

OIL ANALYSIS REPORT

Sample Rating Trend



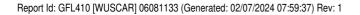


Machine Id 913077 Component

Diesel Engine Fluid

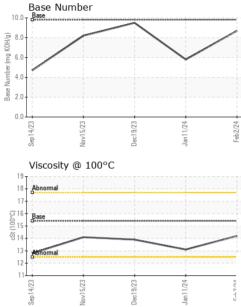
PETRO CANADA DURON SHP 15W40 (36 LTR)

Resample at the next service interval to monitor. Year All component wear rates are normal. Contamination There is no indication of any contamination in the ol. Matchine Age hrs Client Info 4009 3721 33 Fuid Condition There is no indication of any contamination in the ol. Sample Status NORMAL NORMAL <th>history2</th>	history2
Resample at the next service interval to monitor. Sample Date Client Info 02 Feb 2024 11 Jan 2024 14 All component wear rates are normal. Contamination Gli Age hrs Client Info 4009 3721 33 Contamination There is no indication of any contamination in the ol. Sample Status NORMAL NORMAL NORMAL NORMAL N Sample Status Interview Client Info Changed V/A N Sample Status NORMAL N Sample Status Interview Chelhod 3.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 1.0 <1.0 <1.0	
WearMachine AgehrsClient Info4009372133All component wear rates are normal.Oil AgehrsClient Info6002.9370There is no indication of any contamination in the oil.File StatusNORMALNORMALNORMALNFuel Kalinity remaining in the oil. The condition of the oil is suitable for further service.CONTAMINATIONmethod0.2NEGNEGFuel Kalinity remaining in the oil. The condition of the oil is suitable for further service.Sample StatusCONTAMINATIONmethodNEGNEGWaterWC Method0.2NEGNEGNEGNEGNEGGlycolWC Method0.2NEGNEGNEGNEGNickelppmASTM D5185m2011NickelNickelppmASTM D5185m202101NickelppmASTM D5185m202101LeadppmASTM D5185m202101LeadppmASTM D5185m00210CorperppmASTM D5185m00210LeadppmASTM D5185m00210LeadppmASTM D5185m00210CorperppmASTM D5185m00110DifferenceppmASTM D5185m00110CorperppmASTM D5185m00 <td< th=""><th>FL0104316</th></td<>	FL0104316
All component wear rates are normal. Contamination There is no indication of any contamination in the il. Fluid Condition The BN result indicates that there is suitable atkalinity remaining in the oil. The condition of the ol is suitable for further service. Oil Age ContAMINATION The BN result indicates that there is suitable atkalinity remaining in the oil. The condition of the ol is suitable for further service. ContAMINATION WC Method >0.2 NEG NEG VEAR METALS Tell WC Method >0.2 NEG NEG VEAR METALS Contraming Contaming Contamin	9 Dec 2023
All component wear rates are normal. Contamination There is no indication of any contamination in the oil. Fluid Condition The BM result indicates that there is suitable adialinity remaining in the oil. The condition of the oil is suitable for further service. OI Age hrs Client Info Changed N/A NORMAL	557
Sample Status NORMAL Normal Status Status Current History1 Status Status Normal Status <td></td>	
Sample Status NORMAL NORMAL NORMAL NORMAL N Fuid Condition The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service. WC Method 3.0 <1.0	A
oli. Fuid Condition The BN result indicates that there is suitable alikalinity remaining in the oil. The condition of the oil is suitable for further service. VCMethod >3.0 <1.0	ORMAL
Fluid Condition Fuel WC Method >3.0 <1.0	history2
Water WC Method >0.2 NEG NEG Mailainity method I.The condition of the oil is suitable for further service. NEG NEG NEG Water WC Method WC Method NEG NEG NEG Iron ppm ASTM D5185m >120 6 33 Chromium ppm ASTM D5185m >5 0 4 Nickel ppm ASTM D5185m >5 0 4 Nickel ppm ASTM D5185m >20 <1	<1.0
Glycol WC Method NEG NEG oil is suitable for further service. Glycol WC Method NEG NEG Glycol WC Method Imit/base current history1 Iron ppm ASTM D5165m >20 <1	NEG
WEAR METALS method limit/base current history1 Iron ppm ASTM D5185m >120 6 33 Chromium ppm ASTM D5185m >20 <1	NEG
Iron ppm ASTM D5185m >12.0 6 33 Chromium ppm ASTM D5185m >2.0 <1 1 Nickel ppm ASTM D5185m >5 0 4 Titanium ppm ASTM D5185m >2 0 0 Silver ppm ASTM D5185m >2 0 <1 Aluminum ppm ASTM D5185m >20 2 10 Lead ppm ASTM D5185m >20 2 10 Copper ppm ASTM D5185m >20 2 10 Tin ppm ASTM D5185m >33.0 0 -1 Copper ppm ASTM D5185m >15 0 2 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 Boron ppm ASTM D5185m 0 5 0 Malynesium ppm ASTM D5185m 0 5 0 Maloganesee ppm AST	history2
Chromium ppm ASTM D5185m >20 <1 1 Nickel ppm ASTM D5185m >5 0 4 Titanium ppm ASTM D5185m >2 0 0 Silver ppm ASTM D5185m >2 0 <1	
Nickel ppm ASTM D5185m >5 0 4 Titanium ppm ASTM D5185m >2 0 0 Silver ppm ASTM D5185m >2 0 <1	20
Titanium ppm ASTM D5185m >2 0 0 Silver ppm ASTM D5185m >2 0 <1	<1
Silver ppm ASTM D5185m >2 0 <1 Aluminum ppm ASTM D5185m >20 2 10 10 Lead ppm ASTM D5185m >40 0 <1	0
Aluminum ppm ASTM D5185m >20 2 10 Lead ppm ASTM D5185m >40 0 <1	<1
LeadppmASTM D5185m>400<1CopperppmASTM D5185m>3300341TinppmASTM D5185m>15022VanadiumppmASTM D5185m0001CadmiumppmASTM D5185m0001BoronppmASTM D5185m0261BariumppmASTM D5185m0500MolybdenumppmASTM D5185m0566666ManganeseppmASTM D5185m10109019211CalciumppmASTM D5185m107095910871PhosphorusppmASTM D5185m115090910002ZincppmASTM D5185m1270116412452SulfurppmASTM D5185m2060300324082CONTAMINANTSmethodlimit/basecurrenthistory1	0
CopperppmASTM D5185m>330034TinppmASTM D5185m>1502VanadiumppmASTM D5185m000CadmiumppmASTM D5185m000ADDITIVESmethodlimit/basecurrenthistory1BoronppmASTM D5185m026BariumppmASTM D5185m050MolybdenumppmASTM D5185m605666ManganeseppmASTM D5185m1010901921CalciumppmASTM D5185m10709591087PhosphorusppmASTM D5185m11509091000ZincppmASTM D5185m127011641245SulfurppmASTM D5185m206030032408CONTAMINANTSmethodlimit/basecurrenthistory1	5
TinppmASTM D5185m>1502VanadiumppmASTM D5185m000CadmiumppmASTM D5185m000ADDITIVESreethodlimit/basecurrenthistory1BoronppmASTM D5185m026BariumppmASTM D5185m050MolybdenumppmASTM D5185m05666ManganeseppmASTM D5185m001MagnesiumppmASTM D5185m1010901921CalciumppmASTM D5185m10709591087PhosphorusppmASTM D5185m11509091000ZincppmASTM D5185m127011641245SulfurppmASTM D5185m206030032408CONTAMINANTSmethodlimit/basecurrenthistory1	0
Vanadium CadmiumppmASTM D5185m00ADDITIVESmethodlimit/basecurrenthistory1BoronppmASTM D5185m026BariumppmASTM D5185m0501MolybdenumppmASTM D5185m0566666ManganeseppmASTM D5185m0011MagnesiumppmASTM D5185m1010901192112CalciumppmASTM D5185m107095910871PhosphorusppmASTM D5185m1270116412451SulfurppASTM D5185m2060300324082CONTAMINANTSmethodlimit/basecurrenthistory1	1
CadmiumppmASTM D5185m00ADDITIVESmethodlimit/basecurrenthistory1BoronppmASTM D5185m026BariumppmASTM D5185m050MolybdenumppmASTM D5185m605666ManganeseppmASTM D5185m001MagnesiumppmASTM D5185m1010901921CalciumppmASTM D5185m10709591087PhosphorusppmASTM D5185m11509091000ZincppmASTM D5185m127011641245SulfurppmASTM D5185m206030032408	0
ADDITIVESmethodlimit/basecurrenthistory1BoronppmASTM D5185m026BariumppmASTM D5185m0500MolybdenumppmASTM D5185m605666ManganeseppmASTM D5185m001MagnesiumppmASTM D5185m1010901921CalciumppmASTM D5185m10709591087PhosphorusppmASTM D5185m11509091000ZincppmASTM D5185m127011641245SulfurppmASTM D5185m206030032408	0
BoronppmASTM D5185m026BariumppmASTM D5185m0500MolybdenumppmASTM D5185m605666ManganeseppmASTM D5185m0011MagnesiumppmASTM D5185m10109019211CalciumppmASTM D5185m107095910871PhosphorusppmASTM D5185m115090910001ZincppmASTM D5185m1270116412451SulfurppmASTM D5185m2060300324081	0
BariumppmASTM D5185m050MolybdenumppmASTM D5185m605666ManganeseppmASTM D5185m001MagnesiumppmASTM D5185m1010901921CalciumppmASTM D5185m10709591087PhosphorusppmASTM D5185m11509091000ZincppmASTM D5185m127011641245SulfurppmASTM D5185m206030032408	history2
Molybdenum ppm ASTM D5185m 60 56 66 Manganese ppm ASTM D5185m 0 0 1 0 Magnesium ppm ASTM D5185m 1010 901 921 Calcium ppm ASTM D5185m 1070 959 1087 Phosphorus ppm ASTM D5185m 1150 909 1000 Zinc ppm ASTM D5185m 1270 1164 1245 Sulfur ppm ASTM D5185m 2060 3003 2408	5
Manganese ppm ASTM D5185m 0 0 1 Magnesium ppm ASTM D5185m 1010 901 921 Calcium ppm ASTM D5185m 1070 959 1087 Phosphorus ppm ASTM D5185m 1150 909 1000 Zinc ppm ASTM D5185m 1270 1164 1245 Sulfur ppm ASTM D5185m 2060 3003 2408	0
Magnesium ppm ASTM D5185m 1010 901 921 Calcium ppm ASTM D5185m 1070 959 1087 0 Phosphorus ppm ASTM D5185m 1150 909 1000 Zinc ppm ASTM D5185m 1270 1164 1245 Sulfur ppm ASTM D5185m 2060 3003 2408	59
Magnesium ppm ASTM D5185m 1010 901 921 Calcium ppm ASTM D5185m 1070 959 1087 0 Phosphorus ppm ASTM D5185m 1150 909 1000 Zinc ppm ASTM D5185m 1270 1164 1245 Sulfur ppm ASTM D5185m 2060 3003 2408	<1
Calcium ppm ASTM D5185m 1070 959 1087 Phosphorus ppm ASTM D5185m 1150 909 1000 Zinc ppm ASTM D5185m 1270 1164 1245 Sulfur ppm ASTM D5185m 2060 3003 2408 CONTAMINANTS method limit/base current history1	944
Phosphorus ppm ASTM D5185m 1150 909 1000 Zinc ppm ASTM D5185m 1270 1164 1245 Sulfur ppm ASTM D5185m 2060 3003 2408 CONTAMINANTS method limit/base current history1	1100
ZincppmASTM D5185m127011641245SulfurppmASTM D5185m206030032408CONTAMINANTSmethodlimit/basecurrenthistory1	1046
SulfurppmASTM D5185m206030032408CONTAMINANTSmethodlimit/basecurrenthistory1	1255
	3221
	history2
Silicon ppm ASTM D5185m >25 5 11	10
Sodium ppm ASTM D5185m 0 4	5
Potassium ppm ASTM D5185m >20 2 27	2
INFRA-RED method limit/base current history1	history2
Soot % % *ASTM D7844 >4 0 0.6	0.2
Nitration Abs/cm *ASTM D7624 >20 4.5 10.3	5.2
Sulfation Abs/.1mm *ASTM D7415 >30 17.7 22.0	17.5
FLUID DEGRADATION method limit/base current history1	
Oxidation Abs/.1mm *ASTM D7414 >25 13.1 19.3	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 8.7 5.8	history2 13.0





OIL ANALYSIS REPORT



VISUAL		method	limit/base	current	history1	history
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	13.1	13.9
GRAPHS						
Ferrous Alloys						
¹⁵		<u>Å</u>				
iron						
30 - tesessee chromium						
ssssssssss nicke		> > > > > > > > > > > > > > > > > > >				
25	/					
	_/					
20-	\checkmark	\sim				
20	\checkmark					
20 -	\checkmark					
	\checkmark		\setminus			
20						
			\backslash			
5						
10 5 0						
10 5 0	52/6					
10 5 0	beci 9/23		Feb2/24			
Sep14/23	Dec19/23	Jan11/24				
10 5 0						
Non-ferrous Metal						
Non-ferrous Metal						
Non-ferrous Metal						
Non-ferrous Metal						
Non-ferrous Metal						
Non-ferrous Metal						
Non-ferrous Metal						
Non-ferrous Metal						
Non-ferrous Metal						
Non-ferrous Metal	s	Jan11/24	Feb2/24			
Non-ferrous Metal	s	Jan11/24	Feb2/24			
Non-ferrous Metal						
Non-ferrous Metal	S Deci3/23	Jan11/24	Feb2/24	Base Number		
Non-ferrous Metal	S Deci3/23	Jan11/24	Feb2/24	Base Number	-	
Non-ferrous Metal	S Deci3/23	Jan11/24	Feb2/24	Base Number		
Non-ferrous Metal	S Deci3/23	Jan11/24	Feb2224	Base Number		
Non-ferrous Metal	S Deci3/23	Jan11/24	Feb2224	Base Number		
Non-ferrous Metal	S Deci3/23	Jan11/24	Feb2224	Base Number		
Non-ferrous Metal	S Deci3/23	Jan11/24	Feb2/24 Feb2/24 Feb2/24	Base Number		

4 Base

0.0

Sep14/23 -

Nov15/23

Feb2/24.

: 06 Feb 2024

: 06 Feb 2024

Jan11/24

Diagnostician : Wes Davis



Test Package : FLEET Certificate L2367 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)

Nov15/23

Dec19/23

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

Recieved

Diagnosed

13 12 11-

Laboratory

Sample No.

Lab Number

Unique Number : 10863224

Sep14/23

: GFL0109975

: 06081133



Jan11/24 -

Feb2/24

Dec19/23 -