



SULLAIR COMPRESSOR FLUID ANALYSIS

Compressor fluid is the lifeblood of your compressor. Testing compressor fluid on a regular basis can help you manage compressor maintenance and optimize performance by identifying abnormal wear or contamination.

A fluid analysis can help predict potential problems before a major or unplanned repair occurs — allowing you to avoid unnecessary downtime.



Fluid Analysis Benefits

- Helps extend fluid and bearing life by identifying contaminants such as dirt, water and other process materials
 - Increased contamination indicates action is needed to save the lubricant and avoid unnecessary machine wear
- Predictive maintenance
 - Helps you avoid unscheduled downtime and establish optimal change intervals
 - Accounts for specific environmental conditions impacting fluid
- Helps optimize compressor performance
- Helps you maintain your Sullair warranty
- Fast test results

And, a Sullair Fluid analysis can be done on any type of compressor fluid!

Easy testing process

You or your local Sullair Authorized Distributor can administer the test using

a testing kit which includes:

- Sampling container
- Fluid sample information form
- Prepaid USPS label
 - However, it is recommended to send samples in via FedEx or UPS for easy tracking

Using the oil sampling valve, draw the fluid from the compressor into the sampling container at given intervals. If your compressor is not equipped with an oil sampling valve, you can order one along with your kit from your local Sullair Authorized Distributor. Once all samples have been taken, send in for testing.

Fluid Sampling Best Practices

To maintain your Sullair warranty, fluid samples must be taken every 2000 hours or every 6 months—whichever occurs first.

- Use a Genuine Sullair Fluid Sample Kit
 - North America – P/N 02250138-667
 - Latin America – P/N 02250219-017
- Always take oil samples from the same location on the compressor
 - Avoid taking samples from a fluid filter as this will provide an inaccurate sample and high particulate counts
 - Ideally the sample should be taken after the filter and before the compressor injection
 - If equipped, a fluid sampling valve can help ensure accurate and consistent sampling
 - 1/8": P/N 02250196-306
 - 1/4": P/N 02250196-305
 - If not equipped with a sampling valve, the sample can be obtained via an oil line or connection after the oil filter
 - For encapsulated units, the sample can be taken from an oil fill port/oil reservoir using a clean handheld vacuum pump or syringe

Additional oil sampling information can be found in your warranty handbook or by contacting your local Sullair representative for more information.

- Samples should be taken at normal operating temperatures. Avoid taking a sample when lubricant is cold
- Make sure the sample area and testing elements are clean
- Always make sure the sample can be obtained safely

Fluid analysis based on original formulation, consumptions and expected life.

Test measures:

- pH levels to look for warning signs of corrosive wear of bearings
- Acid number indicates the remaining useful life of the fluid
- Viscosity to measure the resistance of a fluid to flow at a specific temperature. Higher viscosity can indicate higher operating temperature
- FTIP spectroscopy provides molecular information including additives, fluid breakdown products and external contamination which can help establish optimal change out intervals
- Water levels which can help identify leaks
- Inductively Coupled Plasma (ICP) Spectroscopy measures and quantifies elements associated with wear, contamination and additives

SULLAIR

Analysis Report

Lab Type: 24KT
Compressor MFG: SULLAIR
Compressor Model: LS50-30 W/C

Serial No.: 003144908
Asset No.:
Report: 9/15/2020

Customer Notes:

The particulate contamination exceeds our limits for a compressor (21/28/75). High particulate contamination could be due to sampling issues, consider changing sampling location. High particulate contamination will lead to abrasive wear and damage internal components.

For questions concerning this report, contact your local authorized Sullair distributor or Sullair.

Date Sampled	Reference	9/15/20	9/15/20	12/18/19	9/27/19
Lab No.	Reference	2595137	2595137	2595137	2595137
Lab Hours	Reference	12800000	12800000	7546	9354
Compressor Hours	Reference	151305	11853	10108	9194

Viscosity (Reported in centistokes) ASTM D 445 Mod

Viscosity at 40°C: 31.3 31.3 31.3 31.3

FTIR 34 KT (Reported in %)

Acid Number: 89 89 89 89

Water Content: 0.0 0.0 0.0 0.0

Spectroscopic Analysis (Reported in ppm) ASTM D6188 Mod

Element	9/15/20	9/15/20	9/15/20	9/15/20
Iron	0	0	0	0
Copper	0	0	0	0
Lead	0	0	0	0
Aluminum	0	0	0	0
Nickel	0	0	0	0
Chromium	0	0	0	0
Hydrogen	0	0	0	0
Carbon	0	0	0	0
Magnesium	0	0	0	0
Phosphorus	22	0	0	0
Zinc	0	0	0	0
Barium	0	0	0	0
Silicon	0	0	0	0
Sulfur	> 5000	> 5000	> 5000	> 5000
Boron	0	0	0	0
Sodium	0	0	0	0
Potassium	0	0	0	0

Particle Count (Reported in particles per cc) ISO 4406-0

ISO CODE	21/28/75	21/28/75	18/13/13	13/10/12	18/13/13
<4 Microns	20000	12124	1881	1279	2285
<6 Microns	2500	4753	735	497	857
<8 Microns	329	359	56	37	45
<10 Microns	0	25	2	1	2
<15 Microns	0	0	0	0	0

Testing performed by Bright Services*. This test is accredited under the laboratory's ISO/IEC 17025 accreditation issued by the American National Accreditation Board. Reference is made to scope of accreditation 12221. (a) Estimated sample date. (*) Not in scope of accreditation. Sullair assumes no responsibility for results and recommendations reported by Bright Services, whose obligation is limited to good faith performance. Samples tested as received.

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SULLAIR

Analysis Report

Lab Type: SULLURE
Compressor MFG: SULLURE
Compressor Model: LS255 250AC

Serial No.: 201810310093
Asset No.:
Report: 8/31/2020

Customer Notes:

The viscosity (53.2 cSt) is higher than expected. The viscosity specification for this lubricant is 39 cSt. Low pH is caused by ingesting acids or increased and number indicates antioxidant depletion and is an indicator of lubricant degradation. This machine should be drained, flushed and refilled with fresh lubricant. The particle count for this compressor exceeds the limit (52/18/75). Check for sources of particulate ingesting level of water contamination (0.055%) is excessive and considered abnormal. Sources of water contamination in compressors are: running extended period, ingress from external sources, cooling system leaks.

For questions concerning this report, contact your local authorized Sullair distributor or Sullair.

Date Sampled	Reference	8/31/20	12/18/19
Lab No.	Reference	2595137	2595137
Lab Hours	Reference	7782	1804
Compressor Hours	Reference	7782	1804

Viscosity (Reported in centistokes) ASTM D 445 Mod

Viscosity at 40°C: 53.2 53.2 36.4

FTIR 34 KT (Reported in %)

Acid Number: 7.50 3.52 5.27

Water Content (Reported in %) ASTM D 6188 Mod

Water Content: 0.06 0.05 0.08

Spectroscopic Analysis (Reported in ppm) ASTM D6188 Mod

Element	8/31/20	8/31/20	8/31/20
Iron	0	0	0
Copper	0	0	0
Lead	0	0	0
Aluminum	0	0	0
Nickel	0	0	0
Chromium	0	0	0
Hydrogen	0	0	0
Carbon	0	0	0
Magnesium	0	0	0
Phosphorus	0	0	0
Zinc	0	0	0
Barium	0	0	0
Silicon	0	0	0
Sulfur	> 5000	> 5000	> 5000
Boron	0	0	0
Sodium	0	0	0
Potassium	0	0	0

Particle Count (Reported in particles per cc) ISO 4406-0

ISO CODE	21/28/75	21/28/75	18/13/13	13/10/12	18/13/13
<4 Microns	20000	10807	8880		
<6 Microns	2500	1075	3473		
<8 Microns	329	566	256		
<10 Microns	0	2	11		
<15 Microns	0	1	0		

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SULLAIR

Analysis Report

Lab Type: SULLURE
Compressor MFG: SULLURE
Compressor Model: 5509 V/B

Serial No.: 201806290028
Asset No.:
Report: 9/29/2020

Customer Notes:

The results for this sample indicate normal conditions. Please continue scheduled sampling.

For questions concerning this report, contact your local authorized Sullair distributor or Sullair service at 1-888-765-5247.

Date Sampled	Reference	9/29/20	9/29/20	9/29/20
Lab No.	Reference	2595137	2595137	2595137
Lab Hours	Reference	7109	4679	2454
Compressor Hours	Reference	14963	12561	10376

Viscosity (Reported in centistokes) ASTM D 445 Mod

Viscosity at 40°C: 38.1 38.0 38.0 37.7 37.0

FTIR 34 KT (Reported in %)

Acid Number: 7.38 6.33 7.42 6.35 7.17

Water Content (Reported in %) ASTM D 6188 Mod

Water Content: 0.05 0.03 0.09 0.07 0.03

Spectroscopic Analysis (Reported in ppm) ASTM D6188 Mod

Element	9/29/20	9/29/20	9/29/20	9/29/20
Iron	0	0	0	0
Copper	0	0	0	0
Lead	0	0	0	0
Aluminum	0	0	0	0
Nickel	0	0	0	0
Chromium	0	0	0	0
Hydrogen	0	0	0	0
Carbon	0	0	0	0
Magnesium	0	0	0	0
Phosphorus	3	0	0	0
Zinc	0	0	0	0
Barium	0	0	0	0
Silicon	0	0	0	0
Sulfur	> 5000	> 5000	> 5000	> 5000
Boron	0	0	0	0
Sodium	0	0	0	0
Potassium	0	0	0	0

Particle Count (Reported in particles per cc) ISO 4406-0

ISO CODE	21/28/75	21/28/75	18/13/13	13/10/12	18/13/13
<4 Microns	20000	1259	2338	457	532
<6 Microns	2500	489	959	152	227
<8 Microns	329	17	29	12	15
<10 Microns	0	1	0	0	0
<15 Microns	0	0	0	0	0

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