

# **OIL ANALYSIS REPORT**

# Sample Rating Trend

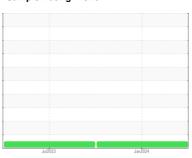
### **NORMAL**



# (AT643T) Supermarket - Tractor **MACK 107A1800**

Component **Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (11 GAL)





### 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

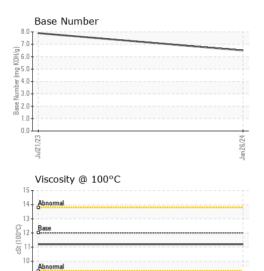
### **Fluid Condition**

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

Cample Number   Client Info   PCA0116480   PCA0100405   PCA010404   PCA010404   PCA010406   PCA010404	•	,		Jul2023	Jan 2024		
Client Info   Changed   Chan	SAMPLE INFORM	ATION	method				history2
Machine Age   mls   Client Info   21572   14001	Sample Number		Client Info		PCA0116480	PCA0100405	
Machine Age   mls   Client Info   21572   14001	Sample Date		Client Info		26 Jan 2024	21 Jul 2023	
Oil Age		mls	Client Info		311938	290366	
Contained   Client Info   Changed   Normal   N		mls	Client Info		21572	14001	
CONTAMINATION   method   imit/base   current   history1   history2	Oil Changed		Client Info		Changed	Changed	
Water	Sample Status					Ü	
Water         WC Method         >0.2         NEG         NEG	CONTAMINATIO	NC	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>3.0	<1.0	<1.0	
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	
Chromium	Glycol		WC Method		NEG	NEG	
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>120	11	9	
Nickel	Chromium	ppm	ASTM D5185m	>20	<1	<1	
Titanium							
Silver			ASTM D5185m	>2	0	<1	
Aluminum					0	<1	
Lead			ASTM D5185m	>20	2		
Copper         ppm         ASTM D5185m         >330         6         6            Tin         ppm         ASTM D5185m         >15         0         <1					2		
Tin					6		
Vanadium         ppm         ASTM D5185m         0         <1            Cadmium         ppm         ASTM D5185m         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         4         2            Barium         ppm         ASTM D5185m         0         5         0            Molybdenum         ppm         ASTM D5185m         0         62         65            Manganese         ppm         ASTM D5185m         0         0         <1            Magnesium         ppm         ASTM D5185m         950         905         967            Calcium         ppm         ASTM D5185m         995         972         1044            Zinc         ppm         ASTM D5185m         2600         2791         3575            CONTAMINANTS         method         limit/base         current         history1         history2           Solium         ppm         ASTM D5185m         >25         3         3 <th< td=""><td></td><td></td><td></td><td></td><th></th><td></td><td></td></th<>							
Cadmium         ppm         ASTM D5185m         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         4         2            Barium         ppm         ASTM D5185m         0         5         0            Molybdenum         ppm         ASTM D5185m         50         62         65            Manganese         ppm         ASTM D5185m         0         0         <1							
Boron   ppm   ASTM D5185m   2   4   2					-		
Barium         ppm         ASTM D5185m         0         5         0            Molybdenum         ppm         ASTM D5185m         50         62         65            Manganese         ppm         ASTM D5185m         0         0         <1            Magnesium         ppm         ASTM D5185m         950         905         967            Calcium         ppm         ASTM D5185m         1050         1083         1195            Calcium         ppm         ASTM D5185m         1050         1083         1195            Phosphorus         ppm         ASTM D5185m         995         972         1044            Zinc         ppm         ASTM D5185m         995         972         1044            Sulfur         ppm         ASTM D5185m         2600         2791         3575            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3            Sodium         ppm         ASTM D5185m	ADDITIVES		method	limit/base	current	history1	history2
Barium	Boron	ppm	ASTM D5185m	2	4	2	
Molybdenum         ppm         ASTM D5185m         50         62         65            Manganese         ppm         ASTM D5185m         0         0         <1	Barium	ppm	ASTM D5185m	0	5	0	
Manganese         ppm         ASTM D5185m         0         0         <1            Magnesium         ppm         ASTM D5185m         950         905         967            Calcium         ppm         ASTM D5185m         1050         1083         1195            Phosphorus         ppm         ASTM D5185m         995         972         1044            Zinc         ppm         ASTM D5185m         1180         1237         1278            Sulfur         ppm         ASTM D5185m         2600         2791         3575            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3            Sodium         ppm         ASTM D5185m         >20         3         0            Potassium         ppm         ASTM D5185m         >20         3         0            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624	Molybdenum	ppm	ASTM D5185m	50	62	65	
Magnesium         ppm         ASTM D5185m         950         905         967            Calcium         ppm         ASTM D5185m         1050         1083         1195            Phosphorus         ppm         ASTM D5185m         995         972         1044            Zinc         ppm         ASTM D5185m         1180         1237         1278            Sulfur         ppm         ASTM D5185m         2600         2791         3575            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3            Sodium         ppm         ASTM D5185m         >20         3         0            Potassium         ppm         ASTM D5185m         >20         3         0            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         9.0         8.0            Sulfation         Abs/.1mm         *ASTM D7414			ASTM D5185m	0	0	<1	
Calcium         ppm         ASTM D5185m         1050         1083         1195            Phosphorus         ppm         ASTM D5185m         995         972         1044            Zinc         ppm         ASTM D5185m         1180         1237         1278            Sulfur         ppm         ASTM D5185m         2600         2791         3575            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3            Sodium         ppm         ASTM D5185m         >20         3         0            Potassium         ppm         ASTM D5185m         >20         3         0            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.3         0.3            Nitration         Abs/cm         *ASTM D7415         >30         20.3         19.4            FLUID DEGRADATION         *ASTM D7		ppm	ASTM D5185m	950	905	967	
Phosphorus         ppm         ASTM D5185m         995         972         1044            Zinc         ppm         ASTM D5185m         1180         1237         1278            Sulfur         ppm         ASTM D5185m         2600         2791         3575            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3            Sodium         ppm         ASTM D5185m         >20         3         0            Potassium         ppm         ASTM D5185m         >20         3         0            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.3         0.3            Sulfation         Abs/cm         *ASTM D7624         >20         9.0         8.0            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 <td></td> <td></td> <td>ASTM D5185m</td> <td>1050</td> <th>1083</th> <td>1195</td> <td></td>			ASTM D5185m	1050	1083	1195	
Zinc         ppm         ASTM D5185m         1180         1237         1278            Sulfur         ppm         ASTM D5185m         2600         2791         3575            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3            Sodium         ppm         ASTM D5185m         <1			ASTM D5185m	995	972	1044	
Sulfur         ppm         ASTM D5185m         2600         2791         3575            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3         3            Sodium         ppm         ASTM D5185m         >20         3         0            Potassium         ppm         ASTM D5185m         >20         3         0            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.3         0.3            Sulfation         Abs/.1mm         *ASTM D7624         >20         9.0         8.0            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4         15.4			ASTM D5185m	1180	1237	1278	
Silicon         ppm         ASTM D5185m         >25         3         3            Sodium         ppm         ASTM D5185m         <1         6            Potassium         ppm         ASTM D5185m         >20         3         0            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.3         0.3            Nitration         Abs/cm         *ASTM D7624         >20         9.0         8.0            Sulfation         Abs/.1mm         *ASTM D7415         >30         20.3         19.4            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4         15.4				2600	2791	3575	
Sodium         ppm         ASTM D5185m         <1         6            Potassium         ppm         ASTM D5185m         >20         3         0            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.3         0.3            Nitration         Abs/cm         *ASTM D7624         >20         9.0         8.0            Sulfation         Abs/.1mm         *ASTM D7415         >30         20.3         19.4            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4         15.4	CONTAMINANT	S	method	limit/base	current	history1	history2
Sodium         ppm         ASTM D5185m         <1         6            Potassium         ppm         ASTM D5185m         >20         3         0            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.3         0.3            Nitration         Abs/cm         *ASTM D7624         >20         9.0         8.0            Sulfation         Abs/.1mm         *ASTM D7415         >30         20.3         19.4            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4         15.4	Silicon	ppm	ASTM D5185m	>25	3	3	
Potassium         ppm         ASTM D5185m         >20         3         0            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.3         0.3            Nitration         Abs/cm         *ASTM D7624         >20         9.0         8.0            Sulfation         Abs/.1mm         *ASTM D7415         >30         20.3         19.4            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4         15.4			ASTM D5185m		<1	6	
Soot %         %         *ASTM D7844 >4         0.3         0.3            Nitration         Abs/cm         *ASTM D7624 >20         9.0         8.0            Sulfation         Abs/.1mm         *ASTM D7415 >30         20.3         19.4            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         16.4         15.4			ASTM D5185m	>20	3	0	
Nitration         Abs/cm         *ASTM D7624         >20         9.0         8.0            Sulfation         Abs/.1mm         *ASTM D7415         >30         20.3         19.4            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4         15.4	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         20.3         19.4            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4         15.4	Soot %	%	*ASTM D7844	>4	0.3	0.3	
Sulfation         Abs/.1mm         *ASTM D7415         >30         20.3         19.4            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.4         15.4							
Oxidation Abs/.1mm *ASTM D7414 >25 <b>16.4</b> 15.4							
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.4	15.4	
					6.5		



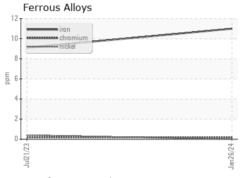
# **OIL ANALYSIS REPORT**

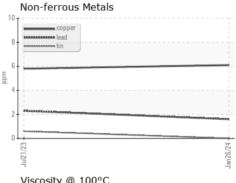


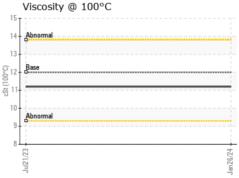
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	

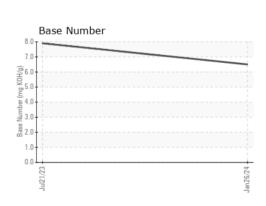
FLUID FROFI		memod			HISTORY	HISTORYZ
Visc @ 100°C	cSt	ASTM D445	12.00	11.2	11.2	

### **GRAPHS**











Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10862692 Test Package : FLEET

: PCA0116480 : 06080601

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 05 Feb 2024 Recieved Diagnosed : 06 Feb 2024

Diagnostician : Wes Davis

Transervice - Shop 1072 - Supermarket-Elizabeth

505 Division Street Elizabeth, NJ US 07207

Contact: Normand Brizak nbrizak@transervice.com T:

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)

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