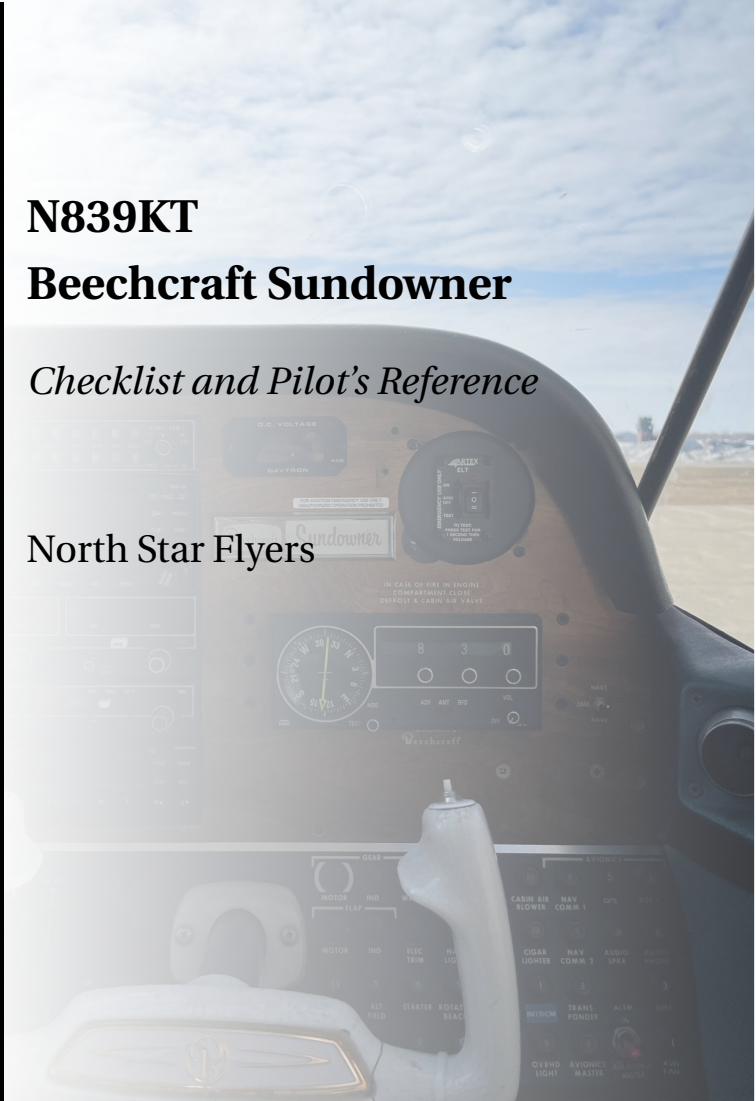


N839KT

Beechcraft Sundowner

Checklist and Pilot's Reference

North Star Flyers



DO NOT REMOVE FROM AIRCRAFT

Revised 2024-10-25

EMERGENCY CONTACT NUMBERS

Derek McLaughlin	MOBILE	(612) 207-6054
Mike Miller	MOBILE	(763) 267-8729
Cheryl Daml	MOBILE	(612) 272-9717
Jack Shelton	MOBILE	(763) 458-2923

AIRPLANE-SPECIFIC NOTES

TIRE PRESSURES:

Nose: 40 psi Main: 29 psi

FUEL (EACH TANK):

Tabs: 15 gal. Slots: 20 gal. Max: 29.9 gal.

Do not touch screens of electronic AI and DG.

GPU plug is located in baggage compartment (metal bar with positive/negative indications for emergency start). **Do not jump start battery.**

Ensure 24 V/28 V when using GPU or charging battery.

Fill oil in full quart increments only.

Transponder should remain on ALT at all times. Ensure 1200 after flight to prevent problems for the next pilot.

Do not leave towbar attached to nose wheel unattended.

AIRSPEDS FOR SAFE OPERATION (KIAS)

V_{S0}.....52

V_{S1}.....62

V_R 65

V_X 69

V_Y 75

V_F 96

V_A (MGW) 118

V_{NO} 136

V_{NE} 152

V_{ref} (flaps up) 80

 (flaps down) 68

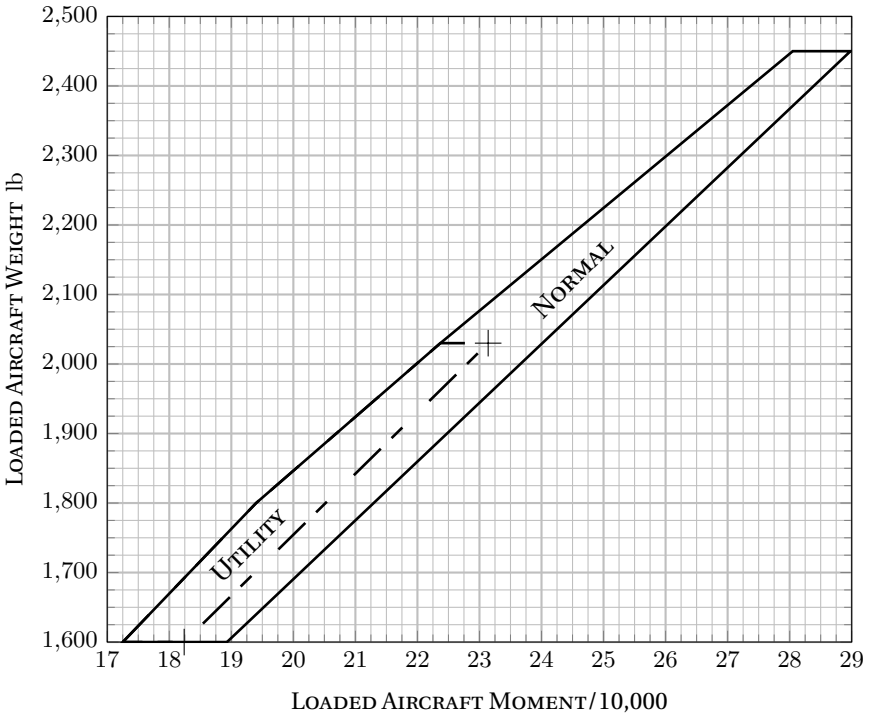
V_G 78

Balked Landing V_Y (flaps down) 64

Max demonstrated crosswind 17

WEIGHT AND BALANCE

LOADING CHART



	WEIGHT	ARM	MOMENT
Empty Weight	1606.15	112.68	180976.42
Pilot/Front Passenger	_____	108(avg.)	_____
Rear Passengers	_____	142	_____
Baggage	_____	167	_____
Zero Fuel	_____		_____
Fuel	_____	117	_____
TOTAL	_____		_____

PREFLIGHT INSPECTION

COCKPIT

- Control Lock REMOVED
- Electrical Switches Off
- Ignition Key Off & OUT
- Carburetor Heat Off
- Throttle CLOSED
- Mixture FULL LEAN
- Circuit Breakers CHECK
- Trim Tab T/O RANGE
- Fuel Selector LEFT OR RIGHT
- Battery Switch ON
- Fuel Gauges CHECK
- Lights, Pitot Heat CHECK
- Stall Warning CHECK
- Flaps EXTEND
- Battery Switch Off

LEFT WING

- Flap CHECK
- Fuel Vent Line CHECK
- Aileron CHECK
- Wing Tip and Light CHECK
- Pitot Tube CHECK
- Landing & Taxi Light CHECK
- Fuel CHECK, CAP SECURE
- Tiedown, Chocks REMOVE
- Tire & Brake CHECK
- Fuel Sump DRAIN

NOSE

- Cowl SECURE
- Induction Air Intake CLEAR
- Air Filter CHECK
- Propeller CHECK
- Tire & Strut CHECK
- Engine Oil 6 QT. MIN
- Fuel Strainer DRAIN
- Chocks REMOVE

RIGHT WING

- Fuel Sump DRAIN
- Tire & Brake CHECK
- Tiedown, Chocks REMOVE
- Fuel CHECK, CAP SECURE
- Taxi Light CHECK
- Wing Tip and Light CHECK
- Aileron CHECK
- Fuel Vent Line CHECK
- Flap CHECK

RIGHT FUSELAGE

- Static Pressure Port CLEAR
- GPU Receptacle CHECK

EMPENNAGE

- Control Surfaces CHECK
- Tiedown REMOVE
- Lights CHECK

LEFT FUSELAGE

- Static Pressure Port CHECK
- Antennas CHECK
- Baggage Door CHECK

PREFLIGHT PROCEDURES

BEFORE STARTING ENGINE

Seats, Belts ADJUST
 Brakes TEST & SET
 Flaps UP
 Fuel Selector FULLEST TANK
 Throttle CLOSED
 Carburetor Heat Off
 Mixture RICH
 Primer IN & LOCKED
 Propeller Area CLEAR
 Battery Switch ON
 Beacon ON

ENGINE START (COLD)

Throttle IDLE
 Prime 4-5 STROKES
 Fuel Boost Pump ON
 Starter ENGAGE
 Starter Engaged Light Off

ENGINE START (FLOODED)

Throttle FULL OPEN
 Mixture IDLE CUT-Off
 Starter ENGAGE
 Mixture ADVANCE AS
 ENGINE FIRES
 Throttle IDLE
 Starter Engaged Light Off

ENGINE START (GPU)

Alternator Switch Off
 GPU Off, CONNECT,
 28V, ON
 Fuel Boost Pump ON
 Starter ENGAGE
 GPU Off, DISCONNECT

BEFORE TAXI

Oil Pressure CHECK
 Alternator Switch ON
 Fuel Boost Pump Off
 Radio Master Switch ON
 Mixture LEAN FOR TAXI
 Directional Gyro CHECK
 Lights AS REQUIRED
 Brakes TEST

ENGINE RUN-UP

Flight Controls CORRECT
 Instruments CHECK & SET
 Mixture RICH
 Throttle 2200 RPM
 Magnetos CHECK (125/50)
 Carburetor Heat CHECK
 Mixture LEAN CHECK
 Engine Instruments CHECK
 Ammeter CHECK
 Voltmeter >24 V
 Throttle IDLE

BEFORE TAKEOFF

Doors & Window CLOSED
 Seats & Belts SECURE
 Flaps UP
 Trim TAKEOFF RANGE
 Fuel Selector FULLEST TANK
 Mixture RICH
 Carburetor Heat Off
 Fuel Boost Pump ON
 Radios, Transponder SET
 Lights AS REQUIRED
 Brakes RELEASE

FLIGHT PROCEDURES

TAKEOFF

Throttle FULL OPEN
 Engine Instruments CHECK
 Rotation Speed 65 kts
 Climb 69 kts (V_X)
 75 kts (V_Y)

CLIMB 1000 ft CHECKS

Airspeed 82-85 kts
 Flaps UP
 Lights AS REQUIRED

CAUTION:

Leave fuel boost pump on during climb.

CRUISE

Power AS REQUIRED
 Fuel Boost Pump Off
 Mixture LEAN (100 °F ROP)

DESCENT

Altimeter SET
 Carburetor Heat AS REQ'D
 Power AS REQUIRED
 Mixture ENRICH AS REQ'D

BEFORE LANDING

Fuel Selector FULLEST TANK
 Fuel Boost Pump ON
 Mixture RICH
 Carburetor Heat AS REQ'D
 Seats & Belts SECURED
 Brakes RELEASED
 Lights AS REQUIRED

NORMAL LANDING

Flaps DOWN (96 kts MAX)
 Airspeed 80 kts CLEAN
 68 kts DIRTY

BALKED LANDING

Power FULL THROTTLE
 Carburetor Heat Off
 Airspeed 64 kts THEN V_Y
 Flaps UP

AFTER LANDING

Flaps UP
 Carburetor Heat Off
 Transponder 1200
 Lights AS REQUIRED
 Fuel Boost Pump Off
 Mixture LEAN FOR TAXI

SECURING AIRCRAFT

Electrical/Avionics Off
 Lights Off, EXCEPT BEACON
 Magnetos GROUND CHECK
 Mixture IDLE CUT-Off
 Ignition Key Off & OUT
 Battery Switch Off
 Alternator Switch Off
 Control Lock AS REQUIRED

Note aircraft tach times and any squawks in aircraft book and on electronic chit form.

EMERGENCY PROCEDURES

ENGINE FIRE - DURING START

Fuel Selector Off
 Throttle CLOSED
 Mixture IDLE CUT-Off
 Battery/Alt Switches Off
 Ignition Key Off
 Fire EXTINGUISH

ENGINE FIRE - IN FLIGHT

Fuel Selector Off
 Mixture IDLE CUT-Off
 Throttle CLOSE
 Cabin Air Off (PULL)
 Defrost Valve Off (PUSH)
 Battery/Alt Switches Off
 Ignition Key Off

Do not attempt engine restart

ELECTRICAL FIRE - SMOKE IN CABIN

Battery/Alt Switches Off
 Electrical Switches Off
 Vents CLOSED
 Cabin Heat Off
 Fire EXTINGUISH
If fire is extinguished:
 Circuit Breakers CHECK
 Battery/Alt Switches ON
 Electrical Switches ON
 Vents OPEN
 Cabin Heat AS REQUIRED

WING FIRE

Navigation Lights Off
 Landing/Taxi Lights Off
 Pitot Heat Off

Sideslip to keep flames away from fuel tank and cabin.

Land as soon as possible.

ENGINE FAILURE - TAKEOFF

Throttle CLOSED
 Brakes APPLY

ENGINE FAILURE IN FLIGHT

If sufficient altitude
 Airspeed 78 kts
 Mixture FULL RICH - THEN
 LEAN AS REQUIRED
 Fuel Boost Pump ON
 Fuel Selector CHANGE TANKS
 Magnetos CHECK
Attempt air start procedure ...

AIR START

Fuel Selector FULLEST TANK
 Throttle FULL OPEN
 Mixture FULL RICH
 Fuel Boost Pump ON
 Throttle ADJUST
 Mixture LEAN AS REQUIRED

Turn fuel boost pump off once power restored unless engine driven pump is inoperative.

EMERGENCY PROCEDURES

POWER OFF LANDING

Airspeed 78 kts CLEAN
 68 kts DIRTY
 Throttle CLOSED
 Fuel Selector Off
 Mixture IDLE CUT-Off
 Ignition Key Off
 Seat Belts SECURE
 Doors UNLATCH
 Flaps AS REQUIRED
 Radios MAYDAY, 7700
 Battery/Alt Switches Off

Glide Range: 1.7 nm/1000 ft

ENGINE DISCREPANCIES

Rough Running Engine
 Mixture FULL RICH, THEN
 LEAN AS REQUIRED
 Magnetos ... LEFT, RIGHT, BOTH

Partial Loss of Engine Power ..
 Fuel Pressure Gauge CHECK
If fuel pressure low
 Mixture FULL RICH
 Fuel Boost Pump ON, THEN
 Off IF NO CHANGE
 Fuel Quantity CHECK
If tank being used is empty
 Fuel Boost Pump ON
 Fuel Selector CHANGE TANKS
 Fuel Boost Pump Off

EMERGENCY DESCENT

Throttle IDLE
 Airspeed 152 kts

ALTERNATOR FAILURE

Alternator Switch CYCLE
 Circuit Breakers CHECK
If condition persists/recurs
 Alternator Switch Off
 Nonessential Electrics Off
Land as soon as practical

NOTE: Deactivation of battery and alternator switches or alternator circuit breaker in flight is *prohibited* except in an actual emergency.

SPIN RECOVERY

Elevator FORWARD
 Rudder FULL OPPOSITE
When rotation stops
 NEUTRALIZE CONTROLS
 RECOVER FROM DIVE

NOTE: Intentional spins are *prohibited*.

POWER OFF STALL SPEEDS

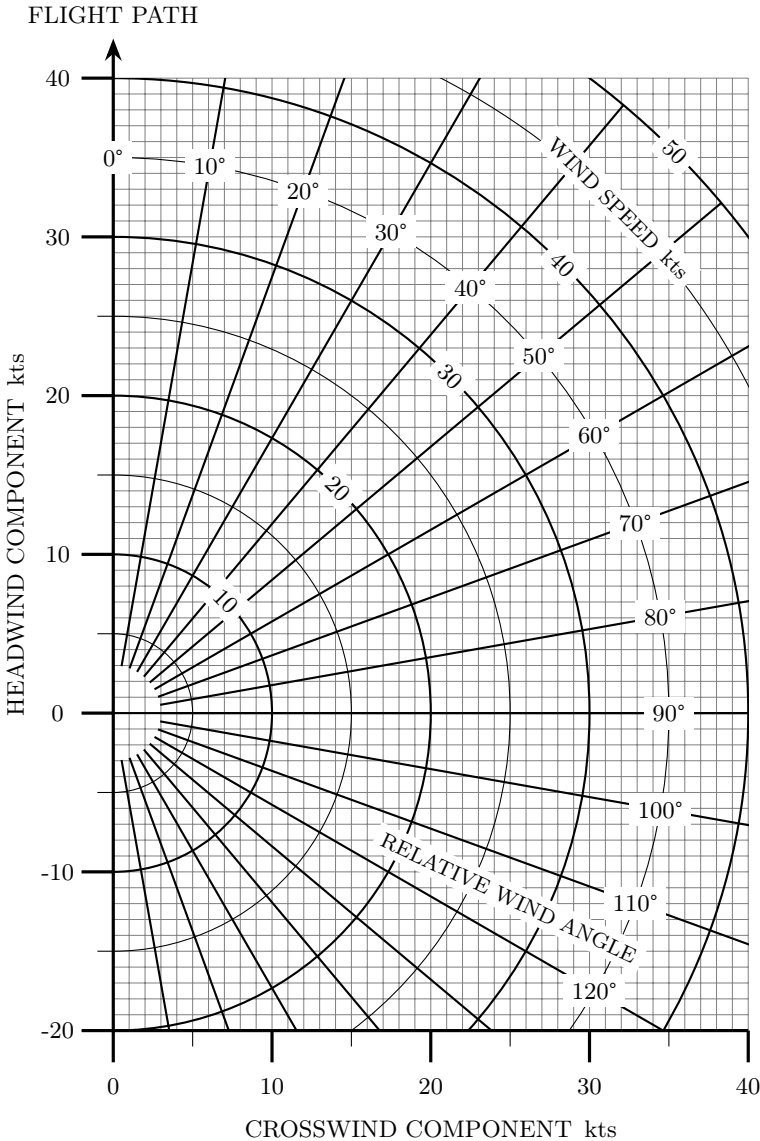
Weight 2450 lb

Maximum altitude loss during a normal stall recovery is approximately 300 ft.

ANGLE OF BANK			
Level	30°	45°	60°
FLAPS UP			
72 mph	77 mph	85 mph	101 mph
63 kts	67 kts	74 kts	88 kts
FLAPS DOWN (35°)			
59 mph	63 mph	70 mph	83 mph
51 kts	55 kts	61 kts	72 kts

WIND COMPONENTS

Demonstrated Crosswind Component is 17 kts

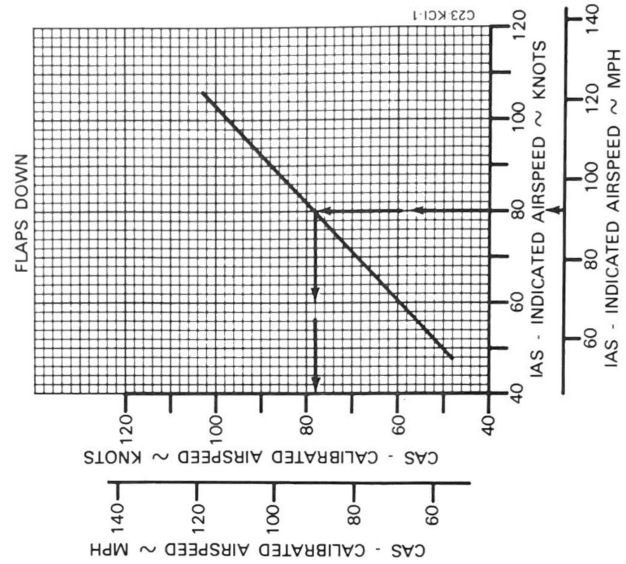
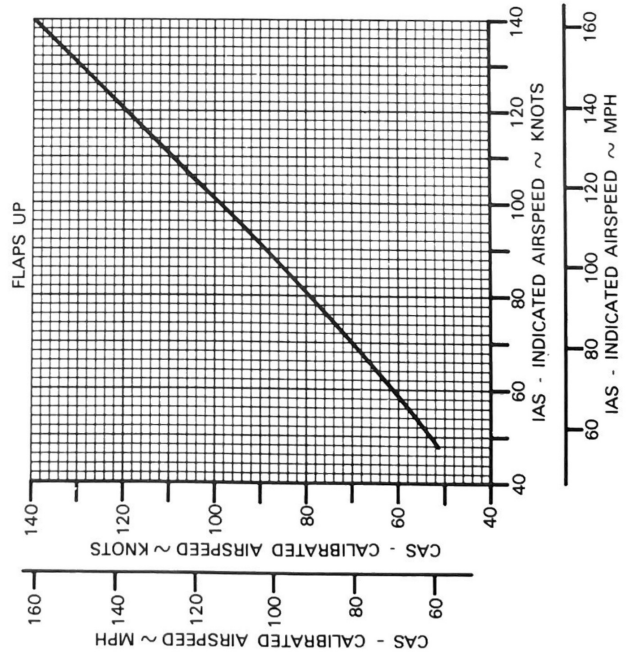


AIRSPEED CALIBRATION - NORMAL SYSTEM

NOTE: INDICATED AIRSPEED ASSUMES ZERO INSTRUMENT ERROR

EXAMPLE:

- FLAPS DOWN
- IAS 80 KTS
- CAS 78 KTS



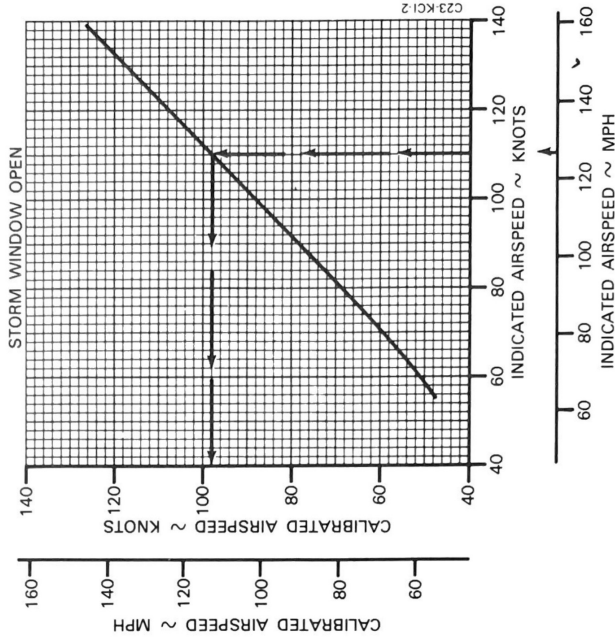
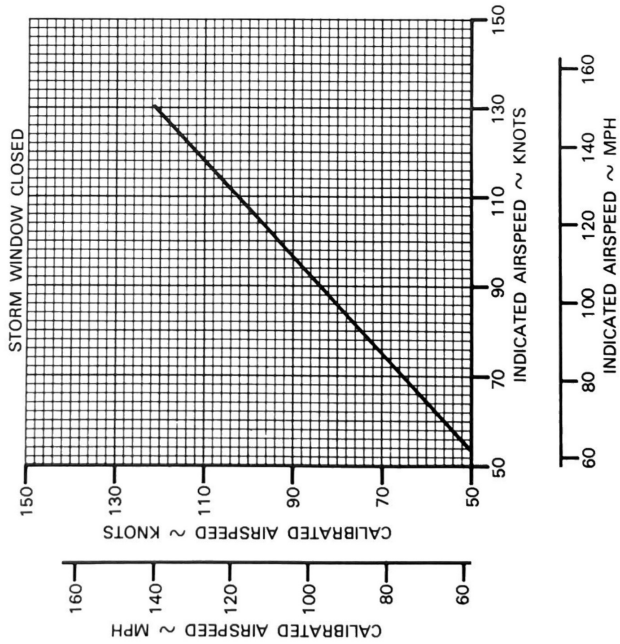
AIRSPEED CALIBRATION - ALTERNATE SYSTEM

NOTE: INDICATED AIRSPEED ASSUMES ZERO INSTRUMENT ERROR

ALL FLAP POSITIONS

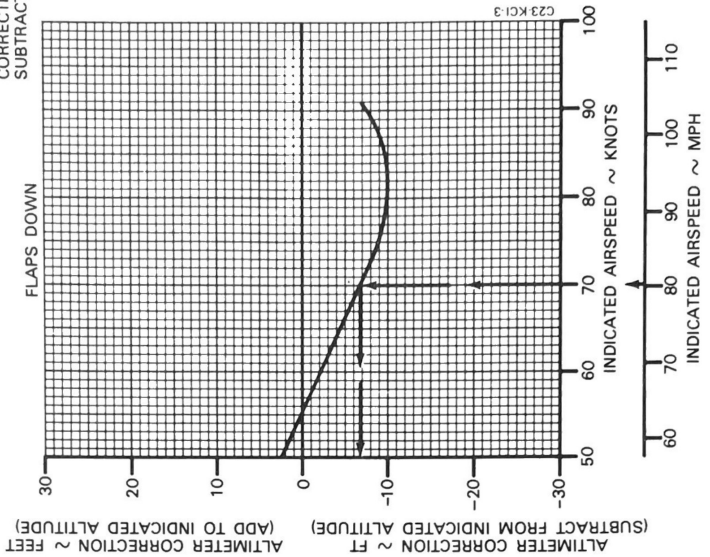
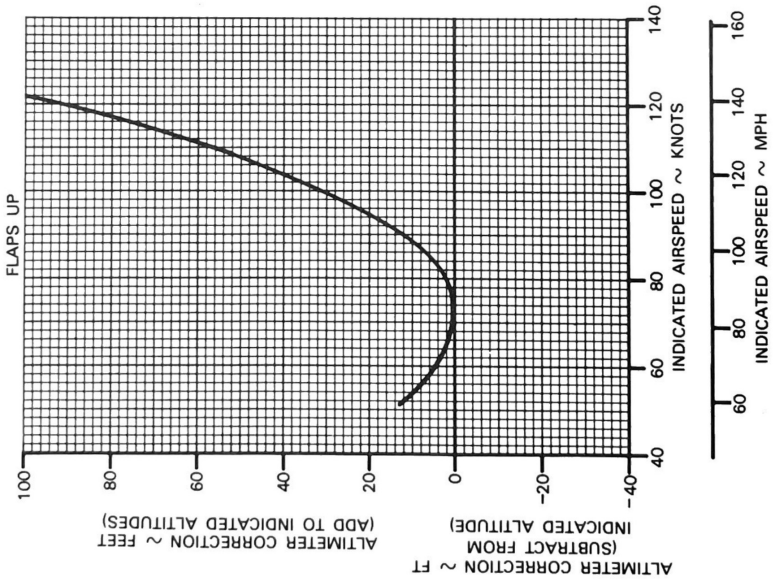
EXAMPLE:

STORM WINDOW - OPEN
IAS - 110 KNOTS/126 MPH
CAS - 98 KNOTS/113 MPH



ALTIMETER CORRECTION - NORMAL SYSTEM

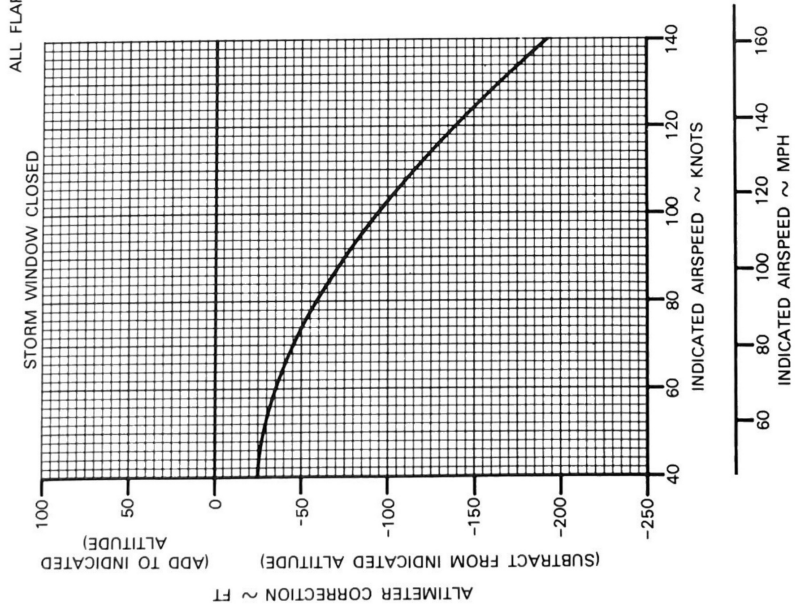
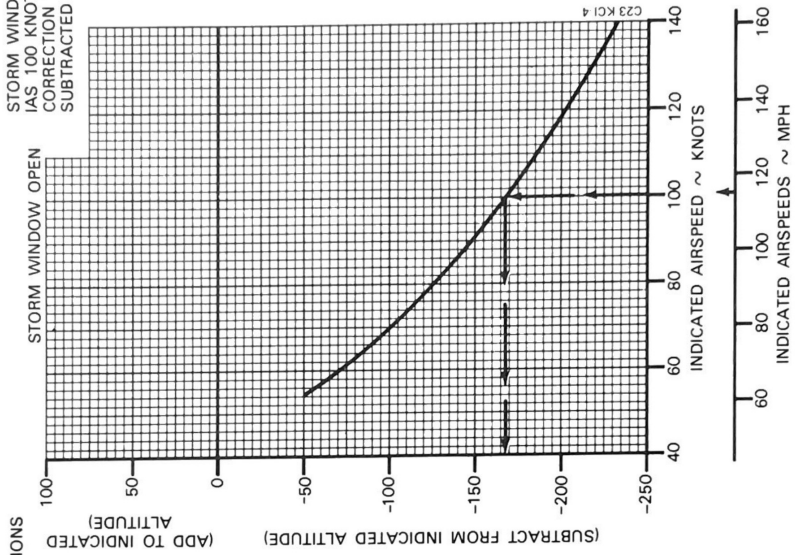
EXAMPLE
 FLAPS DOWN
 IAS 70 KNOTS
 CORRECTION TO BE
 SUBTRACTED - 7 FT



ALTIMETER CORRECTION - ALTERNATE SYSTEM

EXAMPLE

STORM WINDOW OPEN
IAS 100 KNOTS
CORRECTION TO BE
SUBTRACTED - 168 FT



TAKE-OFF DISTANCE - HARD SURFACE

Associated Conditions:

Power Full Throttle
 Mixture Lean to Maximum RPM, Then Enrich Slightly
 Flaps Up
 Runway Level, Dry, Hard Surface
 Weight 2450 lb

Take-Off Speeds:

Lift Off 65 kts/75mph
 At 50 ft 74 kts/85mph

Wind Down Runway	Sea Level			2000 FT			4000 FT			6000 FT			8000 FT		
	OAT °F °C	Ground Roll	Total Over 50' Obstacle	OAT °F °C	Ground Roll	Total Over 50' Obstacle	OAT °F °C	Ground Roll	Total Over 50' Obstacle	OAT °F °C	Ground Roll	Total Over 50' Obstacle	OAT °F °C	Ground Roll	Total Over 50' Obstacle
0	23-5	917	1592	16-9	1046	1805	9 -13	1195	2051	2 -17	1368	2334	-6-21	1569	2662
	41.5	1020	1767	34.1	1165	2007	27 -3	1333	2284	20 -7	1528	2604	13-11	1756	2975
	59.15	1130	1955	52.11	1293	2224	45.7	1481	2535	38.3	1701	2894	31 -1	1957	3311
15	77.25	1248	2155	70.21	1429	2455	63.17	1640	2802	56.13	1856	3204	49.9	2173	3671
	95.35	1373	2369	88.31	1575	2701	81.27	1809	3087	74.23	2083	3535	57.19	2404	4055
	23-5	728	1454	16-9	836	1653	9 -13	961	1883	2 -17	1108	2149	-6-21	1279	2456
30	41.5	813	1618	34.1	935	1842	27 -3	1077	2102	20 -7	1243	2402	13-11	1438	2750
	59.15	904	1793	52.11	1042	2045	45.7	1202	2336	38.3	1389	2674	31 -1	1809	3067
	77.25	1003	1980	70.21	1156	2261	63.17	1336	2587	56.13	1546	2965	49.9	1793	3406
30	95.35	1107	2180	88.31	1279	2492	81.27	1479	2855	74.23	1714	3277	57.19	1990	3768
	23-5	559	1337	16-9	647	1523	9 -13	751	1739	2 -17	873	1988	-6-21	1017	2278
	41.5	628	1490	34.1	728	1700	27 -3	847	1944	20 -7	985	2227	13-11	1149	2555
30	59.15	702	1654	52.11	816	1890	45.7	949	2164	38.3	1107	2483	31 -1	1292	2854
	77.25	782	1829	70.21	910	2094	63.17	1060	2401	56.13	1237	2758	49.9	1446	3174
	95.35	868	2017	88.31	1011	2311	81.27	1180	2653	74.23	1378	3052	57.19	1613	3518

Speeds are given in knots, distances are in feet.

TAKE-OFF DISTANCE - GRASS SURFACE

Associated Conditions:

Power Full Throttle
 Mixture Lean to Maximum RPM, Then Enrich Slightly
 Flaps Up
 Runway Short, Dry, Level Grass Surface
 Weight 2450 lb

Take-Off Speeds:

Lift Off 65 kts/75mph
 At 50 ft 74 kts/85mph

Wind Down Runway	Sea Level			2000 FT			4000 FT			6000 FT			8000 FT		
	OAT of °C	Ground Roll	Total Over 50' Obstacle	OAT of °C	Ground Roll	Total Over 50' Obstacle	OAT of °C	Ground Roll	Total Over 50' Obstacle	OAT of °C	Ground Roll	Total Over 50' Obstacle	OAT of °C	Ground Roll	Total Over 50' Obstacle
0	23-5	990	1665	16-9	1129	1888	9 -13	1290	2146	2 -17	1477	2443	-6-21	1693	2787
	41-5	1101	1848	34-1	1258	2100	27 -3	1439	2391	20 -7	1650	2726	13-11	1896	3115
	59-15	1220	2045	52-11	1396	2327	45 7	1599	2663	38 3	1836	3030	31 -1	2113	3467
15	77-25	1347	2255	70-21	1543	2569	63 17	1771	2933	56 13	2036	3354	49 9	2346	3844
	95-35	1482	2478	88-31	1700	2827	81 27	1954	3231	74 23	2249	3701	57 19	2595	4247
	23-5	786	1512	16-9	902	1720	9 -13	1038	1960	2 -17	1196	2237	-6-21	1381	2558
30	41-5	878	1882	34-1	1009	1917	27 -3	1163	2187	20 -7	1342	2501	13-11	1552	2865
	59-15	977	1865	52-11	1125	2128	45 7	1298	2432	38 3	1500	2785	31 -1	1737	3195
	77-25	1082	2060	70-21	1248	2353	63 17	1442	2693	56 13	1669	3088	49 9	1936	3548
30	95-35	1196	2268	88-31	1381	2594	81 27	1597	2972	74 23	1851	3413	57 19	2149	3927
	23-5	603	1381	16-9	699	1575	9 -13	811	1799	2 -17	943	2058	-6-21	1098	2359
	41-5	678	1540	34-1	786	1758	27 -3	914	2011	20 -7	1064	2305	13-11	1240	2647
30	59-15	758	1710	52-11	881	1955	45 7	1025	2240	38 3	1195	2571	31 -1	1395	2957
	77-25	845	1892	70-21	983	2166	63 17	1145	2485	56 13	1366	2856	49 9	1562	3289
	95-35	938	2086	88-31	1092	2392	81 27	1273	2747	74 23	1488	3162	57 19	1741	3646

Speeds are given in knots, distances are in feet.

NORMAL CLIMB

Associated Conditions:

- Power Full Throttle
- Mixture Lean to Maximum RPM, Then Enrich Slightly
- Flaps Up

Note:

High Humidity and/or use of rich mixture has been found to result in approximately 70 fpm loss in rate of climb from that shown.

Any area with low clouds or a dewpoint temperature of 60 °F(16 °C) or higher is an area of high humidity.

Weight	Sea Level											
	4000 Ft				8000 Ft				12000 Ft			
	OAT °F	R/C ft/min	IAS kts/mph	OAT °F	R/C ft/min	IAS kts/mph	OAT °F	R/C ft/min	IAS kts/mph	OAT °F	R/C ft/min	IAS kts/mph
2450	23 -5	841		9 -13	621		-6 -21	389		-20 -29	167	
	41 5	816		27 -3	596		13 -11	362		-2 -19	141	
	59 15	792	78/90	45 7	572	78/87	31 -1	338	74/85	16 -9	117	74/85
	77 25	769		63 17	549		49 9	315		34 1	94	
	95 55	747		81 27	527		67 19	293		52 11	72	
2200	23 -5	1047		9 -13	812		-6 -21	567		-20 -29	327	
	41 5	1021		27 -3	787		13 -11	539		-2 -19	302	
	59 15	997	76/88	45 7	763	74/85	31 -1	515	72/83	16 -9	277	72/83
	77 25	974		63 17	740		49 9	492		34 1	254	
	95 55	951		81 27	718		67 19	469		52 11	232	
2000	23 -5	1243		9 -13	994		-6 -21	735		-20 -29	478	
	41 5	1217		27 -3	969		13 -11	707		-2 -19	453	
	59 15	1193	75/86	45 7	945	72/83	31 -1	682	70/81	16 -9	428	70/81
	77 25	1169		63 17	922		49 9	659		34 1	405	
	95 55	1147		81 27	900		67 19	636		52 11	383	

TIME, FUEL, AND DISTANCE TO CLIMB

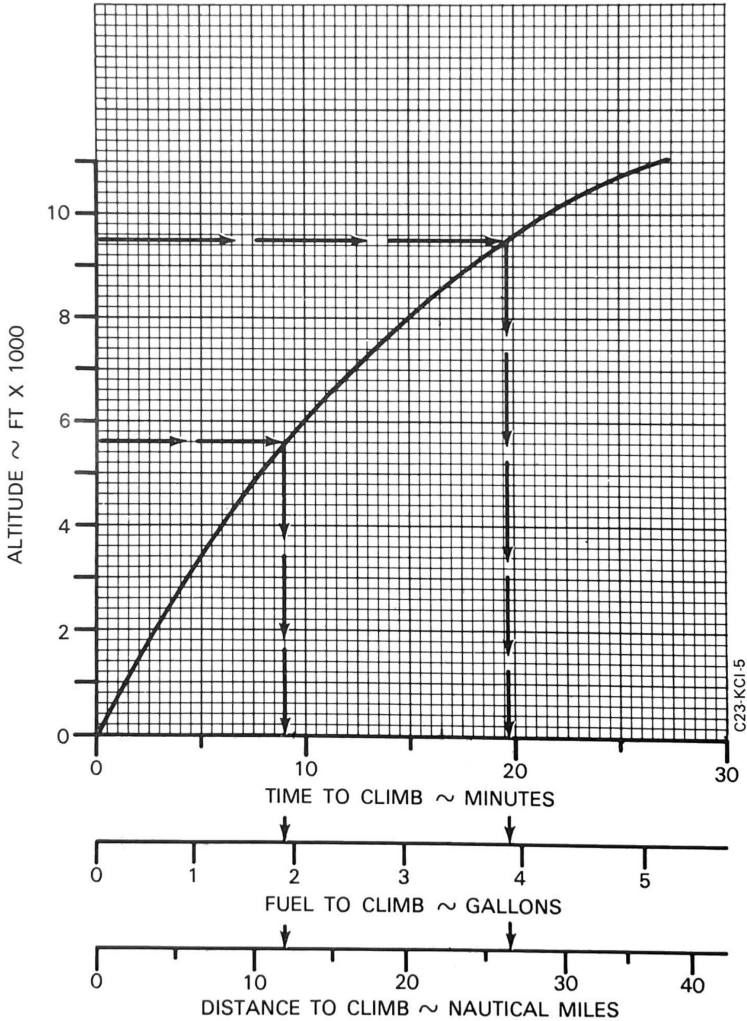
ASSOCIATED CONDITIONS

POWER FULL THROTTLE
 MIXTURE LEAN TO MAXIMUM RPM
 THEN ENRICH SLIGHTLY
 FLAPS UP
 WEIGHT 2450 LBS
 STANDARD DAY

EXAMPLE

AIRPORT PRESSURE ALTITUDE 5650 FT
 CRUISE ALTITUDE 9500 FT
 TIME TO CLIMB 20-9 = 11 MIN
 FUEL TO CLIMB 3.9-1.9 = 2 GAL
 DIST TO CLIMB 27.-12. = 15 NM

78 KTS/90 MPH



C23-KCI-5

CRUISE PERFORMANCE

Standard Day - 2350 lb

Altitude Feet	Power Settings			TAS kts/mph	Range N.M.	
	Throttle Settings	BHP	Fuel Flow		Initial Fuel Onboard (Usable)	
	RPM	%	Gal/Hr	37 Gal.	57 Gal.	
2500	2700	88	13.2	126/145	283	475
	2500	73	10.4	116/134	330	555
	2300	60	8.2	106/122	377	633
3500	2700	86	12.8	128/145	290	484
	2500	71	10.1	116/133	337	567
	2300	59	8.1	105/121	379	638
4500	2700	84	12.5	126/145	298	497
	2500	70	9.8	116/133	346	581
	2300	59	8.0	105/121	381	641
5500	2696	82	12.0	126/145	308	517
	2500	68	9.6	116/133	352	593
	2300	58	7.9	104/120	382	644
6500	2688	79	11.6	125/144	318	534
	2500	67	9.4	115/132	359	606
	2300	58	7.9	103/119	379	640
7500	2680	77	11.2	124/143	324	546
	2500	66	9.2	115/132	365	616
	2300	57	7.9	102/117	378	638
8500	2670	75	10.8	124/143	335	564
	2500	65	9.0	114/131	368	623
	2300	57	7.8	101/116	373	631
9500	2662	73	10.5	123/141	342	577
	2500	64	8.8	114/131	371	629
	2300	57	7.8	101/116	368	623
10500	2654	71	10.2	122/140	347	587
	2500	63	8.7	113/130	372	632
	2300	57	7.9	99/114	362	613

LANDING DISTANCE - HARD SURFACE

Associated Conditions:

Power Idle
 Mixture Rich
 Flaps 35°
 Runway Level, Dry, Hard Surface
 Weight 2450 lb

Landing Speeds:

At 50 ft 68 kts/78mph
 Touchdown 61 kts/70mph

Wind Down Runway	Sea Level			2000 FT			4000 FT			6000 FT			8000 FT		
	OAT °F °C	Ground Roll	Total Over 50' Obstacle	OAT °F °C	Ground Roll	Total Over 50' Obstacle	OAT °F °C	Ground Roll	Total Over 50' Obstacle	OAT °F °C	Ground Roll	Total Over 50' Obstacle	OAT °F °C	Ground Roll	Total Over 50' Obstacle
0	23-5	654	1409	16-9	693	1467	9 -13	735	1532	2 -17	780	1600	-6 -21	828	1672
	41-5	678	1446	34-1	719	1509	27 -3	763	1575	20 -7	810	1644	13-11	861	1724
	59-15	703	1484	52-11	745	1548	45 7	791	1617	38 3	840	1691	31 -1	894	1776
15	77-25	727	1521	70-21	771	1587	63 17	819	1658	56 13	871	1740	49 9	926	1827
	95-35	751	1558	88-31	798	1626	81 27	847	1703	74 23	901	1788	57 19	959	1882
	23-5	496	1190	16-9	530	1243	9 -13	567	1302	2 -17	607	1365	-6 -21	650	1431
30	41-5	518	1222	34-1	553	1280	27 -3	592	1342	20 -7	634	1407	13-11	679	1476
	59-15	539	1257	52-11	576	1317	45 7	617	1381	38 3	661	1448	31 -1	708	1520
	77-25	560	1291	70-21	600	1354	63 17	642	1420	56 13	688	1489	49 9	737	1565
30	95-35	582	1326	88-31	623	1390	81 27	667	1458	74 23	715	1530	57 19	766	1614
	23-5	361	1005	16-9	390	1049	9 -13	421	1095	2 -17	456	1149	-6 -21	493	1211
	41-5	379	1032	34-1	409	1079	27 -3	443	1127	20 -7	479	1188	13-11	518	1252
30	59-15	397	1060	52-11	429	1107	45 7	464	1163	38 3	502	1226	31 -1	544	1293
	77-25	416	1088	70-21	449	1138	63 17	486	1200	56 13	526	1264	49 9	569	1334
	95-35	434	1114	88-31	469	1172	81 27	508	1235	74 23	550	1303	57 19	595	1375

Speeds are given in knots, distances are in feet.

LANDING DISTANCE - GRASS SURFACE

Associated Conditions:

Power Idle
 Mixture Rich
 Flaps 35°
 Runway Short, Dry, Level Grass Surface
 Weight 2450 lb

Landing Speeds:

At 50 ft 68 kts/78mph
 Touchdown 61 kts/70mph

Wind Down Runway	Sea Level			2000 FT			4000 FT			6000 FT			8000 FT		
	OAT °F °C	Ground Roll	Total Over 50' Obstacle	OAT °F °C	Ground Roll	Total Over 50' Obstacle	OAT °F °C	Ground Roll	Total Over 50' Obstacle	OAT °F °C	Ground Roll	Total Over 50' Obstacle	OAT °F °C	Ground Roll	Total Over 50' Obstacle
0	23-5	765	1520	16-9	810	1586	9-13	859	1657	2-17	912	1732	-6-21	969	1812
	41-5	793	1562	34-1	841	1631	27-3	892	1704	20-7	948	1782	13-11	1007	1870
	59-15	822	1603	52-11	872	1675	45-7	925	1751	38-3	983	1834	31-1	1046	1927
15	77-25	851	1644	70-21	903	1719	63-17	959	1797	56-13	1019	1888	49-9	1084	1985
	95-35	879	1685	88-31	933	1762	81-27	992	1847	74-23	1054	1941	57-19	1122	2045
	23-5	581	1274	16-9	621	1333	9-13	663	1399	2-17	710	1468	-6-21	760	1542
30	41-5	606	1310	34-1	647	1374	27-3	693	1442	20-7	741	1515	13-11	794	1591
	59-15	631	1349	52-11	674	1415	45-7	722	1486	38-3	773	1561	31-1	828	1640
	77-25	656	1387	70-21	701	1456	63-17	751	1529	56-13	804	1606	49-9	862	1691
30	95-35	681	1425	88-31	729	1496	81-27	780	1571	74-23	836	1652	57-19	897	1744
	23-5	422	1066	16-9	456	1115	9-13	493	1167	2-17	533	1226	-6-21	576	1294
	41-5	443	1097	34-1	479	1147	27-3	518	1202	20-7	560	1269	13-11	606	1340
30	59-15	465	1127	52-11	502	1180	45-7	543	1242	38-3	588	1312	31-1	636	1385
	77-25	486	1157	70-21	526	1214	63-17	568	1282	56-13	615	1354	49-9	666	1431
	95-35	508	1187	88-31	549	1252	81-27	594	1321	74-23	643	1396	57-19	696	1476

Speeds are given in knots, distances are in feet.