





Customer Name: AVIATION OIL ANALYSIS DEMO	Tail Number: N####	Comp Serial No: 123456
Address: 3319 West Earll Drive Phoenix, AZ 85017 USA	Aircraft Make: Cessna	Comp Name: Engine
Phone: 800-445-7930	Aircraft Model: 172P	Comp Make: Lycoming
Fax: 602-252-4639	Serial No:	Comp Model: O-320
	UIN: 0650C4D	

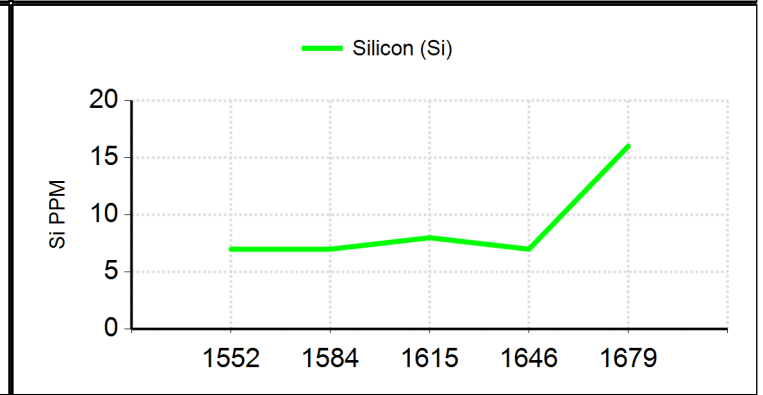
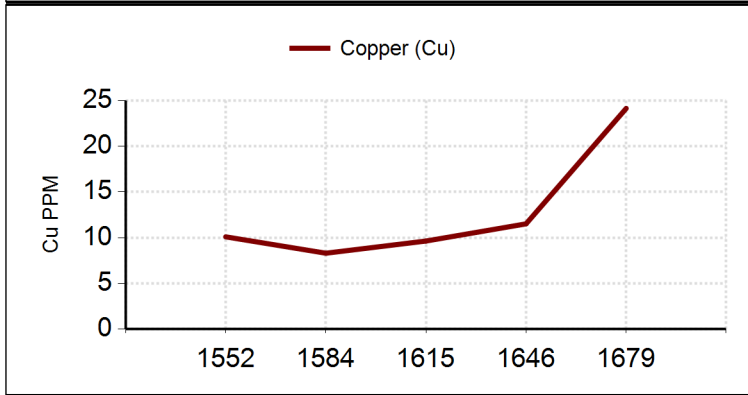
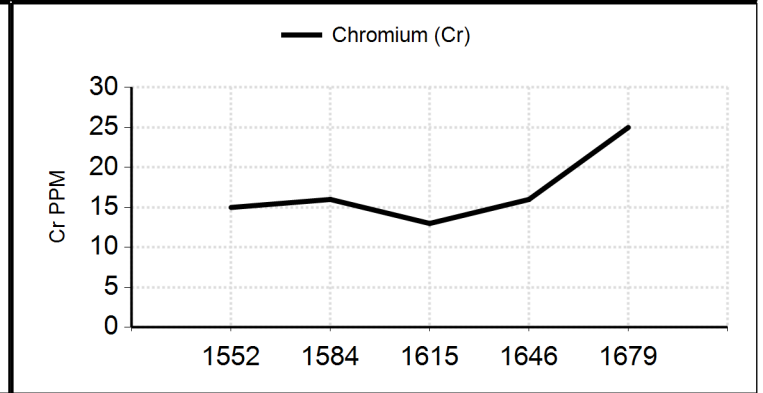
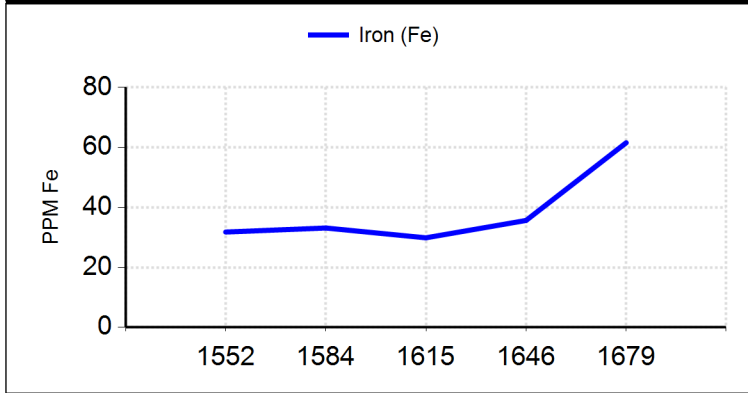
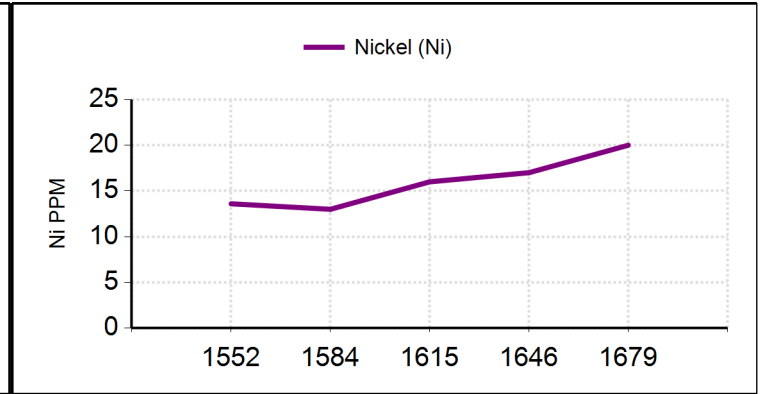
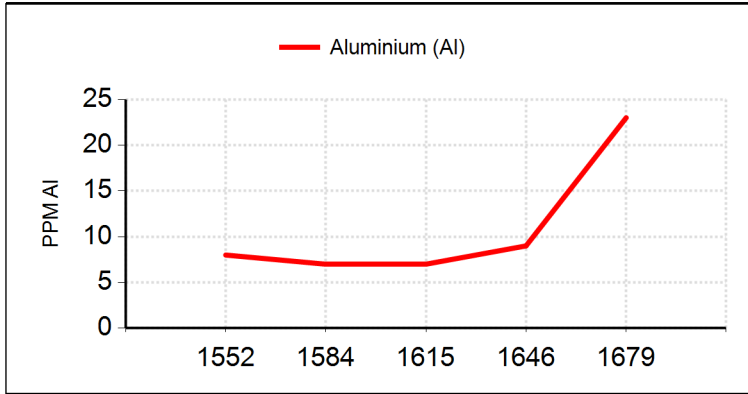
Sample No.	44150176881	44150176880	44150176879	44150176878	44150176877
Date Sampled	02-Dec-17	30-Oct-17	21-Sep-17	12-Aug-17	05-Jul-17
Date Tested	06-Feb-18	06-Feb-18	06-Feb-18	06-Feb-18	06-Feb-18
Oil Brand	Shell	Shell	Shell	Shell	Shell
Oil Type	AeroShell 100	AeroShell 100	AeroShell 100	AeroShell 100	AeroShell 100
Oil Grade	SAE 50	SAE 50	SAE 50	SAE 50	SAE 50
Oil Hrs	33	31	31	32	30
Oil Added					
Hrs Since New					
Rebuild Hrs	1679	1646	1615	1584	1552
Metals (ppm)					
Aluminium (Al)	23	9	7	7	8
Iron (Fe)	61.58	35.67	29.88	33.15	31.80
Copper (Cu)	24.13	11.52	9.64	8.31	10.10
Nickel (Ni)	20	17	16	13	14
Chromium (Cr)	25	16	13	16	15
Tin (Sn)	9	4	3	1	2
Lead (Pb)	3162.82	3201.56	3143.20	3075.14	3189.26
Silver (Ag)	<1	<1	<1	<1	<1
Phosphorus (P)	18	20	17	19	18
Contaminants (ppm)					
Silicon (Si)	16	7	8	7	7
Water (%)	<0.05	<0.05	<0.05	<0.05	<0.05
Additives (ppm)					
Magnesium (Mg)	5	3	2	4	3
Calcium (Ca)	8	8	11	10	9
Zinc (Zn)	30	24	23	25	29
Boron (B)	<5	<5	<5	<5	<5
Physical Tests					
Viscosity (cSt 100C)	18.6	20.0	20.1	19.2	18.4
PQ Index	33	<10	<10	<10	<10

LEGEND

			
Severe	Abnormal	Caution	Normal

				
---	---	---	---	---

Sample No.	Diagnosis/Recommendations
44150176881	Wear metals increased for oil time. Increase in silicon level (dirt/sealant material) noted. PQ Index number (ferrous material) higher than typical. Viscosity within specified operating range. Action: Resample 15 to 20 hours to monitor wear trend. Check for lower than typical oil pressure. For a more comprehensive analysis of your next sample, we recommend a Microscopic Particle Examination (MPE).
44150176880	All wear rates normal. Abrasive and other contaminant levels are acceptable. Viscosity within specified operating range. Action: Resample next oil change to check wear trend.
44150176879	All wear rates normal. Abrasive and other contaminant levels are acceptable. Viscosity within specified operating range. Action: Resample next oil change to check wear trend.
44150176878	All wear rates normal. Abrasive and other contaminant levels are acceptable. Viscosity within specified operating range. Action: Resample next oil change to check wear trend.
44150176877	Engine wear levels appear satisfactory for first sample. Abrasive and other contaminant levels are acceptable. Viscosity within specified operating range. Action: Resample next oil change to establish wear trend.



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 Laboratory group 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.

Aviation Oil Analysis Demo
 Attn: AOA Demo
 3319 West Earll Drive
 Phoenix, AZ 85017
 USA

TEST METHODS:

Acid Number:	ASTM D974/D664
ICP:	ASTM D5185
Viscosity:	ASTM D445 / D7279
Water by Crackle:	ASTM E203 Mod / In House