

OIL ANALYSIS REPORT





Diesel Engine Fluid PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Machine Id 638644 Component

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

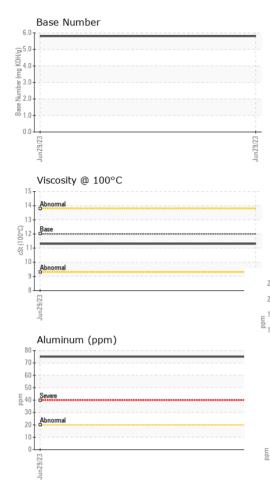
Fluid Condition

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

AL)				Jun2023		
SAMPLE INFOR	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		PCA0100756		
Sample Date		Client Info		29 Jun 2023		
Machine Age	mls	Client Info		53620		
Dil Age	mls	Client Info		53620		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	<1.0		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	124		
Chromium	ppm	ASTM D5185m	>20	8		
Nickel	ppm	ASTM D5185m	>4	2		
Titanium	ppm	ASTM D5185m		- <1		
Silver	ppm	ASTM D5185m	>3	<1		
Aluminum	ppm	ASTM D5185m	>20	75		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	295		
Tin	ppm	ASTM D5185m	>15	7		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	2	23		
Barium	ppm	ASTM D5185m	0	0		
Molybdenum	ppm	ASTM D5185m	50	53		
Manganese						
	ppm	ASTM D5185m	0	7		
-	ppm ppm	ASTM D5185m ASTM D5185m	0 950	7 645		
Magnesium						
Magnesium Calcium	ppm	ASTM D5185m	950	645		
Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	950 1050	645 2083		
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995	645 2083 843		
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180	645 2083 843 1087		
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base	645 2083 843 1087 2443		
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	950 1050 995 1180 2600 limit/base	645 2083 843 1087 2443 current	 history 1	 history 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm VTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base >25	645 2083 843 1087 2443 current 12	 history 1	 history 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ypm JTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base >25	645 2083 843 1087 2443 current 12 10	 history 1 	 history 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ypm JTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base >25 >20	645 2083 843 1087 2443 <u>current</u> 12 10 184	 history 1 	 history 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm JTS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base >25 >20 limit/base	645 2083 843 1087 2443 current 12 10 184 current	 history 1 history 1	 history 2 history 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ytts	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	645 2083 843 1087 2443 current 12 10 184 current 1.8	 history 1 history 1 	 history 2 history 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ym ym ppm ppm ppm pp	ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	645 2083 843 1087 2443 <u>current</u> 12 10 184 <u>current</u> 1.8 1.8 17.5	 history 1 history 1 history 1	 history 2 history 2 history 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ym ym ppm ppm ppm pp	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624	950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20 >30 <i>limit/base</i>	645 2083 843 1087 2443 current 12 10 184 current 1.8 17.5 29.8	 history 1 history 1 	 history 2 history 2 history 2



OIL ANALYSIS REPORT



VISUAL Vhite Metal recipitate ilt rebris and/Dirt ppearance odor mulsified Water ree Water FLUID PROPER isc @ 100°C	scalar scalar	method *Visual	limit/base NONE NONE NONE NONE NONE NORML NORML >0.2	currentNONENONENONENONENONENORENORML	history 1	history 2
ellow Metal recipitate ilt lebris and/Dirt ppearance odor mulsified Water ree Water FLUID PROPER	scalar scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual	NONE NONE NONE NONE NORML NORML	NONE NONE NONE NONE NONE NORML	 	
recipitate ilt lebris and/Dirt ppearance bdor mulsified Water ree Water FLUID PROPER	scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual	NONE NONE NONE NORML NORML	NONE NONE NONE NONE NORML		
ilt lebris and/Dirt ppearance odor mulsified Water ree Water FLUID PROPER	scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual	NONE NONE NORML NORML	NONE NONE NONE NORML		
ebris and/Dirt ppearance dor mulsified Water ree Water FLUID PROPE	scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual	NONE NONE NORML NORML	NONE NONE NORML		
and/Dirt ppearance dor mulsified Water ree Water FLUID PROPE	scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual	NONE NORML NORML	NONE NORML		
ppearance odor mulsified Water ree Water FLUID PROPER	scalar scalar scalar scalar	*Visual *Visual *Visual	NORML NORML	NORML		
idor mulsified Water ree Water FLUID PROPER	scalar scalar scalar	*Visual *Visual	NORML			
mulsified Water ree Water FLUID PROPER	scalar scalar	*Visual		NORML		
ree Water FLUID PROPER	scalar		>0.2	NEG		
FLUID PROPE				NEG		
		VISUUI		NEG		
lisc @ 100℃	RTIES	method	limit/base	current	history 1	history 2
	cSt	ASTM D445	12.00	11.3		
GRAPHS						
Iron (ppm)			100	Lead (ppm)		
Severe				Severe		
			60	1		
Abnormal				Abnormal		
1			40			
9/23			9/23	9/23		
Jun2			Jun2	Jun2		
Aluminum (ppm)				Chromium (pp	om)	
			50	Т :		
Severe			<u>ة</u> 30	Abnormal		
Abnormal						
/23 +						
lun 29.			un 29,	un 29		
-			,	-		
Severe			80			
Approximation			- 60			
			5 40			
				Abnormal		
			20			
un 29/1			un29/2	un29/1		
			Γ,			
, =			6.0 9			
Abnormal			HOX B 4 0			
Base			<u>ق</u> 1.0 او 3.0			
Abnormal			E 2.0	+		
			凝 1.0			
9/23				9/23		
Jun2			Jun2	Jun2		
PCA0100756 F 1 <mark>5891982 C</mark> 0547792 C MOB 1 (Additional T	Received Diagnose Diagnosti Tests: TBI	:07. d:09. ician:Dou N)	Jul 2023 Jul 2023 Ig Bogart	i Mi	2196 BE PHILA Contac	NNETT ROA ADELPHIA, P US 1911 t: JOHN KEE
	Aluminum (ppm) Severe Abnomal Copper (ppm) Severe Abnomal Base Abnomal Base Abnomal Base Abnomal Base Copper (ppm) Severe Abnomal Base Co	Aluminum (ppm) Aluminum (ppm) Severe Abnomal Copper (ppm) Severe Abnomal Base Abnomal Base CA0100756 Received 5891982 Diagnoset 0547792 Diagnoset 0547792 Diagnoset 0547792 Diagnoset Comparison	Aluminum (ppm) Aluminum (ppm) Copper (ppm) Severe Abnomal Base Abnomal Abnomal Base Abnomal Abnomal Abnomal Base Abnomal Abnomal Abnomal Abnomal Base Abnomal Abn	Aluminum (ppm) Aluminum (ppm) Copper (ppm) Viscosity @ 100°C Abooma Copper (ppm) Co	Aluminum (ppm) Aluminum (ppm) Copper (ppm) Viscosity @ 100°C Coper (ppm) Viscosity @ 100°C Coper (ppm) Copper (ppm) Copp	Aluminum (ppm) Aluminum (ppm) Chromium (ppm) Chromium (ppm) Chromium (ppm) Silicon (ppm) Silicon (ppm) Silicon (ppm) Silicon (ppm) Silicon (ppm) Silicon (ppm) Base Number MILLER TRUCK L CA0100756 Received : 07 Jul 2023 Sog 1982 Diagnosed : 09 Jul 2023 Sog 1982 Diagnosed : 09 Jul 2023 Sog 100 C Contact Jacoma Coustomer Service at 1-800-237-1369. Silicon (ppm) Chromium (ppm) Silicon (ppm)

Contact/Location: JOHN KEEN - MILPHINE