

**UIN 081474C**

**Diesel Engine**

**Unit No.** 12E20557

**Unit:**  
**Make**  
**Model**  
**Serial No.**  
**Site** Tom Hund Pacific Provider

**Compartment:**

**Name** Port Main Engine  
**Make**  
**Model**  
**Serial No.**  
**Capacity:**

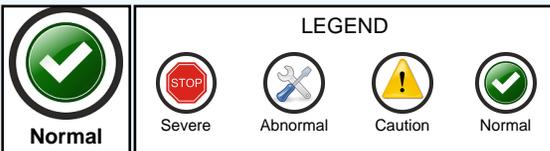
**Customer:**  
 VALLEY POWER SYSTEMS  
 320 Lakme Ave  
 Wilmington CA 90744  
 USA

**DIAGNOSIS**

All wear levels appear within acceptable limits for first sample. Silicon level (dirt/sealant material) satisfactory. Water content acceptable. Fuel dilution satisfactory. Viscosity within specified operating range. Action: Resample at next recommended interval to monitor and establish wear trend.

**ANALYST:** charles.dillard

**LEGEND**



Normal Severe Abnormal Caution Normal

<b>DATE SAMPLED</b>	28-Jul-02
<b>DATE RECEIVED</b>	06-Aug-20
<b>DATE REPORTED</b>	10-Aug-20

LAB NO.	44022285004
SIF NO.	25477429
TIME ON UNIT	Hrs 4374
TIME ON OIL	Hrs 200
OIL BRAND	Chevron
OIL TYPE	Delo 100
OIL GRADE	SAE 40
OIL ADDED	
FILTER	
OIL CHANGED	
WO NUMBER	

**Metals (ppm)**

Iron (Fe)	23
Chromium (Cr)	<1
Lead (Pb)	<1
Copper (Cu)	2
Tin (Sn)	4
Aluminium (Al)	<1
Nickel (Ni)	<1
Silver (Ag)	<1
Titanium (Ti)	<1
Vanadium (V)	<1

**Contaminants (ppm)**

Silicon (Si)	5
Sodium (Na)	5
Potassium (K)	7
Water (%)	<0.05
Coolant	No

**Additives (ppm)**

Magnesium (Mg)	1617
Calcium (Ca)	239
Barium (Ba)	<1
Phosphorus (P)	1206
Zinc (Zn)	1418
Molybdenum (Mo)	8
Boron (B)	<5

**Physical Tests**

Viscosity (cSt 100C)	14.3
Fuel (%)	<1
Soot (%) Infrared	0.5



UIN 081474C

U.S. Laboratories

- Atlanta, Georgia - 420**  
5300 OakBrook Parkway  
Building 200 Suite 245  
Norcross, GA 30093  
800.394.3669
- Valley View, Ohio - 410**  
6180 Halle Dr. Suite D  
Valley View, OH 44125  
800.726.5400
- Kansas City, Kansas - 430**  
935 Sunshine Road  
Kansas City, KS 66115  
800.332.8055
- Phoenix, Arizona - 440**  
3319 West Earll Drive  
Phoenix, AZ 85017  
800.445.7930

**Portland, Oregon - 401**  
4943 NW Front Avenue  
Portland, OR 97210  
800.770.4128

Canadian Laboratories

- Burlington, Ontario - 450**  
5036 South Service Rd.  
Burlington, ON L7L5Y7  
905 332 9559
- Edmonton, Alberta - 402**  
9450 17 Ave NW  
Edmonton, AB T6N 1M9  
888.489.0057

Sales & Marketing

**Houston, Texas**  
10450 Stancliff Road, Suite 210  
Houston, TX 77099  
877.835.8437

International Locations

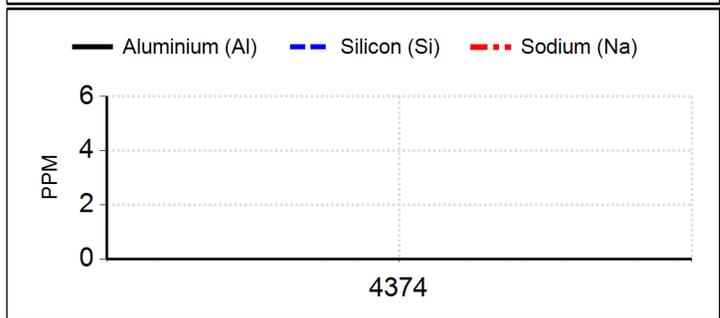
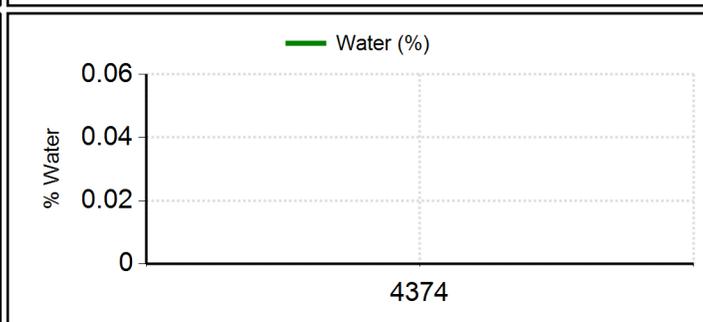
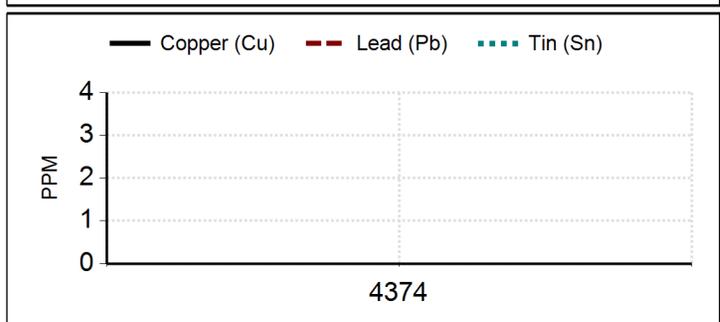
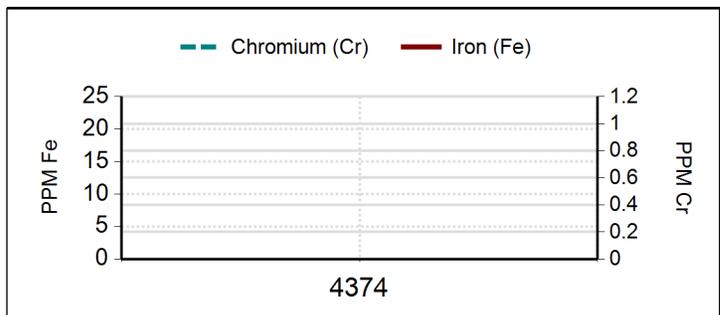
**Australia**  
Brisbane, Perth, Sydney,  
Muswellbrook

**Europe**  
Prague

**New Zealand**  
Wellington

**South America**  
Santiago de Chile,  
Belo Horizonte, Brazil

**Southeast Asia**  
Kuala Lumpur, Singapore



Filter Image

Filter patch test is not performed Contact laboratory for more information

Since services are based on samples and information supplied by others, and since corrective actions, if any, are necessarily taken by others, these services are rendered without any warranty or liability of any kind beyond the actual amount paid to ALS Tribology for the services. Reported recommendations are based on interpretations of the generated test results and historical data. Certain test results appearing in this report may have been tested at other ALS laboratories within the Tribology divisional network.

Valley Power Systems Inc~  
Attn: Craig Carlson  
5725 Eastgate Dr  
San Diego CA 92121  
USA

**UIN 081473F**

**Unit No.** 3A4586  
**Gearbox** 3A4586

**Unit:**  
**Make**  
**Model**  
**Serial No.**  
**Site** Tom Hund

**Compartment:**  
**Name** Port Marine Gearbox  
**Make**  
**Model**  
**Serial No.**  
**Capacity:**

**Customer:**  
 VALLEY POWER SYSTEMS  
 320 Lakme Ave  
 Wilmington CA 90744  
 USA

**DIAGNOSIS**

All wear levels appear within acceptable limits for first sample. Silicon level (dirt/sealant material) satisfactory. Water content acceptable. Viscosity within specified operating range. Action: Resample at next recommended interval to monitor and establish wear trend.

**ANALYST:** charles.dillard

**LEGEND**



Normal Severe Abnormal Caution Normal

<b>DATE SAMPLED</b>	28-Jul-20
<b>DATE RECEIVED</b>	06-Aug-20
<b>DATE REPORTED</b>	10-Aug-20
LAB NO.	44022285003
SIF NO.	25477371
TIME ON UNIT	Hrs 4377
TIME ON OIL	Hrs 200
OIL BRAND	Chevron
OIL TYPE	Delo 100
OIL GRADE	SAE 40
OIL ADDED	
FILTER	Not Applicable
OIL CHANGED	
WO NUMBER	

**Metals (ppm)**

Iron (Fe)	32
Chromium (Cr)	<1
Lead (Pb)	6
Copper (Cu)	11
Tin (Sn)	2
Aluminium (Al)	<1
Nickel (Ni)	<1
Silver (Ag)	<1
Titanium (Ti)	<1
Vanadium (V)	<1

**Contaminants (ppm)**

Silicon (Si)	5
Sodium (Na)	4
Potassium (K)	3
Water (%)	<0.05

**Additives (ppm)**

Magnesium (Mg)	1754
Calcium (Ca)	620
Barium (Ba)	<1
Phosphorus (P)	1227
Zinc (Zn)	1410
Molybdenum (Mo)	18
Boron (B)	<5

**Physical Tests**

Viscosity (cSt 40C)	135.8
Solids (%)	<0.1



UIN 081473F

U.S. Laboratories

Atlanta, Georgia - 420

5300 OakBrook Parkway  
Building 200 Suite 245  
Norcross, GA 30093  
800.394.3669

Valley View, Ohio - 410

6180 Halle Dr. Suite D  
Valley View, OH 44125  
800.726.5400

Kansas City, Kansas - 430

935 Sunshine Road  
Kansas City, KS 66115  
800.332.8055

Phoenix, Arizona - 440

3319 West Earll Drive  
Phoenix, AZ 85017  
800.445.7930

Portland, Oregon - 401

4943 NW Front Avenue  
Portland, OR 97210  
800.770.4128

Canadian Laboratories

Burlington, Ontario - 450

5036 South Service Rd.  
Burlington, ON L7L5Y7  
905 332 9559

Edmonton, Alberta - 402

9450 17 Ave NW  
Edmonton, AB T6N 1M9  
888.489.0057

Sales & Marketing

Houston, Texas

10450 Stancliff Road, Suite 210  
Houston, TX 77099  
877.835.8437

International Locations

Australia

Brisbane, Perth, Sydney,  
Muswellbrook

Europe

Prague

New Zealand

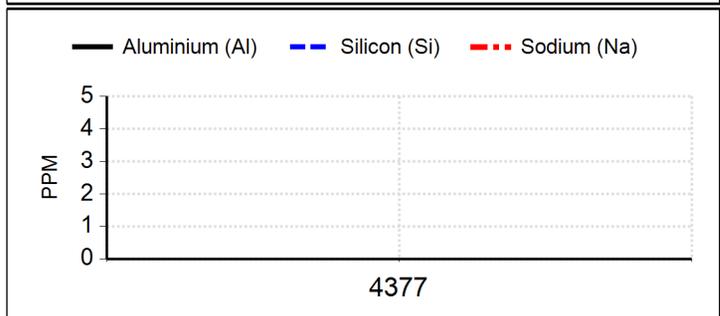
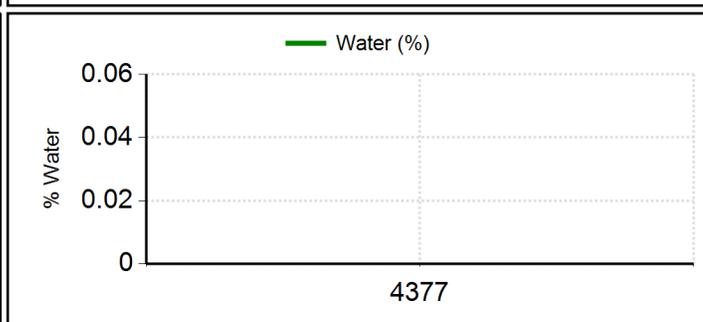
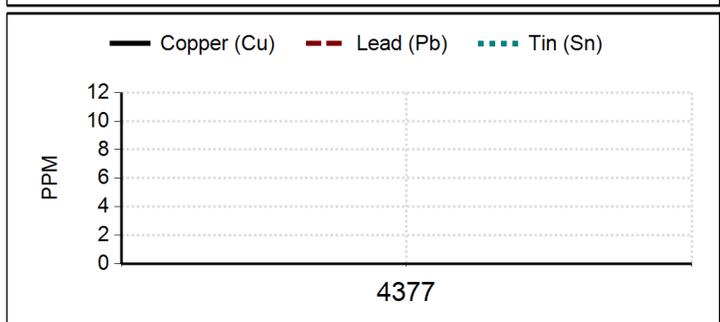
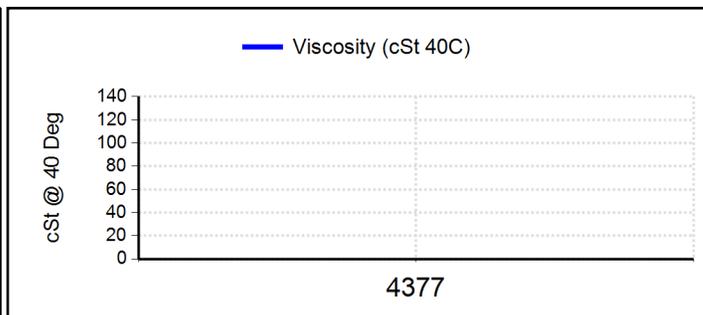
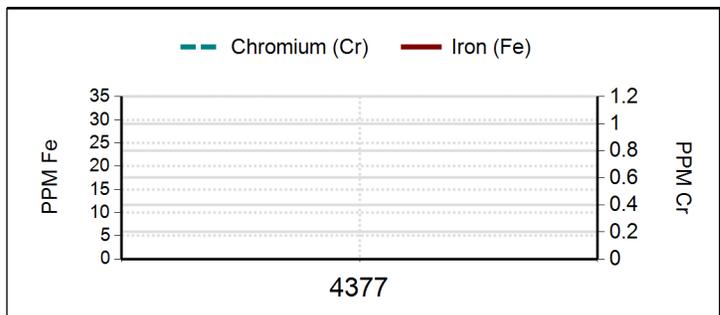
Wellington

South America

Santiago de Chile,  
Belo Horizonte, Brazil

Southeast Asia

Kuala Lumpur, Singapore



Filter Image

Filter patch test is not performed Contact laboratory for more information

Since services are based on samples and information supplied by others, and since corrective actions, if any, are necessarily taken by others, these services are rendered without any warranty or liability of any kind beyond the actual amount paid to ALS Tribology for the services. Reported recommendations are based on interpretations of the generated test results and historical data. Certain test results appearing in this report may have been tested at other ALS laboratories within the Tribology divisional network.

Valley Power Systems Inc~  
Attn: Craig Carlson  
5725 Eastgate Dr  
San Diego CA 92121  
USA

**UIN 081474F**

**Diesel Engine**

**Unit No.** 12E1093

**Unit:**  
**Make**  
**Model**  
**Serial No.**  
**Site** Tom Hund Pacific Provider

**Compartment:**

**Name** Stbd Main Engine  
**Make**  
**Model**  
**Serial No.**  
**Capacity:**

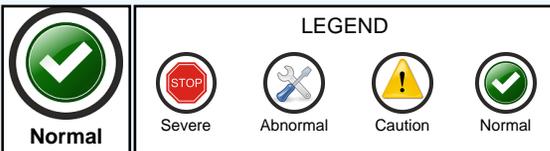
**Customer:**  
 VALLEY POWER SYSTEMS  
 320 Lakme Ave  
 Wilmington CA 90744  
 USA

**DIAGNOSIS**

All wear levels appear within acceptable limits for first sample. Silicon level (dirt/sealant material) satisfactory. Water content acceptable. Fuel dilution satisfactory. Viscosity within specified operating range. Action: Resample at next recommended interval to monitor and establish wear trend.

**ANALYST:** charles.dillard

**LEGEND**



Normal Severe Abnormal Caution Normal

<b>DATE SAMPLED</b>	28-Jul-20
<b>DATE RECEIVED</b>	06-Aug-20
<b>DATE REPORTED</b>	10-Aug-20

LAB NO.	44022285005
SIF NO.	25477364
TIME ON UNIT	Hrs 4357
TIME ON OIL	Hrs 200
OIL BRAND	Chevron
OIL TYPE	Delo 100
OIL GRADE	SAE 40
OIL ADDED	
FILTER	
OIL CHANGED	
WO NUMBER	

**Metals (ppm)**

Iron (Fe)	20
Chromium (Cr)	<1
Lead (Pb)	1
Copper (Cu)	2
Tin (Sn)	5
Aluminium (Al)	<1
Nickel (Ni)	<1
Silver (Ag)	<1
Titanium (Ti)	<1
Vanadium (V)	<1

**Contaminants (ppm)**

Silicon (Si)	6
Sodium (Na)	12
Potassium (K)	6
Water (%)	<0.05
Coolant	No

**Additives (ppm)**

Magnesium (Mg)	1647
Calcium (Ca)	274
Barium (Ba)	<1
Phosphorus (P)	1192
Zinc (Zn)	1420
Molybdenum (Mo)	8
Boron (B)	<5

**Physical Tests**

Viscosity (cSt 100C)	14.7
Fuel (%)	<1
Soot (%) Infrared	0.5



UIN 081474F

U.S. Laboratories

- Atlanta, Georgia - 420**  
5300 OakBrook Parkway  
Building 200 Suite 245  
Norcross, GA 30093  
800.394.3669
- Valley View, Ohio - 410**  
6180 Halle Dr. Suite D  
Valley View, OH 44125  
800.726.5400
- Kansas City, Kansas - 430**  
935 Sunshine Road  
Kansas City, KS 66115  
800.332.8055
- Phoenix, Arizona - 440**  
3319 West Earll Drive  
Phoenix, AZ 85017  
800.445.7930

Portland, Oregon - 401

4943 NW Front Avenue  
Portland, OR 97210  
800.770.4128

Canadian Laboratories

Burlington, Ontario - 450

5036 South Service Rd.  
Burlington, ON L7L5Y7  
905 332 9559

Edmonton, Alberta - 402

9450 17 Ave NW  
Edmonton, AB T6N 1M9  
888.489.0057

Sales & Marketing

Houston, Texas

10450 Stancliff Road, Suite 210  
Houston, TX 77099  
877.835.8437

International Locations

Australia

Brisbane, Perth, Sydney,  
Muswellbrook

Europe

Prague

New Zealand

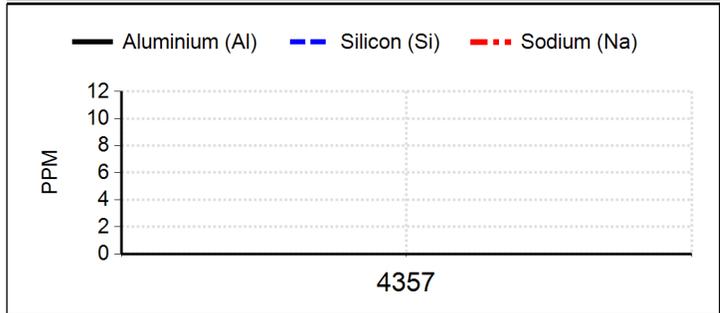
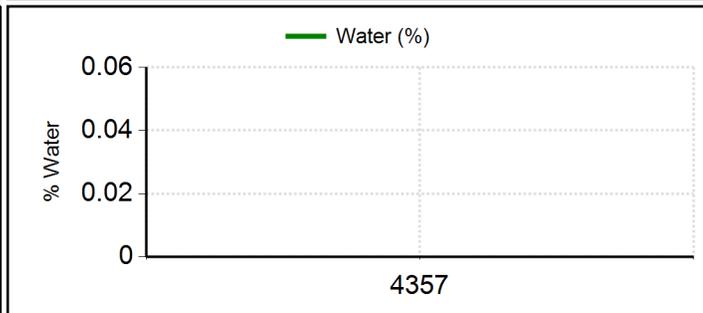
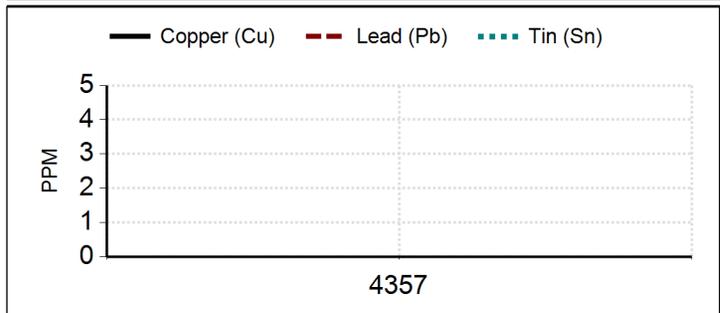
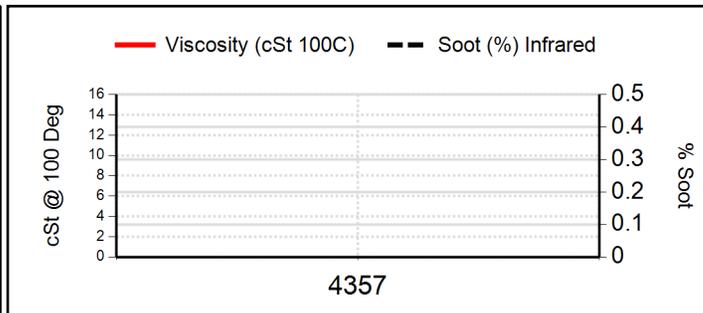
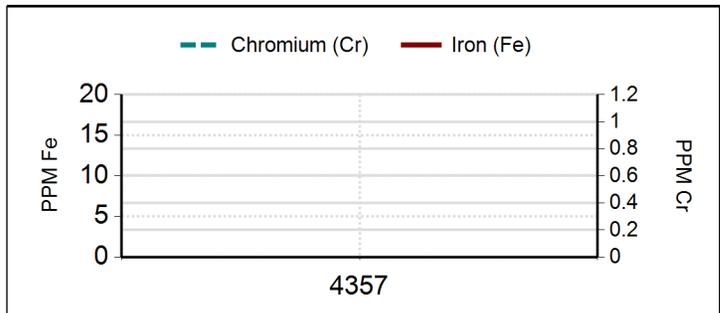
Wellington

South America

Santiago de Chile,  
Belo Horizonte, Brazil

Southeast Asia

Kuala Lumpur, Singapore



Filter Image

Filter patch test is not performed Contact laboratory for more information

Since services are based on samples and information supplied by others, and since corrective actions, if any, are necessarily taken by others, these services are rendered without any warranty or liability of any kind beyond the actual amount paid to ALS Tribology for the services. Reported recommendations are based on interpretations of the generated test results and historical data. Certain test results appearing in this report may have been tested at other ALS laboratories within the Tribology divisional network.

Valley Power Systems Inc~  
Attn: Craig Carlson  
5725 Eastgate Dr  
San Diego CA 92121  
USA



**UIN 081475B**

**Unit No.** 3V4131  
**Gearbox**

**Unit:**  
**Make**  
**Model**  
**Serial No.**  
**Site** Tom Hund

**Compartment:**  
**Name** Stbd Marine Gearbox  
**Make** Twin Disc  
**Model**  
**Serial No.**  
**Capacity:**

**Customer:**  
 VALLEY POWER SYSTEMS  
 320 Lakme Ave  
 Wilmington CA 90744  
 USA

**DIAGNOSIS**

All wear levels appear within acceptable limits for first sample. Silicon level (dirt/sealant material) satisfactory. Water content acceptable. Viscosity within specified operating range. Action: Resample at next recommended interval to monitor and establish wear trend.

**ANALYST:** charles.dillard

**LEGEND**

Normal Severe Abnormal Caution Normal

<b>DATE SAMPLED</b>	28-Jul-20
<b>DATE RECEIVED</b>	06-Aug-20
<b>DATE REPORTED</b>	10-Aug-20
LAB NO.	44022285006
SIF NO.	25477400
TIME ON UNIT	Hrs 4358
TIME ON OIL	Hrs 200
OIL BRAND	Chevron
OIL TYPE	Delo 100
OIL GRADE	SAE 40
OIL ADDED	
FILTER	Not Applicable
OIL CHANGED	
WO NUMBER	

**Metals (ppm)**

Iron (Fe)	7
Chromium (Cr)	<1
Lead (Pb)	19
Copper (Cu)	8
Tin (Sn)	2
Aluminium (Al)	<1
Nickel (Ni)	<1
Silver (Ag)	<1
Titanium (Ti)	<1
Vanadium (V)	<1

**Contaminants (ppm)**

Silicon (Si)	4
Sodium (Na)	6
Potassium (K)	5
Water (%)	<0.05

**Additives (ppm)**

Magnesium (Mg)	1730
Calcium (Ca)	620
Barium (Ba)	<1
Phosphorus (P)	1204
Zinc (Zn)	1394
Molybdenum (Mo)	18
Boron (B)	<5

**Physical Tests**

Viscosity (cSt 40C)	134.6
Solids (%)	<0.1



**1-800-332-0952**

UIN 081475B

U.S. Laboratories

Atlanta, Georgia - 420

5300 OakBrook Parkway  
Building 200 Suite 245  
Norcross, GA 30093  
800.394.3669

Valley View, Ohio - 410

6180 Halle Dr. Suite D  
Valley View, OH 44125  
800.726.5400

Kansas City, Kansas - 430

935 Sunshine Road  
Kansas City, KS 66115  
800.332.8055

Phoenix, Arizona - 440

3319 West Earll Drive  
Phoenix, AZ 85017  
800.445.7930

Portland, Oregon - 401

4943 NW Front Avenue  
Portland, OR 97210  
800.770.4128

Canadian Laboratories

Burlington, Ontario - 450

5036 South Service Rd.  
Burlington, ON L7L5Y7  
905 332 9559

Edmonton, Alberta - 402

9450 17 Ave NW  
Edmonton, AB T6N 1M9  
888.489.0057

Sales & Marketing

Houston, Texas

10450 Stancliff Road, Suite 210  
Houston, TX 77099  
877.835.8437

International Locations

Australia

Brisbane, Perth, Sydney,  
Muswellbrook

Europe

Prague

New Zealand

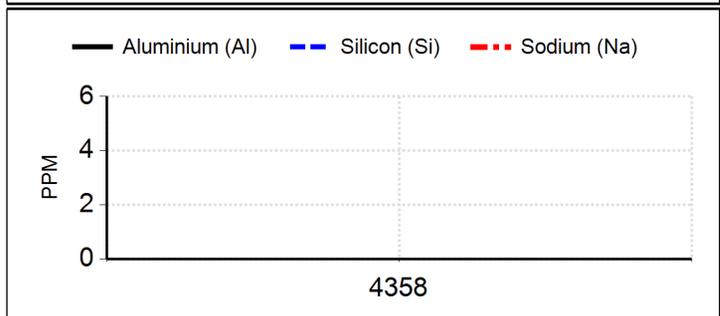
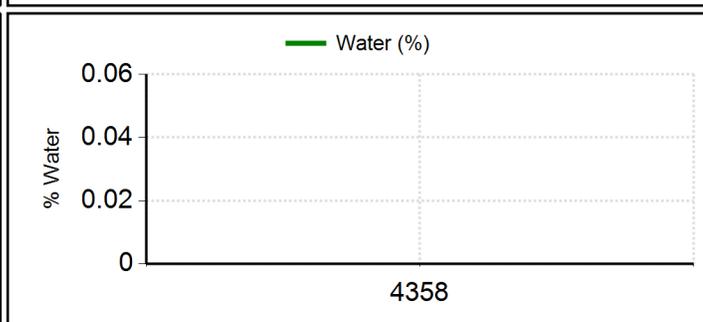
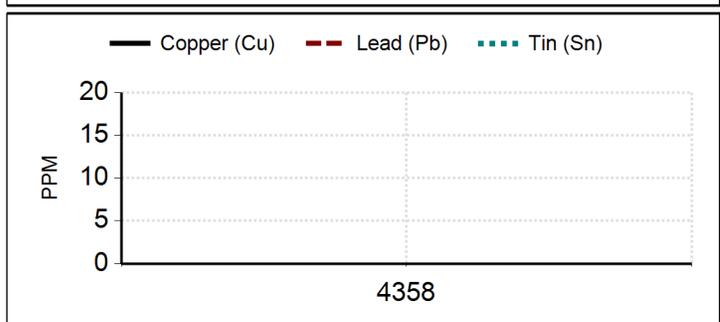
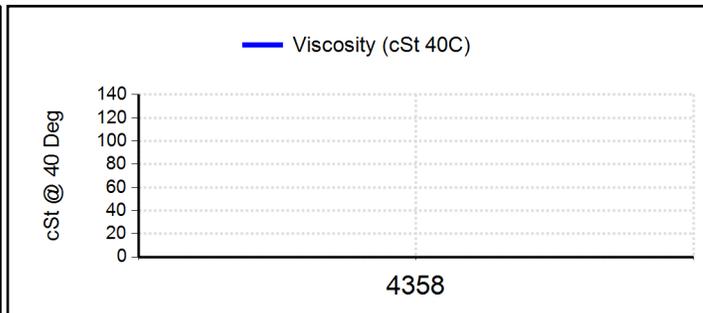
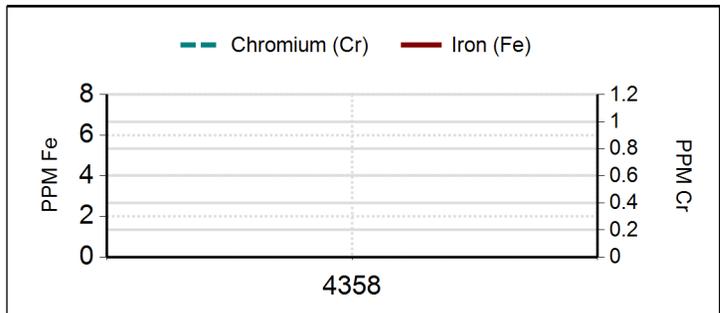
Wellington

South America

Santiago de Chile,  
Belo Horizonte, Brazil

Southeast Asia

Kuala Lumpur, Singapore



Filter Image

Filter patch test is not performed Contact laboratory for more information

Since services are based on samples and information supplied by others, and since corrective actions, if any, are necessarily taken by others, these services are rendered without any warranty or liability of any kind beyond the actual amount paid to ALS Tribology for the services. Reported recommendations are based on interpretations of the generated test results and historical data. Certain test results appearing in this report may have been tested at other ALS laboratories within the Tribology divisional network.

Valley Power Systems Inc~  
Attn: Craig Carlson  
5725 Eastgate Dr  
San Diego CA 92121  
USA