

## **OIL ANALYSIS REPORT**

Sample Rating Trend

NORMAL



## (AT648T) Supermarket - Tractor **MACK 107A1850**

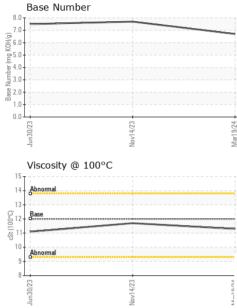
Component Diesel Engine Fluid

PETRO CANADA DURON SHP 10W30 (11 GAL)

DIAGNOSIS	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Recommendation	Sample Number		Client Info		PCA0116454	PCA0111529	PCA0100428
Resample at the next service interval to monitor.	Sample Date		Client Info		19 Mar 2024	14 Nov 2023	30 Jun 2023
Wear	Machine Age	mls	Client Info		327633	314038	302858
All component wear rates are normal.	Oil Age	mls	Client Info		13595	11180	10684
Contamination	Oil Changed		Client Info		Changed	Changed	Changed
There is no indication of any contamination in the	Sample Status				NORMAL	NORMAL	NORMAL
oil.	CONTAMINAT	ION	method	limit/base	current	history1	history2
Fluid Condition The BN result indicates that there is suitable	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Water		WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	WEAR METAL	S	method	limit/base	current	history1	history2
	Iron	ppm	ASTM D5185m	>120	17	10	14
	Chromium	ppm	ASTM D5185m		<1	<1	<1
	Nickel	ppm	ASTM D5185m		<1	<1	<1
	Titanium	ppm	ASTM D5185m		<1	0	0
	Silver	ppm	ASTM D5185m		<1	0	0
	Aluminum	ppm	ASTM D5185m		3	2	5
	Lead	ppm	ASTM D5185m		2	0	<1
	Copper	ppm	ASTM D5185m		4	4	5
	Tin	ppm	ASTM D5185m		2	<1	1
	Vanadium	ppm	ASTM D5185m		- <1	0	0
	Cadmium	ppm	ASTM D5185m		<1	0	0
	ADDITIVES		method	limit/base	current	history1	history2
	Boron	ppm	ASTM D5185m	2	5	21	9
	Barium	ppm	ASTM D5185m	0	1	2	0
	Molybdenum	ppm	ASTM D5185m	50	59	52	61
	Manganese	ppm	ASTM D5185m	0	1	0	<1
	Magnesium	ppm	ASTM D5185m	950	917	740	957
	Calcium	ppm	ASTM D5185m	1050	1121	1205	1129
	Phosphorus	ppm	ASTM D5185m	995	1008	010	1060
				333	1006	913	1063
	Zinc	ppm	ASTM D5185m		1235	1151	1333
	Zinc Sulfur			1180			
		ppm ppm	ASTM D5185m	1180	1235 3189	1151	1333
	Sulfur	ppm ppm	ASTM D5185m ASTM D5185m	1180 2600 limit/base	1235 3189	1151 3829	1333 3818
	Sulfur CONTAMINAN	ppm ppm ITS	ASTM D5185m ASTM D5185m method	1180 2600 limit/base	1235 3189 current	1151 3829 history1	1333 3818 history2
	Sulfur CONTAMINAN Silicon	ppm ppm ITS ppm	ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	1180 2600 limit/base >25	1235 3189 current 4	1151 3829 history1 2	1333 3818 history2 3
	Sulfur CONTAMINAN Silicon Sodium	ppm ppm ITS ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	1180 2600 limit/base >25	1235 3189 current 4 <1 3	1151 3829 history1 2 0	1333 3818 history2 3 4
	Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ITS ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	1180 2600 limit/base >25 >20 limit/base	1235 3189 current 4 <1 3	1151 3829 history1 2 0 3	1333 3818 history2 3 4 2
	Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ITS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1180 2600 limit/base >25 >20 limit/base >4	1235 3189 current 4 <1 3 current	1151 3829 history1 2 0 3 3 history1	1333 3818 history2 3 4 2 2 history2
	Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ITS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> *ASTM D7844	1180 2600 limit/base >25 >20 limit/base >4 >20	1235 3189 current 4 <1 3 current 0.1	1151 3829 history1 2 0 3 history1 0.1	1333 3818 history2 3 4 2 history2 0.1
	Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> *ASTM D7844 *ASTM D7624	1180 2600 limit/base >25 >20 limit/base >4 >20	1235 3189 current 4 <1 3 current 0.1 8.5 18.9	1151 3829 history1 2 0 3 history1 0.1 7.1	1333 3818 history2 3 4 2 2 history2 0.1 7.6
	Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm TS ppm ppm ppm ppm ppm % Abs/cm Abs/1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624	1180 2600 >25 >20 <b>limit/base</b> >4 >20 >30 <b>limit/base</b>	1235 3189 current 4 <1 3 current 0.1 8.5 18.9 current	1151 3829 history1 2 0 3 history1 0.1 7.1 18.7	1333 3818 history2 3 4 2 history2 0.1 7.6 19.4
	Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/cm Abs/1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624	1180 2600 >25 >20 <b>limit/base</b> >4 >20 >30 <b>limit/base</b>	1235 3189 current 4 <1 3 current 0.1 8.5 18.9	1151 3829 history1 2 0 3 history1 0.1 7.1 18.7 history1	1333 3818 history2 3 4 2 history2 0.1 7.6 19.4 history2



## **OIL ANALYSIS REPORT**



		VISUA	AL		method	limit/base	current	history1	history2
		White Me	etal	scalar	*Visual	NONE	NONE	NONE	NONE
		Yellow M	letal	scalar	*Visual	NONE	NONE	NONE	NONE
		Precipita	te	scalar	*Visual	NONE	NONE	NONE	NONE
		Silt		scalar	*Visual	NONE	NONE	NONE	NONE
		Debris		scalar	*Visual	NONE	NONE	NONE	NONE
		Sand/Dir	t	scalar	*Visual	NONE	NONE	NONE	NONE
	Mar19/24	Appeara	nce	scalar	*Visual	NORML	NORML	NORML	NORML
	Mar	Odor		scalar	*Visual	NORML	NORML	NORML	NORML
		Emulsifie	d Water	scalar	*Visual	>0.2	NEG	NEG	NEG
		Free Wat	ter	scalar	*Visual		NEG	NEG	NEG
		FLUID	) PROPEI	RTIES	method	limit/base	current	history1	history2
		Visc @ 1		cSt	ASTM D445	12.00	11.3	11.7	11.1
		GRAF	PHS						
		Ferrous	s Alloys						
	v		iron			/			
	10		chromium nickel						
	h.d	12-		-					
		E <sup>10</sup>		$\checkmark$					
		8							
		4							
		2							
				-	and the second division of the second divisio				
		Jun30/23		Nov14/23		Mar19/24			
		Junî		Novi		Mar			
			rrous Metals	5					
		<sup>10</sup>	copper						
			lead						
			•tin						
		6							
		udd							
		2							
				and the second division of the second divisio	NAMES OF TAXABLE PARTY.				
		1/23		1/23		9/24			
		Jun30/23		Nov14/23		Mar19/24			
		Viscosit	ty @ 100°C	~		~	Base Number	r	
	15				8.0				
		14 - Abnormal				7.0			
		13				(B)(HO) 8.0 3.0 3.0 3.0			
		0 12 Base				¥ 5.0	- J		
		0012 Base				a 4.0			
		10				Jan 2.0			
		Abnormal				88 2.0			
		9-				1.0			
		53		23 -		0.0	53	23	
		Jun30/23		Nov14/23		Mar1 9/24	Jun30/23	Nov14/23	
				Nc		×	٦٢	Nc	
		Jur					_		
2	Laboratory	: WearChec			on Ave., Cary	, NC 27513	Transerv	ice - Shop 1072 - Sup	
АВ	Sample No.	: WearCheo : PCA01164		Rece	ived : 25	5 Mar 2024	Transerv		Division Stre
	Sample No. Lab Number	: WearChec : PCA01164 : 06127520		Rece Teste	ived : 25 ed : 26	5 Mar 2024 5 Mar 2024			Division Stre Elizabeth, N
	Sample No. Lab Number Unique Number	: WearChec : PCA01164 : 06127520 : 10941671		Rece Teste	ived : 25 ed : 26	5 Mar 2024		505	Division Stre Elizabeth, I US 072
THE L2367 Securs this	Sample No. Lab Number	: WearChec : PCA01164 : 06127520 : 10941671 : FLEET	154	Rece Teste Diagr	ived : 25 ed : 26 nosed : 26	5 Mar 2024 5 Mar 2024 Mar 2024 - W		505 Contact: N	Division Stre