

PROBLEM SUMMARY



Sample Rating Trend





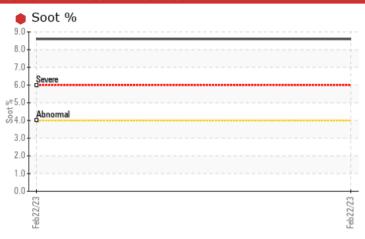


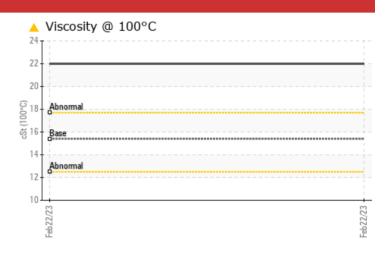
927087-260102

Component **Diesel Engine**

PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

PROBLEMATIC TEST RESULTS									
Sample Status				SEVERE					
Soot %	%	*ASTM D7844	>4	8.6					
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	△ 0.0					
Visc @ 100°C	cSt	ASTM D445	15.4	22.0					

Customer Id: GFL918 Sample No.: GFL0071465 Lab Number: 05800123 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:

Don Baldridge +1 don.b505@comcast.net

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Change Fluid			?	Oil and filter change at the time of sampling has been noted.			
Change Filter			?	Oil and filter change at the time of sampling has been noted.			
Resample			?	We recommend an early resample to monitor this condition.			
Alert			?	NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.			
Check Combustion			?	We advise that you check for faulty combustion, plugged air filters, or aftercoolers.			

HISTORICAL DIAGNOSIS



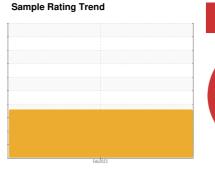
OIL ANALYSIS REPORT



927087-260102

Component **Diesel Engine**

PETRO CANADA DURO





DIAGNOSIS

Recommendation

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

All component wear rates are normal.

Contamination

There is an abnormal amount of solids and carbon present in the oil.

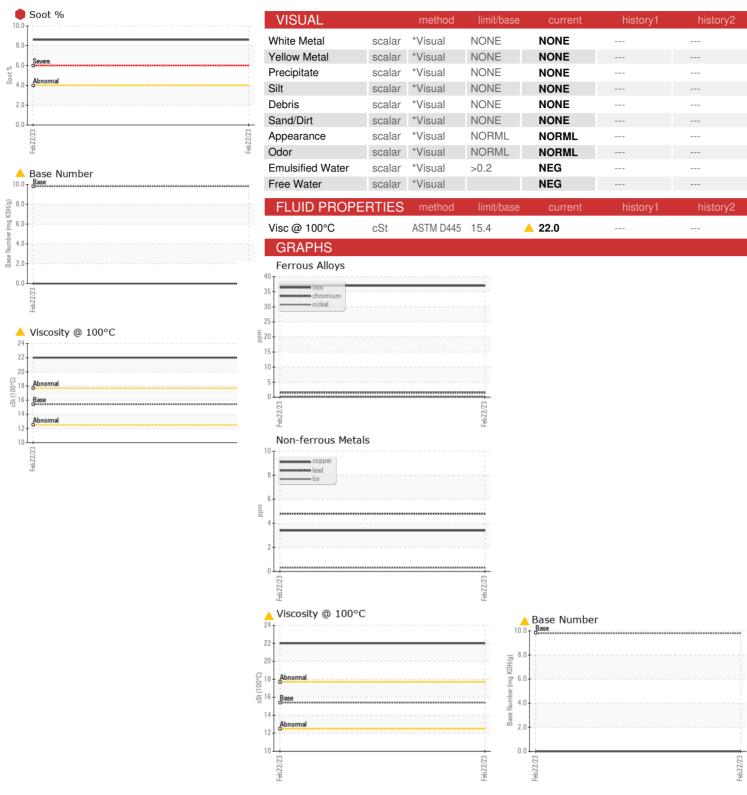
Fluid Condition

The oil viscosity is higher than normal. The BN level is low. The oil is no longer serviceable due to the presence of contaminants.

N SHP 15W40 (- GAL)			Feb 2023		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number	VII TITOL	Client Info	2433	GFL0071465		
Sample Date		Client Info		22 Feb 2023		
Machine Age	hrs	Client Info		3680		
Oil Age	hrs	Client Info		0		
Oil Changed	1110	Client Info		Changed		
Sample Status				SEVERE		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	37		
Chromium	ppm	ASTM D5185m	>20	2		
Nickel	ppm	ASTM D5185m	>5	<1		
Titanium	ppm	ASTM D5185m	>2	0		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>20	1		
Lead	ppm	ASTM D5185m	>40	5		
Copper	ppm	ASTM D5185m	>330	3		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<1		
Barium	ppm	ASTM D5185m	0	0		
Molybdenum	ppm	ASTM D5185m	60	55		
Manganese	ppm	ASTM D5185m	0	<1		
Magnesium	ppm	ASTM D5185m	1010	881		
Calcium	ppm	ASTM D5185m	1070	1048		
Phosphorus	ppm	ASTM D5185m	1150	898		
Zinc	ppm	ASTM D5185m	1270	1122		
Sulfur	ppm	ASTM D5185m	2060	2369		
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	3		
Sodium	ppm	ASTM D5185m		0		
Potassium	ppm	ASTM D5185m	>20	1		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	● 8.6		
Nitration	Abs/cm	*ASTM D7624	>20	48.1		
Sulfation	Abs/.1mm	*ASTM D7415	>30	80.4		
FLUID DEGRA	NOITAC	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	94.5		
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<u> </u>		



OIL ANALYSIS REPORT







Laboratory Sample No. Lab Number Unique Number

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 05800123

To discuss this sample report, contact Customer Service at 1-800-237-1369.

: GFL0071465 : 10389807 Test Package : FLEET

: 23 Mar 2023 Recieved Diagnosed : 28 Mar 2023 : Don Baldridge Diagnostician

GFL Environmental - 918 - Hartland HC 630 E Industrial Drive

Hartland, WI US 53029 Contact: David McCall david.mccall@gflenv.com T: (262)369-3069

* - 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)