

Air Plains Services Corp.
P.O. Box 541
Wellington Airport
Wellington, Ks. 67152

Section 9
Supplements

FAA Approved
Airplane Flight Manual Supplement

For

Cessna 172N
Serial No. 17271035 and Subsequent
Serial No. ~~17271023~~ Reg No. ~~N4538E~~

This Supplement must be attached to Pilots Operating Handbook and the FAA Approved Airplane Flight Manual when the airplane is modified in accordance with STC SA2196CE which increases max. certificated takeoff weight to 2550lbs. The airplane must previously have been modified with STC SA4428SW. The information contained herein supplements or supersedes the basic Manual only in those areas outlined herein. For limitations, procedures, and performance information not contained in this supplement, consult the Pilots Operating Handbook and the basic Airplane Flight Manual.

1. GENERAL
2. LIMITATIONS
3. EMERGENCY PROCEDURES
4. NORMAL PROCEDURES
5. PERFORMANCE
6. WEIGHT AND BALANCE

FAA Approved *B.L. Sorenson*
Manager, Wichita Aircraft
Certification Office
FAA Central Region,
Wichita, Ks.

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Page 1 Of 10
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Air Plains Services Corp.
P.O.Box 541
Wellington Airport
Wellington, Ks. 67152

Section 9
Supplements

Cessna Model 172N

Log of Revisions

Rev.	Pages Affected	Description	FAA Approved	Date
1	1-10	Added revision page Revised cover sheet Changed page numbers	G. M. Baker	10/02/87
2	3&4 1-8	Added O360A4N Revised Company Name	<i>B.L. Soensen</i>	3/21/90

FAA Approved
Sept. 25, 1987
Page 2 of 10
Rev.2 date 3/21/90

Air Plains Services Corp.
P.O. Box 541
Wellington Airport
Wellington, Ks. 67152

Section 9
Supplements

Cessna Model 172N

SECTION 1. General

The information contained in this Flight Manual Supplement is FAA Approved material, and is applicable to the operation of the airplane in accordance with STC SA2196CE which increases the max. certificated takeoff weight to 2550lbs, when the airplane has previously been modified with STC SA4428SW.

DESCRIPTIVE DATA

PAGE 1-3

ENGINE

Engine Model Number: O-360-A4A, A4M, A4N A2F & 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 2700RPM
Maximum Continuous RPM: 2540 RPM

PAGE 1-5

MAXIMUM CERTIFICATED WEIGHTS

Takeoff, Normal	2550lbs.
Utility	2000lbs.
Landing, Normal	2550lbs.
Utility	2000lbs.

SECTION 2. Limitations

PAGE 2-5 AIRSPEED INDICATOR MARKINGS

Airspeed indicator must be replaced with Cessna P/N C661064-0112 or remarked as follows:

FAA Approved
Sept. 25, 1986
Page 3 of 10
Rev.2 date 3/21/90

Air Plains Services Corp.
P.O. Box 541
Wellington Airport
Wellington, Ks. 67152

Section 9
Supplements

Cessna Model 172N

PAGE 2-5 AIRSPEED INDICATOR MARKINGS,(cont.)

MARKING	KIAS VALUE OR RANGE
White Arc	40-85
Green Arc	50-127
Yellow Arc	127-158
Red Line	158

PAGE 2-4 AIRSPEED LIMITATIONS

VA	Maneuvering Speed:	
	2550 Pounds	105 KIAS
	2150 Pounds	95 KIAS
	1750 Pounds	85 KIAS

PAGE 2-5 POWER PLANT LIMITATIONS

Engine Model Number: O-360-A4A,A4M,A4N A2F & A3A
Maximum Power: 180 BHP rating
Maximum Continuous RPM: 2540 RPM

PAGE 2-6 WEIGHT LIMITS

Maximum Takeoff Weight, Normal	2550lbs.
Utility	2000lbs.
Maximum Landing Weight, Normal	2550lbs.
Utility	2000lbs.

PAGE 2-7 CENTER OF GRAVITY LIMITS

NORMAL CATEGORY

Center of Gravity Range:

Forward: 35.0 inches aft of datum at 1950 lbs. or less, with straight line variation to 41.0 inches aft of datum at 2550 lbs.

Aft: 47.3 inches aft of datum at all weights.

FAA Approved
Sept. 25, 1986
Page 4 of 10
Rev.2 date 3/21/90

Air Plains Services Corp.
P.O. Box 541
Wellington Airport
Wellington, Ks. 67152

Section 9
Supplements

Cessna Model 172N

PAGE 2-7 CENTER OF GRAVITY LIMITS,(cont.)

UTILITY CATEGORY

Center of Gravity Range:

Forward: 35.0 inches aft of datum at 1950lbs. or less,
with straight line variation to 35.5 inches aft of
datum at 2000lbs.

Aft: 40.5 inches aft of datum at all weights.

PAGE 2-8 FLIGHT LOAD FACTORS

NORMAL CATEGORY

Flight Load Factors (Maximum Takeoff Weight - 2550lbs):

Flaps Up.....+3.8g, -1.52g

Flaps Down.....+3.0g

PAGE 2-12 PLACARDS

10. Near airspeed indicator: MANEUVER SPEED - 105 KIAS

SECTION 3. Emergency Procedures

PAGE 3-3 AIRSPEEDS FOR EMERGENCY OPERATION

Engine Failure after Takeoff:

Wing Flaps Up.....70 KIAS

Wing Flaps Down.....65 KIAS

Maneuvering Speed:

2550 lbs.....105 KIAS

2150 lbs.....95 KIAS

1750 lbs.....85 KIAS

Maximum Glide:

2550 lbs.....68 KIAS

2150 lbs.....62 KIAS

1750 lbs.....56 KIAS

Precautionary Landing With Engine Power.....65 KIAS

Landing Without Engine Power:

Wing Flaps Up.....70 KIAS

Wing Flaps Down.....65 KIAS

FAA Approved
Sept. 25, 1986
Page 5 of 10
Rev.2 date 3/21/90

Air Plains Services Corp.
P.O. Box 541
Wellington Airport
Wellington, Ks. 67152

Section 9
Supplements

Cessna Model 172N

PAGE 3-4 ENGINE FAILURES

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

1. Airspeed -- 70 KIAS (flaps UP)
65 KIAS (flaps DOWN)

PAGE 3-4 ENGINE FAILURE DURING FLIGHT

1. Airspeed -- 75 KIAS

PAGE 3-4 FORCED LANDINGS

EMERGENCY LANDING WITHOUT ENGINE POWER

1. Airspeed -- 70 KIAS (flaps UP)
65 KIAS (flaps DOWN)
5. Wing Flaps -- AS REQUIRED (30 deg recommended)

PRECAUTIONARY LANDING WITH ENGINE POWER

2. Airspeed -- 65 KIAS
5. Wing Flaps -- 30 deg (on final approach).
6. Airspeed -- 65 KIAS

PAGE 3-5 DITCHING

4. Wing Flaps -- 20-30 deg.

NOTE

If no power is available, approach at 70 KIAS with flaps up
or at 65 KIAS with 10 deg flaps.

PAGE 3-7 ICING

INADVERTENT ICING ENCOUNTER

11. Approach at 80 to 90 KIAS depending upon the amount of
the accumulation.

FAA Approved
Sept. 25, 1986
Page 6 of 10
Rev.2 date 3/21/90

Air Plains Services Corp.
P.O. Box 541
Wellington Airport
Wellington, Ks. 67152

Section 9
Supplements

Cessna Model 172N

SECTION 4. Normal Procedures

PAGE 4-3 NORMAL PROCEDURES

SPEEDS FOR NORMAL OPERATION

Unless otherwise noted, the following speeds are based on a maximum weight of 2550 pounds and may be used for any lesser weight.

Page 4-3

Takeoff

Normal Climb Out.....	75-85 KIAS
Short Field Takeoff, Flaps 10 deg, Speed at 50 Feet..	57 KIAS
Enroute Climb, Flaps Up:	
Normal, Sea Level.....	75-85 KIAS
Normal, 10,000 Feet.....	70-80 KIAS
Best Rate of Climb, Sea Level.....	73 KIAS
Best Rate of Climb, 10,000 Feet.....	72 KIAS
Best Angle of Climb, Sea Level.....	62 KIAS
Best Angle of Climb, 10,000 Feet.....	67 KIAS
Landing Approach:	
Normal Approach, Flaps Up.....	65-75 KIAS
Normal Approach, Flaps 30 deg.....	60-70 KIAS
Short Field Approach, Flaps 30 deg.....	62 KIAS
Balked Landing:	
Maximum Power, Flaps 20 deg.....	60 KIAS
Maximum Recommended Turbulent Air Penetration Speed:	
2550 Lbs.....	105 KIAS
2150 Lbs.....	95 KIAS
1750 Lbs.....	85 KIAS

PAGE 4-8 SHORT FIELD TAKEOFF

Climb Speed -- 57 KIAS(until all obstacles are cleared).

PAGE 4-8 ENROUTE CLIMB

Airspeed -- 75-85 KIAS

FAA Approved
Sept. 25, 1936
Page 7 of 10
Rev. 2 date 3/21/90

Air Plains Services Corp.
P.O. Box 541
Wellington Airport
Wellington, Ks. 67152

Section 9
Supplements

Cessna Model 172N

PAGE 4-9 LANDING

NORMAL LANDING

1. Airspeed -- 65-75 KIAS (flaps UP)
2. Wing Flaps -- AS DESIRED (0-10 deg below 110 KIAS, 10-30 deg. below 85 KIAS).
3. Airspeed -- 60-70 KIAS (flaps DOWN)

SHORT FIELD LANDING

1. Airspeed -- 65-75 KIAS (flaps UP)
2. Wing Flaps -- FULL DOWN (30deg.)
3. Airspeed -- 62 KIAS (until flare)

BALKED LANDING

5. Wing Flaps -- 10 deg. (until obstacles are cleared)
RETRACT SLOWLY after reaching a safe
altitude and 65 KIAS.

Section 5

PAGE 5-21 LANDING DISTANCE - SHORT FIELD

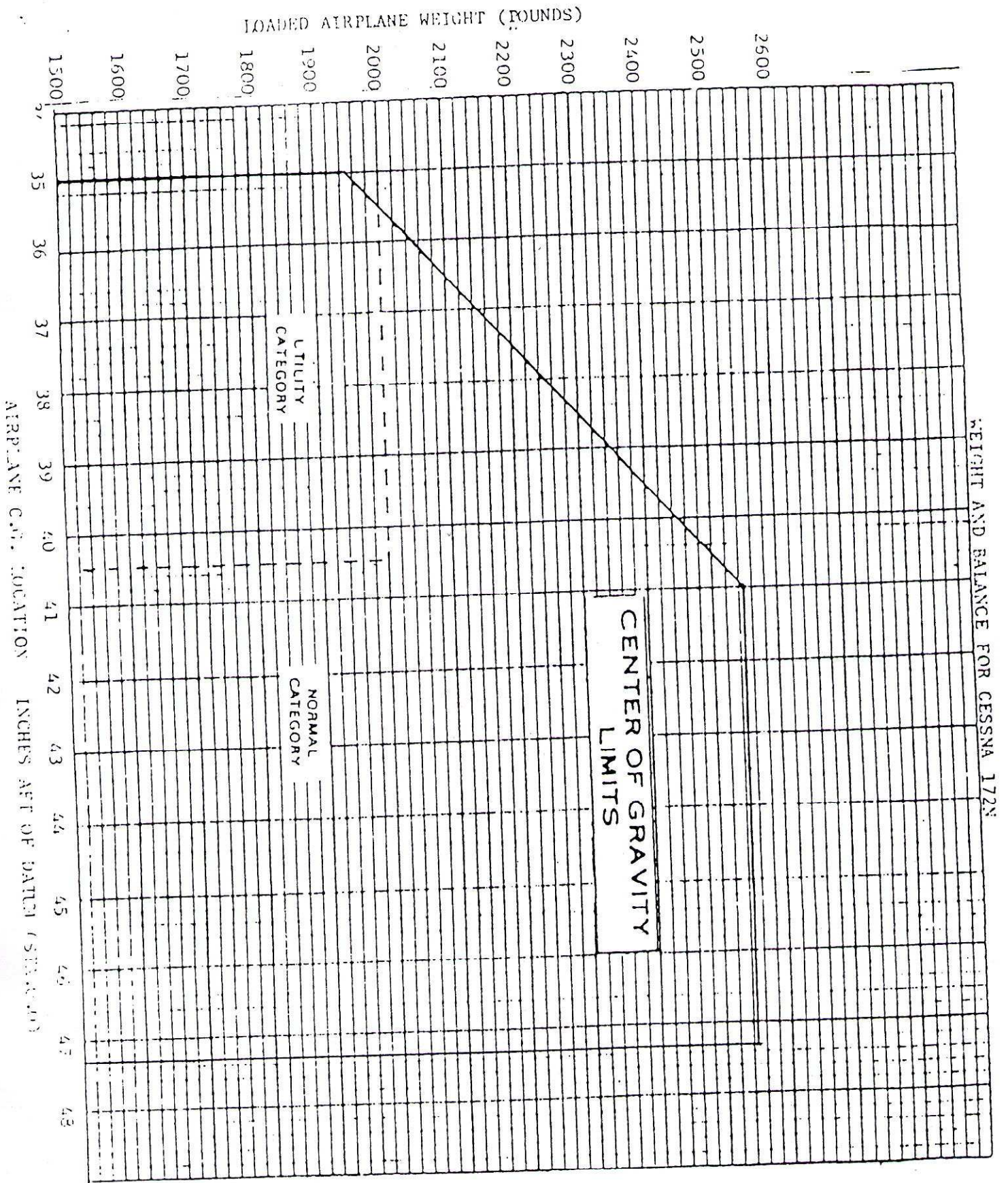
CONDITIONS:

Flaps 30 deg.

NOTES:

4. If a landing with flaps up is necessary, increase approach speed by 9 kias and allow for 35% longer distance.

FAA Approved
Sept. 25, 1986
Page 8 of 10
Rev. 2 date 3/21/90



MIKE KELLEY RCRAFT, INC.
 WEIGHT AND BALANCE FOR CESSNA 172N

