

REVISED: August 19, 1980

DATE: JULY 2, 1980

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Des Plaines, Illinois

F.A.A. APPROVED:

This document must be kept in the airplane at all times. Compliance with the limitations Section of this Flight Manual is required by law.

Registration No. N20055

Serial No. F-1002

Model F21 (Serial Nos. F-1001 and up)
for the
Airplane Flight Manual

TAYLORCRAFT AVIATION CORPORATION
Alliance, Ohio

RECORD OF REVISION

REV. NO.	PAGES AFFECTED	DESCRIPTION	DATE	*APPROVED BY
1	A11 2 3 5 7	All pages re-numbered Added "Record of Revision" page Revised engine fuel and tachometer limits Revised baggage compartment placards Added Airspeed Calibration	8/19/80	<i>J. C. [Signature]</i>

* For Chief of Engineering & Manufacturing Branch, Federal Aviation Administration, Great Lakes Region
NOTE: Revised material indicated by black vertical line.

1. Limitations

The following limitations must be observed in the operation of this airplane.

- A. Engine - Lycoming O-235 L2C
- B. Engine Limits - Maximum continuous, 2600 RPM (112 Hp)
Takeoff (5 min.), 2800 RPM (118 Hp)
- C. Fuel - 100/130 or 100 LL Minimum Grade Aviation Gasoline
- D. Oil - Straight Mineral Oil MIL-L-6082-B or Ashless Dispersant MIL-L-22851
- E. Engine Instrument Markings

- 1. Oil Temperature - Redline (Maximum) 245°F
Green Arc (Normal Operation) 100°F - 245°F
- 2. Oil Pressure - Redline (Maximum) 115 PSI (Minimum) 15 PSI
Green Arc (Normal Operation) 60-90 PSI
- 3. Tachometer - Redline (DO NOT EXCEED) 2800 RPM
Green Arc (Normal Operation) 1950-2600 RPM

F. Airspeed Limits (Calibrated Airspeed)

Normal Category	Utility Category
Never Exceed 136 MPH	141 MPH
Maximum Structural Cruising 108 MPH	104 MPH
Maneuvering 87 MPH	86 MPH

G. Flight Load Factors

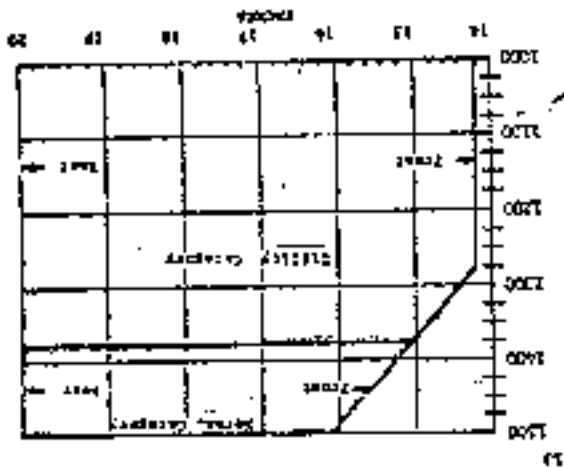
Normal Category	Utility Category
Maximum Positive 3.8	4.4
Maximum Negative -1.52	-1.76
Maximum Weight 1500#	1380#

H. Propellers - Fixed Pitch Metal - Sensenich
Model 72CK-0-50

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- J. C. G. Range - Normal: (+16.1) to (+20.0) at 1500 lbs.
(+14.2) to (+20.0) at 1280 lbs. or less
- Utility: (+15.1) to (+20.0) at 1380 lbs.
(+14.2) to (+20.0) at 1280 lbs. or less
- STRAIGHT LINE VARIATION BETWEEN POINTS GIVEN

C. G. POSITION



1. Datum: Located at leading edge of wing
2. Maximum baggage - 72 lbs. plus a maximum of 10 lbs. in the baggage cylinder.

NOTE: It is the responsibility of the pilot to insure that the airplane is properly loaded (see Weight and Balance Section, Appendix A).

K. Placards - The following placards must be displayed:

1. On the instrument panel in full view of the pilot:

- a. "Operate in normal or utility category in compliance with the Approved Flight Manual."
- "Airplane marked for normal category only."
- "Acrobatics (including spins) prohibited in normal category."
- "VFR Day only." or "VFR Day/Night only" (when approved night flights are installed)
- "No smoking."

- b. "Refill main tank in level flight and only when main tank is less than half full."

- c. Above fuel shut-off valve: "Main tank usable fuel 9 gallons."
 - d. Above each transfer valve: "Auxiliary wing tank usable fuel 6 gallons."
 - e. "Turn off anti-collision light in visible moisture conditions." (When anti-collision light is installed.)
2. Baggage
 - a. On baggage compartment, "Baggage not to exceed 72 lbs."
 - b. On cover of baggage compartment extension cylinder, "Baggage not to exceed 10 lbs."

L. Fuel Systems

1. Fuel to engine feeds from main tank only.
2. Fuel quantity gauge indicates contents of fuselage tank only.
3. The fuel remaining in the tank when the quantity indicator reads "zero" cannot be safely used in flight.

M. Maneuvers

1. Normal Category - No acrobatic maneuvers (including spins) approved.
2. Utility Category - Acrobatic maneuvers are limited to the following, with entry speeds as shown:

- a. Chandelles - 90-100 MPH
- b. Lazy Eights - 90-100 MPH
- c. Steep Turns - 90-100 MPH
- d. Stalls - Power Off (Trim Full Up) 41-46 MPH
Power On (Trim 60 MPH) 38-45 MPH
- e. Spins - Power Off 41-46 MPH
- f. No inverted maneuvers approved.

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N. Airspeed Instrument markings and their significance
(Calibrated Airspeeds)

1. Red Radial Line marks the NEVER EXCEED SPEED which is the maximum safe airspeed - 136 MPH
2. Yellow Arc on indicator denotes range of speed which should be conducted with caution and only in smooth air - 108-136 MPH
3. Green Arc denotes normal operating speed range - 45-108 MPH

II. Procedures

A. Except as noted above, all operating procedures for this airplane are conventional.

B. Operation of fuel system

Fuel to the engine feeds from the main tank only, and wing tank fuel must be transferred to the main tank.

The main fuel tank has a total capacity of 12 gallons, however, only 9 gallons can be safely used in flight.

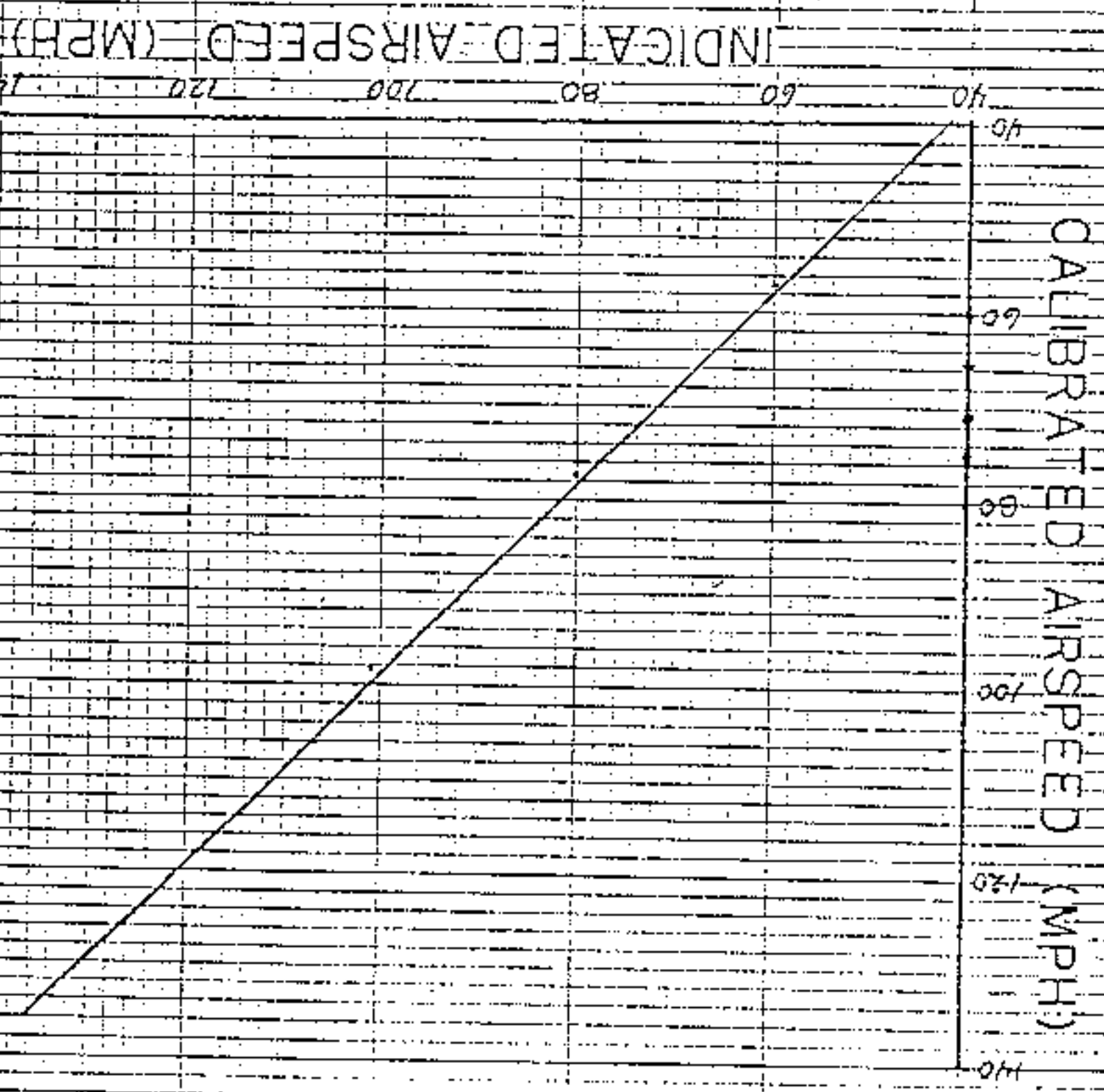
The two auxiliary wing tanks hold a total of 12 gallons usable fuel (6 gallons in each tank). This fuel will transfer completely to the main tank only during level flight. Care must be exercised while transferring wing fuel to avoid overfilling the main tank. It is recommended that wing fuel be transferred one tank at a time, and only, after the main tank has been emptied sufficiently to accept 6 gallons of fuel.

CAUTION

Before refueling the wing tanks, their selection valves must be "OFF." This will preclude the possibility of overfilling the main tank and forcing fuel out through the fuselage tank filler cap.

III. Performance

- V_x
- A. Best R/C speed 75 MPH. (Calibrated Air Speed) with 72CK-0-50 Prop.
- B. Best A/C speed 65 MPH. (Calibrated Air Speed) with 72CK-0-50 Prop.



AIRSPEED SYSTEM CALIBRATION