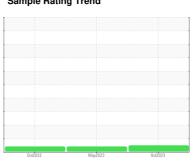


# **OIL ANALYSIS REPORT**

### Sample Rating Trend









**DT819** Component **Front Differential** 

PETRO CANADA TRAXON

# 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**

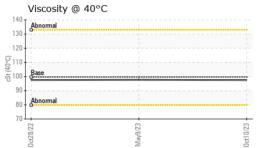
The condition of the oil is suitable for further service.

SAMPLE INFORMATION method limit/base current history1 history2	SYNTHETIC 75W90	(4 GAL)					
Sample Number         Client Info         PCA0103327         PCA0096965         PCA0080977           Sample Date         Client Info         10 Oct 2023         90 May 2023         28 Oct 2022           Machine Age         mls         Client Info         76449         50474         24287           Oill Age         mls         Client Info         76449         50474         0           Oil Changed         Client Info         Changed         Not Changd         Not Changd           Sample Status         More Than 10 mill blase         Current         history1         history2           Iron         ppm         ASTM 05185m         28         5         1         1           Iron         ppm         ASTM 05185m         28         5         1         1           Chromium         ppm         ASTM 05185m         26         1         1         1           Nickel         ppm         ASTM 05185m         25         1         1         1         5           Silver         ppm         ASTM 05185m         26         0         0         0         0           Gopper         ppm         ASTM 05185m         25         0         0         0         0 <th></th> <th>` '</th> <th></th> <th></th> <th></th> <th></th> <th></th>		` '					
Sample Date         Client Info         10 Oct 2023         09 May 2023         28 Oct 2022           Machine Age         mls         Client Info         76449         50474         24287           Oil Age         mls         Client Info         76449         50474         0         Not Changd           Oil Changed Sample Status         Client Info         Changed Changed         NoRMAL         ABNORMAL         <	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age         mls         Client Info         76449         50474         24287           Oil Age         mls         Client Info         76449         50474         0           Oil Changed         Client Info         Changed         Not Changd	Sample Number		Client Info		PCA0103327	PCA0096965	PCA0080972
Oil Age         mls         Client Info         76449         50474         0           Oil Changed Sample Status         Client Info         Changed Not Changd Not Changd Not Changd ABNORMAL         Not Changd ABNORMAL         Not Changd ABNORMAL         ABNORMAL <td>Sample Date</td> <td></td> <td>Client Info</td> <td></td> <th>10 Oct 2023</th> <td>09 May 2023</td> <td>28 Oct 2022</td>	Sample Date		Client Info		10 Oct 2023	09 May 2023	28 Oct 2022
Oil Changed   Client Info   NoRMAL   ABNORMAL   ABNO	Machine Age	mls	Client Info		76449	50474	24287
NORMAL	Oil Age	mls	Client Info		76449	50474	0
WEAR METALS	Oil Changed		Client Info		Changed	Not Changd	Not Changd
Irron	Sample Status				NORMAL	ABNORMAL	ABNORMAL
Chromium         ppm         ASTM D5185m         >8         5         1         1           Nickel         ppm         ASTM D5185m         >25         11         10         5           Tittanium         ppm         ASTM D5185m         >4         0         <1	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>870	281	204	190
Titanium         ppm         ASTM D5185m         >4         0         <1         <1           Silver         ppm         ASTM D5185m         0         0         0         0           Aluminum         ppm         ASTM D5185m         >40         4         <1	Chromium	ppm	ASTM D5185m	>8	5	1	1
Silver	Nickel	ppm	ASTM D5185m	>25	11	10	5
Aluminum	Titanium	ppm	ASTM D5185m	>4	0	<1	<1
Lead         ppm         ASTM D5185m         >25         0         0         0           Copper         ppm         ASTM D5185m         >60         2         1         2           Tin         ppm         ASTM D5185m         >5         0         0         0           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         328         173         162         164           Barium         ppm         ASTM D5185m         1         0         0         <1	Silver	ppm	ASTM D5185m		0	0	0
Copper         ppm         ASTM D5185m         >60         2         1         2           Tin         ppm         ASTM D5185m         >5         0         0         0           Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         328         173         162         164           Barium         ppm         ASTM D5185m         1         0         0         <1	Aluminum	ppm	ASTM D5185m	>40	4	<1	2
Tin	Lead	ppm	ASTM D5185m	>25	0	0	0
Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         328         173         162         164           Barium         ppm         ASTM D5185m         3         2         2         2           Molybdenum         ppm         ASTM D5185m         1         0         0         < 1           Manganese         ppm         ASTM D5185m         3         2         2         2           Manganesium         ppm         ASTM D5185m         1         27         13         14           Calcium         ppm         ASTM D5185m         7         84         70         73           Phosphorus         ppm         ASTM D5185m         1145         1127         1049         1089           Zinc         ppm         ASTM D5185m         3         46         23         35           Sulfur         ppm         ASTM D5185m         7909         26805         25056         27857	Copper	ppm	ASTM D5185m	>60	2	1	2
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         328         173         162         164           Barium         ppm         ASTM D5185m         1         0         0         < 1	Tin	ppm	ASTM D5185m	>5	0	0	0
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	0
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         1         0         0         <1           Molybdenum         ppm         ASTM D5185m         3         2         2           Manganese         ppm         ASTM D5185m         4         3         4           Magnesium         ppm         ASTM D5185m         1         27         13         14           Calcium         ppm         ASTM D5185m         7         84         70         73           Phosphorus         ppm         ASTM D5185m         1145         1127         1049         1089           Zinc         ppm         ASTM D5185m         3         46         23         35           Sulfur         ppm         ASTM D5185m         17909         26805         25056         27857           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >285         246         118         169           Sodium         ppm         ASTM D5185m         >20         2         2         3           VISUAL         method         limit/base         current         history1         hi	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         3         2         2           Manganese         ppm         ASTM D5185m         4         3         4           Magnesium         ppm         ASTM D5185m         1         27         13         14           Calcium         ppm         ASTM D5185m         7         84         70         73           Phosphorus         ppm         ASTM D5185m         1145         1127         1049         1089           Zinc         ppm         ASTM D5185m         3         46         23         35           Sulfur         ppm         ASTM D5185m         17909         26805         25056         27857           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >285         246         118         169           Sodium         ppm         ASTM D5185m         >20         2         2         3           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE<	Boron	ppm	ASTM D5185m	328	173	162	164
Manganese         ppm         ASTM D5185m         4         3         4           Magnesium         ppm         ASTM D5185m         1         27         13         14           Calcium         ppm         ASTM D5185m         7         84         70         73           Phosphorus         ppm         ASTM D5185m         1145         1127         1049         1089           Zinc         ppm         ASTM D5185m         3         46         23         35           Sulfur         ppm         ASTM D5185m         17909         26805         25056         27857           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >285         246         118         169           Sodium         ppm         ASTM D5185m         >20         2         2         3           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE	Barium	ppm	ASTM D5185m	1	0	0	<1
Magnesium         ppm         ASTM D5185m         1         27         13         14           Calcium         ppm         ASTM D5185m         7         84         70         73           Phosphorus         ppm         ASTM D5185m         1145         1127         1049         1089           Zinc         ppm         ASTM D5185m         3         46         23         35           Sulfur         ppm         ASTM D5185m         17909         26805         25056         27857           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >285         246         118         169           Sodium         ppm         ASTM D5185m         >285         246         118         169           Sodium         ppm         ASTM D5185m         >20         2         2         3           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual	Molybdenum	ppm	ASTM D5185m		3	2	2
Calcium         ppm         ASTM D5185m         7         84         70         73           Phosphorus         ppm         ASTM D5185m         1145         1127         1049         1089           Zinc         ppm         ASTM D5185m         3         46         23         35           Sulfur         ppm         ASTM D5185m         17909         26805         25056         27857           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >285         246         118         169           Sodium         ppm         ASTM D5185m         >20         2         2         3           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE         NONE         NONE         NONE<	Manganese	ppm	ASTM D5185m		4	3	4
Phosphorus         ppm         ASTM D5185m         1145         1127         1049         1089           Zinc         ppm         ASTM D5185m         3         46         23         35           Sulfur         ppm         ASTM D5185m         17909         26805         25056         27857           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >285         246         118         169           Sodium         ppm         ASTM D5185m         >285         246         118         169           Sodium         ppm         ASTM D5185m         >20         2         2         3           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE         NONE         NONE	Magnesium	ppm	ASTM D5185m	1	27	13	14
Zinc         ppm         ASTM D5185m         3         46         23         35           Sulfur         ppm         ASTM D5185m         17909         26805         25056         27857           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >285         246         118         169           Sodium         ppm         ASTM D5185m         >285         246         118         169           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual	Calcium	ppm	ASTM D5185m	7	84	70	73
Sulfur         ppm         ASTM D5185m         17909         26805         25056         27857           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >285         246         118         169           Sodium         ppm         ASTM D5185m         >20         2         2         3           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE         NONE           Precipitate         scalar         *Visual         NONE         NONE         NONE         NONE         NONE           Silt         scalar         *Visual         NONE         NONE         NONE         NONE         NONE           Semd/Dirt         scalar         *Visual         NONE	Phosphorus	ppm	ASTM D5185m	1145	1127	1049	1089
CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185m >285 246 118 169  Sodium ppm ASTM D5185m 6 4 1  Potassium ppm ASTM D5185m >20 2 2 3  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE MODER NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE NONE Address scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON	Zinc	ppm	ASTM D5185m	3	46	23	35
Silicon         ppm         ASTM D5185m         >285         246         118         169           Sodium         ppm         ASTM D5185m         >20         2         2         3           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         MODER         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         MODER         MODER           Sand/Dirt         scalar         *Visual         NONE         NONE         NONE         NONE         NONE         NONE           Appearance         scalar         *Visual         NORML	Sulfur	ppm	ASTM D5185m	17909	26805	25056	27857
Sodium         ppm         ASTM D5185m         6         4         1           Potassium         ppm         ASTM D5185m         >20         2         2         3           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         MODER         NONE           Yellow Metal         scalar         *Visual         NONE         MODER         MODER         MODER         MODER         MODER         MODER         MODER         NONE	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 2 3  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE NONE  Yellow Metal scalar *Visual NONE NONE NONE NONE NONE  Precipitate scalar *Visual NONE NONE NONE NONE NONE  Silt scalar *Visual NONE NONE NONE NONE NONE  Debris scalar *Visual NONE NONE NONE NONE NONE  Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML NORML  Odor scalar *Visual NORML NORML NORML NORML  Emulsified Water scalar *Visual >.2 NEG NEG NEG  Free Water Scalar *Visual NEG NEG NEG	Silicon	ppm	ASTM D5185m	>285	246	118	169
VISUAL  method limit/base current history1 history2  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 NONE  Debris scalar *Visual NONE NONE NONE NONE  Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML NORML  Odor scalar *Visual NORML NORML NORML NORML  Emulsified Water scalar *Visual >.2 NEG NEG NEG  NEG NEG	Sodium	ppm	ASTM D5185m		6	4	1
White Metal scalar *Visual NONE NONE MODER 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 >.2 NEG NEG NEG NEG	Potassium	ppm	ASTM D5185m	>20	2	2	3
Yellow Metal       scalar       *Visual       NONE       NONE       NONE       NONE       NONE         Precipitate       scalar       *Visual       NONE       MODER       MODER       MODER       MODER       NONE       NORML	VISUAL		method	limit/base	current	history1	history2
Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE MODER Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >.2 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	White Metal	scalar	*Visual	NONE	NONE	MODER	NONE
Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     MODER     MODER       Sand/Dirt     scalar     *Visual     NONE     NONE     NONE     NONE       Appearance     scalar     *Visual     NORML     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORML     NORML     NORML     NORML     NORML       Emulsified Water     scalar     *Visual     >.2     NEG     NEG     NEG       Free Water     scalar     *Visual     NEG     NEG     NEG	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Debris       scalar       *Visual       NONE       NONE       MODER       MODER         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       >.2       NEG       NEG       NEG         Free Water       scalar       *Visual       NEG       NEG       NEG	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGFree Waterscalar*VisualNEGNEGNEG	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance scalar *Visual NORML NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >.2 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	Debris	scalar	*Visual	NONE	NONE	▲ MODER	▲ MODER
Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >.2 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Emulsified Water       scalar       *Visual       >.2       NEG       NEG       NEG         Free Water       scalar       *Visual       NEG       NEG       NEG	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Free Water scalar *Visual NEG NEG NEG	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>.2	NEG	NEG	NEG
FLUID PROPERTIES method limit/base current history1 history2	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2

Visc @ 40°C

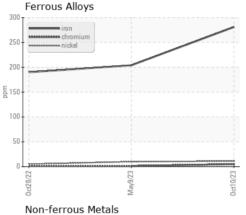


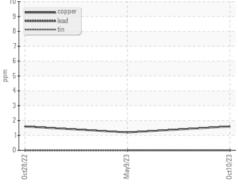
## **OIL ANALYSIS REPORT**

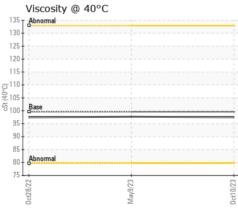




### **GRAPHS**











Laboratory Sample No. Lab Number

Unique Number : 10689368

: PCA0103327 : 05977418

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 12 Oct 2023

Diagnosed : 17 Oct 2023 Diagnostician : Sean Felton

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)

NW WHITE & CO - ANDERSON DIVISION

2605 RIVER RD PIEDMONT, SC US 29673

Contact: James Threatt jthreatt@nwwhite.com

T: (864)918-4646