

# **GREASE ANALYSIS**

# [450240064] Machine Id NC-05603 TORQUE TUBE BEARING

Component

1 Grease

PETRO CANADA GREASE OG-1 (--- GAL)

# Sample Rating Trend NOR Deciders



### DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### **Grease Condition**

The condition of the grease is acceptable for the time in service.

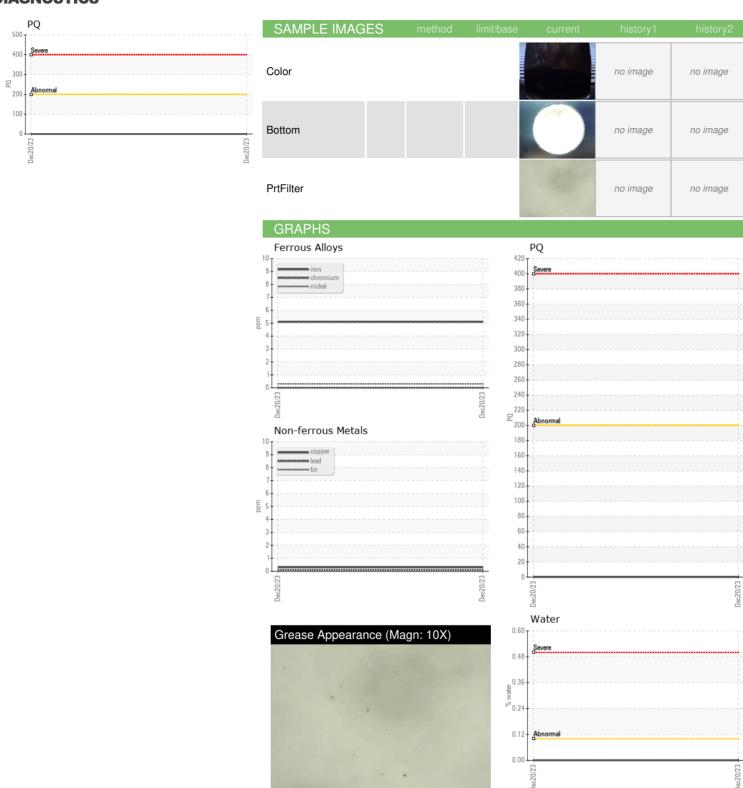
### Contaminants

There is no indication of any contamination in the grease.

Machine Age         hrs         Client Info         0             Grease Age         hrs         Client Info         0             Grease Serviced         Client Info         N/A					Dec2023		
Sample Date   Client Info   20 Dec 2023	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Date   Client Info   20 Dec 2023	Sample Number		Client Info		PC		
Grease Age         hrs         Client Info         N/A	Sample Date		Client Info		20 Dec 2023		
Contamination   Client Info   N/A   Contamination   Contamin	Machine Age	hrs	Client Info		0		
CONTAMINATION	Grease Age	hrs	Client Info		0		
CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.1         NEG	Grease Serviced		Client Info		N/A		
Water         WC Method         >0.1         NEG            WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184"         >200         0             Chromium         ppm         ASTM D6185(m)         >10         0             Chromium         ppm         ASTM D6185(m)         >5         <1	Sample Status				NORMAL		
WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184*         >200         0             Iron         ppm         ASTM D8185(m)         >250         5             Chromium         ppm         ASTM D8185(m)         >10         0             Nickel         ppm         ASTM D8185(m)         >5         <1             Cadmium         ppm         ASTM D8185(m)         0             Vanadium         ppm         ASTM D8185(m)         0             Vanadium         ppm         ASTM D8185(m)         >25         <1             Lead         ppm         ASTM D8185(m)         >5         0             Copper         ppm         ASTM D8185(m)         >5         0             Silver         ppm         ASTM D8185(m)         >5         0             Silver         ppm         ASTM D8185(m)         9 <tr< th=""><th>CONTAMINAT</th><th>ION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></tr<>	CONTAMINAT	ION	method	limit/base	current	history1	history2
PQ	Water		WC Method	>0.1	NEG		
	WEAR METAL	.S	method	limit/base	current	history1	history2
Chromium	PQ		ASTM D8184*	>200	0		
Nickel	Iron	ppm	ASTM D5185(m)	>250	5		
Cadmium         ppm         ASTM D5185(m)         0             Titanium         ppm         ASTM D5185(m)         0             Vanadium         ppm         ASTM D5185(m)         >25         <1	Chromium	ppm	ASTM D5185(m)	>10	0		
Titanium	Nickel	ppm	ASTM D5185(m)	>5	<1		
Vanadium         ppm         ASTM D5185(m)         0             Lead         ppm         ASTM D5185(m)         >25         <1	Cadmium	ppm	ASTM D5185(m)		0		
Lead	Titanium	ppm	ASTM D5185(m)		0		
Copper         ppm         ASTM D5185(m)         >75         <1             Tin         ppm         ASTM D5185(m)         >5         0             Silver         ppm         ASTM D5185(m)         >5         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185(m)         9             Magnesium         ppm         ASTM D5185(m)         0             Manganese         ppm         ASTM D5185(m)         0             Molybdenum         ppm         ASTM D5185(m)         0             Phosphorus         ppm         ASTM D5185(m)         2             Phosphorus         ppm         ASTM D5185(m)         49             Antimony         ppm         ASTM D5185(m)         0             Antimony         ppm         ASTM D5185(m)         0             Barium         ppm         ASTM D	Vanadium	ppm	ASTM D5185(m)		0		
Tin	Lead	ppm	ASTM D5185(m)	>25	<1		
Silver	Copper	ppm	ASTM D5185(m)	>75	<1		
ADDITIVES		ppm	, ,	>5	0		
Boron	Silver	ppm	ASTM D5185(m)	>5	0		
Magnesium         ppm         ASTM D5185(m)         9             Manganese         ppm         ASTM D5185(m)         0             Molybdenum         ppm         ASTM D5185(m)         0             Phosphorus         ppm         ASTM D5185(m)         2             Zinc         ppm         ASTM D5185(m)         49             Antimony         ppm         ASTM D5185(m)         0             Antimony         ppm         ASTM D5185(m)         0             THICKENER/SOAP         method         limit/base         current         history1         history2           Aluminum         ppm         ASTM D5185(m)         0             Barium         ppm         ASTM D5185(m)         3919             Calcium         ppm         ASTM D5185(m)         15             Sodium         ppm         ASTM D5185(m)         <1             Sulfur         ppm         ASTM D5185(m)         >150         3 <th>ADDITIVES</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	ADDITIVES		method	limit/base	current	history1	history2
Manganese         ppm         ASTM D5185(m)         0             Molybdenum         ppm         ASTM D5185(m)         2             Phosphorus         ppm         ASTM D5185(m)         2             Zinc         ppm         ASTM D5185(m)         49             Antimony         ppm         ASTM D5185(m)         0             Antimony         ppm         ASTM D5185(m)         2             THICKENER/SOAP         method         limit/base         current         history1         history2           Aluminum         ppm         ASTM D5185(m)         2             Barium         ppm         ASTM D5185(m)         3919             Calcium         ppm         ASTM D5185(m)         15             Sodium         ppm         ASTM D5185(m)         <1             Sulfur         ppm         ASTM D5185(m)         >150         3             CONTAMINANTS         method         limit/base         c	Boron	ppm	ASTM D5185(m)		149		
Molybdenum         ppm         ASTM D5185(m)         0             Phosphorus         ppm         ASTM D5185(m)         2             Zinc         ppm         ASTM D5185(m)         49             Antimony         ppm         ASTM D5185(m)         0             THICKENER/SOAP         method         limit/base         current         history1         history2           Aluminum         ppm         ASTM D5185(m)         2             Barium         ppm         ASTM D5185(m)         3919             Calcium         ppm         ASTM D5185(m)         15             Sodium         ppm         ASTM D5185(m)         <1	Magnesium	ppm	ASTM D5185(m)		9		
Phosphorus         ppm         ASTM D5185(m)         2             Zinc         ppm         ASTM D5185(m)         49             Antimony         ppm         ASTM D5185(m)         0             THICKENER/SOAP         method         limit/base         current         history1         history2           Aluminum         ppm         ASTM D5185(m)         2             Barium         ppm         ASTM D5185(m)         0             Calcium         ppm         ASTM D5185(m)         3919             Sodium         ppm         ASTM D5185(m)         15             Lithium         ppm         ASTM D5185(m)         <1	•	ppm	ASTM D5185(m)		0		
Zinc         ppm         ASTM D5185(m)         49             Antimony         ppm         ASTM D5185(m)         0             THICKENER/SOAP method limit/base current         limit/base current         history1         history2           Aluminum         ppm         ASTM D5185(m)         2             Barium         ppm         ASTM D5185(m)         0             Calcium         ppm         ASTM D5185(m)         3919             Sodium         ppm         ASTM D5185(m)         15             Lithium         ppm         ASTM D5185(m)         <1	Molybdenum	ppm	ASTM D5185(m)		0		
Antimony         ppm         ASTM D5185(m)         0             THICKENER/SOAP         method         limit/base         current         history1         history2           Aluminum         ppm         ASTM D5185(m)         2             Barium         ppm         ASTM D5185(m)         0             Calcium         ppm         ASTM D5185(m)         3919             Sodium         ppm         ASTM D5185(m)         15             Lithium         ppm         ASTM D5185(m)         <1		ppm			2		
THICKENER/SOAP         method         limit/base         current         history1         history2           Aluminum         ppm         ASTM D5185(m)         2             Barium         ppm         ASTM D5185(m)         0             Calcium         ppm         ASTM D5185(m)         3919             Sodium         ppm         ASTM D5185(m)         15             Lithium         ppm         ASTM D5185(m)         <1		ppm	. ,		49		
Aluminum			ASTM D5185(m)		0		
Barium	THICKENER/S	OAP	method	limit/base	current	history1	history2
Calcium         ppm         ASTM D5185(m)         3919             Sodium         ppm         ASTM D5185(m)         15             Lithium         ppm         ASTM D5185(m)         <1	Aluminum	ppm					
Sodium	Barium	ppm	ASTM D5185(m)		0		
Lithium         ppm         ASTM D5185(m)         <1             Sulfur         ppm         ASTM D5185(m)         719             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >150         3             Potassium         ppm         ASTM D5185(m)         3             GREASE CONDITION         method         limit/base         current         history1         history2           Grease Color         Visual*         Tan         Cream             Texture         In-house*         Buttery         Buttery		ppm					
Sulfur         ppm         ASTM D5185(m)         719             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >150         3             Potassium         ppm         ASTM D5185(m)         3             GREASE CONDITION         method         limit/base         current         history1         history2           Grease Color         Visual*         Tan         Cream             Texture         In-house*         Buttery         Buttery		ppm	( )				
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >150         3             Potassium         ppm         ASTM D5185(m)         3             GREASE CONDITION         method         limit/base         current         history1         history2           Grease Color         Visual*         Tan         Cream             Texture         In-house*         Buttery         Buttery							
Silicon         ppm         ASTM D5185(m)         >150         3             Potassium         ppm         ASTM D5185(m)         3             GREASE CONDITION method limit/base current         history1         history2           Grease Color         Visual* Tan         Cream             Texture         In-house* Buttery         Buttery			ASTM D5185(m)		719		
Potassium         ppm         ASTM D5185(m)         3             GREASE CONDITION         method         limit/base         current         history1         history2           Grease Color         Visual*         Tan         Cream             Texture         In-house*         Buttery         Buttery	CONTAMINAN	ITS	method	limit/base	current	history1	history2
GREASE CONDITION method limit/base current history1 history2  Grease Color Visual* Tan Cream  Texture In-house* Buttery Buttery	Silicon	ppm	ASTM D5185(m)	>150	3		
Grease Color Visual* Tan Cream Texture In-house* Buttery Buttery	Potassium	ppm	ASTM D5185(m)		3		
Texture In-house* Buttery Buttery	GREASE CON	DITION	method	limit/base	current	history1	history2
	Grease Color		Visual*	Tan	Cream		
NLGI Consistency NLGI Scale SKF Method* 1 2	Texture		In-house*	Buttery	Buttery		
	NLGI Consistency	NLGI Scale	SKF Method*	1	2		



## **GREASE ANALYSIS**





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5710667

: PC

: 02609581

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Recieved : 17 Jan 2024 Diagnosed : 19 Jan 2024 Diagnostician : Bill Quesnel

Test Package : GRS 1 ( Additional Tests: BottomAnalysis, KV40, Spat, TAN Auto )

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.

**Suncor - Terra Nova Projects** 

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