Transport Canada Approved Flight Manual Supplement
For

AEROCET MODEL 3500 FLOATS

This supplemental manual is applicable to Aerocet Model 3500 float equipped FBA-2C2 airplanes or Aerocet Model 3500 float equipped FBA-2C1 airplanes with Mod 1043 installed. Mod 1043 replaces the plain flap system on the model FBA-2C1 airplane with a slotted Fowler-type flap system (commonly referred to as "Fowler Flaps"). Therefore where 2C2 is used in this manual it is acceptable to read 2C1 with Mod 1043 installed.

This Supplement must be attached to the Transport Canada Approved Airplane Flight Manual when the airplane is modified by the installation of Aerocet Model 3500 seaplane floats in accordance with Found Aircraft Canada drawing D237 Issue 2 or later approved revision.

The information contained herein supplements or supersedes the basic flight manual, airplane markings and/or placards only in those areas listed herein.

For Limitations, Procedures, and Performance information not contained in this Supplement, consult the airplane markings and placards and/or basic Airplane Flight Manual, (P/N: FAC2-M400).

Approved: 

Date: 19 DEC 2003

P/N M400-S02

LOG OF REVISIONS

Rev. No.	Approved	
	Date	Name
(Original)	DEC. 19, 2003	19 DEC 2003

LIST OF EFFECTIVE PAGES

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GENERAL

INTRODUCTION

This supplemental manual is applicable to Aerocet Model 3500 float equipped FBA-2C2 airplanes or Aerocet Model 3500 float equipped FBA-2C1 airplanes with Mod 1043 installed. Mod 1043 replaces the plain flap system on the model FBA-2C1 airplane with a slotted Fowler-type flap system (commonly referred to as "Fowler Flaps"). Therefore where 2C2 is used in this manual it is acceptable to read 2C1 with Mod 1043 installed.

This supplement provides information and limitations not included in the Transport Canada approved markings and placards, and/or Airplane Flight Manual (P/N: FAC2-M400).

The aircraft is to be operated under the "NORMAL CATEGORY" only.

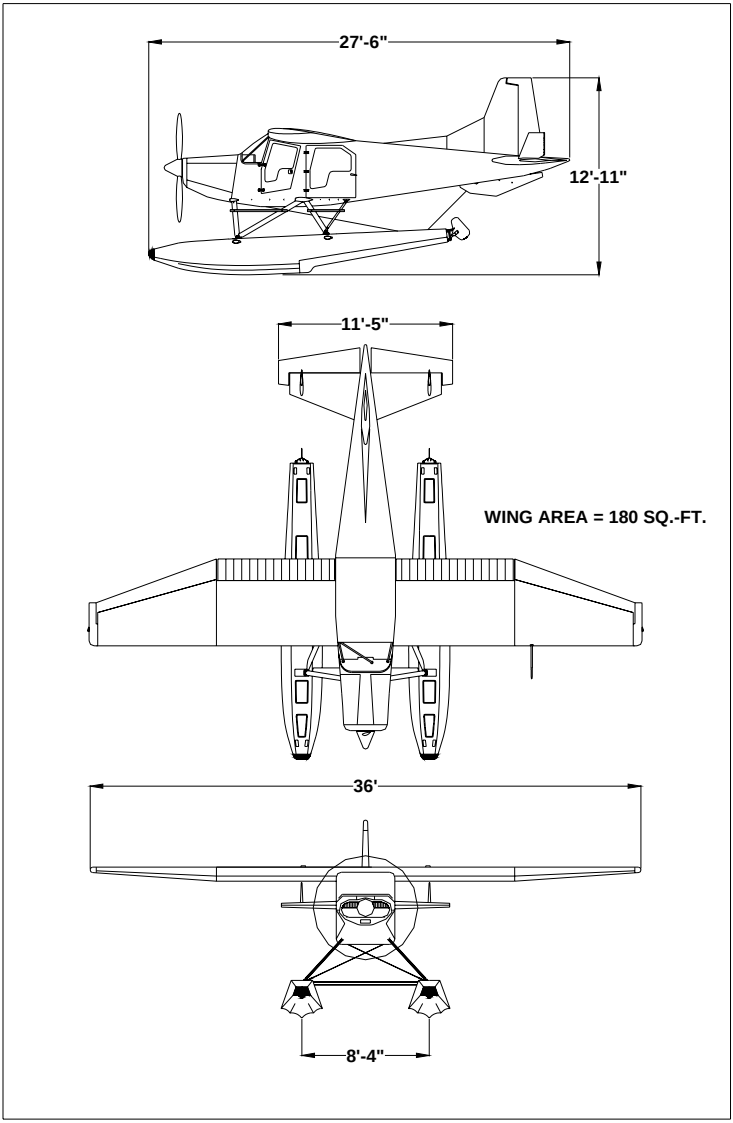


Figure 1 Three View - Normal Ground Attitude

DESCRIPTIVE DATA

MAXIMUM CERTIFICATED WEIGHTS

Maximum Operational Weight:

Takeoff:	3600 lbs
Landing:	3600 lbs

STANDARD AIRPLANE WEIGHTS

Standard Empty Weight:	2300 lbs *
Maximum Useful Load:	1300 lbs *

* the above weights may vary depending on configuration.

SPECIFIC LOADINGS

Wing Loading:	20.0 lbs/sq.ft.
Power Loading:	12.0 lbs/hp

SECTION 2
LIMITATIONS

INTRODUCTION

The FBA-2C2 Bush Hawk-XP Aerocet floatplane must be operated in accordance with the limitations contained in this section. These include operating limitations, instrument markings, colour coding and basic placards, powerplant, systems and equipment limitations. The limitations shown in this section apply only to operations of the FBA-2C2 Bush Hawk-XP equipped with Aerocet Model 3500 seaplane floats.

AIRSPEED LIMITATIONS

Airspeed limitations changes due to floats installation and their operational significance are shown below:

	SPEED	KCAS	KIAS	REMARKS
V_A	Maneuvering Speed	115	117	Do not make full or abrupt control movements above this speed.

Figure 2 Airspeed Limitations

NOTE

Since the operating speeds for the float installation are within 3 knots of those for the standard wheel installation, no changes to the airspeed indicator markings have been made.

WEIGHT LIMITS

Maximum Takeoff Weight:	3600 lbs.
Maximum Landing Weight:	3600 lbs.
Maximum Weight in Baggage Compartment	250 lbs. (Arm = 94")
Maximum Weight in Float Baggage Compartments	100 lbs. each (Arm = 10")

CENTER-OF-GRAVITY LIMITS

Center-of-Gravity Range:	
Forward:	17.0 inches aft of datum at 2750 lbs or less. 20.5 inches aft of datum at 3600 lbs max. GW with linear variation with weight in between.
Aft:	23.5 inches aft of datum at all weights.
Reference Datum:	Lower forward corner of the front door

OTHER LIMITATIONS

FLAP LIMITATIONS

Approved Takeoff Range: ..... 0^o to 20^o
Approved Landing Range: ..... 0^o to 30^o

WATER RUDDER LIMITATIONS

Water rudders must be retracted for all flight operations.

PLACARDS

The following information is displayed in the form of composite or individual placards.

1. Above the airspeed indicator:

MANEUVER SPEED = 117 KIAS

2. The following placard is located on the centre instrument panel below the throttle control

FLOAT EQUIPPED AIRCRAFT WATER RUDDER ALWAYS UP EXCEPT WHEN TAXIING

3. For aircraft equipped with AEROCET MODEL 3500 floats, the following placard must be located on the centre instrument panel below the throttle control.

FOR AIRCRAFT EQUIPPED WITH AEROCET 3500 FLOATS, MAX GROSS = 3600 LBS REFER TO FMS SUPPLEMENT M400-S02

SECTION 3
EMERGENCY PROCEDURES

NOTE

These items supplement the FBA-2C2 emergency procedures. Be sure to follow the FBA-2C2 procedures in Flight Manual P/N FAC2-M400 except as noted below.

INTRODUCTION

This section provides the operational checklists that are specific to FBA-2C2 airplanes equipped with Aerocet Model 3500 seaplane floats in abnormal circumstances and emergencies that may occur on the water or during flight. Only the sections that are affected by the Aerocet floats are included in this supplement.

Emergency landings on water should be done with water rudders up, aircraft should be established in a normal water landing attitude with the tail slightly low. On touchdown on the water, gently pull the elevator back to the full up position allowing the floatplane to come off the step and decelerate. If damage occurs to the floats causing compartments to flood, open doors, get life vest on, and taxi aircraft to shallow water as quickly as possible. Emergency landings on land should be done with water rudders up, aircraft in a normal landing attitude on touchdown, and the control wheel full aft after contact.

AIRSPEEDS FOR EMERGENCY OPERATION

Engine Failure after Takeoff
- Flaps - Up ..... 80 KIAS
- Flaps - 20^{o} ..... 70 KIAS

Maneuvering Speed ..... 117 KIAS
Maximum Glide (Flaps - Up) ..... 73 KIAS
Precautionary Landing with Engine Power
- Flaps - Up ..... 80 KIAS
- Flaps - 10^{o} ..... 75 KIAS
- Flaps - 30^{o} ..... 70 KIAS

Landing without Engine Power
- Flaps - Up ..... 80 KIAS
- Flaps - 30^{o} ..... 70 KIAS

EMERGENCY PROCEDURES CHECKLISTS

ENGINE FAILURES

ENGINE FAILURE DURING TAKEOFF RUN

1. Throttle ..... IDLE
2. Control Wheel..... FULL AFT.
3. Flaps ..... RETRACT
4. Mixture ..... IDLE CUT-OFF
5. Ignition Switch ..... OFF
6. Master Switch..... OFF
7. Alternator Switch..... OFF

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

Straight ahead turning only to avoid obstacles

1. Airspeed..... 80 KIAS (Flaps - Up)
   70 KIAS (Flaps - 20^{o})

If time permits:

2. Mixture ..... IDLE CUT-OFF
3. Fuel Shutoff Valve..... OFF
4. Ignition Switch ..... OFF
5. Master Switch..... OFF
6. Alternator Switch..... OFF
7. Flaps ..... AS REQUIRED

FORCED LANDINGS

EMERGENCY LANDING ON WATER WITHOUT ENGINE POWER

1. Seats ..... SECURE
2. Seat belts ..... FASTENED
3. Loose Articles ..... SECURE
4. Airspeed ..... 80 KIAS (Flaps UP)
   70 KIAS (Flaps 30°)

   Before touchdown:
5. Doors ..... UNLATCH PRIOR TO TOUCHDOWN
6. Mixture ..... IDLE CUT-OFF
7. Auxiliary Fuel Pump Switch ..... OFF
8. Fuel Shutoff Valve ..... OFF
9. Ignition Switch ..... OFF
10. Water Rudders ..... UP
11. Master Switch ..... OFF
12. Alternator Switch ..... OFF
13. Touchdown ..... SLIGHTLY TAIL LOW
14. Control Wheel ..... HOLD FULL AFT

PRECAUTIONARY LANDING WITH ENGINE POWER

1. Seats ..... SECURE
2. Seat Belts ..... FASTENED
3. Loose Articles ..... SECURE
4. Airspeed ..... 80 KIAS Minimum
5. Flaps ..... UP
6. Selected Field ..... FLY OVER

   Note terrain and obstructions.
7. Radio and Electrical Switches ..... OFF
8. Flaps ..... 10~20°
   (or 30° for steep approach)
9. Water Rudders ..... UP
10. Airspeed ..... 75 KIAS (Flaps 10°)
    ..... 70 KIAS (Flaps 30°)
11. Propeller ..... HIGH RPM
12. Doors ..... UNLATCH PRIOR TO TOUCHDOWN

    After touchdown:
13. Ignition Switch ..... OFF
14. Master Switch ..... OFF
15. Alternator Switch ..... OFF

SECTION 4
NORMAL PROCEDURES

NOTE

These items supplement the FBA-2C2 normal procedures. Be sure to follow the FBA-2C2 procedures in Flight Manual P/N FAC2-M400 except as noted below.

AIRSPEEDS FOR NORMAL OPERATION

Unless otherwise noted, the following airspeeds are based on a maximum weight of 3600 lb. and may be used at a lesser weight.

CONDITION	KIAS
TAKEOFF	
Normal Climb Out	75~85
Short Field Takeoff – Flaps 20 deg, Speed at 50 feet	65
ENROUTE CLIMB, FLAPS UP	
Normal – Sea Level	75-85
Best Rate-of-Climb - Sea Level	78
Best Rate-of-Climb - 10,000 feet	70
Best Angle of Climb - Sea Level	66
Best Angle of Climb – 10,000 feet	66
LANDING APPROACH	
Normal Approach - Flaps Up	80-90
Normal Approach – Flaps 30 deg	70-80
Short Field Approach – Flaps 30 deg	70
BALKED LANDING	
Maximum Power – Flaps 30 deg	80
MAXIMUM RECOMMENDED TURBULENT AIR PENETRATION SPEED	117
MAXIMUM DEMONSTRATED CROSSWIND VELOCITY	
Takeoff or Landing	15

NORMAL PROCEDURES CHECKLISTS

PREFLIGHT INSPECTION

1. Floatplane Approved Flight Manual Supplement with Airplane Flight Manual should be available in the airplane.
2. Floats, Struts, and Float Fairings – INSPECT for dents, cracks, etc.
3. Float Compartments – INSPECT for water accumulation.
4. Water Rudders - CHECK actuation cables.
5. Pump out each float compartment. Ensure the rubber stoppers are replaced after pumping and they are seated with a snug fit. Inspect the floats for leaks if there appears to be an excess amount of water in any of the compartments.

PRIOR TO ENGINE START

1. Water Rudder Operation – CHECK VISUALLY (lower rudders)
2. Water Rudders – DOWN for taxiing on water (retraction lever full forward).

TAKEOFF

NORMAL TAKEOFF

1. Doors ..... CLOSED, UNLOCKED
2. Water Rudders ..... UP (retraction lever full aft)
3. Flaps ..... 10~20° (20°recommended)
4. Pitch Trim ..... SET to NEUTRAL
5. Mixture ..... RICH
6. Control Wheel ..... HOLD FULL AFT
7. Power ..... FULL THROTTLE at 2700 RPM
8. Propeller ..... 2700 RPM
9. Mixture ..... RICH
10. Control Wheel ..... MOVE FORWARD

when nose stops rising to attain planning attitude (on the step). APPLY LIGHT BACK PRESSURE to lift off at airspeed of 57~60 KIAS.

11. Flaps ..... UP at Safe Speed and Altitude
12. Climb Speed ..... 75~85 KIAS.
    (66 KIAS when obstacles ahead)

NOTE

To reduce takeoff water run, the technique of raising one float out of the water may be used.

NOTE

If the flap indicator is non-functional, for example, flap indicator reads zero when flaps are deployed, use flaps up for all takeoffs.

ENROUTE CLIMB

1. Airspeed ..... 75-85 KIAS
2. Mixture ..... RICH
   (Above 3000ft, LEAN as required)
3. Power ..... FULL THROTTLE AT 2600 RPM
4. Auxiliary Fuel Pump Switch ... OFF

BEFORE LANDING

1. Water Rudders..... UP (retraction lever full aft)
2. Flaps..... AS DESIRED
   (30 deg for short approach)
3. Doors..... CLOSED, UNLOCKED
4. Airspeed (Flaps Up)..... 80-90 KIAS @ 3600 lb
   Airspeed (Full Flap)..... 70-80 KIAS @ 3600 lb
   (Reduce 1 knot for each 80 lb below 3600 lb)

LANDING

NORMAL LANDING

1. Touchdown..... SLIGHTLY TAIL LOW
   (Normal float landing attitude)
2. Control Wheel..... HOLD FULL AFT
   THROUGH DECELERATION

NOTE

With forward loading, a slight nose-down pitch may occur if the elevator is not held full up as floatplane comes down off step.

BALKED LANDING

1. Throttle..... FULL OPEN and 2700 RPM
2. Flaps..... 20^{o}
2. Climb Speed..... 80 KIAS
3. Flaps..... SLOWLY RETRACT to FLAPS UP

AFTER LANDING

1. Water Rudders.....DOWN

SECURING AIRPLANE

1. Fuel Selector Valve.....OFF

AMPLIFIED NORMAL PROCEDURES

TAXIING

The water rudders should be in down position when taxiing. Engine speeds lower than 800 rpm should be used for normal taxi. Taxiing with higher RPM may result in engine overheating and the taxiing speed will not be appreciably increased. Also, higher taxiing speeds may cause excess water spray striking higher on the propeller and makes for more propeller tip erosion.

During all low speed taxi operations, the elevator should be positioned to keep the bows of the floats out of the water as far as possible. Normally, this requires holding the elevator control full aft except when taxiing downwind in high wind conditions. For minimum taxi speed in close quarters, use idle RPM and a single magneto. This procedure is recommended for short periods of time only.

Although taxiing is very simple with the water rudders, it is sometimes necessary to sail the floatplane under high wind condition. In addition to the normal flight controls, the wing flaps, ailerons and cabin doors will aid in sailing. Water rudders should be retracted during sailing.

To taxi great distances, it may be advisable to taxi on the step with the water rudders retracted. Turns on the step from an upwind heading may be made with safety providing they are not too sharp and if ailerons are used to counteract any overturning / rolling tendency.

CROSSWIND OPERATIONS

In most floatplane operating areas, crosswind operating conditions are limited - either the water channel is narrow and the body of water is not greatly stirred up by winds or the body of water is large enough to allow pilots to minimize the crosswind and accept greater wave action. In higher winds where waves have been stirred up, spray may be developed during the early part of the takeoff run which is aggravated under increasing crosswinds. To minimize the adverse impact of spray on visibility and in extreme cases on engine operation, takeoffs should be made as nearly into the wind as possible.

TAKEOFF

Start the takeoff by applying full throttle smoothly while holding the control wheel full aft. When the nose stops rising, move the control wheel forward slowly to place the floats on the step. Slow control movement and light control pressures produce the best results. Attempts to force the floatplane into the planing attitude will generally result in loss of speed and delay in getting on the step. The floatplane will assume a planing attitude which permits acceleration to takeoff speed, at which time the floatplane will fly off smoothly.

Takeoff flap between 10^{o}~20^{o} can be used and 20^{o} is recommended throughout the takeoff run. When the airplane reaches a safe altitude and airspeed, retract the wing flaps slowly especially when flying over glassy water because a loss of altitude cannot be easily defined due to the loss of reference over glassy water.

If porpoising is encountered while on the step, apply additional control wheel backpressure to correct the excessive nose-low attitude. If this does not correct the porpoising, immediately reduce power to idle and allow the floatplane to slow to taxi speed, at which time the takeoff can again be initiated.

To clear an obstacle after takeoff with 20 degrees wing flap, use an obstacle clearance speed of 65 KIAS for maximum performance. Under some adverse combinations of higher takeoff weight, pressure altitude, and high air temperature or operation on glassy water, the airplane may require significantly longer takeoff distances to accelerate to the lift-off speed and extra takeoff distance should be allowed for these conditions.

If lift-off is difficult due to high lake elevation or glassy water, the following procedure is recommended. With the floatplane in the planing attitude, apply full aileron as required to raise one float out of the water. When one float leaves the water, apply slight elevator backpressure to complete the takeoff. Care must be taken to stop the rising wing as soon as the float is clear of the water, and in crosswinds, raise only the downwind wing. With one float out of the water, the floatplane accelerates to takeoff speed much more rapidly.

For a crosswind takeoff, start the takeoff with wing flaps up, ailerons deflected partially into the wind and water rudders extended for better directional control. Flaps should be extended to 20 degree and the water rudders retracted when the floatplane is on the step. The remainder of the takeoff is normal. If the floats are lifted from the water one at a time, the downwind float should be lifted first.

NORMAL LANDING

Normal landings can be made power on or power off using approach speeds of 80~90 KIAS with flaps up and 70~80 KIAS with flaps down. For a restricted landing area, use an approach speed of 70 KIAS with flaps 30 degrees.

GLASSY WATER LANDING

With glassy water conditions, flaps should be extended to 20 degrees and enough power used to maintain a low rate of descent (approximately 200 feet per minute). The floatplane should be flown onto the water in a slightly nose up normal landing attitude at this sink rate with no flare attempted since height above glassy water is nearly impossible to judge. Power should be reduced to idle and control wheel backpressure increased upon contacting the surface. As the floatplane decelerates off the step, apply full backpressure on the control wheel. If this glassy water technique is used in conjunction with an obstacle clearance approach, allowance should be made for appreciably longer total landing distances than are typical of normal water conditions.

CROSSWIND LANDING

The wing-low slip method should be used with the upwind float contacting the surface first while maintaining a slightly nose up normal landing attitude.

SECTION 5
PERFORMANCE

HEIGHT LOSS IN STALLS:

The height loss of up to 200 ft. may occur in stalls.

AIRSPEED CALIBRATION

The airspeed calibration is essentially unchanged from the landplane configuration.

NORMAL STATIC SOURCE

CONDITION
Power required for level flight or maximum power descent

	KCAS			
KIAS	Flaps 0°	Flaps 10°	Flaps 20°	Flaps 30°
55	---	---	52	53
60	57	57	57	58
70	67	67	67	68
80	77	77	77	78
90	87	87	87	88
100	97	97	98	98
110	107	107	108	108
120	118	---	---	---
130	128	---	---	---
140	138	---	---	---
150	148	---	---	---
160	158	---	---	---

Figure 3 Airspeed Calibration

STALL SPEED
AT 3600 POUNDS

CONDITIONS:
Power Off

FLAP SETTING	ANGLE OF BANK							
	0 °		30 °		45 °		60 °	
	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
UP	56	59	61	63	67	70	80	83
10	53	56	57	60	64	66	76	79
15	51	53	54	57	60	63	71	75
20	48	52	51	56	57	62	67	73
30	47	51	50	55	55	61	66	72

NOTES:
1. Altitude loss during stall recovery may be up to 200 ft.
2. KIAS values are approximate.

Figure 4 Stall Speeds

BEST ANGLE-OF-CLIMB AT 3600 POUNDS

CONDITIONS:
Flaps Up
2600 RPM
Full Throttle
Mixture at Best Power Schedule

PRESS ALT	CLIMB SPEED	BEST ANGLE OF CLIMB (deg)			
FEET	KIAS	-20°C	0°C	20°C	40°C
S.L	66	9.1	8.3	7.6	6.9
2,000	66	7.9	7.1	6.5	5.8
4,000	66	6.6	5.9	5.3	4.7
6,000	66	5.3	4.7	4.1	3.6
8,000	66	4.2	3.6	3.1	2.6
10,000	66	3.1	2.6	2.1	1.7

Figure 5 Best Angle-of-Climb

BEST RATE-OF-CLIMB
AT 3600 POUNDS

CONDITIONS:
Flaps Up
2600 RPM
Full Throttle
Mixture at Best Power Schedule

PRESS ALT	CLIMB SPEED	RATE OF CLIMB (FPM)			
FEET	KIAS	-20°C	0°C	20°C	40°C
S.L	78	1006	954	898	842
2000	76	898	846	791	735
4000	74	773	721	667	612
6000	73	649	596	542	488
8000	71	526	473	420	366
10,000	70	404	352	298	244

Figure 6 Best Rate-of-Climb

TIME, FUEL AND DISTANCE TO CLIMB AT 3600 POUNDS

CONDITIONS:
Flaps Up
Full Throttle
2600 RPM
Mixture at Best Power Schedule
Standard Temperatures
AT Best Rate-of-Climb

				FROM SEA LEVEL			
PRESS ALT FEET	TEMP ^{o}C	CLIMB SPEED KIAS	RATE OF CLIMB FPM	TIME IN MIN	FUEL USED LITRES	FUEL USED U.S GAL	DIST IN NM
S.L	15	78	912	0	0	0.0	0
1000	13	77	871	1	2	0.4	1
2000	11	76	816	2	3	0.9	3
3000	9	76	759	4	5	1.4	4
4000	7	75	702	5	7	1.9	6
5000	5	74	645	6	9	2.4	8
6000	3	74	588	8	11	2.9	10
7000	1	73	532	10	13	3.5	12
8000	-1	72	476	12	16	4.2	15
9000	-3	71	420	14	18	4.9	18
10000	-5	71	365	17	21	5.6	21

NOTES:
1. Add 7.5 litres (2 US gallons) of fuel for engine start, run-up, taxi and take off allowance.
2. Mixture leaned to climb schedule.
3. Increase time, fuel and distance by 10% for each 10^{0} C above standard temperature.
4. Distances shown are based on zero wind.

Figure 7 Time, Fuel and Distance to Climb

SECTION 6
WEIGHT AND BALANCE

The FBA-2C2 Bush Hawk-XP equipped with Aerocet 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. locations chart on the following pages.

WARNING
IT IS THE RESPONSIBILITY OF THE AIRPLANE OWNER AND PILOT TO ENSURE THAT THE AIRPLANE IS LOADED PROPERLY.

FLOAT BAGGAGE COMPARTMENTS

Baggage may be carried in the float baggage compartments in accordance with the following limitations.

Compartment	Max. Weight	Arm	Moment/1000
LEFT	100 lbs	10 in.	1.0
RIGHT	100 lbs	10 in.	1.0

FLOATPLANE REFERENCE DATUM

The floatplane reference datum for the purpose of weight and balance is the lower forward corner of the front doors.

FLOATPLANE WEIGHING PROCEDURES

1. Preparation:

a) De-fuel airplane. Refer to FAC2-M200 Maintenance Manual.
b) Service engine oil as required to obtain a normal full indication.
c) Move sliding seats to the most forward position.
d) Raise flaps to the fully retracted position.
e) Place all control surfaces in neutral position.
f) Remove all non-required items from airplane.
g) Remove the ventral fin from the tail wheel bracket.

2. Levelling:

a) Jack up the tail wheel boom bracket on a stand such that the baggage compartment floor is near level longitudinally and laterally. Place a scale under this fitting.
b) Drop plumb lines from both front door datum points. Mark the locations on the floor. Connect the points and extend the line out to the centre of both floats.
c) Place scales under each float. The scales should be centred on the line described above. A minimum scale capacity of 1500 pounds is recommended for the main scales and 1000 pounds for the tail scale.

3. Weighing:

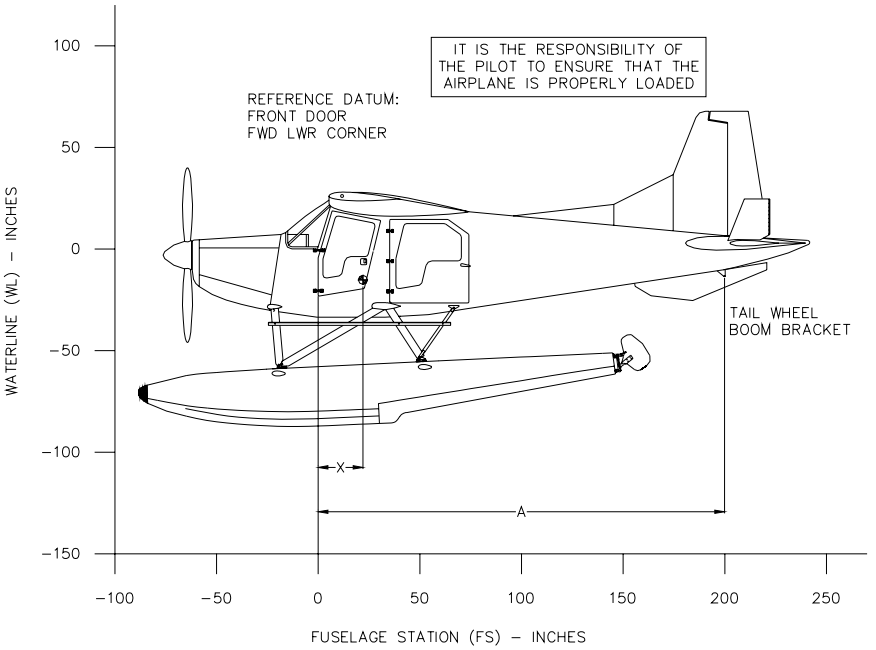
a) With the airplane level and, record the weight shown on each scale. Deduct the tare, if any, from each reading.

4. Measuring Arms:

a) Obtain measurement A by measuring horizontally (along the floor) from the floatplane reference datum line previously drawn on the floor (Item 2b) to a point on the floor directly below the tail wheel boom bracket.

5. Calculate CG and Weight:

a) Using weights from Item 3 and measurements from Item 4, the airplane Basic Empty Weight and C.G. can be determined by completing the following table.
b) DO NOT forget to add in the contribution from the ventral fin. The weight and arm of the ventral fin can be found in the Equipment List provided at the time of delivery of the aircraft.


IT IS THE RESPONSIBILITY OF THE PILOT TO ENSURE THAT THE AIRPLANE IS PROPERLY LOADED
REFERENCE DATUM:
FRONT DOOR
FWD LWR CORNER
TAIL WHEEL
BOOM BRACKET
X
A
WATERLINE (WL) – INCHES
100
50
0
–50
–100
–150
–100
–50
0
50
100
150
200
250
FUSELAGE STATION (FS) – INCHES

Weighing Point	Tare (lbs)	Scale Reading (lbs)	Net Weight (lbs)	Arm (inches)	Moment (in-lbs)
Tail				***A*** =	
R Main (Float)				0.0	
L Main (Float)				0.0	
Ventral Fin*	---	---	3.0	190.0	570.0
Total (Weighed)				**CG=**	
CG = Total Moment / Total Net Weight Use spaces below to add or subtract items from weighed condition.					
Empty Weight				**CG=**	
Drainable Unusable Fuel (6 lbs/USG), 1.7 USG			10.2	21.8	222.4
Basic Empty Weight					

Net Weight = Scale Reading - Tare
Moment = Net Weight * Arm
Arm is measured from the aircraft datum (front door forward lower corner).
* - These are nominal figures for the Ventral Fin. The actual weight and arm should be used instead of the nominal numbers shown above if available. These figures are supplied with the aircraft at the time of delivery.

FLOATPLANE WEIGHT AND BALANCE PROCEDURES

The following information will enable you to operate your FBA-2C2 within the prescribed weight and centre of gravity limitations. To figure weight and balance, use the Sample Loading Problem, Loading Graph (in Section 6 of M400), and Centre of Gravity Moment Envelopes as follows:

1. Take the Basic Empty Weight and Moment from appropriate weight and balance records carried in your airplane and enter them in the column titled YOUR AIRPLANE on the Sample Loading Problem.

NOTE

In addition to the Basic Empty Weight and Moment noted on these records, the C.G. arm (fuselage station) is also shown, but need not be used on the Sample Loading Problem. The moment which is shown must be divided by 1000 and this value used as the moment/1000 on the loading problem.

2. Use the Loading Graph to determine the moment/1000 for each additional item to be carried; then list these on the loading problem.

NOTE

Loading Graph information for the pilot, passengers and baggage is based on seats positioned for average occupants and baggage loaded in the centre of the aft baggage compartment as shown on the Loading Arrangements diagram. For loadings which may differ from these, the Sample Loading Problem lists fuselage stations for these items to indicate their forward and aft C.G. range limitations (seat travel and baggage compartment limitation). Additional moment calculations, based on the actual weight and C.G. arm (fuselage station) of the item being loaded, must be made if the position of the load is different from that shown on the Loading Graph.

3. Total the weights and moments/1000 and plot these values on the centre of Gravity Moment Envelope to determine whether the point falls within the envelope, and if the loading is acceptable.

SAMPLE LOADING PROBLEM FOR FLOATPLANE	WEIGHT AND MOMENT TABULATION				
	SAMPLE AIRPLANE			YOUR AIRPLANE	
	WEIGHT (lbs)	MOMENT (lb-in /1000)	ARM (in)	WEIGHT (lbs)	MOMENT (lb-in /1000)
1. Basic Empty Weight (Use the data pertaining to your airplane as it is presently equipped. Includes unusable fuel and full oil).	2300	35.8	15.6		
2. Usable Fuel (At 6.0 lbs/USG) 98 USG Maximum 50 USG (used for example)	300	6.5	21.8		
3. Pilot and Front Passenger (Station 17.8 & 200 pounds each)	400	7.1	17.8		
4. Rear Passenger (Station 55.0 & 200 pounds each)	400	22.0	55.0		
5. Main Baggage Area (Station 76 to 114; 250 pounds. max. @ Station 94)	50	4.7	94.0		
6. Ramp Weight and Moment (add columns)	3450	76.2			
7. Fuel Allowance for Engine Start, Taxi and Run-Up	-7	-0.2	21.8		
8. Takeoff Weight and Moment (Subtract Step 7 from Step 6)	3443	76.0	22.1		
9. Locate this point (3450 at 76.0) on the Centre of Gravity Moment Envelope, and since this point falls within the envelope, the loading is acceptable.					

CENTER OF GRAVITY MOMENT ENVELOPE

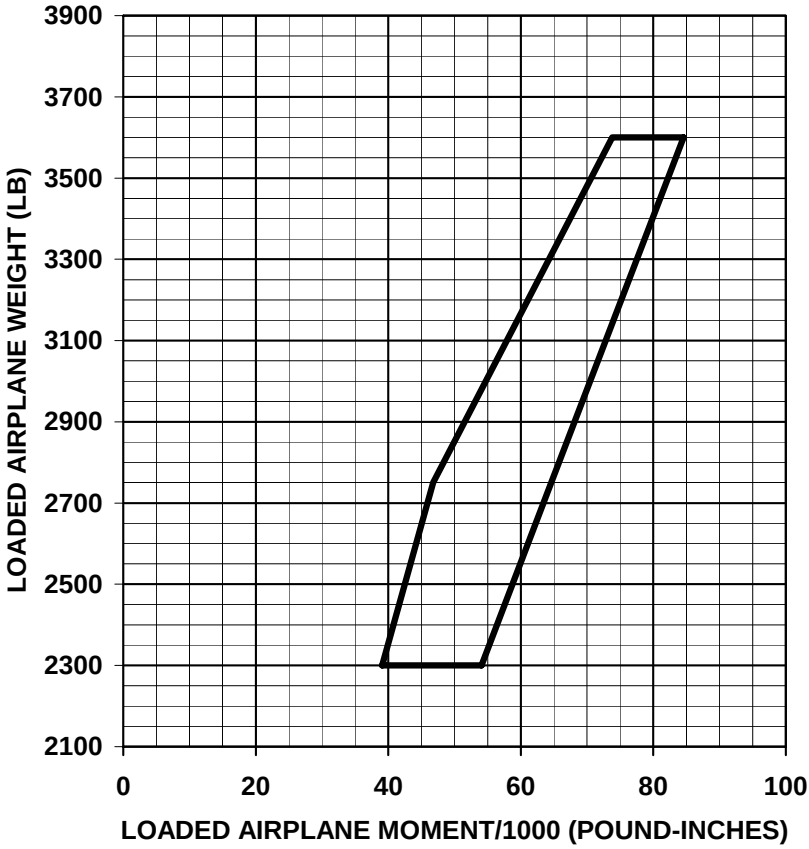


Figure 8 Loaded Airplane Moment/1000 (pound-inches)

CENTER OF GRAVITY RANGE ENVELOPE

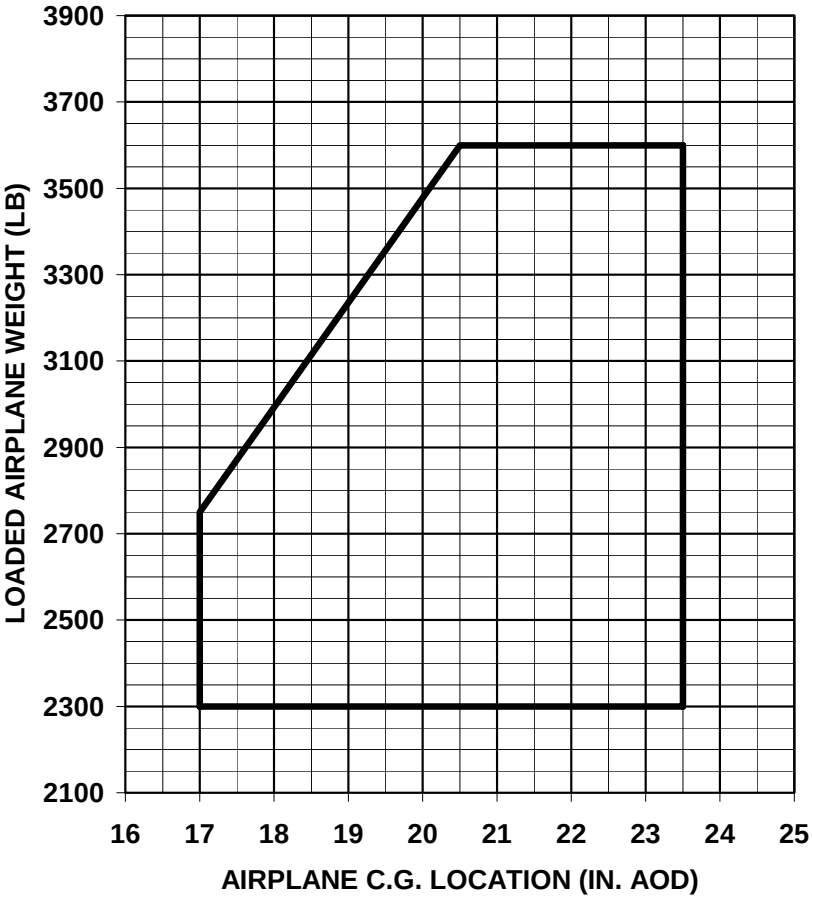


Figure 9 Airplane CG Location (Inches AFT of Datum)

SECTION 7
AIRPLANE AND SYSTEMS DESCRIPTION

In addition to the Aerocet Model 3500 floats installation, the aircraft must incorporate the Found Aircraft Canada Inc. approved floatplane kit. With either of these installations, the floatplane is identical to the landplane with the following exceptions:

FOUND AIRCRAFT CANADA MODIFICATIONS:

1. Floats, which replace the landing gear, include a water rudder steering system, attach struts, tie-rods, and float deck fittings.
2. A water rudder retraction mechanism which is located between the front seats.
3. Water rudder steering cables for retraction and steering control of the water rudders.
4. Ventral fin located on the bottom of fuselage and finlets located on the top of the stabilizer.
5. Loading steps, which are mounted to the float struts and fuselage.
6. Floatplane placards.

WATER RUDDER SYSTEM

Retractable water rudders, mounted at the aft end of each float, are connected by a system of cables and springs to the rudder pedals. Normal rudder pedal operation moves the water rudders to provide steering control for taxiing. A water rudder retraction lever, located on the cabin floor between the front seats, is used to manually raise and lower the water rudders. The handle should be in the UP (full aft) position during takeoff, landing, and in flight. With the handle in this position, the water rudders are up. When the lever is rotated forward to the DOWN position, the water rudders extend to the full down position for water taxiing.

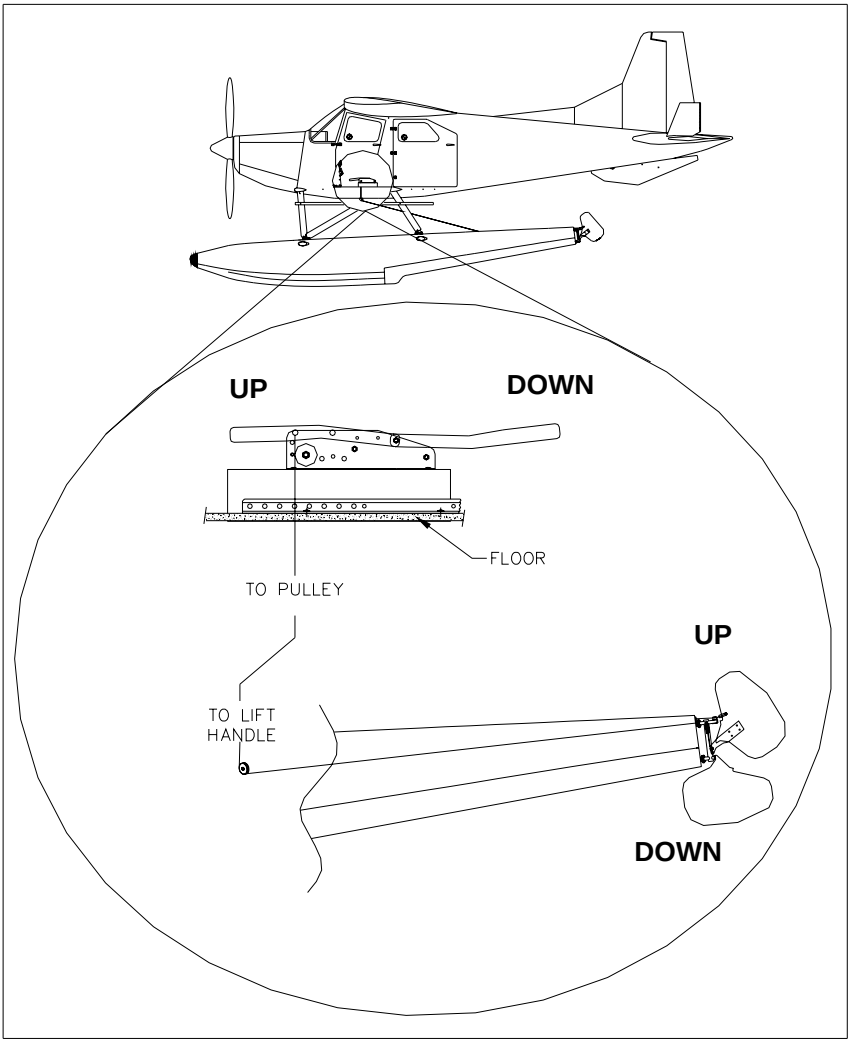


Figure 10 Water Rudder Retraction System