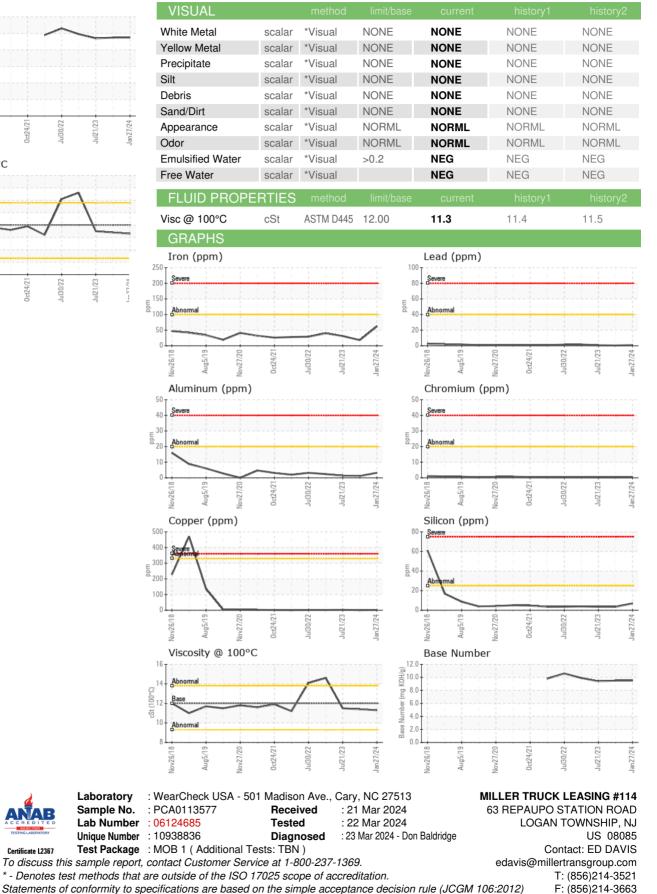
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0113577	PCA0097768	PCA0100949
Sample Date		Client Info		27 Jan 2024	26 Aug 2023	21 Jul 2023
Machine Age	mls	Client Info		130133	132893	0
Oil Age	mls	Client Info		10000	10000	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS method limit/base current history1 history2						
Iron	ppm	ASTM D5185m	>100	62	18	31
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	3	1	1
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	2	<1	2
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 19	history1 14	history2 22
	ppm ppm	ASTM D5185m				
Boron		ASTM D5185m	2	19	14	22
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0 50	19 2	14 0	22 <1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	19 2 82 <1 1164	14 0 58	22 <1 63
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	19 2 82 <1	14 0 58 1	22 <1 63 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	19 2 82 <1 1164	14 0 58 1 927	22 <1 63 <1 905
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	19 2 82 <1 1164 1586	14 0 58 1 927 1211	22 <1 63 <1 905 1130
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	19 2 82 <1 1164 1586 1372	14 0 58 1 927 1211 1077	22 <1 63 <1 905 1130 1016
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180	19 2 82 <1 1164 1586 1372 1622	14 0 58 1 927 1211 1077 1336	22 <1 63 <1 905 1130 1016 1229
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	19 2 82 <1 1164 1586 1372 1622 4800	14 0 58 1 927 1211 1077 1336 4159	22 <1 63 <1 905 1130 1016 1229 3711
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	19 2 82 <1 1164 1586 1372 1622 4800 current	14 0 58 1 927 1211 1077 1336 4159 history1	22 <1 63 <1 905 1130 1016 1229 3711 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	2 0 50 950 1050 995 1180 2600 limit/base >25	19 2 82 <1 1164 1586 1372 1622 4800 current 7	14 0 58 1 927 1211 1077 1336 4159 history1 3	22 <1 63 <1 905 1130 1016 1229 3711 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	19 2 82 <1 1164 1586 1372 1622 4800 current 7 2	14 0 58 1 927 1211 1077 1336 4159 history1 3 <	22 <1 63 <1 905 1130 1016 1229 3711 history2 4 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	19 2 82 <1 1164 1586 1372 1622 4800 current 7 2 2 2	14 0 58 1 927 1211 1077 1336 4159 history1 3 < 1 2	22 <1 63 <1 905 1130 1016 1229 3711 history2 4 3 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3	19 2 82 <1 1164 1586 1372 1622 4800 current 7 2 2 2 2 current	14 0 58 1 927 1211 1077 1336 4159 history1 3 <1 2 history1	22 <1 63 <1 905 1130 1016 1229 3711 history2 4 3 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3	19 2 82 <1 1164 1586 1372 1622 4800 current 7 2 2 2 2 2	14 0 58 1 927 1211 1077 1336 4159 history1 3 <1 2 history1 0.2	22 <1 63 <1 905 1130 1016 1229 3711 history2 4 3 2 history2 0.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	19 2 82 <1 1164 1586 1372 1622 4800 current 7 2 2 2 current 0.3 5.8	14 0 58 1 927 1211 1077 1336 4159 history1 3 3 <1 2 history1 0.2 4.8	22 <1 63 <1 905 1130 1016 1229 3711 history2 4 3 2 history2 0.3 5.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20	19 2 82 <1 1164 1586 1372 1622 4800 <u>current</u> 7 2 2 2 2 <u>current</u> 0.3 5.8 17.4	14 0 58 1 927 1211 1077 1336 4159 history1 3 <1 2 history1 0.2 4.8 16.8	22 <1 63 <1 905 1130 1016 1229 3711 history2 4 3 2 history2 0.3 5.3 17.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	2 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30	19 2 82 <1 1164 1586 1372 1622 4800 <i>current</i> 7 2 2 2 <i>current</i> 0.3 5.8 17.4 <i>current</i>	14 0 58 1 927 1211 1077 1336 4159 history1 3 <1 2 history1 0.2 4.8 16.8 history1	22 <1 63 <1 905 1130 1016 1229 3711 history2 4 3 2 history2 0.3 5.3 17.0 history2



OIL ANALYSIS REPORT







Certificate L2367

Laboratory

Contact/Location: ED DAVIS - MILLOG