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FAA APPROVED
"PILOTS OPERATING HANDBOOK AND FAA APPROVED AIRPLANE FLIGHT MANUAL" SUPPLEMENT
FOR
CESSNA 210N
SERIAL NUMBER 21062955 THROUGH 21064897

Serial No.: 210-63828

Registration No.: N-2306D

This Supplement must be attached to the "Pilot's Operating Handbook and FAA Approved Airplane Flight Manual" when the Teledyne Continental Motors IO-550-P engine and Hartzell propeller Model PHC-J3YF-RF/F7691() are installed in accordance with Supplemental Type Certificate ST02029AT-D dated May 26, 2000. The information contained herein supplements or supersedes the information in the basic handbook only in those areas listed herein. For limitations, procedures and performance information not contained in this Supplement, consult the basic "Pilot's Operating Handbook and FAA Approved Flight Manual".

FAA Approved:

Original signed by Richard J. Gritter
DAS Coordinator
Atlantic Aero, Inc.
DAS 7 SO

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Pilot's Operating Handbook and FAA Approved
Airplane Flight Manual Supplement
For Cessna 210N

Log of Revisions

Revision Number	Description	Pages Affected	FAA Approval and Date
Basic	Initial Release	All	DAS Coordinator April 28, 2000
A	Corrected low Pitch Blade Angle Corrected Wording. Removed description of landing gear warning. System unchanged from original. Revised wording on fuel pump switch.	4,5 7 10	DAS Coordinator June 1, 2001

SECTION 1
GENERAL

INTRODUCTION

The installation consists of replacement of the standard IO-520-L engine and propeller with a TCM IO-550-P engine and Hartzell PHC-J3YF-1RF/F7691() propeller.

DESCRIPTIVE DATA

ENGINE

Number of Engines: 1

Engine Manufacturer:..... Teledyne Continental Motors

Engine Type:.....Normally aspirated, direct drive,
.....air cooled, horizontally opposed,
..... fuel injected, six cylinder engine
.....with 550 cu. in. displacement.

Horsepower Rating and Engine Speed:
Maximum Continuous Power: .310 rated BHP at 2700 RPM.

PROPELLER

Propeller Manufacturer:.....Hartzell Propeller, Inc.

Propeller Model Number: ..... PHC-J3YF-1RF/F7691()

Number of Blades: 3

SECTION 1
GENERAL (Continued)

DESCRIPTIVE DATA (Continued)

Propeller Diameter:
Maximum:..... 78 inches
Minimum:..... 77 inches

Propeller Type:..... Constant speed and hydraulically
..... actuated, with a low pitch setting
.....of 14.0° and a high pitch setting
..... of 31.0° measured at the 30 inch station.

SECTION 2
LIMITATIONS

POWERPLANT LIMITATIONS

Engine Manufacturer:..... Teledyne Continental Motors

Engine Model Number:.....IO-550-P

Engine Operating Limits for Continuous Operations:
Maximum Power, Continuous:..... 310 BHP
Maximum Engine Speed, Continuous:.....2700 RPM

Fuel Pressure:
Minimum:.....3.5 PSI
Maximum:.....22.3 PSI

SECTION 2
LIMITATIONS (CONTINUED)

POWERPLANT LIMITATIONS (CONTINUED)

Propeller Manufacturer: ..... Hartzell Propeller Inc.

Propeller Model Number: ..... PHC-J3YF-1RF/F7691()

Propeller Diameter:
Maximum: ..... 78 inches
Minimum: ..... 77 inches

Propeller Blade Angle at 30 inch Station :
Low: ..... 14.0° +/- 0.1°
High: ..... 31.0° +/- 1.0°

POWERPLANT INSTRUMENT MARKINGS

Tachometer:
Green Arc: .. 2200 thru 2550 RPM (Normal Operating Range)
Red Line: ..... 2700 RPM (Maximum)

Fuel Flow (Pressure):
Red Line: ..... 3.5 PSI (Minimum)
Green Arc: ..... 42-102 LBS/HR (Normal Operating Range)
Red Line: ..... 170 LBS/HR (22.3 PSI) (Maximum)

SECTION 2
LIMITATIONS (CONTINUED)

PLACARDS

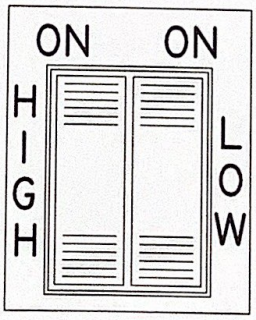
Near Tachometer:

> Do not exceed 20 inches manifold pressure
> below 2200 RPM

Near fuel flow/manifold pressure gauge:

> MIN. FUEL FLOW AT FULL THROTTLE
> 2700 R.P.M.
> S.L. 150 LBS/HR
> 4000 FT. 127 LBS/HR
> 8000 FT. 112 LBS/HR

Around the auxiliary fuel pump switch:



SECTION 3
EMERGENCY PROCEDURES

ENGINE-DRIVEN FUEL PUMP FAILURE

Failure of the engine-driven fuel pump will be evidenced by a sudden reduction in the fuel flow indication prior to a loss of power while operating from a fuel tank containing adequate fuel.

In the event of an engine-driven fuel pump failure, immediately move the **HIGH** portion of the Auxiliary Fuel Pump switch to the **ON** position. Manual leaning may be required for engine smoothness depending on throttle position. Land as soon as practical.

WARNING

If normal fuel flow and engine operation are not established within 3-5 seconds after activating the **HIGH** position the Auxiliary Fuel Pump, turn the Auxiliary Fuel Pump **OFF**. Lack of a flow indication with the **HIGH** portion in the **ON** position may indicate a broken fuel line that can lead to a fire hazard.

SECTION 4
NORMAL PROCEDURES

STARTING ENGINE

Use the Auxiliary Fuel Pump Switch **HI** portion for priming the engine. Turn Switch **OFF** after priming.

NORMAL AND SHORT FIELD TAKEOFF

Power:..... FULL THROTTLE AND 2700 RPM

NORMAL CLIMB

Power:..... 25 inches Hg. and 2550 RPM
Mixture: ..... Lean to 120 LBS/HR

BALKED LANDING

Power:.....FULL THROTTLE and 2700 RPM

SECTION 5
PERFORMANCE

Performance is either unchanged or improved with installation of the IO-550-P engine and PHC-J3YF-1RF/F7691( ) propeller.

SECTION 6
WEIGHT AND BALANCE

The weight and moment of added items is as follows:

ITEM	WEIGHT (LBS)	ARM (IN)	MOMENT (IN-LB)
IO-550-P ENGINE	465	-17.5	7945
PHC-J3YF-1RF/F7691( ) PROPELLER	77.3	-44	-3401

NOTE:
The weight and moment of the removed engine and propeller must be accounted for when changing the overall aircraft weight and balance.

SECTION 7
DESCRIPTION OF SYSTEMS

FUEL SYSTEM

AUXILIARY FUEL PUMP OPERATION

The auxiliary fuel pump is a dual speed, dual pressure pump activated by a yellow and red split-rocker type switch located on the left side of the instrument panel.

The yellow right half of the switch is labeled **LOW**, and its **ON** position is used for increasing fuel flow and minor vapor purging.

The red left half of the switch is labeled **HIGH**, and its **ON** position is used in the event of an engine-driven fuel pump failure. The **HIGH** pump position is also used for priming during normal starting and for extreme vapor purging.

Maximum fuel flow is produced when the **HIGH** side of the switch is placed in the **ON** position. In this position, an interlock within the switch also trips the **LOW** side of the switch to the **ON** position. When the **HIGH** side of the switch is turned **OFF**, the **LOW** side will remain in the **ON** position until manually returned to the **OFF** position.

WARNING

Continued used of the **HIGH** side will cause an overly rich mixture if the engine-driven fuel pump is also operating. Manual leaning will be required to prevent engine roughness and possible engine stoppage due to excessive richness.