

		 Aerocet Incorporated Airplane Flight Manual Supplement Quest KODIAK 100 on Aerocet Floats Model 6650		
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FAA APPROVED
AIRPLANE FLIGHT MANUAL SUPPLEMENT
FOR QUEST KODIAK 100

Equipped with AEROCET 6650 Amphibious 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, markings and 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 6650 Amphibious floats in accordance with Supplemental Type Certificate (STC) No. SA02452SE.

The information contained in this document supersedes the basic airplane markings, placards and 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 Flight Manual plus any applicable increased gross weight STC's Flight Manual Supplements.

FAA Approved: Shun Rippe

for Manager, Northwest Flight Test Section, AIR-715
 Federal Aviation Administration
 Seattle, Washington

FAA Approved Date: NOV 29 2018


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LOG OF REVISIONS

REV	PAGES AFFECTED	DESCRIPTION	ISSUE / REVISION DATE	FAA APPROVAL & DATE
I/R	ALL	Initial Release	8/7/2015	
A	1-2, 24-25, 33, 56 (remainder of document header only.)	Changed wording on hand pump strokes, warning on night landing, float locker description with note on lightning protection.	9/21/2015	
B	All	Format to company standards	3/06/2018	
	1	Change address		
	7	Changed 76 KCAS to 61 KIAS and 60 KCAS to 46 KIAS		
	23	Added "Note: In rough water, landing at a level attitude is preferred to cut through the waves."		
	26	Aileron Failure #2 Added "keep bank angles under 15°"		
	29	Changed rotation speed to 55 KIAS.		
	32	Changed item #9 to show 55 KIAS instead of 50 KIAS		
	35	Added verbiage to last sentence of Obstacle Takeoff Distance.		
C	3	Added "Approved" column this Revision History.	11/28/2018	 11-29-18
	9, 55, 57	Zero Fuel Weight WAS 6,490 lb; IS 7,071 lb.		
	13	Added missing verbiage "C.G." (WAS Aft Limit up to 7,255 lb; IS Aft C.G. Limit up to 7,255 lb.)		
	15	Added missing verbiage, "...compartments, centered on bottom of door (1 ea. float). (Aft baggage)		
	32	Added: "WARNING: DO NOT ATTEMPT TAKEOFF WITH KNOWN HULL LEAK OR STRUCTURAL DAMAGE.: (§IV. Just Prior to Before Entering Floatplane)		
	57	"All loading above maximum zero fuel weight (7,071 lb.) must be fuel." WAS: "All loading above 6490 LBS must be fuel (zero fuel weight)"		
	All	Pages 2 & 4 (blank) added to align document sections.		

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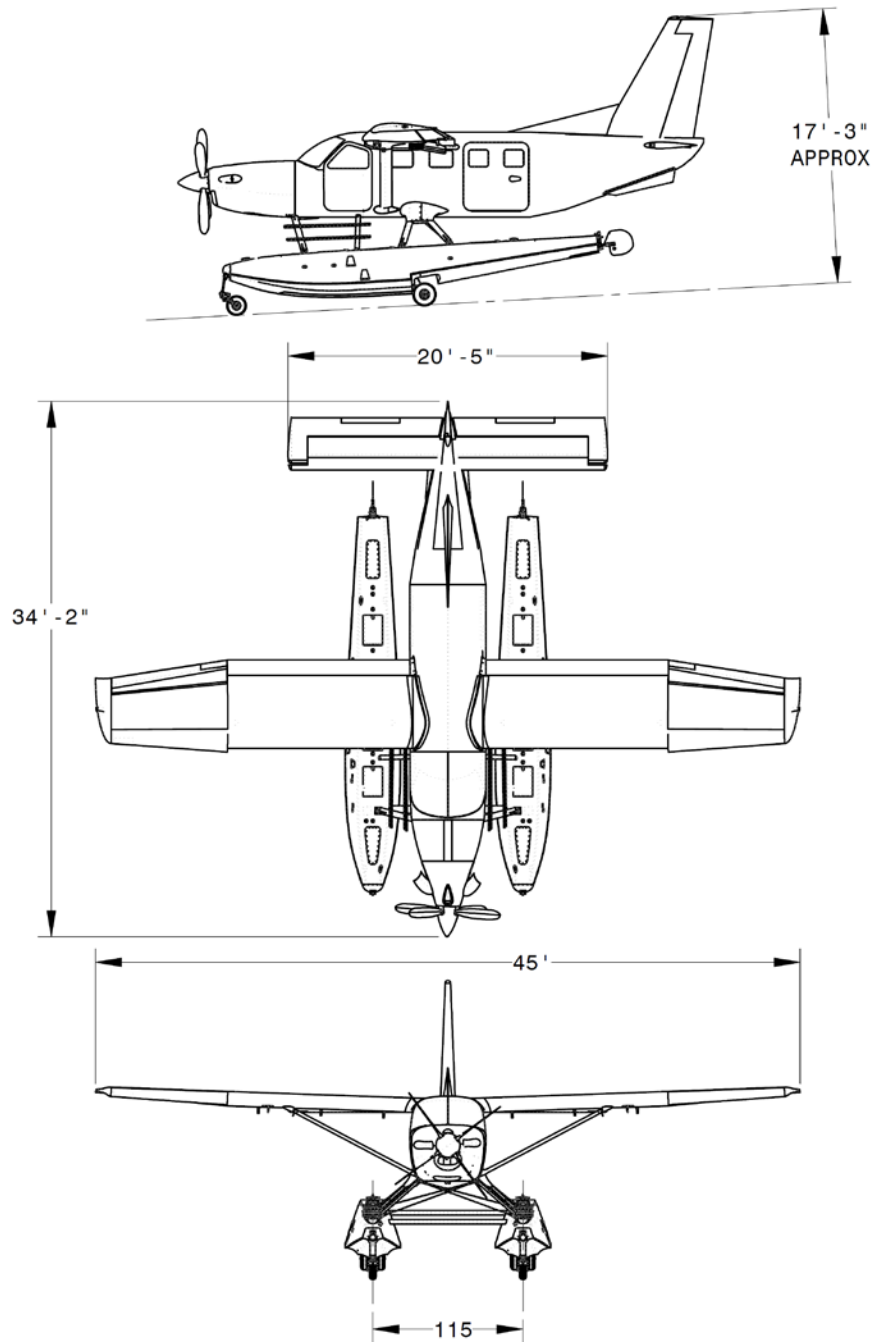


Figure 1-1 Three View

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I. GENERAL

The information contained herein supplements or supersedes the basic Quest KODIAK Model 100 POH/AFM only in those areas listed. For limitations, procedures and performance information not contained in this supplement, consult the basic POH/AFM as applicable.

WARNING:
This supplement is not intended to be a guide for basic airmanship or training. It is not a substitute for competent flight instruction and pilot knowledge.

GENERAL INFORMATION

MAXIMUM ENROUTE RATE OF CLIMB AT SEA LEVEL	
7,255 Pounds	993 ft./min.
MAXIMUM OPERATING ALTITUDE	20,000 ft.
TAKEOFF PERFORMANCE AT SEA LEVEL, 7,255 Pounds (Land)	
Ground Roll.....	975 ft.
Total Distance Over 50 ft. Obstacle	1,507ft.
LANDING PERFORMANCE AT SEA LEVEL, 7,200 Pounds (Land)	
Ground Roll.....	1,291 ft.
Total Distance Over 50 ft. Obstacle	2,046 ft.
TAKEOFF PERFORMANCE AT SEA LEVEL, 7,255 Pounds (Water)	
Water Run	1,735 ft.
Total Distance Over 50 ft. Obstacle	2,332 ft.
LANDING PERFORMANCE AT SEA LEVEL, 7,200 Pounds (Water)	
Water Run	1,314 ft.
Total Distance Over 50 ft. Obstacle	3,061 ft.
STALL SPEED	
Flaps Up, Flight Idle, 7,255 Pounds	61 KIAS
Flaps Down, Flight Idle, 7,255 Pounds	46 KIAS
MAXIMUM WEIGHT	
Ramp Weight.....	7,305 lb.
Takeoff on Wheels	7,255 lb.
Takeoff from Water.....	7,255 lb.
Landing on Wheels or Water.....	7,200 lb.
Zero Fuel Weight*	7,071 lb.
STANDARD EMPTY WEIGHT	4,500 lb.
USEFUL LOAD	2,755 lb.

***NOTE:**
All weight above this amount must be in fuel

****NOTE:**
Water rotation distances established using 55 KIAS.

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II. LIMITATIONS

The Quest KODIAK 100 Amphibian is FAA certificated in the Normal Category.

The Limitations in this section apply only to the operations of the Quest KODIAK 100 equipped with Aerocet Model 6650 amphibious floats and supplement or supersede the basic Quest KODIAK Model 100 POH/AFM for those areas listed. Consult the basic AFM for other limitations.

AIRSPEED LIMITATIONS

Aerocet Airspeed Limitations and their operational significance are shown below.

		KIAS	KCAS	REMARKS
V _{LO}	Maximum Landing Gear Operation	140	138	Do not extend or retract the landing gear above this speed.
V _{LE}	Maximum Extended Gear Speed	182	180	Do not fly above this speed with the gear extended

CENTER OF GRAVITY LIMITS

Center of Gravity Range:

Forward C.G. Limit (5,900 lb. or Less)	67.50 inches aft of datum (19.0% MAC)
Forward C.G. Limit (7,050 lb.)..... (Linear variation from 5,900lb to 7,050 lb.)	72.10 inches aft of datum (26.6% MAC)
Forward C.G. Limit (7,255 lb.)..... (Linear variation from 7,050 lb. to 7,255 lb.)	74.50 inches aft of datum (30.3% MAC)
Aft C.G. Limit, up to 7,255 lb.	78.50 inches aft of datum (36.5% MAC)

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KINDS OF OPERATION LIMITS

Basic Aircraft Unchanged – Refer to Aircraft POH/AFM. Operation on grass/gravel fields approved but allowance for increased takeoff distances must be accounted for. Landing on water at night is prohibited. See takeoff table notes.

FAA equipment requirements may not apply outside the USA. The aircraft must be equipped in accordance with national requirements.

The following list summarizes the equipment required by FAR23 for airworthiness for the particular kind of operation. Those minimum items of equipment necessary under the operating rules are defined in FAR 91 and FAR 135 as applicable.

Instrument, System, or Equipment	Kinds of operation			
	VFR, Day	VFR, Night	IFR, Day	IFR, Night
KODIAK 100 POH/AFM - Basic Aircraft	1	1	1	1
Approved Aerocet 6650 AFMS	1	1	1	1
Landing Gear Lights Up	4	4	4	4
Landing Gear Lights Down	4	4	4	4
Landing Gear Pump Running Light	1	1	1	1
Mirrors To Show Gear Position	2	2	2	2

Figure 2-1 Kinds of Operation Equipment List

MAXIMUM OPERATING ALTITUDE LIMIT

20,000 ft.

ICING LIMITATIONS

Flight into known icing prohibited.

TAKEOFF FLAPS LIMITATION

Flaps set to 20 degrees is only approved position.

LANDING FLAPS LIMITATION

Flaps set to 35 degrees is only approved position.

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TAKE OFF LIMITS

MAXIMUM TAKEOFF WEIGHTS FROM LAND QUEST KODIAK MODEL 100 AMPHIBIAN

See §5 for Performance Details

Conditions: Max takeoff power, flaps 20°, gear down, 83 KIAS at S.L. to 80 KIAS at 10,000 ft.

1. These weights assure the availability of a steady gradient of climb of at least 243 ft./nm.
2. Dashed entries correspond to outside air temperatures beyond aircraft limits.
3. Takeoff is prohibited when airport altitude and temperature fall in the shaded areas below at weights above those shown.

OAT (°C)	OAT (°F)	PRESSURE ALTITUDE (FEET)										
		0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
-3	26.6	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
-1	30.2	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
1	33.8	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
3	37.4	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
5	41.0	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
7	44.6	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
9	48.2	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
11	51.8	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
13	55.4	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
15	59.0	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7225
17	62.6	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7100
19	66.2	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	6960
21	69.8	7255	7255	7255	7255	7255	7255	7255	7255	7255	7165	6835
23	73.4	7255	7255	7255	7255	7255	7255	7255	7255	7255	7025	6720
25	77.0	7255	7255	7255	7255	7255	7255	7255	7255	7200	6885	6600
27	80.6	7255	7255	7255	7255	7255	7255	7255	7255	7050	6760	6480
29	84.2	7255	7255	7255	7255	7255	7255	7255	7240	6920	6635	6355
31	87.8	7255	7255	7255	7255	7255	7255	7255	7075	6780	6505	6215
33	91.4	7255	7255	7255	7255	7255	7255	7255	6935	6640	6365	---
35	95.0	7255	7255	7255	7255	7255	7255	7120	6785	6490	---	---
37	98.6	7255	7255	7255	7255	7255	7255	6985	6625	---	---	---
39	102.2	7255	7255	7255	7255	7255	7255	6780	---	---	---	---
41	105.8	7255	7255	7255	7255	7255	7155	---	---	---	---	---
43	109.4	7255	7255	7255	7255	7255	---	---	---	---	---	---
45	113.0	7255	7255	7255	7255	---	---	---	---	---	---	---
47	116.6	7255	7255	7255	---	---	---	---	---	---	---	---
49	120.2	7255	7255	---	---	---	---	---	---	---	---	---

NOTE: Weight in Kilograms = weight in pounds (X) 0.4536

Figure 2-2 Maximum Takeoff Weights – Land – Pounds

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**MAXIMUM TAKEOFF WEIGHTS FROM WATER
QUEST KODIAK MODEL 100 AMPHIBIAN**

See §5 for Performance Details

Conditions: Max takeoff power, flaps 20°, gear up, 83 KIAS at S.L. to 82 KIAS at 10,000 ft

1. These weights assure the availability of a steady gradient of climb of at least 243 ft/nm.
2. Dashed entries correspond to outside air temperatures beyond aircraft limits.
3. Takeoff is prohibited when water altitude and temperature fall in the shaded areas below at weights above those shown.

OAT (°C)	OAT (°F)	PRESSURE ALTITUDE (FEET)										
		0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
-3	26.6	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
-1	30.2	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
1	33.8	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
3	37.4	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
5	41.0	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
7	44.6	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
9	48.2	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
11	51.8	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
13	55.4	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
15	59.0	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
17	62.6	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255
19	66.2	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7235
21	69.8	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	7095
23	73.4	7255	7255	7255	7255	7255	7255	7255	7255	7255	7255	6985
25	77.0	7255	7255	7255	7255	7255	7255	7255	7255	7255	7150	6865
27	80.6	7255	7255	7255	7255	7255	7255	7255	7255	7255	7030	6750
29	84.2	7255	7255	7255	7255	7255	7255	7255	7255	7190	6905	6630
31	87.8	7255	7255	7255	7255	7255	7255	7255	7255	7055	6780	6500
33	91.4	7255	7255	7255	7255	7255	7255	7255	7210	6920	6655	---
35	95.0	7255	7255	7255	7255	7255	7255	7255	7065	6775	---	---
37	98.6	7255	7255	7255	7255	7255	7255	7240	6905	---	---	---
39	102.2	7255	7255	7255	7255	7255	7255	7060	---	---	---	---
41	105.8	7255	7255	7255	7255	7255	7255	---	---	---	---	---
43	109.4	7255	7255	7255	7255	7255	---	---	---	---	---	---
45	113.0	7255	7255	7255	7255	---	---	---	---	---	---	---
47	116.6	7255	7255	7255	---	---	---	---	---	---	---	---
49	120.2	7255	7255	---	---	---	---	---	---	---	---	---

NOTE: Weight in Kilograms = weight in pounds (X) 0.4536

Figure 2-3 Maximum Takeoff Weights – Water – Pounds

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LANDING LIMITS

MAXIMUM LANDING WEIGHTS ON LAND QUEST KODIAK MODEL 100 AMPHIBIAN

See §5 for Performance Details

Conditions: Max takeoff power, flaps 35°, gear down, 73 KIAS

1. These weights assure the availability of a steady gradient of climb of at least 152 ft./nm.
2. Dashed entries correspond to outside air temperatures beyond aircraft limits.
3. Landings are prohibited when airport altitude and temperature fall in the shaded areas below at weights above those shown.

OAT (°C)	OAT (°F)	PRESSURE ALTITUDE (FEET)										
		0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
-3	26.6	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
-1	30.2	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
1	33.8	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
3	37.4	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
5	41.0	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
7	44.6	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
9	48.2	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7140
11	51.8	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7040
13	55.4	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	6935
15	59.0	7200	7200	7200	7200	7200	7200	7200	7200	7200	7145	6830
17	62.6	7200	7200	7200	7200	7200	7200	7200	7200	7200	7030	6700
19	66.2	7200	7200	7200	7200	7200	7200	7200	7200	7200	6920	6585
21	69.8	7200	7200	7200	7200	7200	7200	7200	7200	7125	6800	6465
23	73.4	7200	7200	7200	7200	7200	7200	7200	7200	7005	6680	6345
25	77.0	7200	7200	7200	7200	7200	7200	7200	7200	6875	6550	6215
27	80.6	7200	7200	7200	7200	7200	7200	7200	7080	6760	6420	6090
29	84.2	7200	7200	7200	7200	7200	7200	7200	6940	6620	6285	5955
31	87.8	7200	7200	7200	7200	7200	7200	7130	6805	6475	6150	5815
33	91.4	7200	7200	7200	7200	7200	7200	6990	6655	6325	6005	---
35	95.0	7200	7200	7200	7200	7200	7165	6840	6500	6175	---	---
37	98.6	7200	7200	7200	7200	7200	7015	6690	6340	---	---	---
39	102.2	7200	7200	7200	7200	7175	6865	6525	---	---	---	---
41	105.8	7200	7200	7200	7200	7020	6705	---	---	---	---	---
43	109.4	7200	7200	7200	7170	6860	---	---	---	---	---	---
45	113.0	7200	7200	7200	7010	---	---	---	---	---	---	---
47	116.6	7200	7200	7155	---	---	---	---	---	---	---	---
49	120.2	7200	6990	---	---	---	---	---	---	---	---	---

NOTE: Weight in Kilograms = weight in pounds (X) 0.4536

Figure 2-4 Maximum Landing Weights – Land – Pounds

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**MAXIMUM LANDING WEIGHTS ON WATER
QUEST KODIAK MODEL 100 AMPHIBIAN**

See §5 for Performance Details

Conditions: Max takeoff power, flaps 35°, gear up, 73 KIAS

1. These weights assure the availability of a steady gradient of climb of at least 152 ft/nm.
2. Dashed entries correspond to outside air temperatures beyond aircraft limits.
3. Landings are prohibited when water altitude and temperature fall in the shaded areas below at weights above those shown.

OAT (°C)	OAT (°F)	PRESSURE ALTITUDE (FEET)										
		0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
-3	26.6	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
-1	30.2	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
1	33.8	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
3	37.4	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
5	41.0	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
7	44.6	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
9	48.2	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
11	51.8	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
13	55.4	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
15	59.0	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
17	62.6	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
19	66.2	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
21	69.8	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
23	73.4	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200
25	77.0	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7045
27	80.6	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	6935
29	84.2	7200	7200	7200	7200	7200	7200	7200	7200	7200	7145	6790
31	87.8	7200	7200	7200	7200	7200	7200	7200	7200	7200	6995	6645
33	91.4	7200	7200	7200	7200	7200	7200	7200	7200	7185	6845	---
35	95.0	7200	7200	7200	7200	7200	7200	7200	7200	6995	---	---
37	98.6	7200	7200	7200	7200	7200	7200	7200	7155	---	---	---
39	102.2	7200	7200	7200	7200	7200	7200	7200	---	---	---	---
41	105.8	7200	7200	7200	7200	7200	7200	---	---	---	---	---
43	109.4	7200	7200	7200	7200	7200	---	---	---	---	---	---
45	113.0	7200	7200	7200	7200	---	---	---	---	---	---	---
47	116.6	7200	7200	7200	---	---	---	---	---	---	---	---
49	120.2	7200	7200	---	---	---	---	---	---	---	---	---

NOTE: Weight in Kilograms = weight in pounds (X) 0.4536

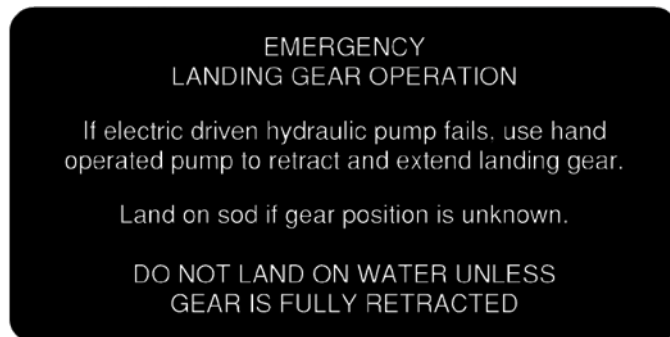
Figure 2-5 Maximum Landing Weights – Water – Pounds

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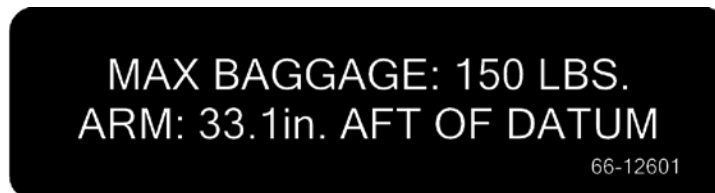
PLACARDS

The following information on placards pertaining to flight and Operating Limitations must be displayed:

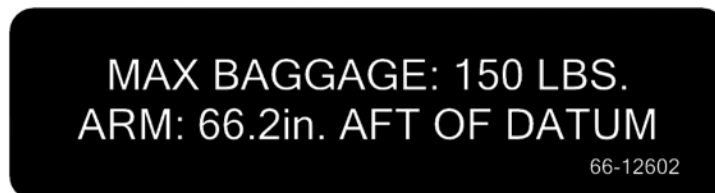
1. In full view of the Pilot



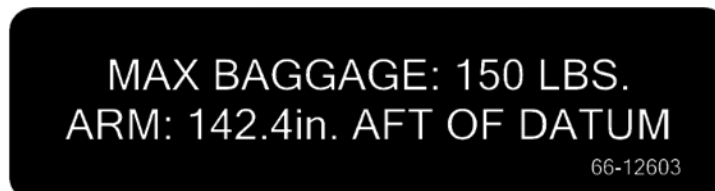
2. In forward baggage compartments, centered on bottom of door (1 ea. float):



3. In middle baggage compartments, centered on bottom of door (1 ea. float):



4. In aft baggage compartments, centered on bottom of door (1 ea. float):



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5. In full view of the pilot:

**EMERGENCY HAND PUMP
OPERATING INSTRUCTIONS**

1. Pump power circuit breaker - pull out.
2. Move landing gear position lever to desired position.
3. Extend emergency pump handle - Pump until gear lights show desired position and there is significant force on pump handle.

66-12054

6. In full view of pilot, near water rudder control.

WATER RUDDER
ALWAYS UP
EXCEPT
WATER TAXIING

DN
↔
UP

EMERGENCY
HAND PUMP

7. Affixed to Hydraulic Pump Reservoir:

Normal fluid height - 2.25" below top of filler neck
USE MIL-H-5606 ONLY 66-12057

8. In full view of the pilot:

This airplane is certified in the Normal Category. The markings and placards installed in this airplane must be complied with when operating this airplane. This airplane must be operated in accordance with the FAA Approved Flight Manual and Pilot's Operating Handbook, and FAA Approved Airplane Flight Manual Supplement when equipped with Aerocet Model 6650 floats.

Aerobatic maneuvers, including spins are PROHIBITED. Flight into known icing is PROHIBITED.

This airplane is certified for the following flight operations as of the date of issuance of the original airworthiness certificate:

DAY - NIGHT - VFR - IFR

66-12052

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9. In full view of the pilot:

AEROCET FLOAT EQUIPPED AMPHIBIAN
MAX. GEAR OPERATION SPEED (V_{LO}): 140 KIAS
MAX. GEAR EXTENDED SPEED (V_{LE}): 182 KIAS
66-12051

10. Locate to the right of the TAWS Inhibit button:

TAWS INHIBIT

11. Locate above 1 amp breaker:

GR. ADV.
Wt. On Whls.

12. Locate above 1 amp breaker:

**RELAY &
FLOAT
SENSORS**

13. Locate above 15 amp breaker:

**PUMP
PWR**

14. Locate on Pedestal to the right side of the gear selector handle:

DOWN
↑
GEAR
↓
UP

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III. EMERGENCY PROCEDURES

§III of this supplement describes the recommended procedures for the KODIAK amphibian emergency situations which may occur. Emergencies caused by the airplane or engine malfunctions are quite rare if properly maintained and preflight inspections are conducted. However, should an emergency condition arise, the basic procedures included in the section should be considered and applied as necessary to resolve the problem.

WARNING!!

There is no substitute for proper and complete preflight planning habits and their continual review in minimizing emergencies. Be thoroughly knowledgeable of hazards and conditions that represent potential dangers, and be aware of the capabilities and limitations of the airplane.

AIRSPEEDS FOR EMERGENCY OPERATION

Engine Failure After Takeoff:	
Wing Flaps 20°, 7,255 lb.	85 KIAS
Maneuvering Speed:	
7,255 lb.	141 KIAS
6,000 lb.	128 KIAS
5,000 lb.	117 KIAS
Recommended Glide:	
7,255 lb, Flaps 0°, Gear Up	97 KIAS
Precautionary Landing With Engine Power:	
7,200 lb, Flaps 35°	80 KIAS
Touchdown	as slow as possible
Approach To Landing Without Engine Power (not for water landing)	
7,200 lb, Flaps 0°	100 KIAS
7,200 lb, Flaps 35°	85 KIAS
Touchdown	as slow as possible

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ENGINE FAILURE DURING TAKEOFF RUN ON WATER

1. Power Lever – IDLE
2. Elevator – CONTROL YOKE – FULL AFT
3. Power Lever – BETA RANGE

If the airplane cannot be stopped on the remaining length of waterway:

4. Water Rudders – DOWN
5. Fuel Condition Lever – CUTOFF
6. Firewall Fuel Shutoff – FUEL OFF (Pull Out)
7. Fuel Selector Valves – OFF (Red LED warning light will be shown on panel)
8. Master Switch - OFF

ENGINE FAILURE IMMEDIATELY FOLLOWING TAKEOFF

1. Airspeed – 85 KIAS with 20° of Flaps
2. Power Lever – IDLE
3. Propeller Control Lever – FEATHER
4. Wing Flaps – FULL DOWN
5. Landing Gear – Select Gear DOWN FOR LAND landing, Select Gear UP FOR WATER landing (if time doesn't permit deployment for a land landing (35 seconds), land gear up)
6. Fuel Condition Lever – CUTOFF
7. Firewall Fuel Shutoff – FUEL OFF (Pull Out)
8. Fuel Selector Valves – OFF (Red LED warning light will be shown on panel)
9. Master Switch - OFF
10. Landing – MAKE AS STRAIGHT AHEAD AS POSSIBLE
11. Water Rudders – DOWN as needed on Water

CATASTROPHIC ENGINE FAILURE DURING FLIGHT

1. Airspeed – 97 KIAS
2. Power Lever – IDLE
3. Propeller Control Lever – FEATHER
4. Fuel Condition Lever – CUTOFF
5. Wing Flaps - UP
6. Landing Gear – Select Gear UP
7. Auxiliary Fuel Pump - OFF
8. Firewall Fuel Shutoff – FUEL OFF (Pull Out)
9. Ignition Switch - OFF
10. Standby Alternator - OFF
11. Electrical Load - REDUCE
12. Landing – Refer to the Engine Out Emergency Landing Checklist

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EMERGENCY DESCENT (Low Altitude)

1. Propeller – MAX RPM
2. Power Lever – IDLE
3. Flaps – FULL DOWN
4. Airspeed – 108 KIAS

EMERGENCY DESCENT (High Altitude)

1. Propeller – MAX RPM
2. Power Lever – IDLE
3. Flaps – 0°
4. Airspeed – 172 KIAS

GLIDE

1. Propeller Lever – FEATHER
2. Flaps – UP
3. Airspeed – 97 KIAS

MAXIMUM GLIDE KODIAK 100 AMPHIBIAN ON AEROCET FLOATS

At 97 KIAS

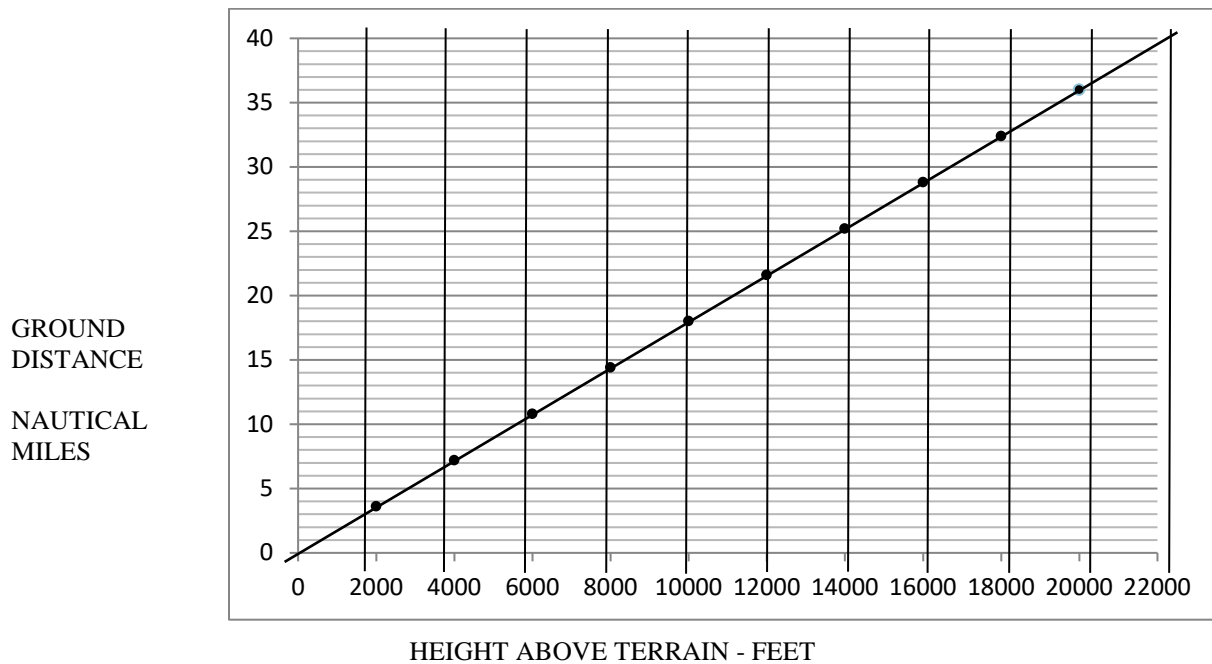


Figure 3-1 Glide Performance

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EMERGENCY LANDING ON WATER WITHOUT ENGINE POWER

1. Prop Control Lever – FEATHER

NOTE:
Significantly improved glide performance will be available with the propeller feathered.

2. Airspeed – 100 KIAS (Flaps Up) or 85 KIAS (Flaps Down)
3. Heavy Objects in Cabin – SECURE
4. Seatbelt and Shoulder Harness – SECURE
5. Inertial Reel Levers – LOCKED
6. Radio – TRANSMIT MAYDAY ON 121.5 MHZ OR WITH ATC
7. Power Lever – IDLE
8. Fuel Condition Lever – CUTOFF
9. Auxiliary Fuel Pump – OFF
10. Ignition Switch – OFF
11. AUX BUS – OFF
12. Firewall Fuel Shutoff – OFF
13. Landing Gear – CHECK Select Gear UP; Blue Lights – 4 ON.
14. Flaps – FULL DOWN
15. Crew Doors – UNLATCH
16. Generator - OFF
17. Standby Alternator – OFF
18. Airspeed – 85 KIAS on final, as slow a possible at landing
19. Master – OFF (when landing is assured)
20. Touchdown – SLIGHTLY TAIL LOW
21. After Touchdown – CONTROL YOKE – FULL AFT
22. Water Rudders – DOWN as needed

NOTE:
In rough water, landing at a level attitude is preferred to cut through the waves.

FLAP FAILURE

1. Follow POH for troubleshooting.
2. Follow normal procedures except Approach Airspeed – 100 KIAS (Flaps Up).

NOTE:
Preferred landing surface is land and use of reverse thrust is recommended.

WARNING!!
The audio gear advisory may not occur until the landing flare is initiated during an emergency flaps-up landing. During flaps-up landings the pilot should double check the gear position and not rely on the audible message.

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LANDING GEAR MALFUNCTION PROCEDURES

LANDING GEAR FAILS TO RETRACT

Electrical failures – skip to #9

1. Landing Gear Position Lever – Select Gear UP POSITION
2. Landing Gear Motor Circuit Breaker - IN.
3. Gear Relay Circuit Breaker - IN.
4. Gear Advisory Circuit Breaker - IN.
5. Gear Up Lights - CHECK bulb operation (press-to-test).
6. Gear Visual - VISUALLY CHECK ALL GEAR WITH MIRRORS
7. Landing Gear Position Lever - RECYCLE.
8. Landing Gear Motor - CHECK operation (motor indicator light, ammeter and noise).

NOTE:

If the landing gear still does not retract and a water landing is desired.

9. Landing Gear Motor Circuit Breaker - PULL.
10. Landing Gear Position Lever – Select Gear “UP”.
11. Extend Emergency Hand Pump Lever - PUMP up and down until gear is in UP position – (approximately 70 full strokes, – short strokes are easier but require far more in quantity - slower flight speeds make the strokes easier. There will be a significant force increase felt on the pump handle when the gear reach their commanded position.)
12. Gear Up Lights - CHECK ILLUMINATED. (If electrical power is available)
13. Main Gear Visual Indicators - VISUALLY CHECK WITH MIRRORS THAT THE GEAR IS RETRACTED

WARNING !!

If the landing gear still does not retract, landing on water should never be attempted. If either nose gear is down, the aircraft will flip onto its back and is likely to flip with either main gear down causing either fatal or serious injury.

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LANDING GEAR FAILS TO EXTEND

Electrical failures – skip to #9

1. Landing Gear Position Lever – Select Gear DOWN POSITION
2. Landing Gear Motor Circuit Breaker - IN.
3. Gear Relay Circuit Breaker - IN.
4. Gear Advisory Circuit Breaker - IN.
5. Gear Down Lights - CHECK bulb operation (press-to-test).
6. Gear Visual - VISUALLY CHECK ALL GEAR WITH MIRRORS
7. Landing Gear Position Lever - RECYCLE.
8. Landing Gear Motor - CHECK operation (motor indicator light, ammeter and noise).

NOTE:
If the landing gear still does not extend and a land landing is desired.

9. Landing Gear Motor Circuit Breaker - PULL.
10. Landing Gear Position Lever – Select Gear “DOWN”.
11. Extend Emergency Hand Pump Lever - PUMP up and down until gear is in DOWN position – (approximately 90 full strokes - short strokes are easier but require far more in quantity – slower flight speeds make the strokes easier. There will be a significant force increase felt on the pump handle when the gear reach their commanded position.)
12. Gear Down Lights - CHECK ILLUMINATED. (If electrical power is available)
13. Main Gear Visual Indicators - VISUALLY CHECK WITH MIRRORS THAT ALL GEAR ARE EXTENDED

NOTE:
If the landing gear still does not extend and a land landing is desired, retract all gear and land at a slightly tail down attitude.

LANDING GEAR PUMP LIGHT ILLUMINATES (WHITE)

If landing gear retraction or extension is in progress

1. No action required, normal condition

If landing gear retraction or extension is complete and light (pump) stays on

1. Landing Gear Pump – PULL PUMP PWR (on circuit breaker panel)
2. Before landing – PUSH TO RESET
3. Landing Gear – SELECT GEAR UP for water landing
– SELECT GEAR DOWN for land landing
4. Landing Gear Pump Circuit Breaker – PULL (after gear has reached desired position)

NOTE:
A pump running light may indicate a hydraulic system leak – there may not be enough fluid to change the gear position later.

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LANDING GEAR STUCK IN TRANSIT

1. Land on land
2. Landing Gear Position Lever – Select Gear UP POSITION
3. Flaps 35° 76 KIAS
4. Land slightly tail down attitude
5. Be prepared for possible loss of directional control

AILERON FAILURE

1. Immediately Reduce Flaps to 20° or less (With flaps deflected to 35° there is a lack of roll control using the rudder without ailerons.)
2. Use Rudder for directional/roll control – keep bank angles under 15°
3. Use aileron trim as needed
4. Land with Flaps 20° 80 KIAS and as much into the wind as possible

SPINS - (Typical Recovery from an Unintentional Spin)

1. Power Lever - IDLE
2. Ailerons - NEUTRAL
3. Rudder – FULL OPPOSITE SPIN DIRECTION
4. Control Yoke – BRISKLY FORWARD until spin motion stops
5. Controls – NEUTRALIZE and recover from resulting dive
6. Flaps – RETRACT if extended

AMPLIFIED PROCEDURES

MECHANICAL FAILURE

If it is ascertained that a mechanical failure has occurred and the gear will not achieve either a gear up or a gear down position with visual confirmation, the best course of action will be dependent upon the nature of the failure and the choices of landing surfaces available. In the unlikely event that a landing gear has failed in an intermediate position, and cannot be moved to either a Gear Up or Gear Down position, the amphibian should **be landed on land only**.

WARNING !!

DO NOT land in the water with the wheels either partially or fully extended. If the landing MUST be accomplished on water and the gear is partially or fully extended, it is suggested that a power-on full stall landing with full flaps (35°) would be the best procedure. Unlatch both forward cabin doors prior to touchdown, and the upper portion of the cargo door if possible with passengers on board. During deceleration after touchdown, with the gear extended, the float bows will submerge and there is a high probability of flipping the amphibian onto its back causing either fatal or serious injury.

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DITCHING

For ditching the aircraft in heavy seas landings should be made parallel to swells, if possible. Landing gear should be in the UP position and heavy objects should be secured or jettisoned. Transmit Mayday message on 121.5 MHz providing the location and intentions and squawk 7700. At night landing flares should be avoided because of possible difficulty in judging the aircraft's height above water surfaces.

LANDING WITH A FLAT MAIN TIRE

The amphibious float landing gear has dual wheel main gear trucks on each float. If one tire is known to be flat efforts should be made to reduce the weight on that side. This can be accomplished by touching down on the fully inflated side first and then allowing the flat side to settle onto the runway. No significant difference in ground handling will be evident with one flat main tire.

The amphibious float landing gear has quadricycle gear. If one nose tire is known to be flat prior to landing, touchdown should be accomplished on the main wheels first and gently lower the nose wheels. Once the nose wheels have touched, brakes should be applied and taxi conducted at as slow a speed as practicable. High speed operations with a flat nose tire may produce nose gear shimmy which can lead to further damage.

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IV. NORMAL PROCEDURES:

(NOTE: THESE ITEMS SUPPLEMENT THE KODIAK 100 NORMAL PROCEDURES)

WARNING!!

There is no substitute for proper and complete preflight planning habits and their continual review in minimizing emergencies. A pilot must be thoroughly knowledgeable of hazards and conditions which represent potential dangers, and be aware of the capabilities and limitations of the airplane.

AIRSPEEDS FOR NORMAL OPERATIONS

Takeoff @ 50 Foot Obstacle:

Rotation Speed 55 KIAS
 Normal Climb Out.....85-95 KIAS
 Short Field Takeoff, Flaps 20° 73 KIAS

Enroute Climb (Flaps Up):

Cruise Climb 105-115 KIAS
 Vy (S.L.)..... 93 KIAS
 Vy (10,000 ft)..... 90 KIAS

Approach to Landing:

Normal Approach, Flaps 35° 80 KIAS
 Normal Approach, Flaps 20° 85 KIAS
 Short Field Approach, Flaps 35° (V-REF)..... 76 KIAS

Balked Landing/Go-Around:

Takeoff Power, Flaps 20° 74 KIAS

Maximum Turbulent Air Penetration Speed:

7,255 Pounds 142 KIAS
 6,000 Pounds 129 KIAS
 5,000 Pounds 118 KIAS

Maximum Demonstrated Crosswind Velocity:

Takeoff/Landing - Land 14 KTS
 Takeoff/Landing - Water 12 KTS

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WARNING:
DO NOT ATTEMPT TAKEOFF WITH KNOWN HULL LEAK OR STRUCTURAL DAMAGE.

BEFORE ENTERING FLOATPLANE

1. Inspect the floats and attachment for dents, cracks, punctures, ETC.
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 – if there is red hydraulic fluid in any water, investigate fittings and lines in that bay before proceeding.
3. Landing gear – INSPECT. Check the main wheel oleo struts for proper inflation; check the tires for cuts, bruises, flat spots (cords showing) and proper inflation. Check fluid level in hydraulic reservoir.

NOTE:
 Refer to labels on the main wheel oleo struts for strut inflation procedures. Proper tire inflation for 6.00-6 main wheel tires is 50 PSI; tire inflation for the 5.00-5 nose wheel is 50 PSI.

4. Inspect Water Rudder System – INSPECT for worn cables, Pulleys, ETC.
5. Inspect locker door latches – DETENTS ENGAGED, LATCHES TURNED CLOCKWISE TO STOPS.
6. Inspect Main Gear Wheel Wells – INSPECT for Rocks, Dirt/Clay Buildup, Debris, ETC.

BEFORE MASTER SWITCH IS TURNED ON

1. Landing Gear Position Lever –DOWN (Amphibian on Land), UP (Amphibian on Water)
2. Water Rudder Operation – CHECK VISUALLY
3. Water Rudders – DOWN FOR TAXIING ON WATER, UP FOR TAXIING ON LAND
4. Water Rudders – CHECK FREEDOM OF MOVEMENT & SECURITY
5. Verify Flight Hobbs – VERIFY THAT FLIGHT TIME HAS NOT BEEN ACCUMULATED SINCE LAST FLIGHT (this assures that the weight on wheels/floats switch is working)

CAUTION!!
 Retracting the Landing Gear while on Land WILL damage landing gear components.

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LAND TAXIING

Taxi with water rudders up. Since steering is done predominately with the use of brakes, it is best to keep up some taxi speed making moving turns. Fuel condition lever should be set to low idle. The power level may be placed into BETA range during taxi on land to improve brake life and to prevent excessive taxi speeds. BETA range is selected by lifting up on the BETA lever and moving the power lever to aft – over a gate. With the power lever moved into this BETA range position, the propeller is at a fine pitch and produces nearly zero thrust in a static 52% Ng idle condition. A leaf spring is installed in the control quadrant which the power lever contacts and provides the pilot with an indication of reaching the REVERSE range. Moving the power lever further aft from this position in REVERSE range will result in a negative blade angle and an increase in engine power to produce reverse thrust from the blades.

WATER TAXIING

Taxi with water rudders down. It is best to place the fuel condition lever in low idle and use BETA with the power lever as needed to keep the float bow as high as possible at forward CG conditions. During all low speed taxi operations, the elevator should be positioned to keep the float bows out of the water as far as possible.

In taxiing on the water in high winds, use of BETA will sometimes aid in a turn to downwind, especially to the left. BETA / REVERSE can be used on water, taking care to avoid excessive spray ingestion. (Bows up.)

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 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 while on the step from an upwind heading to a downwind heading may be made with safety providing they are not too sharp and if ailerons are used to counteract any overturning tendency.

DEMONSTRATED WAVE HEIGHT

The KODIAK amphibian has been demonstrated to operate satisfactorily in wave heights (trough to crest) of 16 inches. This is not considered to be a limitation. Rough water conditions are best addressed with landing relatively level to allow the bows to better cut through the waves.

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TAKEOFF ON WATER

1. Landing Gear – Select Gear UP
2. Landing Gear Blue Indicator Lights – CHECK ILLUMINATED*
3. Water Rudders – UP (retraction handle aft)
4. Wing Flaps – 20° (second notch and only allowable takeoff flap position)
5. Control Yoke – HOLD FAR AFT INITIALLY
6. Fuel Condition Lever – HIGH IDLE
7. Power – SET FOR TAKEOFF (Observe Takeoff Torque, ITT and Ng Limits)
8. Control Yoke – MOVE FORWARD TO ATTAIN PLANING ATTITUDE.

***WARNING:**

Never attempt a take off without all blue indicator lamps illuminated – any gear hanging down will drag the aircraft dangerously into an arc, compromising takeoff distances, and endangering the occupants.

NOTE:

If porpoising is encountered while on the step, apply an amount of control wheel back pressure to correct the excessively nose-low attitude. If this does not correct the porpoising, reduce power to idle and allow the seaplane to slow to taxi speed, at which time the takeoff can be restarted.

9. Control Yoke - APPLY LIGHT BACK PRESSURE UNTIL AIRCRAFT LEAVES WATER TO LIFT OFF AT APPROXIMATELY 55 KIAS.

CAUTION:

Rotation off the water at excessive speeds introduces high loads to the aircraft and float equipment. In rough water a more level attitude will lower the airframe allowing the bows to cut through the waves. Initiating rotation early on rough water leads to high pitch attitudes increasing loading on the floats and airframe.

10. Control Yoke – RELEASE BACKPRESSURE TO MAINTAIN LEVEL FLIGHT UNTIL 60 KIAS. (Accelerate just above the water.)
11. Climb – ADJUST PITCH ATTITUDE TO CAPTURE AND CLIMB AT 73 KIAS UNTIL CLEAR OF OBSTACLES
12. Wing Flaps – UP AFTER OBSTACLES ARE CLEARED
(Retract to 10° at 85 KIAS and retract to 0° at 95 KIAS)

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TAKEOFF ON LAND

1. Water Rudders – UP (retraction handle aft)
2. Wing Flaps – 20° (second notch and only allowable takeoff flap position)
3. Fuel Condition Lever – HIGH IDLE
4. Power – SET FOR TAKEOFF (Observe Takeoff Torque, ITT and Ng Limits)
5. Control Yoke – APPLY LIGHT BACK PRESSURE TO LIFT OFF
6. Wing Flaps – UP AFTER OBSTACLES ARE CLEARED
7. Landing Gear – Select Gear UP
8. Check Pump Light - Turned off after gear has cycled up

CROSSWIND WATER TAKEOFF

1. Wing Flaps – 20°
2. Water Rudders – LEAVE DOWN
3. Control Yoke – FULL AFT (NOSE UP)
4. Fuel Condition Lever – HIGH IDLE
5. Power – SET FOR TAKEOFF (Observe Takeoff Torque, ITT and Ng Limits)

WARNING!!

During crosswind takeoffs power must be added carefully to address torque issues from propulsion. A nose high plowing attitude must be held until sufficient airspeed is obtained to maintain directional control. At that time the nose can be lowered and the aircraft brought onto the step.

6. Controls – AS REQUIRED TO MAINTAIN DIRECTIONAL CONTROL
7. Water Rudders – RETRACT ON STEP IF SAFELY ABLE
8. Wing Flaps – UP AFTER OBSTACLES ARE CLEARED

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GEAR ADVISORY ANNUNCIATOR

If in agreement with the gear position audible advisory:

CANCEL BUTTON – **PRESS** top CANCEL WATER button if landing on water or lower CANCEL RUNWAY button if landing on land. If the wrong cancel button is pressed in relation to the gear position, the audible advisory will not stop.

If not in agreement with the gear position audible advisory:

REPOSITION LANDING GEAR (appropriate to the landing surface)

WARNING!!
Do not land on water unless gear is fully retracted.

CAUTION
The audio gear advisory may not occur until the landing flare is initiated during an emergency flaps-up landing. During flaps-up landing, the pilot should double check the gear position and not rely on the audible message.

BEFORE LANDING ON WATER

1. Landing Gear – Select Gear UP
2. Landing Gear BLUE Indicator Lights – CHECK ILLUMINATED
3. Cancel Audio Advisory With – CANCEL WATER button
4. Visually Check That the Nose gear and Main Gear are – UP
5. Water Rudders – UP
6. Wing Flaps – 35°

WARNING!!
Night landing on water is prohibited due to lack of illumination of landing gear.

LANDING ON WATER

1. Touchdown – SLIGHTLY TAIL LOW
2. Control Yoke – HOLD FULL AFT as amphibian decelerates to taxi speed
3. After Landing – WATER RUDDERS DOWN
4. Fuel Condition Lever – LOW IDLE
5. Propeller Position – FOR APPROPRIATE SPEED (use Beta including reverse if necessary)

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BEFORE LANDING ON LAND

1. Landing Gear – Select Gear DOWN
2. Landing Gear AMBER Indicator Lights – CHECK ILLUMINATED
3. Cancel Audio Advisory With –CANCEL RUNWAY button
4. Visually Check That the Nose gear and Main Gear are – DOWN
5. Water Rudders – UP
6. Wing Flaps – 35°

LANDING ON LAND

1. Touchdown – SLIGHTLY TAIL LOW
2. Control Yoke – EASE FORWARD to lower wheels gently to runway
3. Braking – MINIMUM REQUIRED
4. Fuel Condition Lever – LOW IDLE (TYPICALLY)
5. Propeller Position – FOR APPROPRIATE SPEED (use Beta if necessary)

BALKED LANDING

1. RETRACT FLAPS TO 20° IMMEDIATELY AFTER APPLYING TAKEOFF POWER FOR GO-AROUND. AIRSPEED TO 74 KIAS.

SECURING AIRPLANE

1. Fuel Selector – TO RIGHT OR LEFT TANK POSITION TO PREVENT CROSSFEEDING.
2. Verify Flight Hobbs – VERIFY THAT FLIGHT TIME HAS BEEN ACCUMULATED SINCE START OF FLIGHT (this assures that the weight on wheels/floats switch is working).

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V. PERFORMANCE

Performance data charts are presented in this section to provide information to the pilot with respect to aircraft performance capabilities. The data presented have been compiled from actual flight tests with the airplane and engine in good condition using average pilot techniques.

WARNING!!

To ensure that performance in this section can be duplicated, the airplane and engine must be maintained in good condition.

USE OF PERFORMANCE CHARTS

Performance data is presented in tabular or graphical form to illustrate the effects or trends of several variables and to allow conservative approximation of operational performance. It should be noted that dry grass or loose gravel runway operation increases the takeoff distance by 15% and landing by 20%.

ALTITUDE CALIBRATION

This chart determines altitude correction in feet for a given altitude, flap position and indicated airspeed. Add or subtract the correction from the desired altitude to get the altitude to fly at. Shaded areas correspond to speeds above the approved operating limits for that aircraft configuration.

STALL SPEEDS

Stall speeds are the same as the KODIAK 100 landplane and pertain to the forward CG limits of the approved loading envelope for an airplane gross weight of 7,255 Pounds (3291 Kilograms). It should be noted that indicated airspeed values at the stall are sensitive to minor variations in the pilot/static probes and the corresponding indicated values may not be completely accurate.

OBSTACLE TAKEOFF DISTANCE

Takeoff distances for the worst-case condition for a land takeoff at 7,255 lbs (3291 Kilograms) gross weight, as well as for lighter weights of 6,000 lb. and 5,000 lb. are provided. Water takeoff distances at 7,255 lb. are also provided. Only a flap setting of 20 degrees is approved for takeoff on both land and water. These charts may be used as a guide for predicting takeoff distances for a particular flight. Normally, the next higher temperature and altitude in the chart compared with actual conditions will yield a conservative approximation of field performance needs. Water takeoffs contain many variables associated with water conditions and pilot technique. Water takeoffs distances should be used as a rough guide only. Obstacle takeoff charts for both land and water use a 55 KIAS rotation speed; however, company tests using a 50 KIAS water rotation speed has shown shorter takeoff distances. The FAA has not evaluated the performance or handling qualities when using a 50 KIAS rotation speed, however.

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OBSTACLE LANDING DISTANCE

Landing distances for the worst-case condition for a land landing at 7,200 lb. (3291 Kilograms) as well as for lighter weights of 6,000 lb. and 5,000 lb. are provided. Water landing distances at 7,200 lb. are also provided. These charts may be used as a guide for predicting landing distances for a particular flight. Normally, the next higher temperature and altitude in the chart compared with actual conditions will yield a conservative approximation of field performance needs. Landings on dry grass or loose gravel will increase the ground roll by 20% of those in the tables. Water landings contain many variables associated with water conditions and pilot technique. Water landing distances should be used as a rough guide only.

RATE OF CLIMB – TAKEOFF – FLAPS 20°

This chart provides rate of climb performance data for the takeoff flap setting of 20°. Data is provided for 7,255 lb. 6,000 lb. 5,000 lb. gross weights. The next higher temperature and altitude in the chart compared with actual conditions will yield a conservative approximation of climb performance available.

CLIMB GRADIENT– TAKEOFF – FLAPS 20°

This chart provides rate of climb gradient data for the takeoff flap setting of 20°. Data is provided for 7,255 lb. 6,000 lb. 5,000 lb. gross weights. The next higher temperature and altitude in the chart compared with actual conditions will yield a conservative approximation of climb gradient available.

ENROUTE RATE OF CLIMB, FLAPS 0°

This chart provides rate of climb performance data for the enroute configuration. Data is provided for 7,255 lb. 6,000 lb. 5,000 lb. gross weights. The next higher temperature and altitude in the chart compared with actual conditions will yield a conservative approximation of climb performance available.

ENROUTE CLIMB GRADIENT, FLAPS 0°

This chart provides rate of climb gradient data for the enroute configuration. Data is provided for 7,255 lb. (3291 Kilogram), 6,000 lb. and 5,000 lb. gross weights. The next higher temperature and altitude in the chart compared with actual conditions will yield a conservative approximation of climb gradient available.

RATE OF CLIMB – BALKED LANDING – FLAPS 35°

This chart provides rate of climb performance data for the maximum landing flap setting (35°). Data is provided for 7,200 lb. 6,000 lb. and 5,000 lb. landing weights. The next higher temperature and altitude in the chart compared with actual conditions will yield a conservative approximation of climb performance available.

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CLIMB GRADIENT – BALKED LANDING – FLAPS 35°

This chart provides rate of climb gradient data for the maximum landing flap setting (35°). Data is provided for 7,200 lb. 6,000 lb. and 5,000 lb. landing weights. The next higher temperature and altitude in the chart compared with actual conditions will yield a conservative approximation of climb gradient available.

CRUISE PERFORMANCE

Cruise performance when equipped with Aerocet 6650 amphibious floats is generally 7-8% lower than that published in the KODIAK 100 POH. Lines used for docking attached to various places on the aircraft introduce performance variables.

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ALTITUDE CALIBRATION

FLAPS	PRESS ALT(FT)	CORRECTION TO BE ADDED						
		NORMAL STATIC SOURCE - KIAS						
		60	80	100	120	140	160	180
0°	S.L.		+7	-9	+1	+8	+2	-24
	10000		+10	-11	+2	+10	+3	-38
	20000		+18	-20	+3	+18	+4	-62
10°	S.L.		+7	+1	+3	+7		
	10000		+8	+1	+3	+8		
	20000		+9	+1	+4	+9		
20°	S.L.		+11	-2	0			
	10000		+13	-2	0			
	20000		+17	-3	0			
35°	S.L.	+12	+10	+8				
	10000	+14	+12	+9				
	20000	+18	+15	+10				

Figure 5-1 Altitude Calibration

WIND COMPONENTS

<p>NOTE:</p> <p>Maximum demonstrated crosswind velocity on water is 12 kts (not a limitation) Maximum demonstrated crosswind velocity on land is 14 kts (not a limitation)</p>
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OBSTACLE TAKEOFF DISTANCE FROM LAND

- Rotation initiated at 55 KIAS
- If brakes are not held, distances are from point where takeoff power is reached
- Decrease distances 10% for each 12 knots headwind. For operation in tail winds up to 10 knots, increase distances by 10% for each 2 knots.
- For operation on dry grass or loose gravel increase distances by 15% of the “ground roll” figure.
- Increase both ground roll and total distances by 1% for the inertial separator system in bypass.
- For operation in air colder than this table provides, use the coldest(leftmost) data for takeoff distances.
- For operation in air warmer than this table provides, use extreme caution and be very conservative regarding obstacle clearance distances.
- Dashed entries indicate atmospheric temperatures above limitations on airplane.
- For each 1% of up sloped runway (up to 3% grade), Increase the table distances by:
 - 22% of the ground roll distance at Sea Level to 4,999 feet
 - 30% of the ground roll distance at 5,000 to 9,999 feet
 - 43% of the ground roll distance at 10,000 feet or above
- For each 1% of down sloped runway, decrease the table distances by:
 - 7% of the ground roll distance at Sea Level to 4,999 Feet
 - 10% of the ground roll distance at 5,000 feet to 9,999 feet
 - 14% of the ground roll distance at 10,000 feet or above

CONDITIONS:

Flaps 20°
 2200 Prop RPM, Torque Set Per Quest KODIAK 100 POH prior to brake release
 Heater Off
 Paved, Level, Dry Runway
 Zero Wind
 Rotation Speed: 55 KIAS (approx.)
 Speed at 50 ft: 73 KIAS

7255 POUNDS												
Press. Alt (ft)	0° C		10° C		20° C		30° C		40° C		50° C	
	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle
S.L.	890	1389	946	1467	1004	1547	1146	1767	1332	2057	1576	2440
1000	947	1468	1007	1551	1095	1680	1260	1935	1469	2260	1744	2692
2000	1008	1552	1071	1640	1204	1841	1388	2123	1619	2481	---	---
3000	1073	1642	1159	1766	1327	2020	1531	2334	1788	2731	---	---
4000	1142	1737	1279	1941	1463	2219	1689	2564	1974	3004	---	---
5000	1246	1886	1411	2133	1611	2436	1860	2814	2178	3303	---	---
6000	1378	2078	1557	2345	1777	2675	2055	3097	---	---	---	---
7000	1521	2285	1718	2579	1964	2946	2277	3419	---	---	---	---
8000	1681	2517	1903	2846	2178	3256	2525	3779	---	---	---	---
9000	1900	2872	2154	3253	2465	3722	2856	4316	---	---	---	---
10000	2144	3272	2433	3709	2788	4251	3237	4941	---	---	---	---
11000	2425	3736	2763	4254	3160	4864	---	---	---	---	---	---
12000	2745	4270	3131	4867	3585	5572	---	---	---	---	---	---

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6000 POUNDS												
Press. Alt (ft)	0° C		10° C		20° C		30° C		40° C		50° C	
	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle
S.L.	543	866	578	914	613	964	700	1100	813	1281	962	1520
1000	578	915	614	966	668	1046	769	1205	897	1408	1064	1677
2000	615	967	654	1021	735	1146	847	1322	988	1545	---	---
3000	655	1022	708	1099	810	1258	934	1453	1091	1700	---	---
4000	697	1081	780	1208	893	1381	1031	1596	1205	1870	---	---
5000	760	1174	861	1328	983	1516	1135	1752	1329	2056	---	---
6000	841	1293	950	1459	1084	1665	1254	1927	---	---	---	---
7000	928	1422	1049	1604	1199	1833	1389	2128	---	---	---	---
8000	1026	1566	1162	1771	1329	2025	1541	2351	---	---	---	---
9000	1159	1786	1315	2023	1504	2314	1743	2684	---	---	---	---
10000	1309	2034	1485	2306	1702	2643	1976	3071	---	---	---	---
11000	1480	2322	1686	2643	1928	3022	---	---	---	---	---	---
12000	1675	2653	1911	3024	2188	3462	---	---	---	---	---	---

5000 POUNDS												
Press. Alt (ft)	0° C		10° C		20° C		30° C		40° C		50° C	
	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle
S.L.	338	550	360	581	381	612	436	699	506	814	599	966
1000	360	581	382	614	416	665	479	765	558	894	662	1065
2000	383	614	407	648	458	728	527	839	615	981	---	---
3000	407	649	440	698	504	799	582	923	679	1080	---	---
4000	434	687	486	767	556	877	642	1013	750	1187	---	---
5000	473	745	536	843	612	962	707	1112	828	1305	---	---
6000	523	821	591	926	675	1057	781	1223	---	---	---	---
7000	578	902	653	1018	746	1163	865	1350	---	---	---	---
8000	639	994	723	1123	827	1285	959	1492	---	---	---	---
9000	722	1133	818	1283	936	1468	1085	1703	---	---	---	---
10000	815	1290	924	1462	1059	1676	1230	1948	---	---	---	---
11000	921	1472	1050	1675	1200	1916	---	---	---	---	---	---
12000	1043	1681	1189	1916	1362	2193	---	---	---	---	---	---

Figure 5-2 Obstacle Takeoff from Land

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OBSTACLE TAKEOFF DISTANCE FROM WATER

- Distances are from point where takeoff power is reached
- Decrease distances 10% for each 11 knots headwind. For operation in tail winds up to 10 knots, increase distances by 10% for each 2 knots.
- Increase both the water run and total distances by 1% for the inertial separator system in bypass
- For operation on glassy water, expect distances to increase by at least 50% or more of the water run distance
- For operation in air colder than this table provides, use the coldest (leftmost) data for takeoff distances. Be alert for icy/frozen water conditions
- For operation in air warmer than this table provides, use extreme caution and be very conservative regarding obstacle clearance distances
- Dashed entries indicate atmospheric temperatures above limitations on airplane
- Due to the difficulty of determining altitude effects on water performance and the many variables associated with water conditions and pilot technique, these distances should be used as a rough guide only, particularly as altitude and temperature increase.

CONDITIONS:

Flaps 20°
 2200 Prop RPM, Torque Set Per Quest KODIAK 100
 POH
 Heater Off
 Zero Wind
 Rotation Speed: 55 KIAS (approx.)
 Speed at 50ft: 73 KIAS

7255 POUNDS												
Press. Alt (ft)	0° C		10° C		20° C		30° C		40° C		50° C	
	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle
S.L.	1584	2144	1684	2269	1786	2396	2040	2736	2371	3184	2804	3774
1000	1685	2270	1791	2402	1949	2605	2242	2999	2615	3502	3103	4167
2000	1793	2404	1906	2544	2143	2858	2470	3295	2881	3849	---	---
3000	1909	2547	2063	2744	2361	3139	2725	3625	3182	4240	---	---
4000	2033	2700	2276	3018	2603	3452	3005	3987	3513	4669	---	---
5000	2217	2935	2511	3322	2868	3792	3311	4381	3877	5138	---	---
6000	2452	3238	2770	3655	3162	4170	3657	4826	---	---	---	---
7000	2706	3564	3058	4023	3495	4597	4051	5333	---	---	---	---
8000	2992	3930	3387	4445	3875	5085	4494	5901	---	---	---	---
9000	3381	4497	3833	5095	4387	5829	5082	6759	---	---	---	---
10000	3815	5138	4330	5826	4962	6676	5760	7757	---	---	---	---
11000	4315	5882	4916	6698	5622	7659	---	---	---	---	---	---
12000	4885	6741	5572	7685	6380	8798	---	---	---	---	---	---

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6000 POUNDS												
Press. Alt (ft)	0° C		10° C		20° C		30° C		40° C		50° C	
	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle
S.L.	967	1329	1028	1405	1090	1484	1245	1695	1447	1972	1711	2338
1000	1028	1406	1093	1488	1189	1614	1369	1858	1596	2169	1894	2581
2000	1094	1489	1163	1575	1308	1769	1507	2040	1758	2383	---	---
3000	1165	1577	1259	1699	1441	1943	1663	2245	1942	2625	---	---
4000	1240	1672	1389	1869	1588	2137	1834	2469	2144	2891	---	---
5000	1353	1817	1532	2056	1750	2348	2020	2712	2366	3181	---	---
6000	1496	2004	1691	2262	1930	2581	2232	2987	---	---	---	---
7000	1651	2206	1866	2490	2133	2845	2472	3301	---	---	---	---
8000	1826	2432	2067	2750	2365	3147	2742	3652	---	---	---	---
9000	2063	2782	2340	3152	2677	3606	3102	4181	---	---	---	---
10000	2329	3177	2642	3603	3028	4129	3515	4797	---	---	---	---
11000	2633	3637	3000	4141	3431	4735	---	---	---	---	---	---
12000	2981	4166	3400	4749	3894	5438	---	---	---	---	---	---
5000 POUNDS												
Press. Alt (ft)	0° C		10° C		20° C		30° C		40° C		50° C	
	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle
S.L.	602	840	640	888	679	938	775	1071	901	1246	1065	1477
1000	640	889	680	940	740	1019	852	1173	993	1370	1179	1631
2000	681	941	724	995	814	1118	938	1289	1094	1505	---	---
3000	725	996	784	1073	897	1227	1035	1418	1209	1658	---	---
4000	772	1056	865	1180	989	1349	1142	1559	1335	1826	---	---
5000	842	1147	954	1298	1089	1482	1258	1712	1473	2009	---	---
6000	931	1265	1052	1428	1201	1630	1389	1886	---	---	---	---
7000	1028	1392	1162	1572	1328	1796	1539	2084	---	---	---	---
8000	1136	1535	1287	1736	1472	1986	1707	2305	---	---	---	---
9000	1284	1755	1456	1989	1666	2275	1931	2638	---	---	---	---
10000	1449	2004	1645	2273	1885	2604	2188	3026	---	---	---	---
11000	1639	2293	1868	2611	2136	2986	---	---	---	---	---	---
12000	1856	2626	2117	2994	2424	3428	---	---	---	---	---	---

Figure 5-3 Obstacle Takeoff Distance from Water

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OBSTACLE LANDING DISTANCE ON LAND

CONDITIONS:

Flaps 35°

Propeller lever - Maximum

Power for 3° descent to obstacle,

Then Gradual Reduction to Idle at Touchdown, Beta Range After Landing

Maximum Braking

Paved, Level, Dry Runway

For dry grass or loose gravel, increase ground roll by 20%

Zero Wind

7200 POUNDS (50 foot speed 76 KIAS)												
Press. Alt (ft)	0° C		10° C		20° C		30° C		40° C		50° C	
	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle
S.L.	1224	1968	1269	2020	1313	2072	1358	2125	1403	2178	1448	2231
1000	1269	2020	1315	2075	1362	2129	1408	2184	1455	2240	1501	2296
2000	1316	2075	1364	2132	1413	2189	1461	2247	1509	2305	---	---
3000	1365	2134	1415	2193	1465	2252	1515	2313	1565	2373	---	---
4000	1417	2195	1469	2257	1521	2319	1573	2382	1624	2445	---	---
5000	1471	2259	1525	2324	1579	2389	1632	2455	1686	2521	---	---
6000	1527	2327	1583	2395	1639	2463	1695	2532	---	---	---	---
7000	1586	2398	1644	2469	1702	2541	1760	2613	---	---	---	---
8000	1648	2473	1708	2548	1768	2623	1829	2698	---	---	---	---
9000	1746	2604	1810	2683	1874	2763	1938	2844	---	---	---	---
10000	1851	2742	1918	2827	1986	2912	2054	2998	---	---	---	---
11000	1961	2889	2033	2979	2105	3070	---	---	---	---	---	---
12000	2078	3044	2154	3140	2230	3238	---	---	---	---	---	---

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6000 POUNDS (50 foot speed 70 KIAS)												
Press. Alt (ft)	0° C		10° C		20° C		30° C		40° C		50° C	
	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle
S.L.	744	1458	771	1490	798	1523	825	1556	852	1589	880	1623
1000	771	1491	799	1525	827	1559	856	1593	884	1628	912	1663
2000	800	1525	829	1561	858	1596	888	1633	917	1669	---	---
3000	830	1561	860	1599	890	1636	921	1674	951	1712	---	---
4000	861	1600	892	1639	924	1678	955	1718	987	1758	---	---
5000	894	1640	926	1681	959	1723	992	1764	1025	1806	---	---
6000	928	1683	962	1726	996	1769	1030	1813	---	---	---	---
7000	964	1728	999	1773	1034	1819	1069	1865	---	---	---	---
8000	1001	1776	1038	1823	1074	1871	1111	1919	---	---	---	---
9000	1061	1863	1100	1914	1139	1965	1178	2017	---	---	---	---
10000	1124	1955	1166	2010	1207	2064	1248	2120	---	---	---	---
11000	1192	2053	1235	2111	1279	2170	---	---	---	---	---	---
12000	1263	2156	1309	2219	1355	2281	---	---	---	---	---	---

5000 POUNDS (50 foot speed 63 KIAS)												
Press. Alt (ft)	0° C		10° C		20° C		30° C		40° C		50° C	
	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle
S.L.	442	1140	458	1160	474	1180	490	1200	506	1221	522	1242
1000	458	1160	475	1181	491	1202	508	1223	525	1245	542	1267
2000	475	1181	492	1203	510	1225	527	1248	544	1271	---	---
3000	493	1203	511	1227	529	1250	547	1274	565	1298	---	---
4000	511	1227	530	1252	549	1276	567	1301	586	1327	---	---
5000	531	1253	550	1278	569	1304	589	1331	608	1357	---	---
6000	551	1279	571	1306	591	1334	611	1362	---	---	---	---
7000	572	1308	593	1336	614	1365	635	1394	---	---	---	---
8000	594	1338	616	1368	638	1399	660	1429	---	---	---	---
9000	630	1398	653	1430	676	1463	699	1496	---	---	---	---
10000	668	1460	692	1495	717	1530	741	1566	---	---	---	---
11000	708	1527	733	1564	759	1602	---	---	---	---	---	---
12000	750	1597	777	1638	805	1678	---	---	---	---	---	---

Figure 5-4 Obstacle Landing Distance on Land

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OBSTACLE LANDING DISTANCE ON WATER

CONDITIONS:

Flaps 35°

Propeller lever - Maximum

Zero Wind

7200 POUNDS (50 foot speed 76 KIAS)												
Press. Alt (ft)	0° C		10° C		20° C		30° C		40° C		50° C	
	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle
S.L.	1246	2956	1291	3026	1337	3096	1382	3168	1428	3241	1474	3314
1000	1292	3026	1339	3100	1386	3174	1433	3249	1481	3326	1528	3403
2000	1340	3101	1389	3178	1438	3256	1487	3336	1536	3416	---	---
3000	1390	3180	1441	3261	1492	3343	1542	3427	1593	3511	---	---
4000	1442	3264	1495	3349	1548	3436	1601	3524	1653	3613	---	---
5000	1497	3352	1552	3442	1607	3534	1661	3626	1716	3720	---	---
6000	1554	3447	1611	3541	1668	3637	1725	3735	---	---	---	---
7000	1614	3546	1673	3646	1732	3747	1792	3850	---	---	---	---
8000	1677	3652	1738	3758	1800	3864	1861	3971	---	---	---	---
9000	1777	3840	1842	3953	1908	4067	1973	4183	---	---	---	---
10000	1884	4039	1953	4160	2022	4283	2091	4407	---	---	---	---
11000	1996	4251	2069	4381	2142	4512	---	---	---	---	---	---
12000	2115	4476	2193	4615	2270	4756	---	---	---	---	---	---

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6000 POUNDS (50 foot speed 70 KIAS)												
Press. Alt (ft)	0° C		10° C		20° C		30° C		40° C		50° C	
	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle
S.L.	823	2204	853	2249	883	2295	914	2342	944	2389	974	2437
1000	854	2249	885	2297	916	2345	947	2395	979	2445	1010	2496
2000	885	2298	918	2348	950	2399	983	2451	1015	2504	---	---
3000	918	2349	952	2402	986	2456	1019	2511	1053	2567	---	---
4000	953	2404	988	2460	1023	2517	1058	2575	1093	2634	---	---
5000	989	2462	1026	2521	1062	2582	1098	2643	1134	2704	---	---
6000	1027	2524	1065	2587	1102	2650	1140	2714	---	---	---	---
7000	1067	2590	1106	2656	1145	2723	1184	2791	---	---	---	---
8000	1108	2660	1149	2730	1189	2800	1230	2872	---	---	---	---
9000	1175	2789	1218	2864	1261	2940	1304	3017	---	---	---	---
10000	1245	2926	1290	3007	1336	3088	1382	3171	---	---	---	---
11000	1319	3071	1368	3158	1416	3246	---	---	---	---	---	---
12000	1398	3226	1449	3319	1500	3413	---	---	---	---	---	---

5000 POUNDS (50 foot speed 63 KIAS)												
Press. Alt (ft)	0° C		10° C		20° C		30° C		40° C		50° C	
	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle	Grnd Roll (ft)	Total ft to clear 50 ft Obstacle
S.L.	548	1705	568	1734	588	1765	608	1795	628	1827	648	1859
1000	568	1735	589	1766	609	1798	630	1831	651	1864	672	1898
2000	589	1766	611	1800	632	1834	654	1868	675	1903	---	---
3000	611	1800	633	1836	656	1872	678	1908	701	1945	---	---
4000	634	1837	657	1874	680	1912	704	1951	727	1990	---	---
5000	658	1875	682	1915	706	1955	730	1996	755	2038	---	---
6000	683	1917	708	1959	733	2001	758	2044	---	---	---	---
7000	710	1961	736	2005	762	2050	788	2096	---	---	---	---
8000	737	2008	764	2055	791	2102	818	2150	---	---	---	---
9000	781	2099	810	2149	839	2201	867	2253	---	---	---	---
10000	828	2196	858	2250	889	2305	919	2361	---	---	---	---
11000	878	2298	910	2357	942	2416	---	---	---	---	---	---
12000	930	2407	964	2470	998	2534	---	---	---	---	---	---

Figure 5-5 Obstacle Landing Distance on Water

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RATE OF CLIMB TAKEOFF – FLAPS 20°

Max Takeoff Power, Flaps 20°, gear dn. 2200 RPM, 1790 ft./lb. (observe ITT & Ng limits), Bypass Normal

Note:
Dashed entries correspond to outside air temperatures beyond aircraft limits.

7255 POUNDS WEIGHT						
PRESS ALT FT	CLIMB SPEED KIAS	RATE OF CLIMB - FPM				
		-20°C	0°C	20°C	40°C	50°C
S.L.	79	1082	1047	1014	633	402
2000	79	1049	1010	854	460	232
4000	78	1009	972	679	290	---
6000	77	969	810	505	124	---
8000	76	881	660	365	---	---
10000	74	703	478	189	---	---

6200 POUNDS WEIGHT						
PRESS ALT FT	CLIMB SPEED KIAS	RATE OF CLIMB - FPM				
		-20°C	0°C	20°C	40°C	50°C
S.L.	79	1474	1442	1411	973	706
2000	79	1445	1407	1233	780	516
4000	78	1409	1374	1040	594	---
6000	77	1374	1196	849	411	---
8000	76	1283	1035	699	---	---
10000	74	1089	835	507	---	---

5200 POUNDS WEIGHT						
PRESS ALT FT	CLIMB SPEED KIAS	RATE OF CLIMB - FPM				
		-20°C	0°C	20°C	40°C	50°C
S.L.	79	1957	1926	1897	1382	1068
2000	79	1931	1894	1694	1162	851
4000	78	1898	1865	1474	951	---
6000	77	1867	1665	1259	745	---
8000	76	1772	1485	1094	---	---
10000	74	1553	1260	878	---	---

Figure 5-6 Rate of Climb – Takeoff, Flaps 20°

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CLIMB GRADIENT – TAKEOFF – FLAPS 20°

Max Takeoff Power, Flaps 20°, gear dn, 2200 RPM, 1790 ft./lb. (observe ITT & Ng limits), Bypass Normal

Note:
Dashed entries correspond to outside air temperatures beyond aircraft limits.

7255 POUNDS WEIGHT						
PRESS ALT FT	CLIMB SPEED KIAS	CLIMB GRADIENT - FT/NM				
		-20°C	0°C	20°C	40°C	50°C
S.L.	79	872	811	757	456	284
2000	79	819	758	617	321	159
4000	78	768	711	477	197	---
6000	77	718	576	346	82	---
8000	76	637	458	244	---	---
10000	74	495	323	123	---	---

6200 POUNDS WEIGHT						
PRESS ALT F	CLIMB SPEED KIAS	CLIMB GRADIENT - FT/NM				
		-20°C	0°C	20°C	40° C	50° C
S.L.	79	1199	1126	1062	702	500
2000	79	1137	1064	896	545	354
4000	78	1080	1012	734	404	---
6000	77	1025	856	583	272	---
8000	76	934	721	469	---	---
10000	74	769	566	331	---	---

5200 POUNDS WEIGHT						
PRESS ALT FT	CLIMB SPEED KIAS	CLIMB GRADIENT - FT/NM				
		-20°C	0°C	20° C	40° C	50° C
S.L.	79	1615	1525	1445	1005	760
2000	79	1541	1450	1243	815	585
4000	78	1474	1390	1049	649	---
6000	77	1410	1202	870	495	---
8000	76	1303	1043	736	---	---
10000	74	1107	859	575	---	---

Figure 5-7 Climb Gradient – Takeoff – Flaps 20°

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RATE OF CLIMB – ENROUTE – FLAPS 0°

Max Climb Power, Flaps 0°, 2200 RPM, gear up, 1674 ft./lb. (observe ITT and Ng limits), Bypass Normal

Note:
Dashed entries correspond to outside air temperatures beyond aircraft limits.

7255 POUNDS WEIGHT							
PRESS ALT FT	CLIMB SPEED KIAS	RATE OF CLIMB - FPM					
		-40°C	-20°C	0°C	20°C	40°C	50°C
S.L.	94	1219	1191	1159	938	426	160
5000	94	1139	1113	923	504	19	---
10000	94	1010	771	453	55	---	---
15000	94	524	289	---	---	---	---
20000	94	95	---	---	---	---	---

6200 POUNDS WEIGHT							
PRESS ALT FT	CLIMB SPEED KIAS	RATE OF CLIMB - FPM					
		-40°C	-20°C	0°C	20°C	40°C	50°C
S.L.	94	1599	1574	1543	1292	699	390
5000	94	1521	1499	1284	801	240	---
10000	94	1389	1118	754	296	---	---
15000	94	841	576	213	---	---	---
20000	94	364	90	---	---	---	---

5200 POUNDS WEIGHT							
PRESS ALT FT	CLIMB SPEED KIAS	RATE OF CLIMB - FPM					
		-40°C	-20°C	0°C	20°C	40°C	50°C
S.L.	94	2087	2065	2036	1743	1043	679
5000	94	2012	1994	1746	1177	516	---
10000	94	1873	1559	1134	597	---	---
15000	94	1242	936	513	---	---	---
20000	94	698	383	---	---	---	---

On a standard day at Sea Level, the enroute rate of climb at 7255 pounds is 1060 ft/min.

Figure 5-8 Rate of Climb – Enroute – Flaps 0°

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CLIMB GRADIENT – ENROUTE – FLAPS 0°

Max Climb Power, Flaps 0°, 2200 RPM, gear up, 1674 ft./lb. (observe ITT and Ng limits), Bypass Normal

Note:
Dashed entries correspond to outside air temperatures beyond aircraft limits.

7255 POUNDS WEIGHT							
PRESS ALT FT	CLIMB SPEED KIAS	CLIMB GRADIENT - FT/NM					
		-40°C	-20°C	0°C	20°C	40°C	50°C
S.L.	94	872	817	764	595	261	96
5000	94	741	694	553	290	10	---
10000	94	596	436	246	29	---	---
15000	94	279	148	---	---	---	---
20000	94	46	---	---	---	---	---

6200 POUNDS WEIGHT							
PRESS ALT FT	CLIMB SPEED KIAS	CLIMB GRADIENT - FT/NM					
		-40°C	-20°C	0°C	20°C	40°C	50°C
S.L.	94	1135	1070	1008	811	422	231
5000	94	981	926	761	456	132	---
10000	94	811	624	404	153	---	---
15000	94	442	290	103	---	---	---
20000	94	172	41	---	---	---	---

5200 POUNDS WEIGHT							
PRESS ALT FT	CLIMB SPEED KIAS	CLIMB GRADIENT - FT/NM					
		-40°C	-20°C	0°C	20°C	40°C	50°C
S.L.	94	1500	1420	1344	1102	632	403
5000	94	1310	1243	1042	672	284	---
10000	94	1102	875	609	308	---	---
15000	94	655	472	248	---	---	---
20000	94	330	174	---	---	---	---

On a standard day at Sea Level, the enroute climb gradient at 7,255 pounds is 680 ft./nm

Figure 5-9 Climb Gradient– Enroute – Flaps 0°

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RATE OF CLIMB– BALKED LANDING – FLAPS 35°

Max Takeoff Power, Flaps 35°, gear dn, 2200 RPM, 1790 ft./lb. (observe ITT & Ng limits), Bypass Normal

Note:
Dashed entries correspond to outside air temperatures beyond aircraft limits.

7200 POUNDS WEIGHT						
PRESS ALT FT	CLIMB SPEED KIAS	CLIMB GRADIENT - FT/NM				
		-20°C	0°C	20°C	40°C	50°C
S.L.	73	930	891	848	476	252
2000	73	891	847	689	307	85
4000	73	850	804	512	136	---
6000	73	803	639	342	---	---
8000	73	713	489	189	---	---
10000	73	541	301	---	---	---

6200 POUNDS WEIGHT						
PRESS ALT FT	CLIMB SPEED KIAS	CLIMB GRADIENT - FT/NM				
		-20°C	0°C	20°C	40°C	50°C
S.L.	73	1305	1269	1227	803	547
2000	73	1268	1227	1051	616	363
4000	73	1229	1185	856	428	---
6000	73	1183	1003	667	231	---
8000	73	1088	839	500	---	---
10000	73	899	630	295	---	---

5200 POUNDS WEIGHT						
PRESS ALT FT	CLIMB SPEED KIAS	CLIMB GRADIENT - FT/NM				
		-20°C	0°C	20°C	40°C	50°C
S.L.	73	1784	1750	1709	1212	911
2000	73	1749	1708	1508	997	700
4000	73	1711	1668	1284	783	---
6000	73	1665	1461	1070	558	---
8000	73	1562	1275	881	---	---
10000	73	1346	1037	648	---	---

Figure 5-10 Rate of Climb – Balked Landing– Flaps 35°

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CLIMB GRADIENT– BALKED LANDING – FLAPS 35°

Max Takeoff Power, Flaps 35°, gear dn, 2200 RPM, 1790 ft./lb. (observe ITT & Ng limits), Bypass Normal

NOTE:
Dashed entries correspond to outside air temperatures beyond aircraft limits.

7200 POUNDS WEIGHT						
PRESS ALT FT	CLIMB SPEED KIAS	CLIMB GRADIENT - FT/NM				
		-20°C	0°C	20°C	40°C	50°C
S.L.	73	813	750	688	372	194
2000	73	751	687	537	231	63
4000	73	689	627	385	99	---
6000	73	627	480	247	---	---
8000	73	535	353	131	---	---
10000	73	390	208	---	---	---

6200 POUNDS WEIGHT						
PRESS ALT FT	CLIMB SPEED KIAS	CLIMB GRADIENT - FT/NM				
		-20°C	0°C	20°C	40°C	50°C
S.L.	73	1152	1076	1002	630	421
2000	73	1077	1001	824	464	269
4000	73	1004	931	644	310	---
6000	73	929	756	483	161	---
8000	73	821	607	348	---	---
10000	73	650	438	198	---	---

5200 POUNDS WEIGHT						
PRESS ALT FT	CLIMB SPEED KIAS	CLIMB GRADIENT - FT/NM				
		-20°C	0°C	20°C	40°C	50°C
S.L.	73	1600	1506	1414	957	704
2000	73	1507	1412	1194	756	520
4000	73	1416	1325	974	570	---
6000	73	1324	1110	778	391	---
8000	73	1190	928	615	---	---
10000	73	981	723	434	---	---

Figure 5-11 Climb Gradient – Balked Landing– Flaps 35

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VI. WEIGHT AND BALANCE:

The airplane equipped with Aerocet Model 6650 amphibious seaplane floats must be loaded in accordance with the limitations in §2. These are shown as an aircraft weight/moment envelope or an aircraft weight versus c.g. location chart.

Weight limit – All Lockers 150 LB. maximum each.

The reference datum for weight and balance calculations is the forward face of the firewall.

Locker central locations Aft of datum are:

Front Locker	33.1”
Middle Locker	66.2”
Aft Locker	142.4”

All loading above maximum zero fuel weight (7,071 lb.) must be fuel.

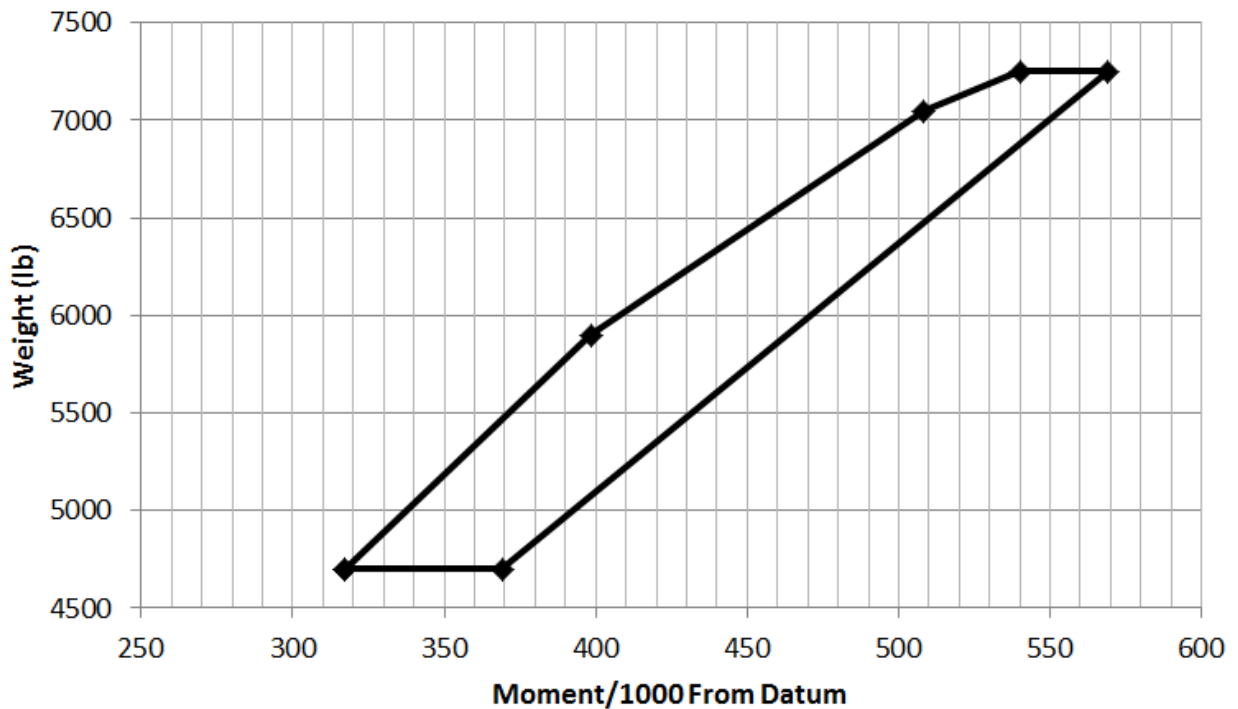


Figure 6-1 Weight and Moment Limits Chart

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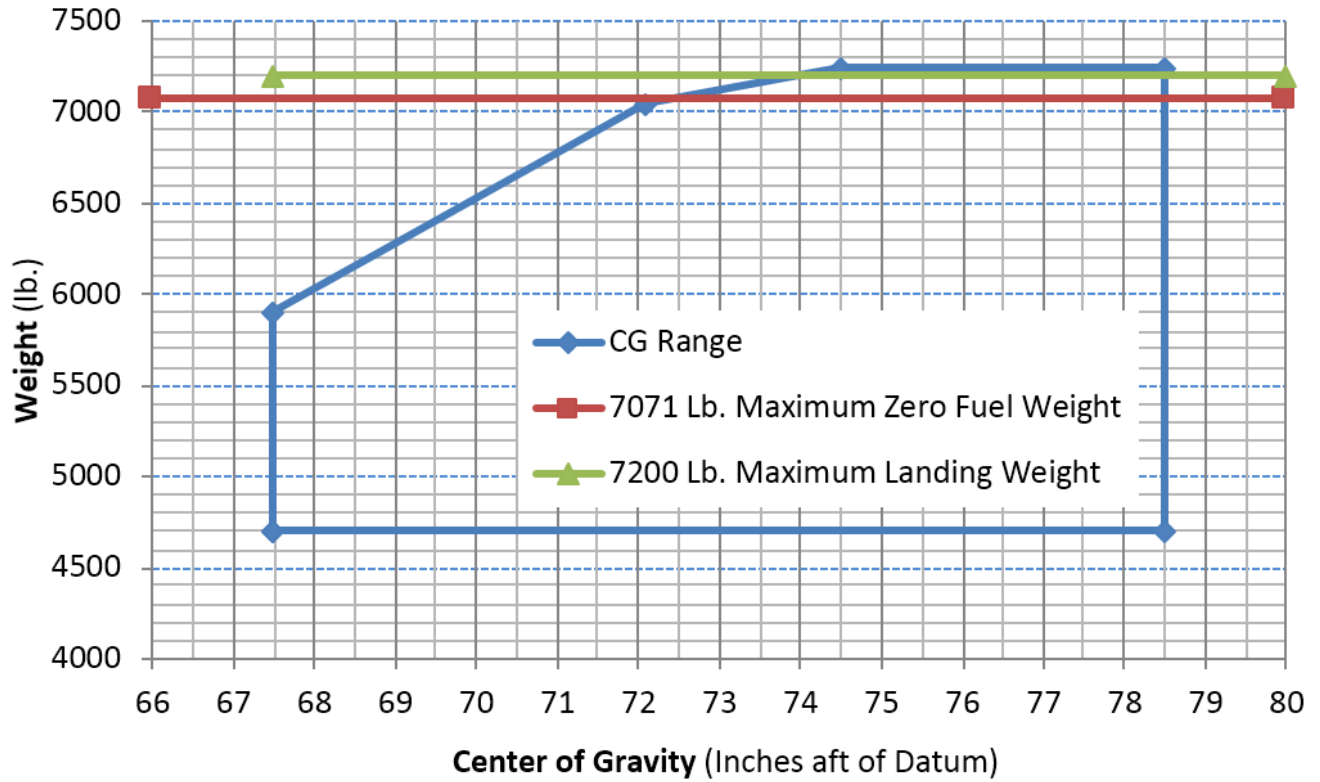


Figure 6-2 Approved Loading Envelope

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VII. AEROCET FLOAT MODEL 6650 SYSTEMS DESCRIPTIONS:

AMPHIBIOUS LANDING GEAR SYSTEM

The landing gear incorporated within the amphibious floats on this airplane is a retractable, quadricycle type with two full swiveling nose (or bow) wheels and two main wheels. Shock absorption is provided by air oil shock struts for the main gear and composite leaf springs for the bow gear. Each main wheel is equipped with a hydraulically-actuated disc-type brake.

Normal landing gear extension and retraction accomplished by hydraulic actuators for each gear. The hydraulic system is powered by electrically-driven hydraulic pump located in the pedestal between the crew seats. Hydraulic system fluid level should be checked at 25-hour intervals by viewing reservoir inside the pedestal. Fill to within 2.25" of the top of the filler neck using MIL-H-5606 hydraulic fluid. Hydraulic pump operation is initiated by moving the landing gear position lever to either the up or down position. The landing gear will travel to the position selected, cycling the electrically-driven hydraulic pump. The pump is shut off by a pressure switch. When the pressure switch senses a certain amount of pressure in the hydraulic line, which the electric pump is forcing fluid through, it will send a signal to the motor relay shutting down the pump. The pressure increases at the end of operation when all the actuators have traveled to the end of their stroke. Eight position-indicator lights (four gear up and four gear down) are provided to show landing gear position. An additional indicator light shows that the landing gear pump motor is in operation. The landing gear system is also equipped with an emergency hand pump.

LANDING GEAR POSITION LEVER

The landing gear position lever has two positions (UP for gear up and DOWN for gear down) which give a mechanical indication of the gear position selected. From either position, the handle lock must be pulled to clear a detent before it can be repositioned. Moving the handle to UP or DOWN will start the electrically-driven hydraulic pump in the selected direction of gear travel.

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INDICATOR LIGHTS

Eight indicator lights are mounted on the Landing Gear Advisory Unit. The four blue indicator lights, labeled WATER, (positioned respective to their location on the float, i.e. top left – front left gear) show by their illumination that the landing gear is up. The four amber indicator lights, labeled RUNWAY, illuminate when the landing gear is down. Neither set of lights is illuminated when the landing gear is in transit. The single white indicator light, labeled HYD PMP, comes on when current is being supplied to the landing gear pump motor. If the motor continues running during flight or goes on and off repeatedly, the motor should be shut off by pulling the PUMP PWR circuit breaker, since continual running of the motor can result in premature motor failure. Prior to landing, the circuit breaker should be pushed in to reactivate the circuit. If an indicator light should fail to come on when pressed for testing, the unit must be serviced by Aerocet. There are two LED lights for each indicated position rated at 40,000 Hr life. The WATER, RUNWAY, and HYD PMP light circuits are protected by the Landing Gear Advisory circuit breaker (GR. ADV.), and are therefore independent of the landing gear motor circuit and will function when using the emergency hand pump.

WARNING:

The pilot should always visually check the nose gear via the mirrors before attempting a water landing to assure himself that it is up regardless of lights. If the pull ram mechanically fails, it could travel and show a light but not be connected to the nose gear itself leaving the nose gear in the down position.

FLOAT LOCKERS

Three float lockers are provided for baggage in each float. The lockers include an optional removable floor to keep gear out of any water that may accumulate. The aft float locker includes additional lightning protection surrounding the locker to prevent a source of ignition from any lightning currents from entering the aft locker. This is provided in the event an operator seeks a hazardous material operating certificate.

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AUDIO ADVISORY OPERATION

The GC600 audio announcements are dependent on airspeed “ARM” and “TRIGGER” settings which are factory pre-set. The GC600 is armed by the aircraft exceeding the pre-set airspeed. As the aircraft begins its approach, it slows its airspeed passing through the pre-set trigger speed, and sounding an audio announcement to indicate the gear position. If the gear is not in a fully retracted or a fully deployed position, then a gear unsafe announcement will sound.

With all blue lights on, the announcement will sound, “Water landing, gear is up for water landing”. This announcement will continue to repeat and complete the phrase, until the upper “CANCEL” button is pushed, or the aircraft speed is increased above the trigger airspeed setting.

With all amber lights on, the announcement will sound, “Runway landing, gear is down for runway landing”. This announcement will continue to repeat and complete the phrase, until the lower “CANCEL” button is pushed, or the aircraft speed is increased above the trigger airspeed setting.

If the condition exists where any indicator light within the WATER quadrant, or RUNWAY quadrant, fails to illuminate, then the announcement will sound, “Gear is unsafe, check gear”. This announcement will continue to repeat and complete the phrase, until either upper or lower Cancel button is pushed to de-activate.

The “TEST” button in the center left position of the face, when depressed, will sound an audible announcement indicating the current position of the gear. One of three announcements listed above, will repeat as long as the button is depressed. This announcement will continue to repeat and complete the phrase, until the button is released.

(It should be clearly noted that the audio advisory side of the Landing Gear Advisory Unit by Aerocet, Inc. does not alleviate the pilot’s responsibility to visually check the location of the landing gear prior to landing, especially to assure the gear is up when making a water landing. Audio systems may be turned down or fail.)

WARNING:

The pilot should always visually check the nose gear before attempting a water landing to assure himself that it is up regardless of audio indication. If the pull ram mechanically fails, it could travel and show a light or give an audio indication but not be connected to the nose gear itself leaving the nose gear in the down position.

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VIII. AIRPLANE HANDLING, SERVICE & MAINTENANCE:

MOORING

Proper securing of the amphibian 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 amphibian can be moored to a buoy, using a yoke tied to the forward float cleats, so that it will freely weathervane into the wind.
2. The amphibian can be secured to a dock using the fore and aft cleats of one float, although this method is not generally recommended unless the water is calm and the amphibian is attended. Securing with lines around the base of the struts is preferred for windy conditions.
3. If conditions permit the amphibian can be beached. Ensure that the shoreline is free of rocks or abrasive material that may damage the float. It is preferred to beach the floats “nose in” to keep debris from collecting in the main wheel well possibly restricting the movement of the landing gear into the full down position. A rock deflector is located in the main wheel well to help prevent any collection of debris.

TOWING

The lugs on each of the nose gears should be utilized and attached to a ground towing yoke. Assure brakes are off and the amphibian is not allowed to roll into obstacles giving extraordinary stress loads to the nose gear assemblies. Towing may also be done by tying lines to the front strut attachment points if a tow bar is not available.

FORKLIFTING UNDER THE SPREADER BARS

Assure that the forks are spread as far apart as possible without contacting the sides of the float. Forks must be within 12” from inside of floats (no closer together).

JACKING

A floor jack may be used to jack up a float. Locate the jack 7” forward from the step of the float and use at least a 8” minimum 2x6 wood block. Once raised block the float to assure safety in case the jack fails. Additional support can be placed at 73” ahead of the step and 80” behind the step (locations below bulkheads).

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SERVICING

Service the amphibian according to AEROCET Service Manual.

Special attention should be given to the landing gear servicing of the amphibian.

Protective lubricants for metal components is advised, especially in salt water environments e.g. “Corrosion X”, ACF-50, Boeshield T-9.

AMPHIBIOUS LANDING GEAR

NOSE WHEEL TIRE PRESSURE – 50 +/- 5 PSI ON 5.00 X 5 6 PLY

MAIN WHEEL TIRE PRESSURE – 50 +/- 5 PSI ON 6.00 X 6 8 PLY

MAIN GEAR SHOCK STRUTS – Keep filled with MIL-H-5606 hydraulic fluid and inflated with nitrogen to 400psi.

HYDRAULIC PUMP FLUID RESERVOIR – Check and service with MIL-H-5606 hydraulic fluid every 25 hours of flight time.

BRAKES – Service as required with MIL-H-5606 hydraulic fluid. They utilize the stock aircraft brake reservoir.

-END-