

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id

PRESS #1 MAIN TANK

Hydraulic System Fluid AW HYDRAULIC OIL ISO 46 (9000 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

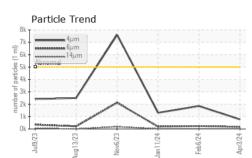
Fluid Condition

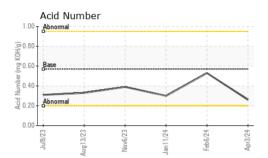
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service (unconfirmed).

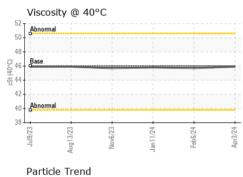
| SAMPLE INFORM | 1ATION | method | limit/base | current | history1 | history2 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sample Number | | Client Info | | WC0921559 | WC0899882 | WC |
| Sample Date | | Client Info | | 03 Apr 2024 | 06 Feb 2024 | 11 Jan 2024 |
| 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 | | | | NORMAL | NORMAL | NORMAL |
| CONTAMINATION | ١ | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.05 | NEG | NEG | NEG |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185(m) | >20 | 2 | 2 | 2 |
| Chromium | ppm | ASTM D5185(m) | >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) | >20 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >20 | 0 | <1 | <1 |
| Lead | ppm | ASTM D5185(m) | >20 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185(m) | >20 | 17 | 16 | 16 |
| Tin | ppm | ASTM D5185(m) | >20 | 0 | 0 | 0 |
| Antimony | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| | | method | | | | history2 |
| ADDITIVES | | method | iiiiii/base | Current | TIIStOLA | motory |
| Boron | ppm | ASTM D5185(m) | 5 | <1 | 0 | <1 |
| Boron Barium | ppm ppm | | 5 | | | |
| Boron | | ASTM D5185(m) | 5 | <1 0 0 | 0 0 0 | <1 0 0 |
| Boron Barium Molybdenum Manganese | ppm | ASTM D5185(m) ASTM D5185(m) | 5 5 | <1 0 | 0 0 0 0 | <1 0 |
| Boron Barium Molybdenum Manganese Magnesium | ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | 5 5 5 25 | <1 0 0 0 1 | 0 0 0 0 1 | <1 0 0 0 <1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium | ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | 5 5 5 25 200 | <1 0 0 1 61 | 0 0 0 0 1 62 | <1 0 0 0 <1 63 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | 5 5 5 25 200 300 | <1 0 0 1 61 330 | 0 0 0 1 62 337 | <1 0 0 <1 63 335 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | 5 5 25 200 300 370 | <1 0 0 1 61 330 421 | 0 0 0 1 62 337 414 | <1 0 0 <1 63 335 425 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm ppm ppm ppm ppm ppm | 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) | 5 5 5 25 200 300 | <1 0 0 1 61 330 421 732 | 0 0 0 1 62 337 414 781 | <1 0 0 <1 63 335 425 774 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | 5 5 25 200 300 370 | <1 0 0 1 61 330 421 | 0 0 0 1 62 337 414 | <1 0 0 <1 63 335 425 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS | ppm ppm ppm ppm ppm ppm ppm ppm | 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) | 5 5 25 200 300 370 2500 limit/base | <1 0 0 1 61 330 421 732 <1 current | 0 0 0 1 62 337 414 781 <1 <1 history1 | <1 0 0 <1 63 335 425 774 <1 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon | ppm ppm ppm ppm ppm ppm ppm ppm | 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) | 5 5 25 200 300 370 2500 | <1 0 0 1 61 330 421 732 <1 current 0 | 0 0 0 1 62 337 414 781 <1 history1 0 | <1 0 0 <1 63 335 425 774 <1 history2 0 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) | 5 5 5 25 200 300 370 2500 limit/base >15 | <1 0 0 1 61 330 421 732 <1 Current 0 <1 | 0 0 0 1 62 337 414 781 <1 ×1 history1 0 <1 | <1 0 0 <1 63 335 425 774 <1 history2 0 <1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) | 5 5 5 25 200 300 370 2500 limit/base >15 | <1 0 0 1 61 330 421 732 <1 current 0 | 0 0 0 1 62 337 414 781 <1 history1 0 | <1 0 0 <1 63 335 425 774 <1 history2 0 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) | 5 5 5 25 200 300 370 2500 limit/base >15 >20 limit/base | <1 0 0 1 1 61 330 421 732 <1 <i>current</i> 0 <1 <1 <1 | 0 0 0 1 62 337 414 781 <1 *1 history1 0 <1 <1 <1 history1 | <1 0 0 (0 <1 63 335 425 774 <1 history2 0 <1 10 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) | 5 5 5 200 300 370 2500 imit/base >15 \$ 20 imit/base \$ 15 \$ 20 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 100 \$ 10 | <1 0 0 1 61 330 421 732 <1 Current 0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 | 0 0 0 1 62 337 414 781 <1 <1 history1 0 <1 <1 <1 history1 1849 | <1 0 0 () () () () () () () () () () () () () |
| 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 ppm | ASTM D5185(m) ASTM D5185(m) | 5 5 5 200 300 370 2500 imit/base >15 >20 imit/base >5000 >1300 | <1 0 0 1 61 330 421 732 <1 <u>current</u> 0 <1 <1 <1 <u>current</u> 768 167 | 0 0 0 1 62 337 414 781 <1 history1 0 <1 <1 <1 history1 1849 234 | <1 0 0 0 <1 63 335 425 774 <1 history2 0 <1 10 history2 1310 190 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Potassium Particles >4µm Particles >14µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D76477 ASTM D7647 | 5 5 5 225 200 300 370 2500 2500 imit/base >20 imit/base >5000 >1300 >1300 >160 | <1 0 0 1 61 330 421 732 <1 <i>current</i> 0 <1 <1 <1 <1 <i>current</i> 768 167 19 | 0 0 0 1 62 337 414 781 <1 <1 history1 0 <1 <1 <1 history1 1849 | <1 0 0 0 <1 63 335 425 774 <1 history2 0 <1 10 history2 1310 190 14 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Potassium Particles >4µm Particles >14µm Particles >21µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D76477 ASTM D76477 ASTM D7647 | 5 5 5 225 200 300 370 2500 2500 imit/base >15 >20 imit/base >5000 >1300 >1300 >160 >40 | <1 0 0 1 61 330 421 732 <1 Current 0 <1 <1 <1 768 167 19 7 | 0 0 0 1 62 337 414 781 <1 * history1 0 <1 <1 <1 * history1 1849 234 16 4 | <1 0 0 0 <1 63 335 425 774 <1 history2 0 <1 10 history2 1310 190 14 4 |
| 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 ppm | ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 | 5 5 5 25 200 300 370 2500 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10 | <1 0 0 1 61 330 421 732 <1 Current 0 <1 <1 <1 768 167 19 7 2 | 0 0 0 1 62 337 414 781 <1 history1 0 <1 <1 <1 history1 1849 234 16 4 1 | <1 0 0 0 <1 63 335 425 774 <1 history2 0 <1 10 history2 1310 190 14 4 0 0 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >5µm Particles >38µm Particles >71µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 | 5 5 5 25 200 300 370 2500 2500 limit/base >15 >20 limit/base >20 limit/base >15 >20 20 20 20 20 20 20 20 20 20 20 20 20 2 | <1 0 0 1 1 61 330 421 732 <1 Current 0 <1 <1 <1 <768 167 19 7 2 0 0 <1 <10 <10 <10 <10 <10 <10 <10 <10 | 0 0 0 1 62 337 414 781 <1 history1 0 <1 <1 <1 history1 1849 234 16 4 1 10 0 | <1 0 0 0 <1 63 335 425 774 <1 history2 0 <1 10 history2 1310 190 14 4 0 0 0 14 4 0 0 0 0 14 14 14 14 0 0 0 0 14 15 190 14 14 14 14 14 14 14 14 15 15 15 15 15 15 15 15 15 15 |
| 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 ppm | ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 | 5 5 5 25 200 300 370 2500 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10 | <1 0 0 1 1 61 330 421 732 <1 Current 0 <1 <1 <1 768 167 19 7 2 0 17/15/11 | 0 0 0 1 62 337 414 781 <1 history1 0 <1 <1 <1 history1 1849 234 16 4 1 1 0 18/15/11 | <1 0 0 0 <1 63 335 425 774 <1 history2 0 <1 10 history2 1310 190 14 4 0 0 |

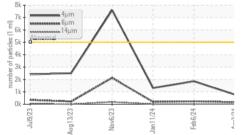


OIL ANALYSIS REPORT



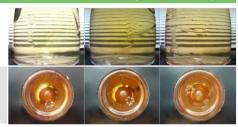




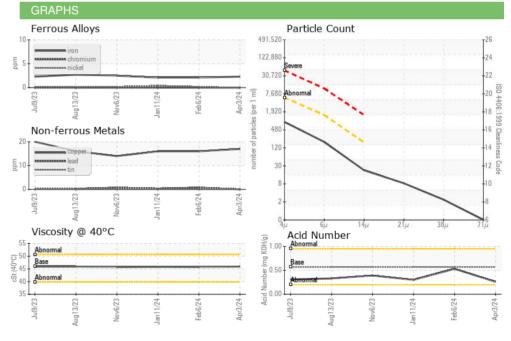


| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
|------------------|----------|---------------|------------|---------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.57 | 0.26 | 0.53 | 0.30 |
| VISUAL | | method | limit/base | current | history1 | 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 |
| 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* | >0.05 | NEG | NEG | NEG |
| Free Water | scalar | Visual* | | NEG | NEG | NEG |
| FLUID PROPERT | IES | method | limit/base | current | history1 | history2 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 46 | 45.9 | 45.7 | 45.8 |
| SAMPLE IMAGES | | method | limit/base | current | history1 | history2 |
| | | | | | | 0 |

Color



Bottom



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA : WC0921559 Sample No. Received : 05 Apr 2024 Lab Number : 02626973 Tested : 08 Apr 2024 ISO 17025:2017 Accredited Laboratory Unique Number : 5760105 Diagnosed : 08 Apr 2024 - Wes Davis Test Package : IND 2 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. 5675 Kennedy Road Mississauga, ON CA L4Z 2H9 Contact: Harsh Murria

Hydro Extrusion North

CA L4Z 2H9 Contact: Harsh Murria Harsh.murria@hydro.com T: (819)462-0479 F: (866)462-6478

Report Id: INDMIS [WCAMIS] 02626973 (Generated: 04/08/2024 08:49:17) Rev: 1

Contact/Location: Harsh Murria - INDMIS Page 2 of 2