

AIR PLAINS SERVICES, CORP.  
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Supplemental Aircraft Flight Manual  
Cessna 172 B-N  
FAA Approved STC SA4428SW



FAA APPROVED  
**Supplemental Aircraft Flight Manual**

**DOCUMENT NUMBER 172041**

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

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

Serial No. 17247747 to 17271034

Applicable to

Serial No: 17263721 Reg. #: 1713V

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.

for FAA APPROVED M. Kline  
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Date: 12/2/2011

172041  
FAA APPROVED  
DATE: 12/2/2011

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### 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		12/2/2011

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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**

**AIRSPPEED LIMITATIONS**

Unchanged from the original Cessna Owners Handbook.

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

OIL 8 QTS.
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**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
<b>2000</b>	<b>2550</b>	---	---	<b>76</b>	<b>10.2</b>	<b>72</b>	<b>9.6</b>
	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
<b>4000</b>	<b>2600</b>	---	---	<b>76</b>	<b>10.2</b>	<b>72</b>	<b>9.6</b>
	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
<b>6000</b>	<b>2650</b>	---	---	<b>76</b>	<b>10.1</b>	<b>72</b>	<b>9.6</b>
	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
<b>8000</b>	<b>2700</b>	---	---	<b>76</b>	<b>10.1</b>	<b>71</b>	<b>9.5</b>
	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
<b>10,000</b>	<b>2700</b>	<b>77</b>	<b>10.2</b>	<b>72</b>	<b>9.6</b>	<b>68</b>	<b>9.1</b>
	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
	2200	47	6.7	45	6.4	42	6.1
<b>12,000</b>	<b>2700</b>	<b>69</b>	<b>9.3</b>	<b>65</b>	<b>8.8</b>	<b>62</b>	<b>8.4</b>
	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
	2200	47	6.7	45	6.4	42	6.1

### **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.