Transport Canada Approved Flight Manual Supplement

For

AEROCET MODEL 3500L/3500 FLOATS

This supplemental manual is applicable to Aerocet Models 3500L and 3500 float equipped FBA-2C3 airplanes.

This Supplement must be attached to the Transport Canada Approved Airplane Flight Manual when the airplane is modified by the installation of Aerocet Model 3500L or 3500 floats in accordance with Found Aircraft Canada Mod 1273.

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: FM2C3).

Approved By:

Date:

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH

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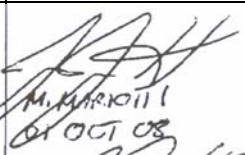
1	2	01-October-2008	
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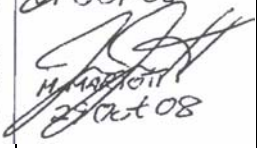
2	2	29-October-2008	
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SECTION 1
GENERAL

INTRODUCTION

This supplemental manual is applicable to Aerocet Models 3500L and 3500 float equipped FBA-2C3 airplanes.

This supplement provides information and limitations not included in the Transport Canada approved markings and placards, and/or Airplane Flight Manual (P/N: FM2C3).

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

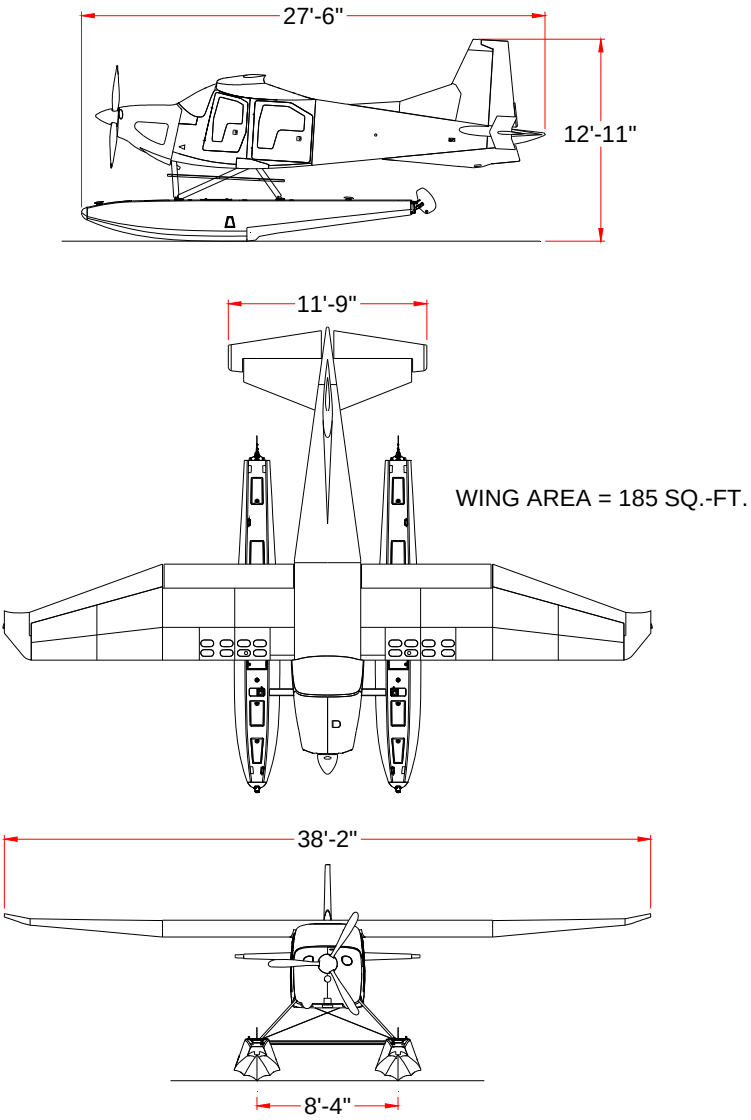

Figure 1 Three View - Normal Ground Attitude

DESCRIPTIVE DATA

MAXIMUM CERTIFICATED WEIGHTS

Maximum Operational Weight:	3800 lbs

STANDARD AIRPLANE WEIGHTS

Standard Empty Weight:	2475 lbs *
Maximum Useful Load:	1325 lbs *

* the above weights may vary depending on configuration.

SPECIFIC LOADINGS

Wing Loading:	20.5 lbs/sq.ft.
Power Loading:	12.1 lbs/hp

SECTION 2
LIMITATIONS

INTRODUCTION

The FBA-2C3 EXPEDITION E350 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-2C3 EXPEDITION E350 equipped with Aerocet Model 3500L or 3500 floats.

AIRSPEED LIMITATIONS

Airspeed limitations and their operational significance are shown below.

	SPEED	KCAS	KIAS	REMARKS
V_A	Maneuvering Speed	110	111	Do not make full or abrupt control movements above this speed.
V_{FE}	Maximum Flap Extended Speed	115	116	Do not exceed this speed with flaps down.
V_{NE}	Never Exceed Speed	157	159	Do not exceed this speed in any operation.
V_{NO}	Maximum Structural Cruising Speed	140	142	Do not exceed this speed except in smooth air, and then only with caution.

Figure 2: Airspeed Limitations

AIRSPEED INDICATOR MARKINGS

Airspeed indicator markings and their colour coding are presented below. The indicated airspeeds presented are based on the normal static source airspeed calibration. When using the optional alternate static source, allow for the airspeed calibration variations between the normal and alternate static sources, as shown in Section 5.

MARKING	KIAS OR RANGE	SIGNIFICANCE
White Arc	50 – 116	Full flap operating range. Lower limit is approximately maximum weight $\mathbf{V_{so}}$ in landing configuration. Upper limit is maximum flap extended speed.
Green Arc	56 - 142	Normal operating range. Lower limit is approximately maximum weight $\mathbf{V_s}$ at forward C.G. with flaps retracted. Upper limit is maximum structural cruising speed.
Yellow Arc	142 - 159	Operations must be conducted with caution and only in smooth air.
Red Line	159	Maximum speed for all operations.

Figure 3: Airspeed Indicator Markings

WEIGHT LIMITS

Maximum Takeoff Weight	3800 lbs.
Maximum Landing Weight	3800 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 3800 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:
From Land or Water ..... 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 or next to the airspeed indicator:

MANEUVER SPEED = 111 KIAS

2. Located in plain view of the pilot:

FLOAT EQUIPPED AIRCRAFT WATER RUDDER ALWAYS UP EXCEPT WHEN TAXIING

3. Located near the water rudder control:

WATER RUDDER CONTROL

DOWN UP

4. Located in plain view of the pilot:

FOR AIRCRAFT EQUIPPED WITH AEROCET MODEL 3500L FLOATS, MAX. GROSS WEIGHT = 3800 LBS REFER TO AFM SUPPLEMENT S02

SECTION 3
EMERGENCY PROCEDURES

NOTE

These items supplement the FBA-2C3 emergency procedures. Be sure to follow the FBA-2C3 procedures in Flight Manual FM2C3 except as noted below.

INTRODUCTION

This section provides the operational checklists that are specific to FBA-2C3 with Aerocet Model 3500L/3500 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

CONDITION	KIAS
Engine Failure after Takeoff (Flaps 20^o)	72
Maneuvering Speed	111
Precautionary Landing with Engine Power (Flaps 30^o)	70
Best Glide Speed	85
Landing Without Engine Power: Wing Flaps Up Wing Flaps Down	 85 70

EMERGENCY PROCEDURES CHECKLISTS

ENGINE FAILURES

ENGINE FAILURE DURING TAKEOFF RUN

1. Throttle.....IDLE
2. Control Wheel.....FULL AFT

If time permits:

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

Land straight ahead turning only to avoid obstacles

1. Airspeed.....72 KIAS (Flaps 20°)

If time permits:

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

MAXIMUM GLIDE

Conditions:		**Example:**	
Power	Off	Altitude	8000 ft
Propeller	Windmilling, Pitch Full Coarse	Airspeed	85 kias
Flaps	0 degree		
Wind	0 knot	Glide Distance	13.1 NM

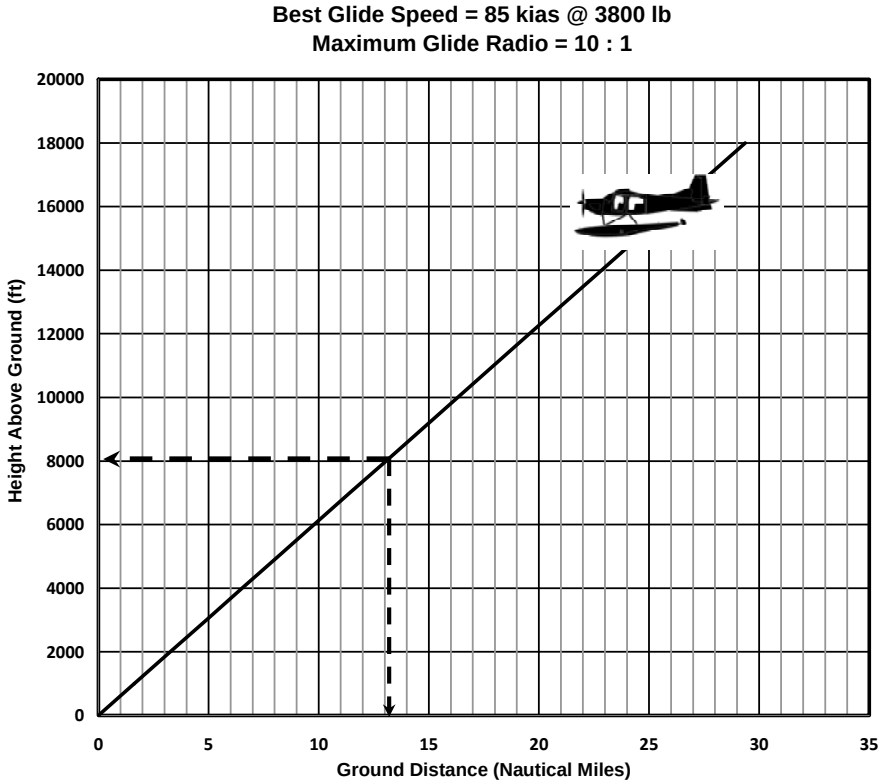

Figure 4: Maximum Glide

FORCED LANDINGS

EMERGENCY LANDING ON WATER WITHOUT ENGINE POWER

1. Seats ..... SECURE
2. Seat belts ..... FASTENED
3. Loose Articles ..... SECURE
4. Airspeed ..... 85 KIAS (Flaps UP)
   70 KIAS (Flaps 30^{o})

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 ..... 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 & Electrical Switches ..... OFF
8. Flaps ..... 20^{o} (or 30^{o} for steep approach)
9. Water Rudders ..... UP
10. Airspeed ..... 70 KIAS
11. Propeller ..... HIGH RPM
12. Doors ..... UNLATCH PRIOR TO TOUCHDOWN

After touchdown:

13. Ignition Switch ..... OFF
14. Master Switch ..... OFF
15. Alternator ..... OFF

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SECTION 4
NORMAL PROCEDURES

NOTE

These items supplement the FBA-2C3 normal procedures. Be sure to follow the FBA-2C3 procedures in Flight Manual FM2C3 except as noted below.

AIRSPEEDS FOR NORMAL OPERATION

Unless otherwise noted, the following airspeeds are based on a maximum weight of 3800 lb. and may be used at a lesser weight.

CONDITION	KIAS
TAKEOFF	
Normal Climb Out	70-80
Short Field Takeoff, Speed at 50 feet:	
Takeoff with Flaps 20 deg.	67
ENROUTE CLIMB, FLAPS UP	
Normal – Sea Level	75-85
Best Rate-of-Climb - Sea Level	84
Best Rate-of-Climb - 10,000 feet	74
Best Angle of Climb - Sea Level	65
Best Angle of Climb – 10,000 feet	70
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	70
MAXIMUM RECOMMENDED TURBULENT AIR PENETRATION SPEED	111
MAXIMUM DEMONSTRATED CROSSWIND VELOCITY	
Takeoff or Landing	12

NORMAL PROCEDURES CHECKLISTS

PREFLIGHT INSPECTION

BEFORE ENTERING FLOATPLANE

1. Floatplane Approved Flight Manual Supplement with Airplane Flight Manual should be available in the airplane.
2. Floats, Struts, and Float Fairings ....INSPECT for damage.
3. Float Compartments.....INSPECT for water accumulation.
4. Pump out each float compartment. Ensure the rubber pump out 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.
5. Water Rudders .....CHECK actuation cables

PRIOR TO ENGINE START

1. Water Rudder Operation.....CHECK VISUALLY
2. Water Rudders .....DOWN for taxing on water (lever full forward)
3. Water Rudders .....CHECK freedom of movement and security

TAKEOFF

NORMAL TAKEOFF

1. Doors.....CLOSED, UNLOCKED
2. Water Rudders .....UP (retraction lever full aft)
3. Auxiliary fuel pump .....ON
4. Wing Flaps.....20 deg
5. Pitch Trim .....SET for TAKEOFF
6. Mixture.....RICH
7. Control Wheel.....HOLD FULL AFT
8. Power .....FULL THROTTLE at 2700 RPM
9. Elevator Control.....MOVE FORWARD gently when the nose pitches up and stops rising to attain planing attitude. APPLY LIGHT BACK PRESSURE to lift off at airspeed of 60-65 KIAS.
10. Wing Flaps.....UP at Safe Speed and altitude
11. Climb Speed.....70- 80 KIAS

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 5000ft, LEAN as required)
3. Power .....FULL THROTTLE at 2700 RPM
4. Auxiliary Fuel Pump Switch.....OFF

BEFORE LANDING

1. Water Rudders ..... UP
2. Auxiliary fuel pump ..... ON
3. Wing Flaps ..... AS DESIRED
   (30 deg for short approach)
4. Doors ..... CLOSED, UNLOCKED
5. Airspeed (Flaps Up) ..... 80-90 KIAS @ 3800 lb
6. Airspeed (Full Flap) ..... 70-80 KIAS @ 3800 lb
   (Reduce 1 knot for each 80 lb Below 3800 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 back as floatplane comes down off the step.

BALKED LANDING

1. Throttle ..... FULL OPEN and 2700 RPM
2. Flap ..... 20^{o}
3. Climb Speed ..... 70 KIAS

When clear of obstacles:

4. Airspeed ..... 70 ~ 80 KIAS
5. Flaps ..... SLOWLY RETRACT
   to FLAPS UP

AFTER LANDING

1. Water Rudders ..... DOWN

SECURING AIRPLANE

1. Fuel Selector Valve ..... OFF

AMPLIFIED NORMAL PROCEDURES

WATER 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 to strike the propeller tip and cause 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 conditions. 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 of 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 as 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 slight positive backpressure to the yoke to reduce and stop the porpoise. 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 67 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 lift-off speed and extra takeoff distance should be allowed when any of these conditions exist.

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 ample 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 should accelerate 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 planing 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 float landing attitude at this sink rate with no flare attempted since height above glassy water is 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 float landing attitude.

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SECTION 5
PERFORMANCE

HEIGHT LOSS IN STALLS

The height loss of up to 250 ft. may occur in stalls.

AIRSPEED CALIBRATION

The airspeed calibration is not changed due to the float installation. The following airspeed calibration and altitude correction tables are from Flight Manual FM2C3.

AIRSPEED CALIBRATION

Normal Static Source

Conditions:
Power for level flight or maximum continuous, whichever is less

Example:

Conditions	
Flaps	0 degree
Indicated Airspeed	120 KIAS
Calibrated Airspeed	119 KCAS

KIAS	KCAS		
	FLAPS 0°	FLAPS 20°	FLAPS 30°
60	-	59	59
70	70	69	69
80	80	78	78
90	89	88	88
100	99	98	98
110	109	107	107
120	119	117	117
130	128	-	-
140	138	-	-
150	148	-	-
160	158	-	-
170	167	-	-
180	177	-	-
190	187	-	-

* KCAS = Calibrated Airspeed in knots
* KIAS = Indicated Airspeed in knots with "zero" instrument error

Figure 5: Airspeed Calibration – Normal Static Source

AIRSPEED CALIBRATION

Alternate Static Source

Conditions:
Power for level flight or maximum continuous, whichever is less
Cabin Heater, Air & Defrost on maximum

Example:

Conditions	
Flaps	0 degree
Indicated Airspeed	120 KIAS
Calibrated Airspeed	116 KCAS

KIAS	KCAS		
	FLAPS 0°	FLAPS 20°	FLAPS 30°
60	-	61	61
70	69	70	70
80	78	79	79
90	87	88	88
100	96	97	97
110	105	107	107
120	115	116	116
130	124	-	-
140	133	-	-
150	142	-	-
160	151	-	-
170	160	-	-
180	169	-	-
190	179	-	-

* KCAS = Calibrated Airspeed in knots
* KIAS = Indicated Airspeed in knots with "zero" instrument error

Figure 6: Airspeed Calibration – Alternate Static Source

ALTITUDE CORRECTION

Conditions:

Power for level flight or maximum continuous, whichever is less

Example:

Flight Condition - Flap 0^o & 120 KIAS
Desired Altitude = 6000 FT
Altitude correction = -16 FT
Altitude to fly = 5984 FT

KIAS	CORRECTION TO BE ADDED (ft)		
	FLAPS 0^o	FLAPS 20^o	FLAPS 30^o
60	-	1	1
70	-2	-5	-5
80	-4	-11	-11
90	-7	-17	-17
100	-10	-23	-23
110	-13	-29	-29
120	-16	-35	-35
130	-18	-	-
140	-21	-	-
150	-24	-	-
160	-27	-	-
170	-30	-	-
180	-32	-	-
190	-35	-	-

* KIAS = Indicated Airspeed in knots with "zero" instrument error

Figure 7: Altitude Correction – Normal Static Source

ALTITUDE CORRECTION

Alternate Static Source

Conditions:

Power for level flight or maximum continuous, whichever is less

Example:

Flight Condition - Flap 0^o & 120 KIAS
Desired Altitude = 6000 FT
Altitude correction = -12 FT
Altitude to fly = 5988 FT

KIAS	CORRECTION TO BE ADDED (ft)		
	FLAPS 0^o	FLAPS 20^o	FLAPS 30^o
60	-	-4	-4
70	3	-7	-7
80	0	-10	-10
90	-3	-14	-14
100	-6	-17	-17
110	-9	-21	-21
120	-12	-24	-24
130	-15	-	-
140	-18	-	-
150	-21	-	-
160	-24	-	-
170	-27	-	-
180	-31	-	-
190	-34	-	-

* KIAS = Indicated Airspeed in knots with "zero" instrument error

Figure 8: Altitude Correction – Alternate Static Source

TEMPERATURE CONVERSION

- To convert from Celsius(^{o}C) to Fahrenheit(^{o}F), the temperature in the shaded area represents in Celsius. The equivalent temperature in Fahrenheit is read to the right.

  Example: 20^{o}C = 68^{o}F

- To convert from Fahrenheit(^{o}F) to Celsius(^{o}C), the temperature in the shaded area represents in Fahrenheit. The equivalent temperature in Celsius is read to the right.

  Example: 50^{o}F = 10^{o}C

Temp. to Convert ^{o}C or ^{o}F			Temp. to Convert ^{o}C or ^{o}F			Temp. to Convert ^{o}C or ^{o}F		
^{o}C	↔	^{o}F	^{o}C	↔	^{o}F	^{o}C	↔	^{o}F
-46	-50	-58	-13	8	46	19	66	151
-44	-48	-54	-12	10	50	20	68	154
-43	-46	-51	-11	12	54	21	70	158
-42	-44	-47	-10	14	57	22	72	162
-41	-42	-44	-9	16	61	23	74	165
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-34	-30	-22	-2	28	82	30	86	187
-33	-28	-18	-1	30	86	31	88	190
-32	-26	-15	0	32	90	32	90	194
-31	-24	-11	1	34	93	33	92	198
-30	-22	-8	2	36	97	34	94	201
-29	-20	-4	3	38	100	36	96	205
-28	-18	0	4	40	104	37	98	208
-27	-16	3	6	42	108	38	100	212
-26	-14	7	7	44	111	39	102	216
-24	-12	10	8	46	115	40	104	219
-23	-10	14	9	48	118	41	106	223
-22	-8	18	10	50	122	42	108	226
-21	-6	21	11	52	126	43	110	230
-20	-4	25	12	54	129	44	112	234
-19	-2	28	13	56	133	46	114	237
-18	0	32	14	58	136	47	116	241
-17	2	36	16	60	140	48	118	244
-16	4	39	17	62	144	49	120	248
-14	6	43	18	64	147	50	122	252

Figure 9: Temperature Conversion

STALL SPEED

Conditions:

Weight	3800 lb
C.G.	Most Fwd. CG
Power	Idle
Bank Angle	Noted

Example:

Flaps	Up
Bank Angle	30°
Stall Speed	60 KIAS
	64 KCAS

Flap Setting	0°		30°		45°		60°	
(deg)	(KIAS)	(KCAS)	(KIAS)	(KCAS)	(KIAS)	(KCAS)	(KIAS)	(KCAS)
0	56	60	60	64	67	71	81	85
20	51	55	55	59	61	65	74	78
30	50	54	54	58	60	64	72	76

Notes:

1. Altitude loss in the stall may be as much as 250ft.
2. KIAS values are approximate.

Figure 10: Stall Speed

TAKEOFF DISTANCE

Conditions:

Weight	3800 lb
Flaps	20 degrees
Power	Full Throttle & 2700RPM
Wind	0 knots
Liftoff Speed	63 KIAS
50ft Speed	67 KIAS

	0°C		10°C		20°C		30°C		40°C	
Pressure Altitude	WATER DIST.	TOTAL DIST.	WATER DIST.	TOTAL DIST.	WATER DIST.	TOTAL DIST.	WATER DIST.	TOTAL DIST.	WATER DIST.	TOTAL DIST.
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
0	1216	1832	1304	1965	1393	2098	1500	2260	1608	2422
1000	1348	2031	1450	2185	1552	2339	1678	2528	1804	2718
2000	1502	2263	1621	2442	1740	2621	1889	2846	2038	3071
3000	1698	2558	1840	2772	1981	2985	2162	3257	2343	3530
4000	1936	2917	2107	3174	2278	3432	2502	3769	2725	4106
5000	2245	3383	2460	3707	2675	4030	2958	4456	3240	4882
6000	2641	3979	2919	4398	3197	4817	---	---	---	---
7000	3194	4813	---	---	---	---	---	---	---	---
8000	---	---	---	---	---	---	---	---	---	---
9000	---	---	---	---	---	---	---	---	---	---
10000	---	---	---	---	---	---	---	---	---	---

1. Head Wind - Decrease 10% from the table distances for each 9 knots headwind.
2. Tail Wind - Add 10% to the table distances for each 2 knots tailwind up to 10 knots
3. The following distances can be used in 45°C condition.
   At Sea Level: Water Distance = 1633 ft, Total Distance = 2461 ft
   At 2000ft : Water Distance = 2071 ft, Total Distance = 3120 ft
4. For operation in outside air temperatures colder than this table provides, use coldest data shown.

Figure 11: Takeoff Distance

TAKEOFF CLIMB GRADIENT

Conditions:

Flaps	20 degrees
Power	Full Throttle
Mixture	Best Power Schedule
RPM	2700
Airspeed	Best Angle of Climb

Weight (lb)	Pressure Altitude (ft)	Climb Speed (kias)	Climb Gradient (Feet per Nautical Mile)			
			-20°C	0°C	20°C	40°C
3800	S.L	67	857	795	718	642
	2,000	67	722	665	594	524
	4,000	67	588	535	470	406
	6,000	67	455	406	347	292
	8,000	67	324	280	230	180
	10,000	67	196	161	116	69
3200	S.L	67	1211	1136	1044	952
	2000	67	1049	980	895	811
	4000	67	887	824	746	669
	6000	67	728	670	599	533
	8000	67	572	519	459	400
	10,000	67	419	376	323	268

1. For operation in cooler than the lowest temperature shown, use data in coldest temperature.
2. For operation at 45°C, the following climb performance can be used.
3800 lb - At Sea Level ROC = 623 ft/NM At 2000 ft = 507 ft/NM
3200 lb - At Sea Level ROC = 929 ft/NM At 2000 ft = 790 ft/NM

Figure 12: Takeoff Climb Gradient

TAKEOFF RATE OF CLIMB

Conditions:

Flaps	20 degrees
Power	Full Throttle
Mixture	Best Power Schedule
RPM	2700
Airspeed	Best Rate of Climb

Weight (lb)	Pressure Altitude (ft)	Climb Speed (kias)	Rate of Climb (Feet per Minute)			
			-20°C	0°C	20°C	40°C
3800	S.L	74	905	869	811	750
	2000	73	787	750	694	635
	4000	72	660	622	569	510
	6000	71	527	490	438	378
	8000	69	389	353	300	241
	10,000	68	245	209	155	- - -
3200	S.L	72	1244	1211	1152	1086
	2000	70	1116	1082	1023	958
	4000	69	978	942	885	822
	6000	68	833	797	739	680
	8000	67	681	643	590	531
	10,000	67	519	486	432	370

1. For operation in cooler than the lowest temperature shown, use data in coldest temperature.
2. For operation at 45°C, the following climb performance can be used.
3800 lb - At Sea Level ROC = 734 ft/min At 2000 ft = 621 ft/min
3200 lb - At Sea Level ROC = 1070 ft/min At 2000 ft = 941 ft/min

Figure 13: Takeoff Rate of Climb

ENROUTE CLIMB GRADIENT

Conditions:

Flaps	0 degree
Power	Full Throttle
Mixture	Best Power Schedule
RPM	2700
Airspeed	Best Rate of Climb

Weight (lb)	Pressure Altitude (ft)	Climb Speed (kias)	Climb Gradient (Feet per Nautical Mile)			
			-20°C	0°C	20°C	40°C
3800	S.L	84	795	753	697	645
	2,000	82	701	654	601	544
	4,000	80	587	550	501	446
	6,000	78	485	445	394	347
	8,000	76	369	337	290	244
	10,000	74	257	228	185	141
3200	S.L	81	1112	1063	983	926
	2000	79	1004	933	872	816
	4000	77	867	813	756	703
	6000	75	740	691	638	580
	8000	73	611	575	518	465
	10,000	71	482	448	397	347

1. For operation in cooler than the lowest temperature shown, use data in coldest temperature.
2. For operation at 45°C, the following climb performance can be used.
3800 lb - At Sea Level ROC = 632 ft/NM At 2000 ft = 530 ft/NM
3200 lb - At Sea Level ROC = 911 ft/NM At 2000 ft = 803 ft/NM

Figure 14: Enroute Climb Gradient

ENROUTE RATE OF CLIMB

Conditions:

Flaps	0 degree
Power	Full Throttle
Mixture	Best Power Schedule
RPM	2700
Airspeed	Best Rate of Climb

Weight (lb)	Pressure Altitude (ft)	Climb Speed (kias)	Rate of Climb (Feet per Minute)			
			-20°C	0°C	20°C	40°C
3800	S.L	84	1047	1020	967	904
	2000	82	926	897	846	781
	4000	80	795	766	714	650
	6000	78	658	627	576	512
	8000	76	514	482	430	368
	10,000	74	363	330	278	216
3200	S.L	81	1402	1377	1322	1257
	2000	79	1268	1242	1189	1123
	4000	77	1125	1098	1045	980
	6000	75	975	946	894	829
	8000	73	816	787	736	673
	10,000	71	652	621	570	508

1. For operation in cooler than the lowest temperature shown, use data in coldest temperature.
2. For operation at 45°C, the following climb performances can be used.
3800 lb - At Sea Level ROC = 888 ft/min At 2000 ft = 765 ft/min
3200 lb - At Sea Level ROC = 1240 ft/min At 2000 ft = 1106 ft/min

Figure 15: Enroute Rate of Climb

TIME, FUEL AND DISTANCE TO CLIMB

Conditions:

Power	Full Throttle
Mixture	Best Power
Wind	0 knot
Airspeed	Noted
Weight	3800 lb
Flaps	0 degree
Temperature	ISA

Pressure Altitude (ft)	TEMP (^{o}C)	Climb Speed (kias)	Rate of Climb (fpm)	From Sea Level		
				Time (minute)	Fuel (gallons)	Distance (NM)
S.L	15	84	984	0	0.0	
1000	13	83	931	1	0.4	1
2000	11	82	874	2	0.9	3
3000	9	81	814	3	1.4	5
4000	7	80	751	5	1.8	6
5000	5	79	687	6	2.4	8
6000	3	78	621	8	2.9	11
7000	1	77	553	9	3.5	13
8000	-1	76	483	11	4.2	16
9000	-3	75	412	13	4.9	19
10000	-5	74	339	16	5.8	23
11000	-7	73	264	19	6.8	27
12000	-9	72	187	24	8.1	34
13000	-11	71	108	31	10.1	44

1. Add 2 gallons for start, taxi and takeoff
2. Add 10% for each 10^{o}C above standard temperature.

Figure 16: Time, Fuel and Distance to Climb

CRUISE PERFORMANCE

Conditions:

Mixture	Best Power
Cruise Weight	3800 lb
Winds	0 knot
Cowl Flaps	Closed

2000ft Pressure Altitude										
		ISA -20°C (-9°C)			ISA (11°C)			ISA 20°C (31°C)		
RPM	MAP	% PWR	KTAS	GPH	% PWR	KTAS	GPH	% PWR	KTAS	GPH
2600	27	94	130	24.1	90	132	23.3	87	133	22.6
2600	26	89	127	23.0	86	129	22.3	83	130	21.6
2600	25	84	124	21.9	81	127	21.3	79	128	20.7
2600	24	80	122	20.9	77	124	20.3	74	125	19.7
2600	23	75	118	19.9	72	120	19.3	70	121	18.8
2600	22	70	115	18.9	68	116	18.4	66	117	18.0
2600	21	66	112	18.0	63	113	17.5	61	114	17.1
2400	27	87	128	22.1	84	130	21.3	82	130	20.7
2400	26	83	125	21.1	80	127	20.4	77	128	19.8
2400	25	79	122	20.1	76	124	19.4	73	125	18.9
2400	24	74	119	19.1	71	120	18.5	69	121	18.0
2400	23	70	116	18.1	67	117	17.6	65	117	17.2
2400	22	65	113	17.2	63	113	16.8	61	114	16.3
2200	27	78	123	19.7	76	124	19.0	73	125	18.4
2200	26	75	120	18.8	72	122	18.2	70	121	17.6
2200	25	71	118	17.9	68	118	17.3	66	119	16.8
2200	24	67	115	17.1	65	116	16.6	62	116	16.1
2200	23	63	112	16.3	61	113	15.8	59	113	15.4
2200	22	60	109	15.5	57	109	15.1	55	110	14.7

Figure 17: Cruise Performance (1 of 5)

CRUISE PERFORMANCE

Conditions:

Mixture	Best Power
Cruise Weight	3800 lb
Winds	0 knot
Cowl Flaps	Closed

4000ft Pressure Altitude										
		ISA -20°C (-13°C)			ISA (7°C)			ISA 20°C (27°C)		
RPM	MAP	% PWR	KTAS	GPH	% PWR	KTAS	GPH	% PWR	KTAS	GPH
2600	25	87	129	22.5	84	131	21.8	81	132	21.2
2600	24	82	126	21.5	79	127	20.8	77	129	20.2
2600	23	78	123	20.4	75	124	19.8	72	125	19.3
2600	22	73	119	19.4	70	121	18.9	68	122	18.4
2600	21	68	116	18.5	66	117	18.0	63	118	17.5
2600	20	63	112	17.5	61	112	17.1	59	113	16.7
2400	25	81	127	20.7	78	128	20.0	76	129	19.4
2400	24	77	124	19.7	74	124	19.1	72	125	18.5
2400	23	72	121	18.7	70	121	18.1	67	122	17.7
2400	22	68	117	17.7	65	118	17.2	63	119	16.8
2400	21	63	114	16.8	61	114	16.4	59	114	16.0
2400	20	58	109	15.9	56	109	15.5	54	110	15.1
2200	25	73	122	18.4	70	122	17.8	68	123	17.3
2200	24	69	119	17.5	67	120	17.0	64	120	16.5
2200	23	65	117	16.7	63	117	16.2	61	116	15.7
2200	22	61	112	15.9	59	114	15.4	57	113	15.0
2200	21	58	109	15.1	56	109	14.7	54	110	14.3
2200	20	54	105	14.4	52	105	14.0	50	105	13.7

Figure 17: Cruise Performance (2 of 5)

CRUISE PERFORMANCE

Conditions:

Mixture	Best Power
Cruise Weight	3800 lb
Winds	0 knot
Cowl Flaps	Closed

6000ft Pressure Altitude

		ISA -20°C (-17°C)			ISA (3°C)			ISA 20°C (23°C)		
RPM	MAP	% PWR	KTAS	GPH	% PWR	KTAS	GPH	% PWR	KTAS	GPH
2600	24	85	130	22.1	82	131	21.3	79	133	20.7
2600	23	80	126	21.0	77	128	20.3	74	129	19.8
2600	22	75	122	19.9	73	125	19.3	70	126	18.8
2600	21	71	119	18.9	68	120	18.4	66	121	17.9
2600	20	66	115	18.0	63	117	17.5	61	118	17.1
2600	19	61	112	17.0	59	113	16.6	57	113	16.2
2400	24	80	127	20.3	77	129	19.6	74	129	19.1
2400	23	75	124	19.3	72	126	18.7	70	127	18.1
2400	22	70	121	18.3	68	121	17.7	65	122	17.3
2400	21	66	117	17.3	63	118	16.8	61	118	16.4
2400	20	61	113	16.4	59	114	15.9	57	113	15.6
2400	19	56	109	15.5	54	109	15.1	52	109	14.7
2200	24	71	122	18.0	69	124	17.4	66	123	16.9
2200	23	67	119	17.1	65	120	16.6	63	120	16.1
2200	22	63	116	16.3	61	117	15.8	59	117	15.4
2200	21	59	113	15.5	57	114	15.0	55	113	14.6
2200	20	56	109	14.7	54	109	14.3	52	109	14.0
2200	19	52	104	14.0	50	105	13.6	48	104	13.3

Figure 17: Cruise Performance (3 of 5)

CRUISE PERFORMANCE

Conditions:

Mixture	Best Power
Cruise Weight	3800 lb
Winds	0 knot
Cowl Flaps	Closed

8000ft Pressure Altitude										
		ISA -20°C (-21°C)			ISA (-1°C)			ISA 20°C (19°C)		
RPM	MAP	% PWR	KTAS	GPH	% PWR	KTAS	GPH	% PWR	KTAS	GPH
2600	23	83	130	21.5	79	132	20.8	77	133	20.2
2600	22	78	126	20.5	75	130	19.8	72	130	19.3
2600	21	73	123	19.4	70	124	18.9	68	125	18.4
2600	20	68	119	18.4	65	121	17.9	63	122	17.5
2600	19	63	115	17.5	61	116	17.0	59	117	16.6
2600	18	58	111	16.6	56	112	16.1	54	111	15.8
2400	23	78	128	19.8	75	130	19.2	72	130	18.6
2400	22	73	125	18.8	70	126	18.2	68	126	17.7
2400	21	68	122	17.8	65	122	17.3	63	123	16.8
2400	20	63	117	16.9	61	117	16.4	59	118	16.0
2400	19	59	113	15.9	56	113	15.5	54	113	15.1
2400	18	54	107	15.0	52	108	14.7	50	108	14.3
2200	23	69	123	17.6	67	124	17.0	64	124	16.5
2200	22	65	119	16.7	63	120	16.2	61	120	15.7
2200	21	61	116	15.9	59	116	15.4	57	117	15.0
2200	20	57	113	15.1	55	113	14.6	53	112	14.3
2200	19	53	109	14.3	51	108	13.9	50	108	13.6
2200	18	49	104	13.5	48	103	13.2	---	---	---

Figure 17: Cruise Performance (4 of 5)

CRUISE PERFORMANCE

Conditions:

Mixture	Best Power
Cruise Weight	3800 lb
Winds	0 knot
Cowl Flaps	Closed

10000ft Pressure Altitude										
		ISA -20°C (-25°C)			ISA (-5°C)			ISA 20°C (15°C)		
RPM	MAP	% PWR	KTAS	GPH	% PWR	KTAS	GPH	% PWR	KTAS	GPH
2600	21	75	126	19.9	72	129	19.3	70	130	18.8
2600	20	70	123	18.9	68	125	18.3	65	125	17.9
2600	19	65	119	17.9	63	120	17.4	61	121	17.0
2600	18	61	114	17.0	58	115	16.5	56	116	16.1
2600	17	56	109	16.0	54	109	15.7	52	110	15.3
2400	21	71	125	18.3	68	127	17.8	65	127	17.3
2400	20	66	121	17.3	63	122	16.8	61	123	16.4
2400	19	61	116	16.4	59	118	15.9	57	117	15.5
2400	18	56	112	15.5	54	112	15.1	52	111	14.7
2400	17	51	106	14.6	49	106	14.2	---	---	---
2200	21	63	120	16.3	61	120	15.8	59	119	15.3
2200	20	59	116	15.4	57	116	15.0	55	116	14.6
2200	19	55	112	14.6	53	112	14.2	51	111	13.8
2200	18	51	107	13.8	49	107	13.5	---	---	---
2200	17	47	102	13.1	---	---	---	---	---	---

Figure 17: Cruise Performance (5 of 5)

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BALKED LANDING CLIMB GRADIENT

Conditions:

Flaps	30 degrees
Power	Full Throttle
Mixture	Best Power Schedule
RPM	2700
Airspeed	Best Angle of Climb
Landing Gear	Extended

Weight (lb)	Pressure Altitude (ft)	Climb Speed (kias)	Climb Gradient (Feet per Nautical Mile)			
			-20°C	0°C	20°C	40°C
3800	S.L	71	670	609	534	460
	2,000	71	539	482	413	346
	4,000	71	406	354	293	234
	6,000	71	275	230	177	122
	8,000	71	149	111	---	---
	10,000	71	---	---	---	---
3200	S.L	71	972	899	809	721
	2000	71	814	746	664	584
	4000	71	655	593	521	450
	6000	71	500	446	383	317
	8000	71	349	304	246	186
	10,000	71	205	164	112	---

1. For operation in cooler than the lowest temperature shown, use data in coldest temperature.
2. For operation at 45°C, the following climb performance can be used.
3800 lb - At Sea Level ROC = 442 ft/NM At 2000 ft = 330 ft/NM
3200 lb - At Sea Level ROC = 698 ft/NM At 2000 ft = 564 ft/NM
3. Climb speeds are equal to or higher than Vref

Figure 18: Balked Landing Climb Gradient

BALKED LANDING RATE OF CLIMB

Conditions:

Flaps	30 degrees
Power	Full Throttle
Mixture	Best Power Schedule
RPM	2700
Airspeed	Best Rate of Climb
Landing Gear	Extended

Weight (lb)	Pressure Altitude (ft)	Climb Speed (kias)	Rate of Climb (Feet per Minute)			
			-20°C	0°C	20°C	40°C
3800	S.L	71	729	689	626	558
	2000	71	609	566	503	436
	4000	71	477	432	371	306
	6000	71	336	292	233	166
	8000	71	190	146	- - -	- - -
	10,000	71	- - -	- - -	- - -	- - -
3200	S.L	71	1050	1011	944	871
	2000	71	916	873	806	734
	4000	71	767	722	657	587
	6000	71	609	565	502	430
	8000	71	443	400	336	263
	10,000	71	270	224	159	- - -

1. For operation in cooler than the lowest temperature shown, use data in coldest temperature.
2. For operation at 45°C, the following climb performance can be used.
3800 lb - At Sea Level ROC = 542 ft/min At 2000 ft = 420 ft/min
3200 lb - At Sea Level ROC = 852 ft/min At 2000 ft = 716 ft/min

Figure 19: Balked Landing Rate of Climb

LANDING DISTANCE

Conditions:

Weight	3800 lb
Flaps	30 degrees
Power	Off
Wind	0 knot
50ft Speed	71 kias

	0°C		10°C		20°C		30°C		40°C	
PRESS ALT. (ft)	Water Dist. (ft)	50ft Clear Dist. (ft)	Water Dist. (ft)	50ft Clear Dist. (ft)	Water Dist. (ft)	50ft Clear Dist. (ft)	Water Dist. (ft)	50ft Clear Dist. (ft)	Water Dist. (ft)	50ft Clear Dist. (ft)
SL	731	1528	752	1573	774	1618	795	1663	817	1708
1000	752	1574	775	1620	797	1667	819	1714	842	1760
2000	775	1621	798	1669	821	1718	845	1766	868	1815
3000	799	1671	823	1721	847	1771	871	1821	895	1872
4000	824	1722	848	1775	873	1827	898	1879	923	1931
5000	849	1776	875	1831	901	1885	927	1939	953	1993
6000	876	1833	903	1889	930	1946	957	2002	984	2058
7000	905	1892	933	1951	961	2009	989	2067	1016	2126
8000	934	1954	963	2015	992	2076	1021	2136	1050	2197
9000	965	2019	996	2082	1026	2145	1056	2208	1086	2271
10000	998	2087	1029	2152	1060	2218	1092	2283	1123	2349

NOTES:

1. Head Wind - Decrease total distances 10% from the table distances for each 9 knot headwind.
   Tail Wind - Add 10% to the table distances for each 2 knots tail wind up to 10 knots.
2. For operation in cooler than the lowest temperature shown, use data in coldest temperature.
3. For operation in hotter than the highest temperature shown, use extreme caution.

Figure 20: Landing Distance

SECTION 6
WEIGHT AND BALANCE

The FBA-2C3 equipped with Aerocet 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. 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 half inch aft of the top of the lower hinge pin of the front doors. See figure 21.

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.

2. Levelling:

a) Jack up the tail at the jacking point on the aft fuselage such that the aft seat compartment floor is near level longitudinally. Place a scale under the jack remembering to "tare" the weight of the jack.
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 jacking point. See Figure 21.

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.

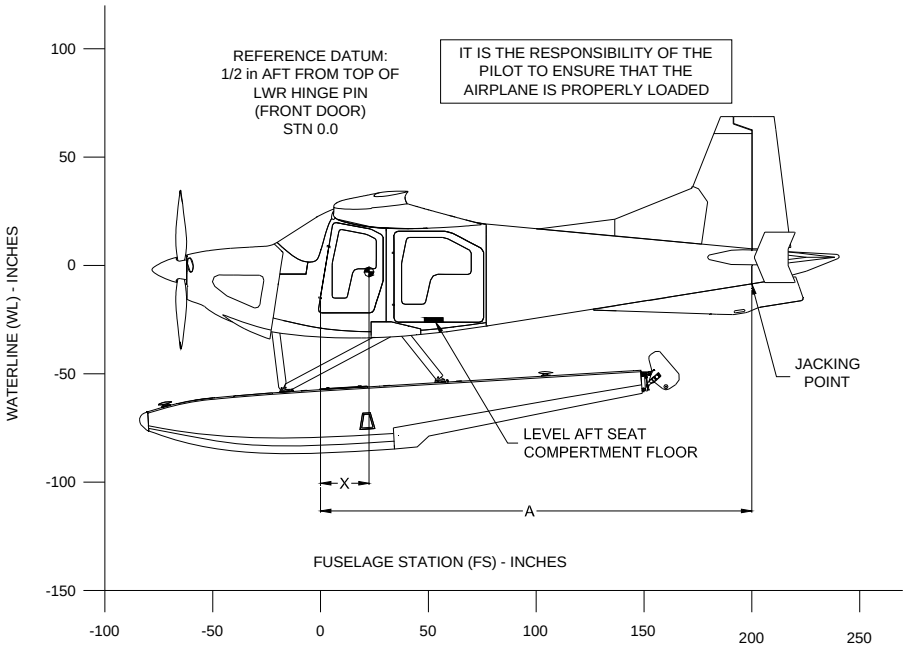

Figure 21: Airplane Weighing Form (1 of 2)

Weighing Point	Tare (lbs)	Scale Reading (lbs)	Net Weight (lbs)	Arm (inches)	Moment (in-lbs)
Tail				A=	
Right Main (float)				0.0	
Left Main (float)				0.0	
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 (6lbs/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.					

Figure 21: Airplane Weighing Form (2 of 2)

The following information will enable you to operate your FBA-2C3 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 FM2C3), 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.

Serial # : **Date:**

Registration:

ITEM	DESCRIPTION	SAMPLE AIRPLANE			YOUR AIRPLANE		
		WEIGHT (lbs)	ARM (in. AOD)	MOMENT (in-lbs / 1000)	WEIGHT (lbs)	ARM (in. AOD)	MOMENT (in-lbs / 1000)
1	**Basic Empty Weight** *Includes unusable fuel & oil*	2500	16.5	41.3			
2	Front Seat Occupants *Pilot and Front Passenger at 22 in. arm for example*	400	22.0	8.8			
3	Rear Seat Occupants *One 200lb passengers @ 56 in. arm for example*	200	56.0	11.2			
4	Baggage compartment (250 lbs Maximum) *100 lbs @ 94 in. arm for example*	100	94.0	9.4			
5	**Zero Fuel Condition** *Sub total from 1 through 4*	3200	---	70.7			
6	Usuable Fuel (6.0 lb/USG) 98 Gallon Max. @ 21.8 in. Arm *75 Gallon @ 21.8 in. arm for example*	450	21.8	9.8			
7	**Ramp Condition** *Sub total item 5 & 6*	3650	---	80.5			
8	Fuel Allowance for Engine Start, Taxi and Run-Up *Normally 2 Gallon (12 lbs) @ 21.8 in. Arm.*	12	21.8	0.3			
9	**Takeoff Condition** *Subtract item 8 from 7.* *** For CG (arm), divide Moment by weight. (i.e. 80.2 x 1000 / 3638)*	3638	22.0 **	80.2			
Note 1:	The takeoff weight in item 9 must not exceed 3800 lbs.						
Note 2:	The takeoff condition moment and CG must be within the limits shown in figures 23 to 24 at the takeoff weight condition for appropriate land or water operation.						

Figure 22: Sample Loading Form

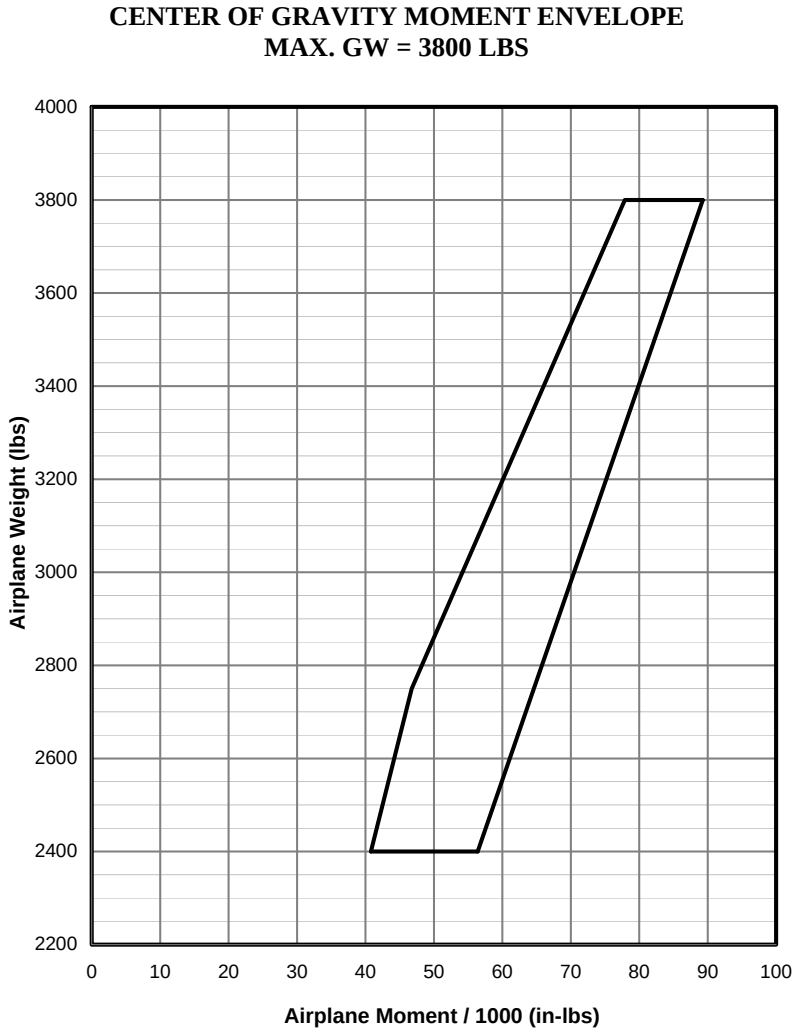

Figure 23: Loaded Airplane Moment/1000 (pound-inches)

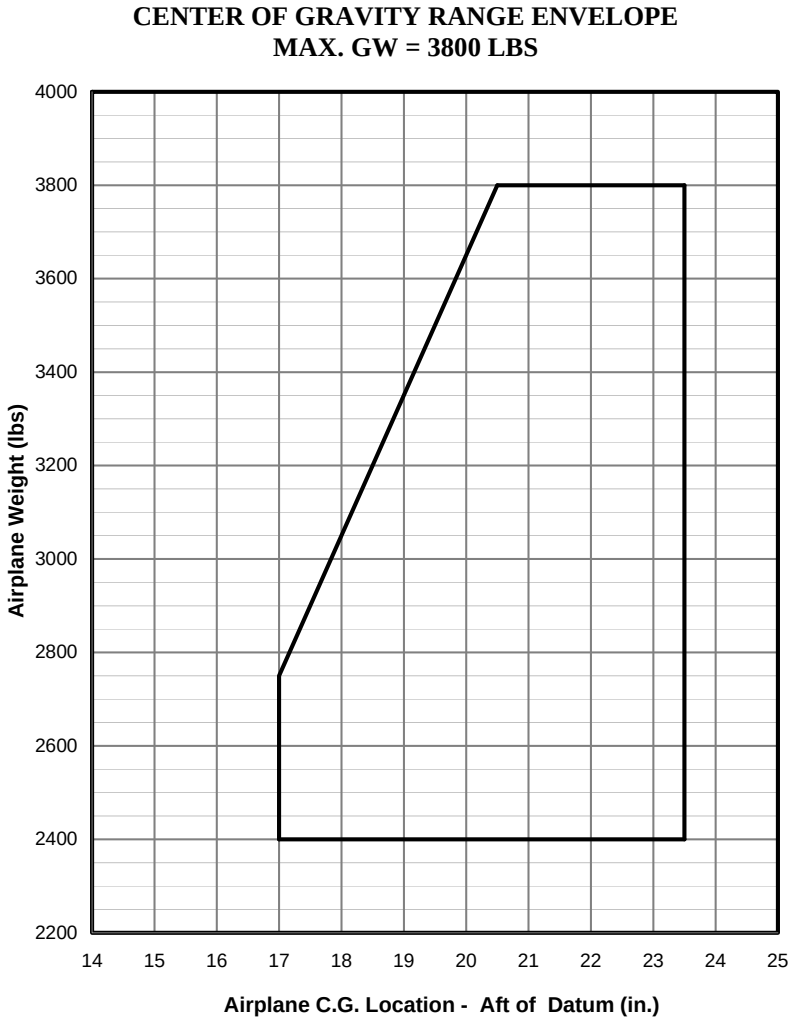

Figure 24: Airplane CG Location (Inches AFT of Datum)

SECTION 7
AIRPLANE AND SYSTEMS DESCRIPTION

In addition to the Aerocet Model 3500L 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, incorporating water rudder steering system, replace the landing gear.
2. Water rudder steering cables for retraction and steering control of the water rudders.
3. A water rudder retraction lever connected to the dual water rudders by cables is located on the cabin floor between the front seats.
4. Ventral fin located on the bottom of the fuselage and two endplates at the tips of the horizontal stabilizer.
5. Loading steps, which are mounted to the float struts.
6. Seaplane 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 on the water. 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.

CAUTION

AN OSCILLATION MAY OCCUR IN THE RUDDER PEDALS WHEN THE WATER RUDDERS ARE LEFT DEPLOYED AND LARGE RUDDER DEFLECTIONS ARE EMPLOYED IN FLIGHT.

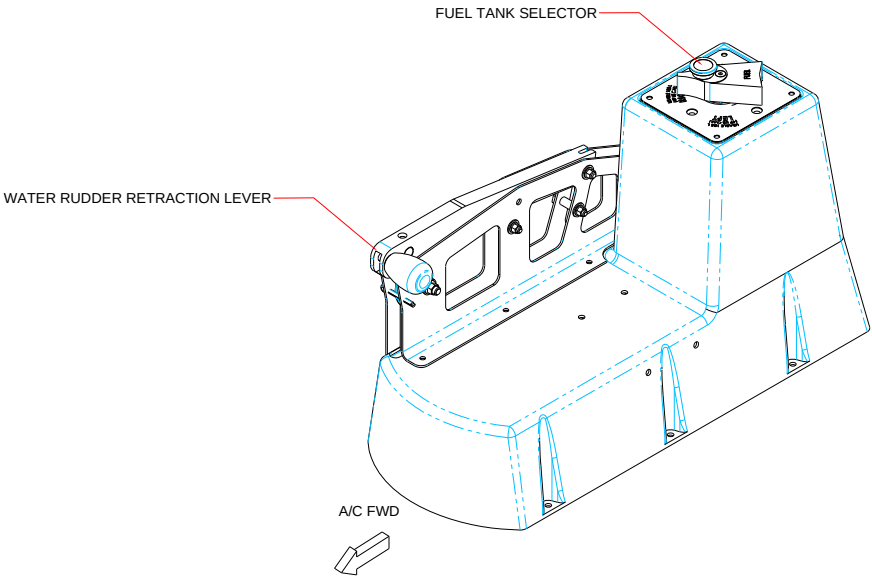

Figure 25: Water Rudder Retraction System

SECTION 8
AIRPLANE HANDLING, SERVICE, AND MAINTENANCE

Airplane handling, service, and maintenance in the basic handbook apply, in general, to the floatplane. The following recommended procedures apply specifically to the floatplane. (Cleaning, servicing and maintenance of the floats should be accomplished as suggested in the Aerocet, Inc. 3500L Service and Maintenance Manual.)

MOORING

Proper securing of the floatplane can vary considerably, depending on the type of operation involved and the facilities available. Each operator should use the method most appropriate for his operation. Some of the most common mooring alternatives are as follows:

1. The floatplane can be moored to a buoy, using a yoke tied to the forward float cleats, allowing it to freely weathervane into the wind.
2. The floatplane can be secured to a dock using the fore and aft cleats of either float. This method is generally not recommended unless the water is calm and the floatplane is attended.
3. The floatplane may be removed from the water (by use of a hydraulic lift under the spreader bars) and secured by using the wing tie-down rings and float cleats. If conditions permit the floatplane to be beached, ensure that the shoreline is free of rocks or abrasive material that may damage the floats.

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