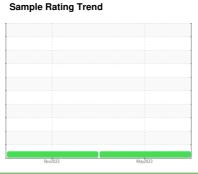


# **OIL ANALYSIS REPORT**

# AREA 2 EXTRUSION **N7-A EXTRUDER GEARBOX**

Component Gearbox

PETRO CANADA ENDURATEX EP 150 (33 GAL)





### 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

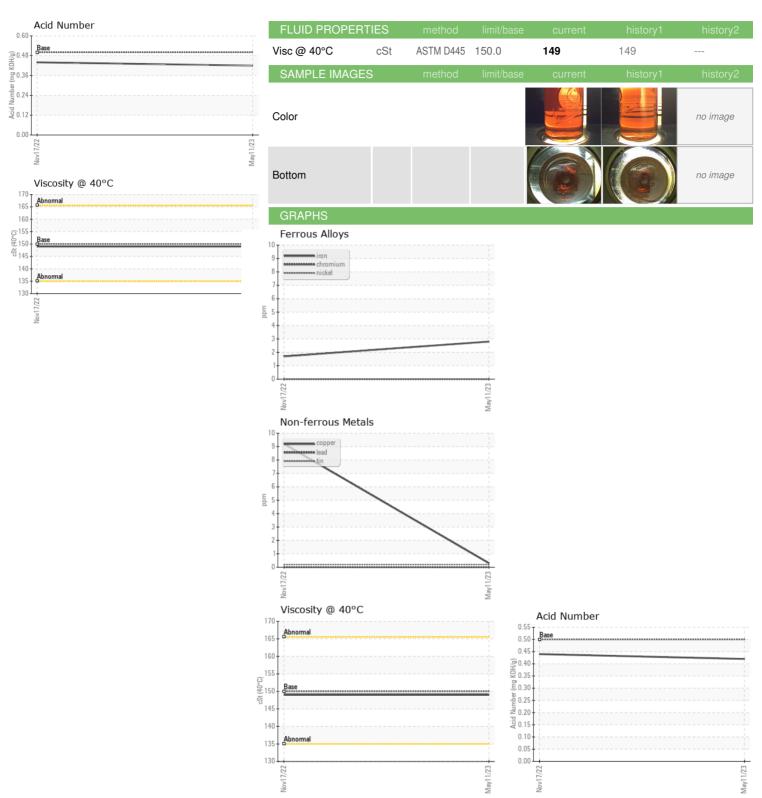
### **Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION	GAL)			Nov2022	May2023		
Sample Date   Client Info   11 May 2023   17 Nov 2022	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Date   Client Info   11 May 2023   17 Nov 2022	Sample Number		Client Info		WC0762600	KFS0001622	
Machine Age			Client Info		11 May 2023	17 Nov 2022	
Oil Changed Status		mths	Client Info		-	0	
NORMAL   N	Oil Age	mths	Client Info		0	0	
WEAR METALS	Oil Changed		Client Info		Filtered	Filtered	
Iron					NORMAL	NORMAL	
Chromium         ppm         ASTM D5185m         >15         0         0	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>200	3	2	
Titanium	Chromium	ppm	ASTM D5185m	>15	0	0	
Silver	Nickel	ppm	ASTM D5185m	>15	0	0	
Aluminum	Titanium	ppm	ASTM D5185m		0	0	
Lead	Silver	ppm	ASTM D5185m		0	0	
Copper	Aluminum	ppm	ASTM D5185m	>25	1	0	
Tin	Lead	ppm	ASTM D5185m	>100	0	0	
Vanadium         ppm         ASTM D5185m         0         0            Cadmium         ppm         ASTM D5185m         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         55         51         45            Barium         ppm         ASTM D5185m         0         0         0            Molybdenum         ppm         ASTM D5185m         0         0         0            Magnesium         ppm         ASTM D5185m         2         0         0            Calcium         ppm         ASTM D5185m         2         0         0            Phosphorus         ppm         ASTM D5185m         3         0         <1	Copper	ppm	ASTM D5185m	>200	<1	9	
Cadmium         ppm         ASTM D5185m         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         55         51         45            Barium         ppm         ASTM D5185m         0         0         0            Molybdenum         ppm         ASTM D5185m         0         0         0            Manganese         ppm         ASTM D5185m         0         <1         0            Magnesium         ppm         ASTM D5185m         2         0         0            Magnesium         ppm         ASTM D5185m         250         255         255            Calcium         ppm         ASTM D5185m         3         0         <1            Phosphorus         ppm         ASTM D5185m         3         0         <1            Zinc         ppm         ASTM D5185m         3         0         <1            Sulfur         ppm         ASTM D5185m         >50         <	Tin	ppm	ASTM D5185m	>25	<1	<1	
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	
Boron	Cadmium	ppm	ASTM D5185m		0	0	
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         0         0         0            Manganese         ppm         ASTM D5185m         0         <1	Boron	ppm	ASTM D5185m	55	51	45	
Manganese         ppm         ASTM D5185m         0         <1	Barium	ppm	ASTM D5185m	0	0	0	
Magnesium         ppm         ASTM D5185m         2         0         0            Calcium         ppm         ASTM D5185m         6         <1         12            Phosphorus         ppm         ASTM D5185m         250         255         255            Zinc         ppm         ASTM D5185m         3         0         <1            Sulfur         ppm         ASTM D5185m         7500         7403         6897            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         <1         <1            Sodium         ppm         ASTM D5185m         >50         <1         <1            Sodium         ppm         ASTM D5185m         >20         0         0            FLUID DEGRADATION         method         limit/base         current         history1         history2           FLUID DEGRADATION         method         limit/base         current         history1         history2           VISUAL	Molybdenum	ppm	ASTM D5185m	0	0	0	
Calcium         ppm         ASTM D5185m         6         <1	Manganese	ppm	ASTM D5185m	0	<1	0	
Phosphorus         ppm         ASTM D5185m         250         255         255            Zinc         ppm         ASTM D5185m         3         0         <1            Sulfur         ppm         ASTM D5185m         7500         7403         6897            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         <1         <1            Sodium         ppm         ASTM D5185m         >20         0         0            Potassium         ppm         ASTM D5185m         >20         0         0            Potassium         ppm         ASTM D5185m         >20         0         0            FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg K0H/g         ASTM D8045         0.5         0.42         0.44            VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual	Magnesium	ppm	ASTM D5185m	2	0	0	
Zinc         ppm         ASTM D5185m         3         0         <1	Calcium	ppm	ASTM D5185m	6	<1	12	
Sulfur         ppm         ASTM D5185m         7500         7403         6897            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         <1         <1            Sodium         ppm         ASTM D5185m         >20         0         0            Potassium         ppm         ASTM D5185m         >20         0         0            FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg KOH/g         ASTM D8045         0.5         0.42         0.44            VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE            Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE            Yellow Metal         scalar         *V	Phosphorus	ppm	ASTM D5185m	250	255	255	
CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185m >50 <1 <1 Sodium ppm ASTM D5185m >20 0 0 Potassium ppm ASTM D5185m >20 0 0  FLUID DEGRADATION method limit/base current history1 history2  Acid Number (AN) mg KOH/g ASTM D8045 0.5 0.42 0.44  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NONE NONE NONE Appearance scalar *Visual NONE NONE NONE Codor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG	Zinc	ppm	ASTM D5185m	3	0	<1	
Silicon         ppm         ASTM D5185m         >50         <1	Sulfur	ppm	ASTM D5185m	7500	7403	6897	
Sodium         ppm         ASTM D5185m         <1	CONTAMINANTS	;	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 0 0  FLUID DEGRADATION method limit/base current history1 history2  Acid Number (AN) mg KOH/g ASTM D8045 0.5 0.42 0.44  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  Silt scalar *Visual NONE NONE NONE  Sand/Dirt scalar *Visual NONE NONE NONE  Sand/Dirt scalar *Visual NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML  Codor scalar *Visual NORML NORML NORML  Emulsified Water scalar *Visual >0.2 NEG NEG	Silicon	ppm	ASTM D5185m	>50	<1	<1	
FLUID DEGRADATION method limit/base current history1 history2  Acid Number (AN) mg KOH/g ASTM D8045 0.5 0.42 0.44  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  Silt scalar *Visual NONE NONE NONE  Sand/Dirt scalar *Visual NONE NONE NONE  Sand/Dirt scalar *Visual NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML  Appearance scalar *Visual NORML NORML NORML  Bemulsified Water scalar *Visual >0.2 NEG NEG	Sodium	ppm	ASTM D5185m		<1	0	
Acid Number (AN)         mg KOH/g         ASTM D8045         0.5         0.42         0.44            VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE            Yellow Metal         scalar         *Visual         NONE         NONE         NONE            Precipitate         scalar         *Visual         NONE         NONE         NONE            Silt         scalar         *Visual         NONE         NONE         NONE            Debris         scalar         *Visual         NONE         NONE         NONE            Sand/Dirt         scalar         *Visual         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	Potassium	ppm	ASTM D5185m	>20	0	0	
VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG	Acid Number (AN)	mg KOH/g	ASTM D8045	0.5	0.42	0.44	
Yellow Metalscalar*VisualNONENONENONEPrecipitatescalar*VisualNONENONENONESiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEG	VISUAL		method			history1	history2
Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG		scalar					
Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Debrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEG							
Sand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEG							
Appearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEG		scalar					
Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG	Sand/Dirt	scalar		NONE	NONE	NONE	
Emulsified Water scalar *Visual >0.2 NEG NEG	Appearance	scalar			NORML	NORML	
		scalar	*Visual	NORML		NORML	
Free Water scalar *Visual NEG NEG		scalar		>0.2			
	Free Water	scalar	*Visual		NEG	NEG	



## **OIL ANALYSIS REPORT**







Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** 

: WC0762600 : 05847241 : 10471348 Test Package : IND 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 15 May 2023 Diagnosed : 16 May 2023

Diagnostician : Wes Davis

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)

Berry Global Inc. - Nashville

463 Harding Industrial Drive Nashville, TN

US 37211 Contact: Mike Kraay mikekraay@berryglobal.com

T: (615)833-1572