LP

Viscosity – Mineral Based AD Oil

g operating conditions and / or availability may warrant the use of scosity oils. Most important to RAM is that the oil be mineral based. ecommends a multi-viscosity ashless dispersant mineral based oil s Phillips 66 X/C 20W-50. [RAM service history records indicate neral Based AD oils perform significantly better than synthetic and nthetic oils.]

at

t is recommended when engine starting temperatures are below 40° eat equipment can be purchased through numerous aviation supply nies, as well as through RAM's Parts Catalog.

Filter Change

commends changing the oil and filter every 50 hours or 4 months ver occurs first. More frequent oil changes are encouraged.

ajor reasons for frequent oil changes are:
sh out metal particles. (2) Flush out acid contamination.

ent Oil Changes

out metal particles

coming and Continental Motors (CMI) engines include parts that proven history of normal wear that deposits normal wear particles of to the oil. Oil filters contribute significantly to capturing these wear s, but not as effectively as frequently changing the oil.

out acid contamination

ur-cycle gasoline engines it is an unavoidable fact that acids collect il. Acids are formed when combustion by- products and unburned e leak past (blow-by) the piston rings into the crankcase. Acids are e. They cause rust as well as pitting of lifter faces. Acids are not d by oil filters or by changing filters. The only way to remove acids nove the oil that has become acid contaminated.

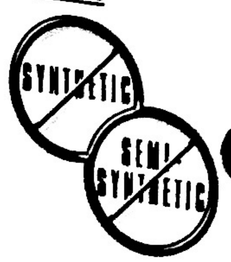
cosity

nade are well taken on both sides of the issue of whether to use r multi grade oils. In the final analysis, you know that your aircraft is ed to extreme temperature variations and starting conditions. Many fly frequently. Many aircraft don't fly enough. Successes and lack esses, suggests there is simply not one viscosity that is always the all flight environments. In general RAM sees the following:

- Multi-Viscosity Mineral Based (AD) oil performs well in high usage airplanes.
- Single Viscosity Mineral Based (AD) oil performs well in high or low usage airplanes.

etic & Semi-synthetic vs. Mineral Based Oil

ervice history records are much less favorable ines that have a history of being operated on c blends or semi-synthetic oil products. RAM ges using Mineral Based (AD) Oils only, single -viscosity as conditions require.



HARTZELL

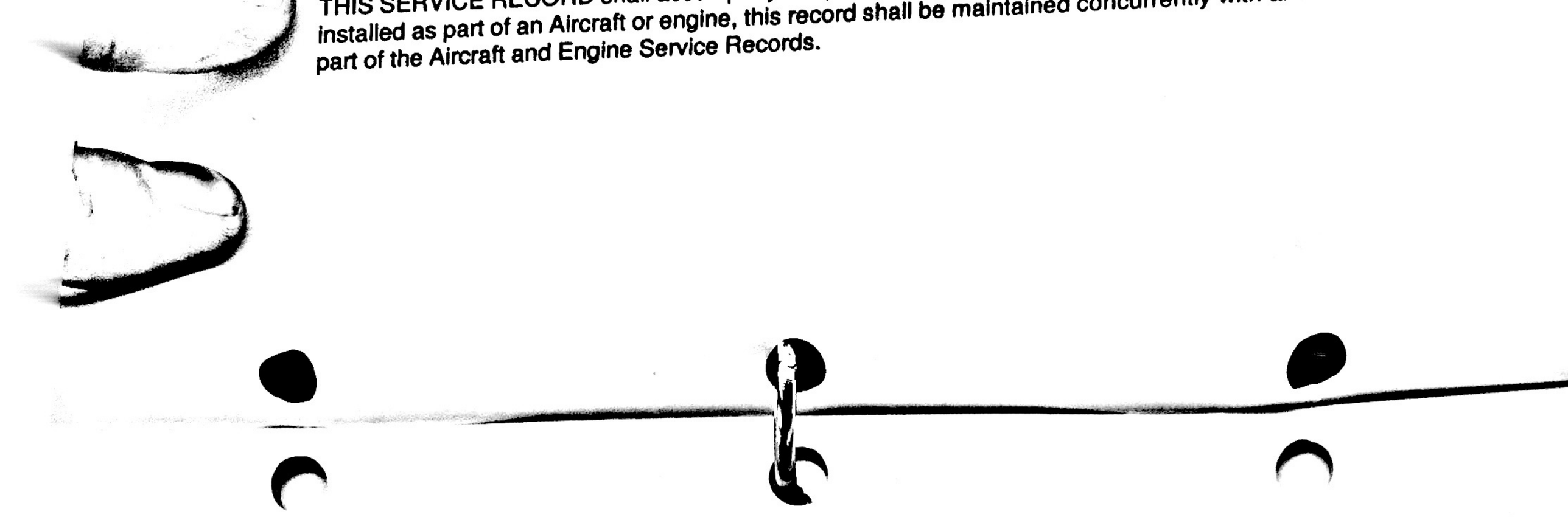
PROPELLER LOGBOOK

PROPELLER MODEL PHC-J3YF-1RF/F7693F+2

PROPELLER S/N FP89068

LOGBOOK #_____

THIS SERVICE RECORD shall accompany the propeller at all times. When this propeller is installed as part of an Aircraft or engine, this record shall be maintained concurrently with all part of the Aircraft and Engine Service Records.



PROPELLER MAINTENANCE RECORD

PITCH RANGE

HARTZELL PROPELLER INC

INSPECTION

Item Number: J3F09050

Date: 8/28/2016

Work Order #: M661930

Model Number						
PHC-J3YF-1RF/F7693F+2						
Ass'y Ser No.	Hydr Unit No.	Bulkhead No.	Valve No.			
FP8906B	NA	NA	NA			
Blade 1: L72962	Blade 2: L72963	Blade 3: L72964	Blade 4:	Blade 5:	Blade 6:	
Clamp 1:	Clamp 2:	Clamp 3:	Clamp 4:	Clamp 5:		

Reverse	Start Lock	Low Pitch	High Pitch	Feather
NA	NA	14.0	31.0	NA

Ref Radius (inches) for angles: 30

Position	Orient.	Qty:Al	St	Scrw	A-2424-1	Washer
1	T	1	0	0	0	2
3	L	0	0	0	0	2

Comments:
Deice Kit: NA

Packing
Certified By: Tim Jess
Date: 8-30-16

Inspected By: Tim Jess

The approved design data for this propeller incoporates all changes required by applicable Airworthiness Directives.

The propeller covered by this certificate has passed a functional test as required by 14 CFR Part 21.137(e)(2).

Spinner Assembly Part No.

Late Aircraft Repair LLC

Date

9/1/2017 Tach 4191.82 N13KS T210L Hartzell PHC-J3YF-1RF/F7693 SN FP8906B

Install propeller SN FP8906B on N13KS SN 2106020 IAW STC SA10615SC-D and Hartzell manual 115N. Propeller dynamically balanced to .08 IPS @ 2300 RPM.

I certify that this Propeller has been inspected in accordance with a 100/annual inspection and is found to be in an Airworthy condition at this time.

Kevin Late AP3112349IA Kevin Late

Late Aircraft Repair

8/6/2018 Tach 4253.03 TSNEW 61.21 N13KS Hartzell PHC-J3YF-1RF SN FP8906B

Lube hub using Aeroshell 6 grease. Dress blades as needed.

I certify that this Propeller has been inspected in accordance with a 100hr/Annual inspection and is found to be in an Airworthy condition at this time.

Kevin Late AP3112349IA Kevin Late

07/05/2022			4401.03 Tach 209.21 PTT Removed propeller from N13KS, Cessna T 210L, S/N 21060202, due to leading edge damage to blades. Mark McLaren ABP 5019048 60
29 JUL 2022			29 JUL 2022

MAINTENANCE PERFORMED AMO # 105-99

PROPELLER REPAIRED
Under Work Order Number 12828

The performed maintenance, as duly noted above, has been carried out in accordance with applicable airworthiness requirements as described on the maintenance release.

PROPWORKS PROPELLER SYSTEMS INC.

A.M.O. # 105-99 (WINNIPEG, MANITOBA)

P. Inc.

MICHAEL HUDEC STAMP

Propeller TSO / TCN	A/C Hrs	Description of all operations pertaining to Airworthiness Directives, Service Documents, Overhaul, Major or Minor Repair, and Inspections.

W/O # 15501	Details of this work order are on file at BAC	BISMARCK AERO CENTER ND	2301 University Dr. Bldg. 53 Bismarck, ND 58504	PROP
Registration N13KS				PTT: 209.2

DATE	MFG.	MODEL#:	SERIAL#:	TACH:	ETT:	ESOH:	AFTT:
08/11/2022	CESSNA	T210L	21060202	4401.0	4509.7	224.2	4401.0

1. Removed Hartzell propeller (Model PHC-J3YF-1RF, S/N FP8906B) from engine and sent out for repair. Reinstalled repaired Hartzell propeller (Model PHC-J3YF-1RF, S/N FP8906B) onto engine. Installed propeller was repaired and returned to service by Propworks Propeller Systems under Work Order #12828. Leak and operational checks OK.
Howard Burns AP 501908279 IA Howard Burns

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Fax: 937.778.4391