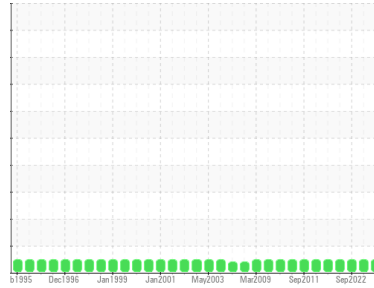




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
81 FINISHING & WAREHOUSE
 Machine Id
Stacker Hydraulic Pump & Reservoir (S/N 812102)
 Component
Hydraulic System
 Fluid
ESSO NUTO H ISO 68 (30 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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 suitable for further service.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-----------------|--------------------|-------------|-------------|
| Sample Number | Client Info | WC | WC0789946 | WC |
| Sample Date | Client Info | 03 Oct 2023 | 27 Mar 2023 | 28 Sep 2022 |
| 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 |

WEAR METALS

| method | limit/base | current | history1 | history2 |
|-----------------------------|------------|--------------|----------|----------|
| Iron ppm ASTM D5185(m) | >20 | 1 | 1 | <1 |
| Chromium ppm ASTM D5185(m) | >10 | <1 | <1 | <1 |
| Nickel ppm ASTM D5185(m) | >10 | 0 | 0 | 0 |
| Titanium ppm ASTM D5185(m) | | 0 | 0 | 0 |
| Silver ppm ASTM D5185(m) | | <1 | 0 | 0 |
| Aluminum ppm ASTM D5185(m) | >10 | 0 | 0 | 0 |
| Lead ppm ASTM D5185(m) | >10 | 1 | <1 | <1 |
| Copper ppm ASTM D5185(m) | >75 | 4 | 4 | 3 |
| Tin ppm ASTM D5185(m) | >10 | 0 | 0 | 0 |
| Antimony ppm ASTM D5185(m) | | 0 | 0 | <1 |
| 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 |
|------------------------------|------------|--------------|----------|----------|
| Boron ppm ASTM D5185(m) | 0 | 0 | <1 | <1 |
| Barium ppm ASTM D5185(m) | 0 | <1 | 0 | 0 |
| Molybdenum ppm ASTM D5185(m) | 0 | 0 | 0 | 0 |
| Manganese ppm ASTM D5185(m) | | 0 | 0 | 0 |
| Magnesium ppm ASTM D5185(m) | 5 | 0 | <1 | 0 |
| Calcium ppm ASTM D5185(m) | 50 | 49 | 52 | 52 |
| Phosphorus ppm ASTM D5185(m) | 330 | 341 | 368 | 375 |
| Zinc ppm ASTM D5185(m) | 420 | 393 | 428 | 422 |
| Sulfur ppm ASTM D5185(m) | 3100 | 5980 | 6187 | 6082 |
| Lithium ppm ASTM D5185(m) | | <1 | <1 | <1 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 |
|-----------------------------|------------|--------------|----------|----------|
| Silicon ppm ASTM D5185(m) | >20 | 0 | <1 | 0 |
| Sodium ppm ASTM D5185(m) | | <1 | <1 | 0 |
| Potassium ppm ASTM D5185(m) | >20 | <1 | 2 | <1 |

FLUID CLEANLINESS

| method | limit/base | current | history1 | history2 |
|------------------------------|------------|-----------------|----------|----------|
| Particles >4µm ASTM D7647 | | 1525 | 389 | 552 |
| Particles >6µm ASTM D7647 | >1300 | 364 | 121 | 161 |
| Particles >14µm ASTM D7647 | >160 | 14 | 6 | 11 |
| Particles >21µm ASTM D7647 | >40 | 3 | 1 | 3 |
| Particles >38µm ASTM D7647 | >10 | 0 | 0 | 0 |
| Particles >71µm ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness ISO 4406 (c) | >--/17/14 | 18/16/11 | 16/14/10 | 16/15/11 |

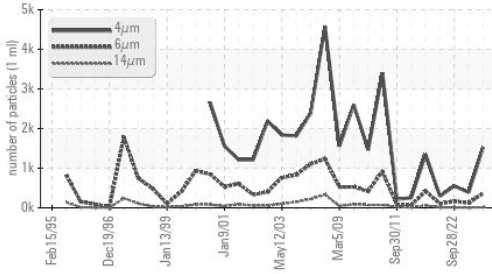
FLUID DEGRADATION

| method | limit/base | current | history1 | history2 |
|--------------------------------------|------------|-------------|----------|----------|
| Acid Number (AN) mg KOH/g ASTM D974* | .40 | 0.48 | 0.24 | 0.39 |

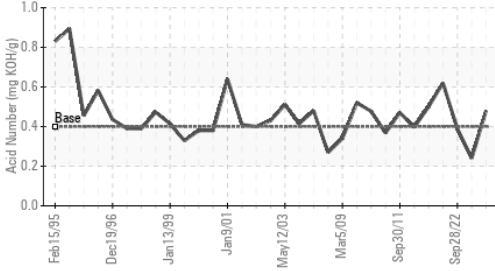


OIL ANALYSIS REPORT

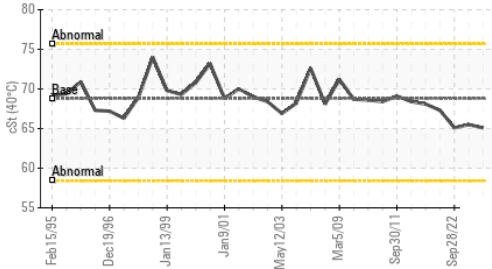
Particle Trend



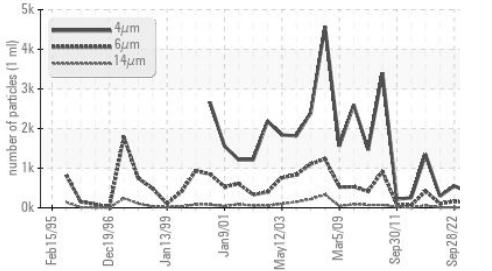
Acid Number



Viscosity @ 40°C



Particle Trend



| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | Visual* | NONE | NONE | NONE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE |
| Precipitate | scalar | Visual* | NONE | NONE | NONE |
| Silt | scalar | Visual* | NONE | NONE | NONE |
| Debris | scalar | Visual* | NONE | NONE | NONE |
| Sand/Dirt | scalar | Visual* | NONE | NONE | NONE |
| Appearance | scalar | Visual* | NORML | NORML | NORML |
| Odor | scalar | Visual* | NORML | NORML | NORML |
| Emulsified Water | scalar | Visual* | >0.1 | NEG | NEG |
| Free Water | scalar | Visual* | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D7279(m) | 68.8 | 65.1 | 65.5 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|

Color

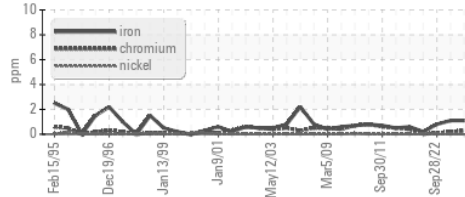


Bottom

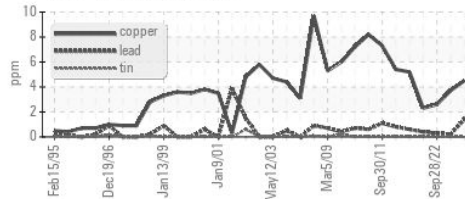


GRAPHS

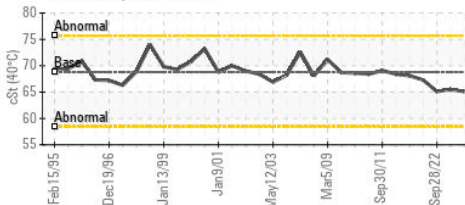
Ferrous Alloys



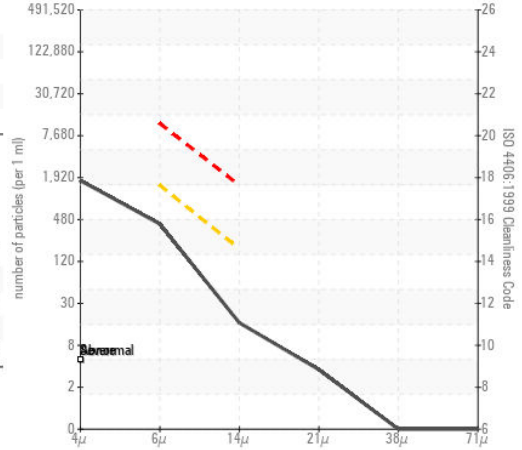
Non-ferrous Metals



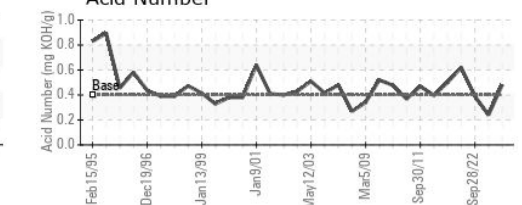
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
 Sample No. : WC
 Lab Number : 02587988
 Unique Number : 5657054
 Test Package : IND 2 (Additional Tests: TAN Man)

AV GROUP NB INC.
 103 PINDER ROAD,, NACKAWIC MILL
 NACKAWIC, NB
 CA E6G 1W4
 Contact: Basil Fadulalla
 basil.fadulalla@adityabirla.com

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.

T:
F: