

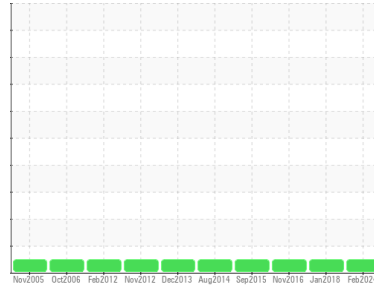
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
[GTT224-328]
 Machine Id
TRANE L5M-20646
 Component
Chiller
 Fluid
TRANE 0022 (--- GAL)



DIAGNOSIS

Recommendation
 Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 The water content is negligible. There is no indication of any contamination in the oil.

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

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | GTT0002225 | GTT40209 | GTT40210 |
| Sample Date | Client Info | | 02 Feb 2024 | 11 Jan 2018 | 17 Nov 2016 |
| Machine Age | hrs | Client Info | 0 | --- | --- |
| Oil Age | hrs | Client Info | 0 | --- | --- |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | NORMAL | NORMAL | NORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185(m) >8 | 0 | <1 | 4 |
| Chromium | ppm | ASTM D5185(m) >2 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | 0 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | 0 | --- | --- |
| Silver | ppm | ASTM D5185(m) >2 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) >3 | 0 | <1 | <1 |
| Lead | ppm | ASTM D5185(m) >2 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185(m) >8 | <1 | <1 | 1 |
| Tin | ppm | ASTM D5185(m) >4 | 0 | <1 | <1 |
| Antimony | ppm | ASTM D5185(m) | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | 0 | --- | --- |
| Beryllium | ppm | ASTM D5185(m) | 0 | --- | --- |
| Cadmium | ppm | ASTM D5185(m) | 0 | --- | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|------------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185(m) 0 | 0 | --- | --- |
| Barium | ppm | ASTM D5185(m) 0 | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) 0 | 0 | --- | --- |
| Manganese | ppm | ASTM D5185(m) 0 | 0 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) 0 | <1 | --- | --- |
| Calcium | ppm | ASTM D5185(m) 0 | 0 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) 35 | 0 | --- | --- |
| Zinc | ppm | ASTM D5185(m) 0 | <1 | <1 | <1 |
| Sulfur | ppm | ASTM D5185(m) 30 | 0 | --- | --- |
| Lithium | ppm | ASTM D5185(m) | <1 | --- | --- |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-------------------|---------------|----------|----------|
| Silicon | ppm | ASTM D5185(m) >15 | <1 | --- | --- |
| Sodium | ppm | ASTM D5185(m) | 0 | --- | --- |
| Potassium | ppm | ASTM D5185(m) >20 | 0 | --- | --- |
| ppm Water | ppm | ASTM D6304* >50 | <10 | 6 | 8 |

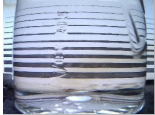

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974* 0.05 | 0.01 | 0.008 | 0.008 |

OIL ANALYSIS REPORT

| VISUAL | method | limit/base | current | history1 | history2 | |
|--------------|--------|------------|---------|--------------|----------|-----|
| White Metal | scalar | Visual* | NONE | NONE | --- | --- |
| Yellow Metal | scalar | Visual* | NONE | NONE | --- | --- |
| Precipitate | scalar | Visual* | NONE | NONE | --- | --- |
| Silt | scalar | Visual* | NONE | NONE | --- | --- |
| Debris | scalar | Visual* | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | Visual* | NONE | NONE | --- | --- |
| Appearance | scalar | Visual* | NORML | NORML | --- | --- |
| Odor | scalar | Visual* | NORML | NORML | --- | --- |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 | |
|------------------|--------|---------------|---------|-------------|----------|-----|
| Visc @ 40°C | cSt | ASTM D7279(m) | 47 | 29.5 | --- | --- |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---|----------|----------|
| Color | | |  | no image | no image |
| Bottom | | |  | no image | no image |

GRAPHS



Sample No. : GTT0002225
Lab Number : 02622912
Unique Number : 5748031
Test Package : IND 2 (Additional Tests: KV40)
Received : 18 Mar 2024
Tested : 20 Mar 2024
Diagnosed : 20 Mar 2024 - Bill Quesnel

To discuss this sample report, contact Customer Service at 1-905-847-9300 Ext 26.

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.

Damages: Seller shall in no event be liable for special, incidental, or consequential damages, of a commercial nature, resulting from any cause.

Smith & Long Limited
 115 Idema Road
 Markham, ON
 CA L3R 1A9
 Contact: Service Manager

T:
F: