

# SCV G2 THBR

Component Thrust Bearing Fluid MOBIL DTE OIL HVY MEDIUM (24 LTR)

# COMPONENT CONDITION SUMMARY



# RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you check for visible metal particles in the oil. We advise that you perform a filter service, and use offline filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.

PROBLEMATIC TEST RESULTS								
Sample Status				SEVERE	SEVERE	ABNORMAL		
Particles >4µm		ASTM D7647	>10000	<b>e</b> 241731	81520	<u> </u>		
Particles >6µm		ASTM D7647	>2500	<b>•</b> 187678	<b>1</b> 3409	<u> </u>		
Particles >14µm		ASTM D7647	>160	🛑 18758	<u> </u>	<b>9</b> 43		
Particles >21µm		ASTM D7647	>40	<b>e</b> 863	<u> </u>	<u> </u>		
Oil Cleanliness		ISO 4406 (c)	>20/18/14	<b>e</b> 25/25/21	24/21/17	<b>2</b> 3/21/17		
White Metal	scalar	Visual*	NONE	🔺 LIGHT	NONE	NONE		
PrtFilter						4.4		

Customer Id: NEWSTJ Sample No.: WC0445192 Lab Number: 02517618 Test Package: IND 2



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RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Change Filter	MISSED	Dec 20 2022	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.			
Resample	MISSED	Dec 20 2022	?	Resample in 30-45 days to monitor this situation.			
Check Breathers	MISSED	Dec 20 2022	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.			
Check Dirt Access	MISSED	Dec 20 2022	?	We advise that you check all areas where contaminants can enter the system.			
Check For Visual Metal	MISSED	Dec 20 2022	?	We advise that you check for visible metal particles in the oil.			
Filter Fluid	MISSED	Dec 20 2022	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.			

#### HISTORICAL DIAGNOSIS

#### 03 Feb 2022 Diag: Kevin Marson



We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.All component wear rates are normal. Particles >4 $\mu$ m are severely high. Particles >6 $\mu$ m are abnormally high. Particles >14 $\mu$ m are abnormally high. Particles >21 $\mu$ m are abnormally high. The water content is negligible. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



view report

# 04 May 2021 Diag: Kevin Marson

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.All component wear rates are normal. Particles >14 $\mu$ m are abnormally high. Particles >21 $\mu$ m are abnormally high. Particles >4 $\mu$ m are abnormally high. Particles >38 $\mu$ m are abnormally high. Particles >6 $\mu$ m are abnormally high. The water content is negligible. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

#### 26 Nov 2020 Diag: Kevin Marson

20 NOV 2020 Diag. Reviii Marson

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.Light concentration of visible metal present. Particles >21 $\mu$ m are severely high. Particles >4 $\mu$ m are abnormally high. Particles >38 $\mu$ m are abnormally high. Particles >6 $\mu$ m are abnormally high. The water content is negligible. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





# **OIL ANALYSIS REPORT**

Sample Rating Trend

# Machine Id SCV G2 THBR

Component **Thrust Bearing** Fluic MOBIL DTE OIL HVY MEDIUM (24 LTR)

### DIAGNOSIS

#### Recommendation

We advise that you check all areas where contaminants can enter the system. We advise that you check for visible metal particles in the oil. We advise that you perform a filter service, and use offline filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.

# A Wear

Moderate concentration of visible metal present. Bearing wear is indicated.

#### Contamination

Particles >14µm are severely high. Particles >21µm are severely high. Particles >6µm are severely high. Oil Cleanliness are severely high. Particles >4µm are severely high.

### Fluid Condition

The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.



Report Id: NEWSTJ [WCAMIS] 02517618 (Generated: 12/11/2023 13:41:55) Rev: 1



SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0445192	WC0328012	WC0328006
Sample Date		Client Info		01 May 2022	03 Feb 2022	04 May 2021
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	SEVERE	ABNORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Water		WC Method	>2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>85	35	4	4
Chromium	ppm	ASTM D5185(m)		0	0	0
Nickel	ppm	ASTM D5185(m)		0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>40	0	0	0
Lead	ppm	ASTM D5185(m)	>60	<1	1	1
Copper	ppm	ASTM D5185(m)	>7	1	<1	<1
Tin	ppm	ASTM D5185(m)	>40	16	29	27
Antimony	ppm	ASTM D5185(m)		2	2	2
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current 0	history1 <1	history2 <1
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185(m) ASTM D5185(m)	limit/base	current 0 0	history1 <1 0	history2 <1 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	current 0 0 0	history1 <1 0 0	history2 <1 0 0
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	current 0 0 0 <1	history1 <1 0 0 0	history2           <1           0           0           0           0           0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	methodASTM D5185(m)ASTM D5185(m)ASTM D5185(m)ASTM D5185(m)ASTM D5185(m)	limit/base	current           0           0           0           <1           <1	history1 <1 0 0 0 0 0	history2           <1           0           0           0           0           0           0           0           0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	methodASTM D5185(m)ASTM D5185(m)ASTM D5185(m)ASTM D5185(m)ASTM D5185(m)ASTM D5185(m)	limit/base	current           0           0           0           <1           <1           0	history1 <1 0 0 0 0 0 0 0	history2 <1 0 0 0 0 0 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	current           0           0           0           <1           <1           0           12	history1           <1           0           0           0           0           0           0           0           3	history2           <1           0           0           0           0           0           0           3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	current           0           0           0           1           21           12           4	history1           <1           0           0           0           0           0           3           2	history2           <1           0           0           0           0           0           0           2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	limit/base	current           0           0           0           1           21           1           0           12           4           117	history1 <1 0 0 0 0 0 0 3 2 140	history2           <1           0           0           0           0           0           2           143
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	limit/base	current           0           0           0           <1           <1           0           12           4           117           <1	history1           <1           0           0           0           0           0           0           1	history2         <1         0         0         0         0         <1         3         2         143         <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	limit/base	current         0         0         0         <1         <1         0         12         4         117         <1         current	<1         0         0         0         0         0         0         0         1         0         0         1         0         140         <1         history1	<1         0         0         0         0         0         0         2         143         <1         history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	limit/base	current       0       0       0       <1       <1       0       12       4       117       <1       current	history1         <1         0         0         0         0         0         0         0         0         140         <1         history1         <1	<1         0         0         0         0         0         0         143         <1         history2         143         <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm 1 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 3 ppm 4 ppm 4 ppm 4 ppm 4	method           ASTM D5185(m)	limit/base	current           0           0           0           <1           <1           0           12           4           117           <1           current           <1           <1	<1         0         0         0         0         0         0         0         140         <1         history1         <1	<1         0         0         0         0         0         0         2         143         <1         history2         <1         0         0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm 1 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 3 ppm 4 ppm 4 ppm 4 ppm 2 ppm 2 ppm 2 ppm 2	method           ASTM D5185(m)	limit/base	current         0         0         0         <1         <1         0         12         4         117         <1         Current         <1         <1         <1         <1         <1         <1         <1         <1         <1	<1         0         0         0         0         0         0         0         3         2         140         <1         history1         <1         0         <1         0         <1	<1         0         0         0         0         0         0         0         0         0         0         143         <1         history2         <1         0         <1         0         <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm 1 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 3 ppm 4 ppm 4 ppm 4 ppm 4 ppm 4 ppm 4	method           ASTM D5185(m)	limit/base	current         0         0         0         <1         0         12         4         117         <1         current         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         current	<1         0         0         0         0         0         0         3         2         140         <1         history1         <1         0         <1         0         <1         0         <1         history1         <1         0         <1         0         <1	<1         0         0         0         0         0         0         <1         3         2         143         <1         history2         <1         0         <1         0         <1         0         <1         Nistory2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm 1 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 3 ppm 4 ppm 4 ppm 4 ppm 2 ppm 4 ppm 4	method           ASTM D5185(m)	limit/base           limit/base           20           >20           limit/base           >20           limit/base           >20	current         0         0         <1         <1         0         12         4         117         <1         Current         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <21731	<1         0         0         0         0         0         0         3         2         140         <1         history1         <1         0         <1         0         <1         0         <1         0         <1         0         <1         0         <1         bistory1	<1         0         0         0         0         0         0         <1         3         2         143         <1         history2         <1         0         <1         0         <1         0         <1         0         <1         0         <1         03         <1         03         <1         103         <103         <103         <103         <103         <103         <133         <1433         <1433         <1433         <1433         <1433         <1433         <1433         <1433         <1433         <1433         <1433         <1433         <1434         <1444         <1445         <1445         <1445         <1445
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	Imit/base Imit/base ≥20 ≥20 Imit/base >20 ≥10000 >2500	current         0         0         <1         <1         0         12         4         117         <1         current         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1 <th>&lt;1         0         0         0         0         0         0         3         2         140         &lt;1         history1         &lt;1         0         &lt;1         0         &lt;1         0         &lt;1         0         &lt;1         1         0         &lt;1         1</th> <th>&lt;1         0         0         0         0         0         &lt;1         3         2         143         &lt;1         &lt;1</th>	<1         0         0         0         0         0         0         3         2         140         <1         history1         <1         0         <1         0         <1         0         <1         0         <1         1         0         <1         1	<1         0         0         0         0         0         <1         3         2         143         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	limit/base	current         0         0         <1         <1         0         12         4         117         <1         current         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         187678         18758	<1         0         0         0         0         0         0         0         0         140         <1         <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         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <	<1         0         0         0         0         0         0         143         <1         3         <1         3         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1      <
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)           ASTM D7647           ASTM D7647           ASTM D7647	limit/base	current         0         0         <1         <1         0         12         4         117         <1         current         <1         <1         <1         <1         <1         <1         187678         1863	<1         0         0         0         0         0         0         3         2         140         <1         0         <1         •	<1         0         0         0         0         0         0         143         <1         3         <1         0         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1      <
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)           ASTM D7647           ASTM D7647           ASTM D7647	limit/base	current         0         0         <1         0         12         4         117         <1         current         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1	<1         0         0         0         0         0         0         3         2         140         <1         •         history1         <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         <10	<1         0         0         0         0         0         0         0         0         143         2         143         1         0         <1         history2         <1         0         <1         0         <1         0         <1         0         <1         0         <1         0         <1         0         <1         0         <1         0         <10401         943         273         21
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)           ASTM D7647           ASTM D7647           ASTM D7647           ASTM D7647           ASTM D7647	limit/base       limit/base       >20       >20       >20       >20       >10000       >2500       >10000       >2500       >160       >40       >10       >3	current         0         0         <1         <1         0         12         4         117         <1         Current         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1	<1         0         0         0         0         0         0         0         0         3         2         140         <1         history1         <1         0         <1         0         <1         0         <1         0         <1         0         <1         0         <1         0         <1         0         <1         0         <10         13409         <10         10         10         10         1	<1         0         0         0         0         0         0         0         0         143         2         143         <1         0         <1         0         <1         0         <1         0         <1         0         <1         0         <1         0         <1         0         <2/td>         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401         <10401

Submitted By: Paul Martin



# **OIL ANALYSIS REPORT**



	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
5	Acid Number (AN)	mg KOH/g	ASTM D974*		0.08	0.11	0.11
	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	Visual*	NONE	LIGHT	NONE	NONE
2) 2)	Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
2	Precipitate	scalar	Visual*	NONE	NONE	NONE	VLITE
6	Silt	scalar	Visual*	NONE	LIGHT	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	.2%	.2%
	Free Water	scalar	Visual*		NEG	NEG	.2%
	FLUID PROPERT	IES	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt	ASTM D7279(m)	65.1	65.5	66.5	66.4
	SAMPLE IMAGES	\$	method	limit/base	current	history1	history2
	Color						- 10/2n2.5



Bottom

PrtFilter



MAGES	method	limit/base	current	history1	history2
					A STATE OF STATE OF STATE
					1/0/2023

IN LANGE STOL	CALA	Laboratory	: WearCheck - C8	-1175 Appleby Lin	e, Burlington, ON L7L 5H9	NEWFOUNDLAND POWER INC.
	Accreditation No. 1000219	Sample No.	: WC0445192	Received	: 20 Oct 2022	50 DUFFY PLACE, PO BOX 8910
	ISO 17025:2017	Lab Number	: 02517618	Diagnosed	: 24 Oct 2022	ST. JOHNS, NL
	Accredited	Unique Number	: 5474598	Diagnostician	: Kevin Marson	CA A1B 3P6
	Laboratory	Test Package	: IND 2 ( Additiona	al Tests: BottomAn	alysis, FilterPatch, PrtCount)	Contact: Paul Martin
	To discuss this	pmartin@newfoundlandpower.com				
而完全的 化合金	Test denoted (	T:				
	Validity of resu	lts and interpreta	tion are based on ti	he sample and info	ormation as supplied.	F: (709)737-2926