

*Citabria*

**N5038M**



**NORTH STAR FLYERS FLYING CLUB**

**Anoka County/Blaine Airport (KANE)**

**14708 Yancy Street NE**

**Ham Lake, MN 55304**

**(763) 458-2923**

**DO NOT REMOVE FROM AIRCRAFT**



**Bellanca Citabria 7ECA  
N5038M s/n 1290-79**



## EMERGENCY CONTACT NUMBERS

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## AIRSPEEDS FOR SAFE OPERATION

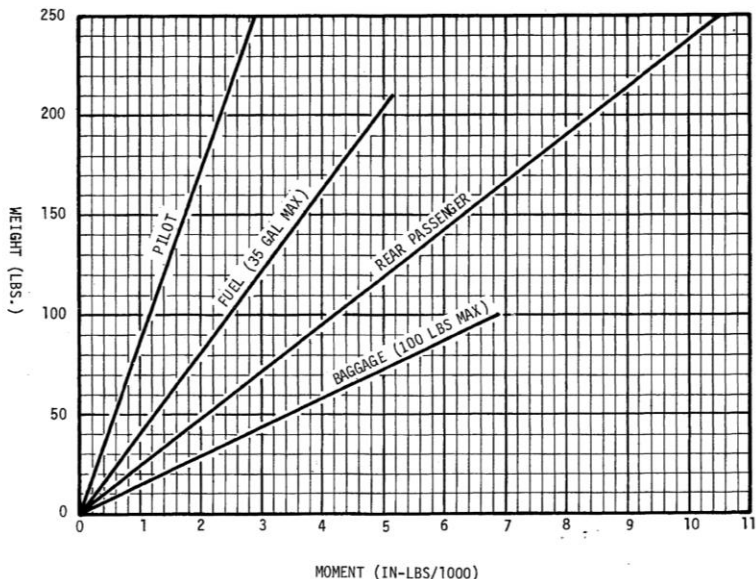
(Note: V speeds are book values in MPH.)

$V_{SO}$	50
$V_R$	55
$V_X$	58
$V_Y$	69
$V_A$ (MGW)	120
$V_{NO}$	120
$V_{NE}$	162
$V_{ref}$	70
$V_G$	65
Max demonstrated crosswind (kt)	17



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# Citabria



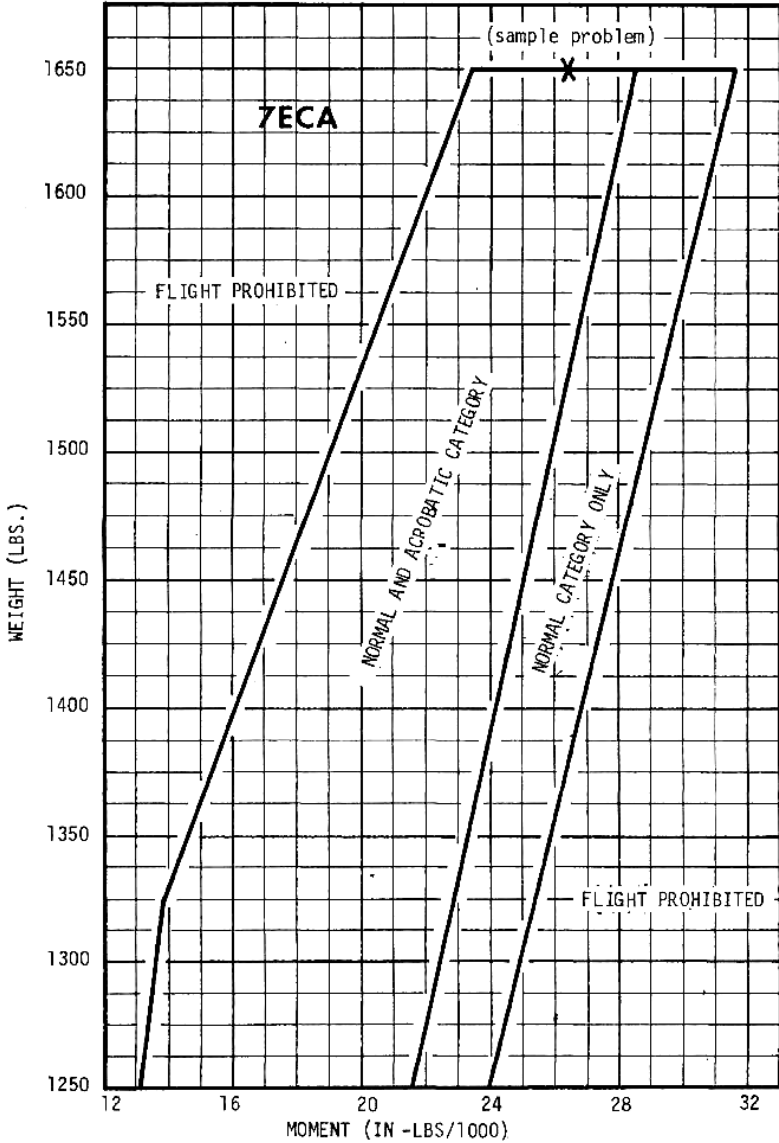
## LOADING CHART

	<u>Weight</u>	<u>Moment/1000</u>
Empty Weight	1178	14.52
Oil	9	-0.34
Front Seat	_____	_____
Rear Seat	_____	_____
Baggage (100# max)	_____	_____
Fuel (35 gal/210# max)	_____	_____
<b>TOTAL</b>	_____	_____



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## PREFLIGHT PROCEDURES

### CABIN

Door pin ..... CHECK  
Fuel quantity ..... CHECK  
Electrical switches ..... OFF  
Magneto switches ..... OFF  
Flight controls ..... CHECK  
Rear seat belt ..... SECURE  
(if solo flight)  
ELT ..... ARMED

### RIGHT WING

Aileron and spade ..... CHECK  
Wing tip and light ..... CHECK  
Wing and struts ..... CHECK  
Tiedown ..... REMOVE  
Pitot-static tube ..... CHECK  
Fuel ..... CHECK

### RIGHT MAIN GEAR

Chocks ..... REMOVE  
Tires ..... CHECK (24 PSI)  
Brakes ..... CHECK

### NOSE

Windshield ..... CHECK  
Oil ..... CHECK (5 QT)  
Cowl, door ..... SECURED  
Alternator belt ..... CHECK  
Propeller, spinner ..... CHECK  
Air filter ..... CHECK  
Landing light ..... CHECK  
Gascolator ..... DRAIN

### LEFT MAIN GEAR

Chocks ..... REMOVE  
Tires ..... CHECK (24 PSI)  
Brakes ..... CHECK

### LEFT WING

Same as right wing, plus:  
Fuel vent ..... CLEAR

### LEFT FUSELAGE

Fabric ..... CHECK  
Windows ..... CHECK  
Fuel belly drain ..... DRAIN  
Antennas ..... CHECK

### EMPENNAGE

Stabilizers ..... CHECK  
Bracing wires ..... CHECK  
Control surfaces ..... CHECK  
Trim tab ..... CHECK  
Light ..... CHECK  
Tailwheel ..... CHECK (40 PSI)  
Tiedown ..... REMOVE

### RIGHT FUSELAGE

Fabric ..... CHECK  
Windows ..... CHECK  
Antennas ..... CHECK



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## FLIGHT PROCEDURES

### BEFORE STARTING

Harnesses..... FASTEN  
Fuel shutoff valve ..... ON  
Brakes ..... SET  
Cabin door ..... CLOSED

### ENGINE START (COLD)

Beacon ..... ON  
Master switch ..... ON  
Magneto switches ..... ON  
Throttle ..... 1/2-1"  
Carburetor heat ..... OFF  
Mixture ..... FULL RICH  
Prime ..... AS REQUIRED  
Propeller ..... CLEAR  
Starter ..... PUSH

### ENGINE START (FLOODED)

Mixture ..... IDLE CUT-OFF  
Throttle ..... FULL OPEN  
Magneto switches ..... OFF  
Starter ..... ENGAGE (5-10 sec)

Repeat normal starting  
procedure without priming

### AFTER STARTING

Throttle ..... 1000 RPM  
Oil pressure ..... CHECK  
Nav/com radio ..... ON  
Transponder ..... ON

### BEFORE TAKEOFF

Brakes ..... SET  
Elevator trim ..... TAKEOFF  
Fuel shutoff valve ..... ON  
Mixture ..... FULL RICH  
Flight controls ..... CHECK  
Instruments/radios ..... SET  
Throttle ..... 1800 RPM  
Magnetos ..... CHECK  
Carburetor heat CHECK, OFF  
Engine instruments ... CHECK  
Throttle ..... 1000 RPM  
Lights ..... AS REQUIRED  
Window ..... CLOSED  
Cabin door, top latch. CLOSED

### TAKEOFF

Brakes ..... HEELS ON FLOOR  
Throttle ..... FULL OPEN  
Liftoff ..... 55-60 MPH  
Climb .....  $V_x$  58 MPH  
 $V_y$  69 MPH

### CRUISE

Power ..... SET  
Mixture ..... SET  
Lights ..... AS REQUIRED



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## FLIGHT PROCEDURES

### DESCENT

Mixture ..... RICH

### LANDING

Carb heat ..... AS REQUIRED

Mixture ..... RICH

Harnesses ..... FASTEN

Brakes ..... HEELS ON FLOOR

Lights ..... AS REQUIRED

Airspeed ..... 70 MPH Normal

60 MPH Obstacle

Gusty winds: increase 5 MPH

### AFTER LANDING

Transponder ..... OFF

Lights ..... AS REQUIRED

### SHUTDOWN

A

Nav/com switch ..... OFF

Mixture ..... IDLE CUT-OFF

Magnetos ..... OFF

Lights ..... OFF

Master switch ..... OFF

Write down times, fuel added

### AIRSPEED CORRECTION

IAS	CAS
50	58
60	66
70	75
80	83
90	92
100	100
110	109
120	117
130	125
140	134
150	142
160	150
170	159

### STALL SPEEDS (CAS)

Bank Angle	MPH
0	51
20	53
40	58
60	72



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## TAKEOFF/CLIMB PERFORMANCE

Max gross weight, hard dry runway, zero wind

PA (ft)	Temp (°F)	T/O (ft)	50 ft Obst	ROC (fpm)
S.L.	0	340	716	800
	20	372	768	775
	40	415	832	750
	60	455	895	725
	80	496	961	700
	100	544	1034	675
	2000	0	407	860
20		444	929	660
40		492	1004	635
60		543	1086	610
80		597	1174	585
100		655	1269	433
4000		0	482	1043
	20	538	1147	360
	40	589	1239	520
	60	640	1329	495
	80	690	1432	470
	100	788	1580	450
	6000	0	576	1301
20		640	1432	435
40		707	1562	410
60		789	1716	385
80		858	1858	365
100		968	2058	340
8000		0		
	20			325
	40			300
	60			275
	80			245
	100			225



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## CRUISE PERFORMANCE

Max gross weight, no reserve

ALT. Feet	RPM	BHP %	TAS MPH	GPH	ENDUR- ANCE	RANGE Sta. Mi.
<b>2500</b>	<b>2800</b>	<b>90</b>	<b>122</b>	<b>9.6</b>	<b>3.6</b>	<b>445</b>
	<b>2700</b>	<b>76</b>	<b>117</b>	<b>8.0</b>	<b>4.4</b>	<b>510</b>
	<b>2600</b>	<b>66</b>	<b>113</b>	<b>5.9</b>	<b>5.9</b>	<b>670</b>
	<b>2500</b>	<b>59</b>	<b>108</b>	<b>5.2</b>	<b>6.7</b>	<b>725</b>
	<b>2400</b>	<b>53</b>	<b>104</b>	<b>4.7</b>	<b>7.4</b>	<b>770</b>
	<b>2300</b>	<b>49</b>	<b>100</b>	<b>4.3</b>	<b>8.1</b>	<b>810</b>
	<b>2200</b>	<b>45</b>	<b>96</b>	<b>4.0</b>	<b>8.8</b>	<b>840</b>
<b>5000</b>	<b>2800</b>	<b>83</b>	<b>123</b>	<b>8.9</b>	<b>3.9</b>	<b>480</b>
	<b>2700</b>	<b>72</b>	<b>118</b>	<b>6.3</b>	<b>5.6</b>	<b>655</b>
	<b>2600</b>	<b>63</b>	<b>114</b>	<b>5.6</b>	<b>6.3</b>	<b>710</b>
	<b>2500</b>	<b>56</b>	<b>108</b>	<b>4.9</b>	<b>7.1</b>	<b>770</b>
	<b>2400</b>	<b>51</b>	<b>104</b>	<b>4.5</b>	<b>7.8</b>	<b>805</b>
	<b>2300</b>	<b>47</b>	<b>99</b>	<b>4.1</b>	<b>8.5</b>	<b>845</b>
	<b>2200</b>	<b>43</b>	<b>94</b>	<b>3.8</b>	<b>9.2</b>	<b>865</b>
<b>7500</b>	<b>2800</b>	<b>77</b>	<b>124</b>	<b>8.2</b>	<b>4.3</b>	<b>525</b>
	<b>2700</b>	<b>67</b>	<b>119</b>	<b>5.9</b>	<b>5.9</b>	<b>705</b>
	<b>2600</b>	<b>60</b>	<b>114</b>	<b>5.2</b>	<b>6.7</b>	<b>765</b>
	<b>2500</b>	<b>53</b>	<b>109</b>	<b>4.7</b>	<b>7.4</b>	<b>810</b>
	<b>2400</b>	<b>48</b>	<b>103</b>	<b>4.3</b>	<b>8.1</b>	<b>835</b>
	<b>2300</b>	<b>44</b>	<b>98</b>	<b>3.9</b>	<b>9.0</b>	<b>875</b>
	<b>2200</b>	<b>41</b>	<b>92</b>	<b>3.6</b>	<b>9.7</b>	<b>890</b>
<b>10000</b>	<b>2800</b>	<b>70</b>	<b>124</b>	<b>6.2</b>	<b>5.6</b>	<b>700</b>
	<b>2700</b>	<b>62</b>	<b>119</b>	<b>5.5</b>	<b>6.4</b>	<b>755</b>
	<b>2600</b>	<b>56</b>	<b>114</b>	<b>4.9</b>	<b>7.1</b>	<b>810</b>
	<b>2500</b>	<b>50</b>	<b>107</b>	<b>4.4</b>	<b>8.0</b>	<b>855</b>
	<b>2400</b>	<b>46</b>	<b>101</b>	<b>4.0</b>	<b>8.8</b>	<b>880</b>
	<b>2300</b>	<b>42</b>	<b>93</b>	<b>3.7</b>	<b>9.5</b>	<b>880</b>

- Notes: (1) 75% power maximum cruise  
(2) Leaned at 75% or lower power settings  
(3) Full rich above 75% power settings



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## LANDING DISTANCE

60 MPH, hard dry runway, MGW, zero wind

Altitude (feet)	Temp (°F)	Ground roll (feet)	Over 50 ft. obstacle (ft.)
S.L.	59	400	775
2500	50	430	805
5000	41	465	840
7500	32	500	875

## MANEUVER ENTRY SPEEDS (CAS)

Chandelle, lazy eights	120 MPH
Barrel or slow roll	120 MPH
Immelman	145 MPH
Loop or cloverleaf	140 MPH
Split S	80 MPH
Snap roll	85 MPH
Vertical reverse	85 MPH
Cuban eight	145 MPH
Spins	Slow deceleration



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## EMERGENCY PROCEDURES

### ENGINE FIRE DURING START

Cranking..... CONTINUE  
Mixture .....IDLE CUT-OFF  
Throttle.....FULL OPEN

If fire persists:

Fuel shut-off valve ..... OFF  
Electrical switches ..... OFF  
Magneto switches ..... OFF

Abandon aircraft

### ENGINE FIRE IN FLIGHT

Mixture .....IDLE CUT-OFF  
Fuel shut-off valve ..... OFF  
Electrical switches ..... OFF  
Magneto switches ..... OFF  
Cabin heat ..... OFF (front/rear)  
Fire..... EXTINGUISH

### ELECTRICAL FIRE

Electrical switches ..... OFF  
Air vents ..... AS REQUIRED  
Fire..... EXTINGUISH

If fire is out:

Master switch..... ON  
Electrical switches ..... ON

### ALTERNATOR FAILURE

Master switch ..... CYCLE

If battery discharge continues:

Nonessential electrics .....OFF

Land as soon as practicable.

If only one circuit appears to be inoperative, remove and replace the suspected fuse.

### ENGINE FAILURE ON TAKEOFF

If sufficient runway remains:

Throttle .....CLOSED  
Land straight ahead

If airborne and sufficient altitude permits, attempt an engine restart:

Fuel shut-off valve.....ON  
Mixture ..... FULL RICH  
Carburetor heat..... ON (Full)  
Magneto switches .....ON

If power is not restored, proceed with forced landing.



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## EMERGENCY PROCEDURES

### ENGINE AIR RESTART

Airspeed ..... 65 MPH minimum  
Magneto switches ..... ON  
Mixture..... RICH or AS REQ'D  
Fuel shut-off valve..... ON  
Carburetor heat ..... ON  
Engine primer ..... OFF  
Starter ..... ENGAGE  
(if propeller not windmilling)

If restart does not occur,  
change throttle, mixture,  
primer, magneto, and  
carburetor heat settings

If still no sirstart, proceed  
with forced landing.

### PRECAUTIONARY LANDING

Airspeed ..... 65 MPH  
Throttle ..... CLOSED  
(within gliding distance)

### FORCED LANDING

Airspeed..... 65 MPH  
Mixture ..... IDLE CUT-OFF  
Fuel shut-off valve ..... OFF  
Radio ..... MAYDAY CALL  
Electrical switches ..... OFF

After landing, if necessary,  
remove and activate ELT

### DITCHING

Cabin side door..... JETTISON

Land parallel to swells, except  
land into high winds

Contact water at minimum  
speed without stalling

### SPIN RECOVERY

Throttle..... CLOSED  
Rudder ..... FULL OPPOSITE  
Elevator .. SLIGHT FORWARD  
Ailterons ..... NEUTRAL

When rotation stops:

Rudder ..... NEUTRALIZE  
Elevator .. SMOOTHLY RAISE



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