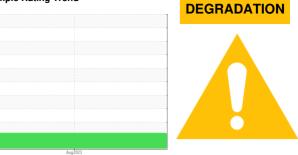
### **PROBLEM SUMMARY**



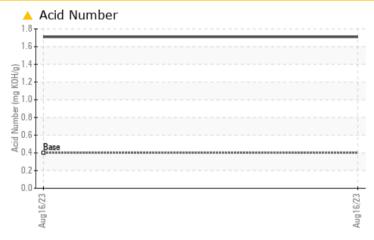
### Sample Rating Trend



# DR169

Component Torque Drive Fluid PETRO CANADA ENDURATEX EP 220 (--- GAL)

### COMPONENT CONDITION SUMMARY



### RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS							
Sample Status				ABNORMAL			
Acid Number (AN)	mg KOH/g	ASTM D974*	0.40	<u> </u>			

Customer Id: GFL286 Sample No.: PC0062401 Lab Number: 02578862 Test Package: IND 2



To manage this report scan the QR code

*To discuss the diagnosis or test data:* Kevin Marson +1 (289)291-4644 x4644 Kevin.Marson@wearcheck.com

*To change component or sample information:* Gloria Gonzalez +1 (289)291-4643 x4643 gloria.gonzalez@wearcheck.com There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS



### **OIL ANALYSIS REPORT**

Sample Rating Trend

**DEGRADATION** 

# Machine Id

Component Torque Drive

### PETRO CANADA ENDURATEX EP 220 (--- GAL)

### DIAGNOSIS

#### Recommendation

The oil 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

There is no indication of any contamination in the oil.

#### Fluid Condition

The AN level is above the recommended limit. The oil is no longer serviceable.

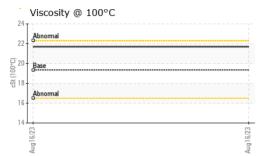
				Aug2023		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0062401		
Sample Date		Client Info		16 Aug 2023		
Machine Age	hrs	Client Info		13758		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		Changed		
Sample Status				ABNORMAL		
WEAR METAL	S	method	limit/base	current	history1	history2
PQ		ASTM D8184*		0		
Iron	ppm	ASTM D5185(m)	>200	45		
Chromium	ppm	ASTM D5185(m)	>10	<1		
Nickel	ppm	ASTM D5185(m)		0		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum	ppm	ASTM D5185(m)	>50	<1		
Lead	ppm	ASTM D5185(m)	>50	0		
Copper	ppm	ASTM D5185(m)	>200	<1		
Tin	ppm	ASTM D5185(m)	>10	0		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
D #				•		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm ppm	ASTM D5185(m) ASTM D5185(m)		0		
		. /	limit/base			
Cadmium	ppm	ASTM D5185(m)		0		
Cadmium ADDITIVES	ppm ppm	ASTM D5185(m) method ASTM D5185(m)	limit/base 60 0	0 current 41		 history2
Cadmium ADDITIVES Boron Barium	ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	60	0 current	 history1 	 history2 
Cadmium ADDITIVES Boron Barium Molybdenum	ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	60 0 0	0 current 41 0 0	 history1 	 history2 
Cadmium ADDITIVES Boron Barium	ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	60 0 0	0 current 41 0	 history1  	 history2  
Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	60 0 0 0	0 current 41 0 0 <1	 history1   	 history2   
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	60 0 0 0 0	0 current 41 0 0 <1 1	 history1   	 history2   
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	60 0 0 0 0 0	0 current 41 0 0 <1 1 1 3	 history1    	 history2    
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	60 0 0 0 0 0 270	0 current 41 0 0 0 <1 1 1 3 429	 history1      	 history2     
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	60 0 0 0 0 270 0	0 current 41 0 0 <1 1 1 3 429 25	 history1       	 history2      
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	60 0 0 0 0 270 0	0 current 41 0 0 <1 1 1 3 429 25 4495	history1	 history2        -
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	60 0 0 0 0 270 0 11200	0 current 41 0 0 <1 1 1 3 429 25 4495 <1 <1	 history1        -	 history2        -
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	60 0 0 0 0 0 270 0 11200	0 current 41 0 0 <11 1 3 429 25 4495 <1 current 2	history1 history1	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) <b>method</b> ASTM D5185(m) ASTM D5185(m)	60 0 0 0 0 270 0 11200 limit/base >50	0 current 41 0 0 <11 1 3 429 25 4495 <1 current 2 <1	history1 history1	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	60 0 0 0 0 270 0 270 0 11200 11200 imit/base >50 >20	0 current 41 0 0 <1 1 3 429 25 4495 <1 current 2 <1 current 2 <1 <1 current	history1 i history1 history1	history2 history2 <
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	60 0 0 0 0 270 0 11200 limit/base >50	0 current 41 0 0 <11 1 3 429 25 4495 <1 current 2 <1	history1 history1 history1	<ul> <li></li> <li>history2</li> <li></li> <li>history2</li> <li>history2</li> <li></li> <li></li> </ul>

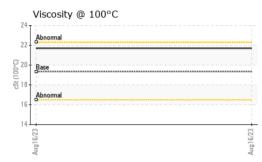


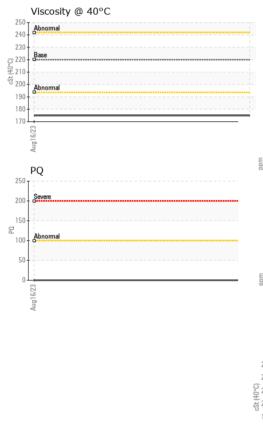
## **OIL ANALYSIS REPORT**

DDM

maa







VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE		
ellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	VLITE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML		
Emulsified Water	scalar	Visual*	>0.1	NEG		
Free Water	scalar	Visual*		NEG		
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
′isc @ 40°C	cSt	ASTM D7279(m)	220	175		
/isc @ 100°C	cSt	ASTM D7279(m)	19.35	21.7		
iscosity Index (VI)	Scale	ASTM D2270*	99	147		
SAMPLE IMAG	ES	method	limit/base	current	history1	history2
				A-1		
Color					no image	no image
					ne mage	ne mage
Bottom					no image	no image
Non-ferrous Metal	s		4ng16/23	60		
				20		
5			_	0		
Aug16/23			Aug 16/23	Aug16/23		
₹ Viscosity @ 40°C			AL			
T			(₽2	Acid Number		
Abnormal Base			Hoy B	.5		
T		******	Acid Number (mg KOH(g) 1 1 2	.0		
Abnormal			Numb	5- Base		
			Acid			
Aug16/23			Aug 16/23	Aug16/23		
BnY			Aug	Aug		
02578862	Received Diagnos Diagnos Diagnos	d : 28 / ed : 29 / tician : Key 100, TAN Ma	Aug 2023 Aug 2023 rin Marson .n, VI )	L7L 5H9 Green Infrastru	151 F Contact: S	Ram Forest Re Stouffville, O CA L4A 2G Shannon Abbo
		00-268-213 dified (a) to		raallab		bott@gipi.co

**Test Package** To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

CALA

ISO 17025:2017 Accredited Laboratory

缸

Laboratory

Sample No.

Lab Number

**Unique Number** 

F:

T: (905)750-5900