AIR PLAINS

FAA APPROVED

Supplemental Aircraft Flight Manual

DOCUMENT NUMBER 172041

CESSNA 172 B, C, D, E, F, G, H, I, K, L, M, N

Serial No. 17247747 to 17271034

Applicable to

Serial No: 17256182 **Reg. #:** N3282L

The information contained in this flight manual is FAA approved Material, which, Along with the FAA Approved placards and instrument markings, is applicable to the operation of the airplane when modified in accordance with **STC SA4428SW** which installed a 180HP Lycoming O-360 engine and a fixed pitch propeller.

FAA APPROVED for M Baker
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Date: 12/2/2011

Log of Revisions

REV	Pages	Description	Approved	Date
-	15	Original	M. L. Kelley*	12/23/96
1	All All	Added Propellers Added C172B & C172C Models	M. L. Kelley*	06/13/00
2	All 1 5 5, 14 6 All	Reformatted to SAFM Added Logo, Added C172N, Added POH Added C172D-H to 1A170/JFA Propeller Removed Engine Information listed in the Textron Lycoming Engine Operating Manual Added Power Plant Instrument Markings Removed Section 8	D M Baker	12/2/2011

*Previous versions of this document were titled Owners Handbook Supplement that were not FAA Approved

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SECTION 1: GENERAL

The information contained in this Supplement is applicable to the operation of the airplane in accordance with STC SA4428SW which installs an O-360 Lycoming engine and a fixed pitch propeller

DESCRIPTIVE DATA

ENGINE

Number of engines: 1.
Engine Manufacturer: Textron Lycoming.
Engine Model Number: O-360-A4A, A4M, A4N, A2F and A3A.
Engine Type: Normally aspirated, direct drive, air cooled, horizontally opposed, carburetor equipped, four cylinder engine with 360 cu. in. displacement.
Horsepower Rating and Engine Speed: 180 rated BHP at 2700 RPM maximum continuous rpm.

PROPELLERS:

Sensenich Propellers approved on installations using the O-360-A4 series engines only
Propeller Manufacturer: Sensenich Corporation
Propeller Model Number: 76EM8S14-0-60
Number of Blades: 2.
Propeller Diameter: Maximum .....76 inches.
Minimum: .....76 inches.
Pitch Range: 62 to 56

Propeller Manufacturer: Sensenich Corporation.
Propeller Model Number: 76EM8S-0-60 (when using MKA3.5 prop spacer).
Number of Blades: 2.
Propeller Diameter: Maximum: .....76 inches.
Minimum: .....76 inches.
Pitch Range: 62 to 56

Approved on all approved engine installations.
Propeller Manufacturer: McCauley Accessory Division.
Propeller Model Number: 1A170/CFA
1A170E/CFA
Number of Blades: 2.
Propeller Diameter: Maximum: .....76 inches.
Minimum: .....74.5 inches.
Propeller Type: Fixed Pitch
Pitch Range: 60 to 56

Approved on C172D-P installations using the O-360-A4A, -A4M, -A4N, and A3A engines only. .
Propeller Manufacturer: McCauley Accessory Division.
Propeller Model Number: 1A170/JFA
Number of Blades: 2.
Propeller Diameter: Maximum: .....76 inches.
Minimum: .....74.5 inches.
Propeller Type: Fixed Pitch
Pitch Range: 60 to 56

STATIC RPM LIMITS
2250-2350 (Carb heat off, mixture leaned to maximum RPM).

Oil:
Refer to the Textron Lycoming Engine Operations Manual Number 60297-12.

Oil Capacity:
Sump: 8 Quarts.
Total: 8 Quarts (if oil filter installed).

MAXIMUM CERTIFICATED WEIGHTS
Unchanged from the original Cessna Owners Handbook.

SECTION 2: LIMITATIONS

AIRSPEED LIMITATIONS
Unchanged from the original Cessna Owners Handbook.

AIRSPEED INDICATORS MARKINGS
Unchanged from the original Cessna Owners Handbook.

POWER PLANT LIMITATIONS
Engine Manufacturer: Textron Lycoming.
Engine Model Number: O-360-A4M (optional engines O-360-A3A, A4N, A3A, A2F)
Maximum Power: 180 BHP rating.
Engine Operating Limits for Takeoff and Continuous Operations:

Maximum Engine Speed: ..... 2700 RPM

Maximum Oil Temperature: ..... 245°F (118°C)

POWER PLANT INSTRUMENT MARKINGS

Oil Temperature

Normal Operating Range ..... Green Arc
Maximum Allowable ..... 245°F ..... Red Line
Oil Pressure Gage
Minimum Idling ..... 25 psi (Red Line
Normal Operating Range ..... 60-90 psi (Green Arc)
Maximum ..... 100 psi (Red Line)

FLAP LIMITATIONS

Unchanged from the original Cessna Owners Handbook.

PLACARDS

NOTE

Only the placards listed below are changed from the FAA Approved Data

(3). Near fuel tank filler cap (standard tanks):

FUEL **100LL/100 MIN. GRADE AVIATION GASOLINE**

(8). On oil filler cap or clearly marked on the dipstick:

OIL **8 QTS.**

SECTION 3: EMERGENCY PROCEDURES

Unchanged from the original Cessna Owners Handbook

OPERATIONAL CHECK LISTS

Unchanged from the original Cessna Owners Handbook

SECTION 4: NORMAL PROCEDURES

SPEEDS FOR NORMAL OPERATION

Unchanged from the original Cessna Owners Handbook

SECTION 5: PERFORMANCE

Refer to the Owners Manual for descriptions of all items not contained in this section.

All performance data not contained in this section is considered to be equal to or better than the data contained in the Owners Manual.

CRUISE FUEL CONSUMPTION
(NOT FAA APPROVED)

Conditions:
2300 Lbs.
Recommended Lean Mixture.

		20°C Below Standard Temp.		Standard Temperature		20°C Above Standard Temp.	
Press. Alt Feet	RPM	% BHP	GPH	% BHP	GPH	% BHP	GPH
2000	**2550**	---	---	**76**	**10.2**	**72**	**9.6**
	2500	77	10.3	72	9.6	68	9.1
	2400	69	9.2	64	8.7	61	8.3
	2300	61	8.3	58	7.9	55	7.6
	2200	55	7.5	52	7.2	49	6.9
	2100	49	6.8	46	6.6	43	6.3
4000	**2600**	---	---	**76**	**10.2**	**72**	**9.6**
	2500	73	9.7	68	9.2	65	8.7
	2400	65	8.8	62	8.3	58	8.0
	2300	58	8.0	55	7.6	52	7.3
	2200	52	7.3	49	6.9	47	6.6
	2100	46	6.6	44	6.3	41	6.1
6000	**2650**	---	---	**76**	**10.1**	**72**	**9.6**
	2600	77	10.3	72	9.6	68	9.1
	2500	69	9.3	65	8.8	62	8.4
	2400	62	8.4	59	8.0	56	7.6
	2300	56	7.7	53	7.3	50	7.0
	2200	50	7.0	47	6.7	44	6.4
8000	**2700**	---	---	**76**	**10.1**	**71**	**9.5**
	2600	73	9.8	69	9.2	65	8.7
	2500	66	8.8	62	8.4	59	8.0
	2400	59	8.1	56	7.7	53	7.3
	2300	53	7.4	50	7.0	47	6.7
	2200	47	6.7	45	6.4	42	6.1
10,000	**2700**	**77**	**10.2**	**72**	**9.6**	**68**	**9.1**
	2600	69	9.3	65	8.8	62	8.4
	2500	63	8.5	59	8.1	56	7.7
	2400	57	7.8	53	7.4	50	7.0
	2300	51	7.1	48	6.8	45	6.5
12,000	**2700**	**69**	**9.3**	**65**	**8.8**	**62**	**8.4**
	2600	66	8.9	62	8.4	59	8.0
	2500	60	8.2	56	7.7	53	7.4
	2400	54	7.5	51	7.1	48	6.7
	2300	48	6.8	45	6.5	42	6.2

RANGE PROFILE

Compute range based on the available fuel load on the aircraft, altitude, ground speed and engine fuel consumption.

ENDURANCE PROFILE

Compute endurance based on the available fuel load on the aircraft and engine fuel consumption.

SECTION 6: WEIGHT AND BALANCE

Reference the Aircraft Weight and Balance and Equipment list Supplement.

SECTION 7: AIRPLANE & SYSTEMS DESCRIPTIONS

ENGINE

Refer to the Textron Lycoming Operators Manual #60297-12 for a description of the engine and related components.

PROPELLER

Fixed pitch Propeller 76" inches in Diameter.

Refer to the Owners Manual for descriptions of all items not contained in this section.