



ALSTribology

UIN 018A72D

Gasoline Engine

Unit No. N9MY

Unit: Cessna

Make Model 172N

Serial No. 17267616

Site

Compartment: Aviation Engine

Name Make Model

Serial No. 0-320

Capacity: 8.0 qt

Customer: NIGHTHAWK SIGNS

4078 Elmwood Rd

South Euclid OH 44121

USA

DIAGNOSIS

All wear rates normal. Abrasive and other contaminant levels are acceptable. Viscosity within specified operating range. Action: Resample next recommended service interval to further monitor.

ANALYST: EricDunlap

LEGEND

Normal	Severe	Abnormal	Caution	Normal

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DATE SAMPLED	DATE RECEIVED	DATE REPORTED
21-Aug-18	22-Aug-18	24-Aug-18
15-Aug-17	01-Sep-17	06-Sep-17
01-May-17	03-May-17	05-May-17
21-Jul-16	27-Jul-16	01-Aug-16
05-May-16	23-May-16	25-May-16
01-Aug-15	28-Aug-15	01-Sep-15

LAB NO.	SIF NO.	TIME ON UNIT	OIL BRAND	OIL TYPE	OIL GRADE	OIL ADDED	FILTER	OIL CHANGED	WO NUMBER
41022004831	34439593	41 Hrs	Exxon Elite	SAE 20W50	3.0	38	52	Changed	
41021757252	32847785	2034 Hrs	Exxon Elite	SAE 20W50	3.0	38			
41021869682	32174087	1896 Hrs	Exxon Elite	SAE 20W50	3.0	52			
41021484283	30746700	51 Hrs	Exxon Elite	SAE 20W50	3.0				
41021439151	092199730007	1891 Hrs	Exxon Elite	Unknown	3.0				
41021262667	092199730005	48 Hrs	Exxon Elite	Unknown	3.0				

Metals (ppm)	41022004831	41021757252	41021869682	41021484283	41021439151	41021262667
Iron (Fe)	29	16	22	21	22	22
Chromium (Cr)	3	2	2	2	2	2
Lead (Pb)	4546	4364	4676	6164	4957	3695
Copper (Cu)	7	4	6	7	6	5
Tin (Sn)	2	1	2	2	2	2
Aluminum (Al)	8	5	6	8	6	6
Nickel (Ni)	<1	<1	<1	1	<1	<1
Silver (Ag)	<1	<1	<1	<1	<1	<1
Titanium (Ti)	<1	<1	<1	<1	<1	<1
Vanadium (V)	<1	<1	<1	<1	<1	<1

Contaminants (ppm)	41022004831	41021757252	41021869682	41021484283	41021439151	41021262667
Silicon (Si)	4	2	2	3	3	3
Sodium (Na)	<1	<1	1	2	2	<1
Potassium (K)	<1	<1	<1	<1	<1	4

Additives (ppm)	41022004831	41021757252	41021869682	41021484283	41021439151	41021262667
Magnesium (Mg)	2	<1	1	<1	2	<1
Calcium (Ca)	119	94	91	101	97	88
Barium (Ba)	<1	<1	<1	<1	<1	<1
Phosphorus (P)	1277	1070	1001	1020	1158	1085
Zinc (Zn)	19	14	16	17	23	21
Molybdenum (Mo)	<1	<1	<1	<1	<1	<1
Boron (B)	<5	<5	<5	<5	<5	<5

Contaminants	41022004831	41021757252	41021869682	41021484283	41021439151	41021262667
Water (%)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Coolant	No	No	No	No	No	No

Physical Tests	41022004831	41021757252	41021869682	41021484283	41021439151	41021262667
Viscosity (cSt 100C)	19.6	20.8	19.9	21.3	21.2	20.2
PQ Index	<10	<10	<10	<10	<10	<10

Additional Same Day Service	41022004831	41021757252	41021869682	41021484283	41021439151	41021262667
Yes						