

Page 1 of 9
Rev. (see rev. page)

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SUPPLEMENTAL AIRPLANE FLIGHT MANUAL FOR CESSNA 180J & 180K SERIES FLOATPLANES

Equipped With AEROCET 3500 or 3500L Seaplane Floats

Registration No	
Serial No.	

The information contained in this document is FAA approved material which must be applied together with the basic FAA approved airplane placards and markings and/or FAA approved Airplane Flight Manual. This supplemental manual must be carried in the airplane when it is modified by the installation of the Aerocet Model 3500 or 3500L seaplane floats in accordance with Supplemental Type Certificate (STC) No. \$A00137\$E. The information contained in this document supersedes the basic airplane markings and placards and/or Flight Manual covered in the items contained herein. For Limitations, Procedures, and Performance information not contained in this supplement, consult the basic airplane markings and placards, and/or Flight Manual.

FAA Approved:

Manager, Special Certification Branch Seattle Aircraft Certification Office

Date: Oet 31, 1994



Document A-10020 Page 2 of 9 Rev. (see rev. page)

LOG OF REVISIONS PAGE

REV.	PAGES AFFECT.	DESCRIPTION	FAA APPROVED
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Document A-10020 Page 3 of 9 Rev. (see rev. page)

SECTION 1. GENERAL

This supplemental manual, applicable to those Cessna Model 180J & 180K Series airplanes itions to gs refore, ıly.

not included in the basic FA Whenever the words "Not indicate that the related inf and placards, and/or Flight	AA approved mark Applicable" (NA) a ormation may not Manual are not re	L Seaplane Floats, provides information and limita kings and placards, and/or Airplane Flight Manual. appear in this supplemental manual, they are used be the same as that shown in the Cessna markin equired by the airplane certification basis and, ther be operated under the "NORMAL CATEGORY" on
	PERFORMAN	ICE - SPECIFICATIONS
SPEED: NA		
CRUISE: NA		
RATE OF CLIMB AT S	EA LEVEL: NA	ı
SERVICE CEILING: NA	4	
TAKEOFF PERFORMAI		
LANDING PERFORMAI		
STALL SPEED (POWER	•	•
FLAPS UP:		64 MPH CAS
FLAPS DOWN:	51 KCAS	59 MPH CAS
MAXIMUM WEIGHT:		0050 1 00
RAMP (DOCK):	NIDINIC:	2950 LBS.
TAKE-OFF & LA		2950 LBS. & BALANCE FORM FOR AIRCRAFT
		TUAL WT. & BALANCE FORM FOR A/C
BAGGAGE ALLOWANG		TOAL WI. & BALANCE FORM FOR A/C
IN AIRPLANE:	JL.	NO CHANGE
IN EACH FLOAT	-	100 LBS.
		GE IS PROPER WHEN LOADING)
WING LOADING:	NA NA	
POWER LOADING:	NA	
RANGE: NA		
FUEL CAPACITY:	NO CHANG	iE
OIL CAPACITY:	NO CHANG	iE
ENGINE:	NO CHANG	iE
PROPELLER:	NO CHANG	iE

FAA APPROVED	DATE:	



Document A-10020 Page 4 of 9 Rev. (see rev. page)

SECTION 2. LIMITATIONS

CENTER OF GRAVITY LIMITS:

Center of Gravity Range: (inches aft of reference datum)

(+38.8) to (+43.9) at 2950 lbs. Max. G.W.

(+36.0) to (+43.9) at 2400 lbs. or less with a straight line variation between

points given.

WEIGHT LIMITS:

Maximum Ramp (Dock) Weight:	2950 lbs.
Maximum Takeoff Weight:	2950 lbs.
Maximum Landing Weight:	2950 lbs.
Maximum Weight in Baggage Compartment:	NO CHANGE
Maximum Weight in Float Baggage Compartment	100 lbs. each.

AIRSPEED LIMITS:

	CAS (KTS)	CAS (MPH)
Never Exceed Speed (Vne)	NO CHANGE	NO CHANGE
Max. Structural Cruising (Vno)	NO CHANGE	NO CHANGE
Max. Maneuvering speed (Va)	NO CHANGE	NO CHANGE
Max. Speed with Flaps (Vfe)	NO CHANGE	NO CHANGE

AIR SPEED INDICATOR MARKINGS:

The airspeed indicator shall be marked with a radial redline at 192 MPH for S/N 18052285 thru 18052620. 194 MPH for S/N 18052621 and on.

If the radial line is on the indicator glass, the glass and bezel should also have a white slippage mark.

Apart from the redline mark, the airspeed indicator markings are the same as shown in the basic markings/Flight manual. Due to differences in airspeed calibration and speeds with floats installed, the indicated stall speeds and maximum structural cruising speed vary slightly from airspeed indicator markings.

FAA APPROVED	DATE:	



Document A-10020 Page 5 of 9 Rev. (see rev. page)

PLACARDS:

Aerocet P/N 35-70006 Placard is located on after part of console near water rudder handle in the "RETRACT" position:

"WATER RUDDER **ALWAYS UP EXCEPT** WATER TAXIING"

Aerocet P/N 35-70009 Placard is installed on left side of cabin in full view of the pilot:

"FLOATPLANE WITH **AEROCET 3500 FLOATS**

NEVER EXCEED SPEED:

167 KNTS. (192 MPH) (IAS)

MAX. MANEUVERING SPEED: 108 KNTS. (124 MPH) (IAS)

MAX. GROSS WEIGHT:

2950 LBS.

CG RANGE

(+38.8) TO (+43.9) AT 2950 LBS. MAX. GROSS WT.

(+36.0) TO (+43.9) AT 2400 LBS. OR LESS WITH A STRAIGHT

LINE VARIATION BETWEEN POINTS GIVEN FOR WT. & BAL.

SEE LOADING SCHEDULE."

SECTION 3. EMERGENCY PROCEDURES:

Emergency procedures in the FAA approved airplane placards and /or Flight Manual generally apply except for airspeeds which may be different. Emergency landings on water should be done with water rudders up, aircraft slightly tail low on touchdown, and control wheel held full aft as the floatplane decelerates on the water. Emergency landings on land should be done with water rudders up, aircraft in a level attitude on touchdown, and the control wheel full aft after contact. If damage occurs to the floats causing compartments to flood, aggressively shift the weight (people & baggage) in the opposite direction of damage in order to balance the aircraft over the buoyant compartments.

SECTION 4. NORMAL PROCEDURES: (NOTE: THESE ITEMS SUPPLEMENT THE CESSNA NORMAL PROCEDURES- BE SURE AND FOLLOW THE CESSNA PROCEDURES EXCEPT AS **NOTED BELOW)**

Before Entering the Floatplane.

1. Inspect the floats and attachment for dents, cracks, punctures, etc.

FΔ	Δ	APPROV	/FD	DATE



Page 6 of 9 Rev. (see rev. page)

- 2. Remove rubber plugs (which serve as stoppers on the standpipe in each float compartment) and pump out any accumulation of water. Reinstall rubber stoppers with enough pressure for a snug fit. (If there is an excess of water, investigate the leakage)
 - 3. When checking engine oil level, use the side of the dipstick having two "X" marks. The lower mark indicates nine quarts and the upper mark indicates twelve quarts.

Before Starting Engine.

- 1. Water Rudder Operation "CHECK VISUALLY"
- 2. Water Rudders "DOWN FOR TAXIING"
- 3. Water Rudders "CHECK FREEDOM OF MOVEMENT & SECURITY

Takeoff

- 1. Water Rudders "UP" (retraction handle aft)
- 2. Wing Flaps "20 DEGREES" (second notch)
- 3. Control Wheel "HOLD FAR AFT INITIALLY"
- 4. Power "FULL THROTTLE & MAX RPM (advance slowly)
- 5. Control Wheel "MOVE FORWARD TO ATTAIN PLANING ATTITUDE"
- 6. Control Wheel "APPLY LIGHT BACK PRESSURE TO LIFT OFF"
- 7. Wing Flaps "UP AFTER OBSTACLES ARE CLEARED"

Before Landing

- 1. Water Rudders "UP"
- 2. Wing Flaps "DOWN"

Landing

- 1. Touchdown "SLIGHTLY TAIL LOW"
- 2. Control Wheel "HOLD FULL AFT THROUGH DECELERATION"

FAA	APPR	OVED	DATE:	



Document A-10020 Page 7 of 9 Rev. (see rev. page)

<u>Balked Landing</u> - "RETRACT FLAPS TO 20 DEG. IMMEDIATELY AFTER APPLYING FULL POWER FOR GO-AROUND"

After Landing - "WATER RUDDERS DOWN"

<u>Securing Aircraft</u> - "FUEL SELECTOR TO RIGHT OR LEFT TANK POSITION TO PREVENT CROSSFEEDING"

SECTION 5. PERFORMANCE:

Airspeed Calibration - Essentially unchanged

STALL SPEEDS:

POWER OFF, FORWARD CG, 2820 LBS

FLAPS UP:

56 KCAS

64 MPH CAS

FLAPS DOWN:

51 KCAS

59 MPH CAS

NOTE: ALTITUDE LOSS DURING STALL RECOVERY MAY BE AS MUCH AS 200 FEET.

SECTION 6. WEIGHT AND BALANCE:

The airplane equipped with Aerocet 3500 or 3500L Floats must be loaded in accordance with the limitations in Section 2. These are shown as an aircraft weight/moment envelope or an aircraft weight versus c.g. location chart on page 9.

Note: It is the responsibility of the airplane owner and pilot to insure that the airplane is loaded properly.

SECTION 7. AIRPLANE AND SYSTEMS DESCRIPTIONS:

In addition to the Aerocet 3500 Float installation the aircraft must incorporate the Cessna approved seaplane kit. As a result of these installations, the floatplane is identical to the landplane with the following exceptions:

AEROCET MODIFICATIONS: Floats, incorporating a water rudder steering system, replace the landing gear. A water rudder retraction lever, connected to the water rudders by cables, is located on the cabin floor tunnel.

CESSNA MODIFICATIONS:

- 1. An additional structural "V" brace is installed between the top of the front door posts and the cowl deck.
- 2. Additional fuselage structure is added to support the float installation.



Page 8 of 9 Rev. (see rev. page)

	A DDDOVED	DATE
FAA.	APPROVED	DATE:

3. A centering spring assembly and cables are added to the rudder control system to improve stability in flight.

NOTE

If the floatplane is returned to the landplane configuration, these items need not be removed.

- 4. The floatplane has additional corrosion proofing and stainless steel cables.
- 5. Hoisting provisions are added to the top of the fuselage.
- 6. The left-hand cabin door is equipped with removable hinge pins for ease of door removal when loading large cargo.
- 7. Fueling steps and assist handles are mounted on the forward fuselage, and steps are mounted on the wing struts to aid in refueling the floatplane. Inboard fuel fillers are added when long range fuel tanks are installed.

NOTE

A reduction of approximately five gallons of usable fuel in each tank will result if inboard fillers are used to fill the long range fuel tanks.

8. Floatplane placards are added.

NOTE: Refer to the appropriate Cessna Pilots Operating Handbook for other seaplane changes which apply to individual 180 models.

SECTION 8. AIRPLANE HANDLING, SERVICE, AND MAINTENANCE

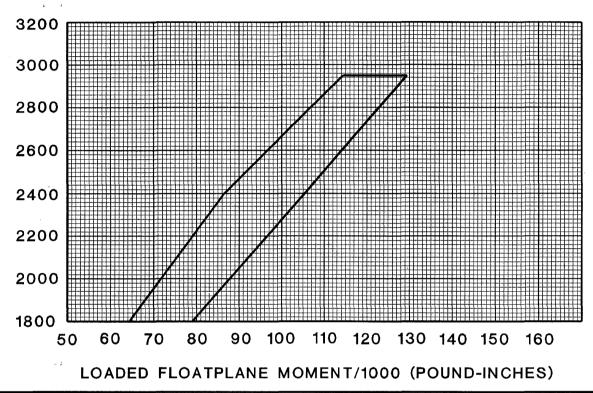
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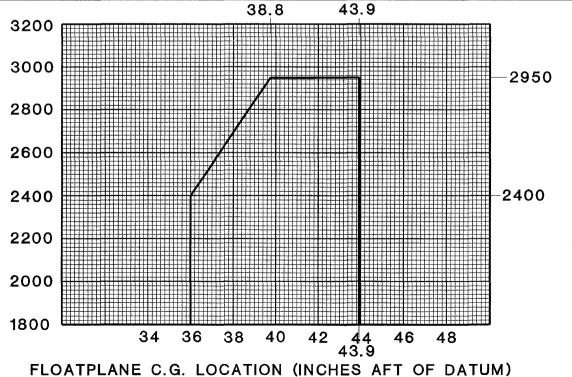
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Document A-10020 Page 9 of 9 Rev. (see rev. page)

38.8 to 43.9 at 2950 lbs 36.0 to 43.9 at 2400 lbs





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