

UIN 0605B66

Gasoline Engine

Unit No.

Unit:

Make Land Rover
Model SALAM2D42AAxxxxxx
Serial No. Model: LR4
Site

Compartment:

Name Gasoline Engine
Make
Model
Serial No.
Capacity:



DIAGNOSIS

All wear rates normal. Abrasive and other contaminant levels are acceptable. Viscosity within specified operating range. Action: As oil and filter(s) already changed, resample next recommended service interval to further monitor.

ANALYST: roldan.beldad

LEGEND

DATE SAMPLED	12-Aug-20	30-May-19	12-Aug-17
DATE RECEIVED	26-Aug-20	27-Jun-19	06-Sep-17
DATE REPORTED	27-Aug-20	01-Jul-19	07-Sep-17
LAB NO.	43021429797	43021288290	43021040763
SIF NO.	33113154	32370385	14796382
TIME ON UNIT	mi 125000	121000	114000
TIME ON OIL	mi 4000	7000	10000
OIL BRAND	Redline	Castrol	Castrol
OIL TYPE	Motor Oil	Unidentified	Unidentified
OIL GRADE	SAE 5W20	SAE 5W20	SAE 5W20
OIL ADDED			
FILTER	4000	7000	10000
OIL CHANGED	Changed	Changed	Changed
WO NUMBER			
Metals (ppm)			
Iron (Fe)	8	19	55
Chromium (Cr)	<1	<1	1
Lead (Pb)	<1	<1	<1
Copper (Cu)	1	1	1
Tin (Sn)	<1	<1	<1
Aluminium (Al)	2	4	7
Nickel (Ni)	<1	<1	<1
Silver (Ag)	<1	<1	<1
Titanium (Ti)	<1	<1	1
Vanadium (V)	<1	<1	<1
Contaminants (ppm)			
Silicon (Si)	6	4	7
Sodium (Na)	14	14	33
Potassium (K)	4	1	<1
Additives (ppm)			
Magnesium (Mg)	17	28	23
Calcium (Ca)	3344	3432	3234
Barium (Ba)	<1	<1	<1
Phosphorus (P)	1016	750	801
Zinc (Zn)	1133	865	929
Molybdenum (Mo)	548	119	102
Boron (B)	51	22	24
Contaminants			
Water (%)	<0.05	<0.05	<0.05
Coolant	No	No	No
Physical Tests			
Viscosity (cSt 100C)	9.0	9.2	9.9
Physical / Chemical			
Base Number (mgKOH/g)	3.3	2.2	2.4



UIN 0605B66

U.S. Laboratories

Atlanta, Georgia - 420 3121 Presidential Drive Atlanta, GA 30340 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 10717-176 Street Edmonton, AB T5S 1K1 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

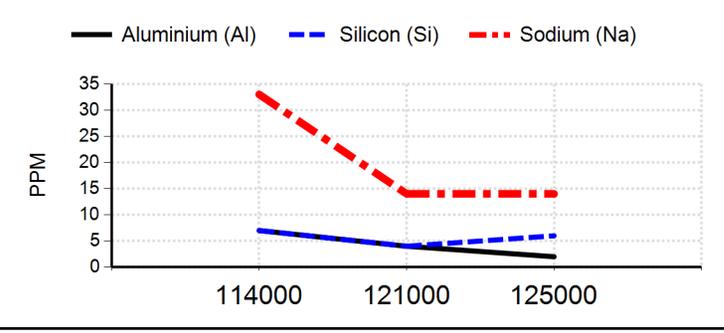
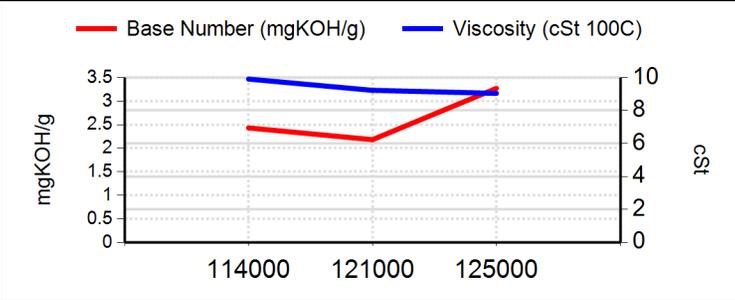
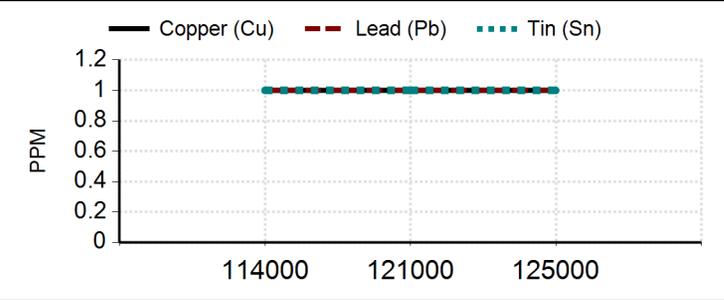
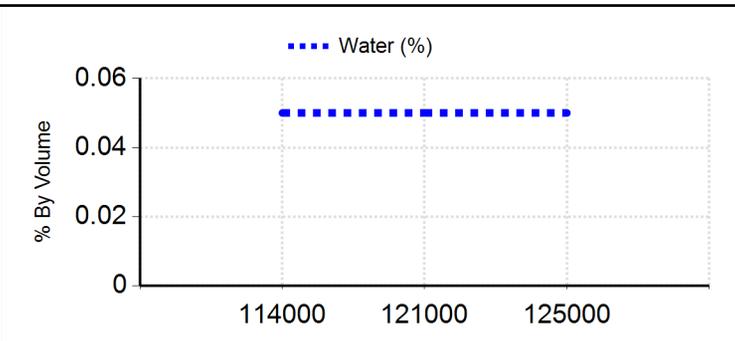
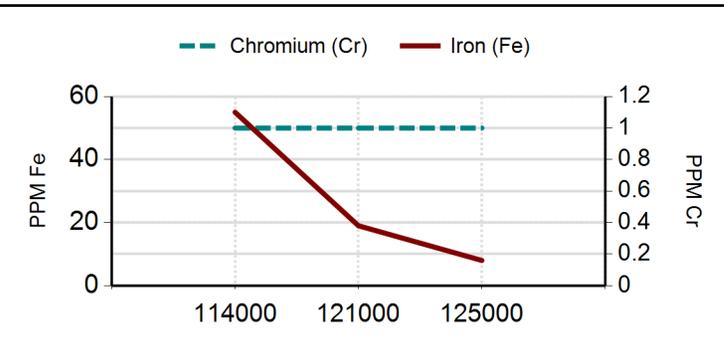
South America
 Santiago de Chile, Belo Horizonte, Brazil

New Zealand Wellington	Southeast Asia Kuala Lumpur, Singapore	Europe Prague
----------------------------------	--	-------------------------

TEST METHODS:

Acid Number:	ASTM D974/D664 (*M)
Base Number:	ASTM D4739 (*M)
Base Number (Perchloric):	ASTM D2896 (*M)
Fuel Dilution by GC:	ASTM D7593
Fuel Dilution Visc/Setaflash	In House
Fuel Soot ATR/IR:	ASTM D7686 (*M)
Soot by FTIR:	ASTM D7844
Glycol:	In House
Metals by ICP AES:	ASTM D5185 (*M)
Ox, NOx, SOx, FTIR:	ASTM E2412/D7418/D7414 D7415
PQ Index:	ASTM D8120 (*M)
Particle Count:	ASTM D7647 (*M) / ISO 4406
Viscosity:	ASTM D445 (*M) / D7279 (*M)
Water KF:	D6304 / E203 (*M)
Water Crackle:	In House

*M - Modified Method



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.

