



N15380



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**



Piper Arrow PA28R-200 Arrow II

N15380 s/n 28R-7335054



EMERGENCY CONTACT NUMBERS

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AIRPLANE-SPECIFIC NOTES

Tire Pressures: Nose - 30 PSI, Main - 27 PSI

Fuel: 17 gal to tabs, 24 gal to top (each tank)

Ensure 12V/14V 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.

Avidyne password: abcdef1234

Do not leave towbar attached to nose wheel unattended.





AIRSPEDS FOR SAFE OPERATION (MPH)

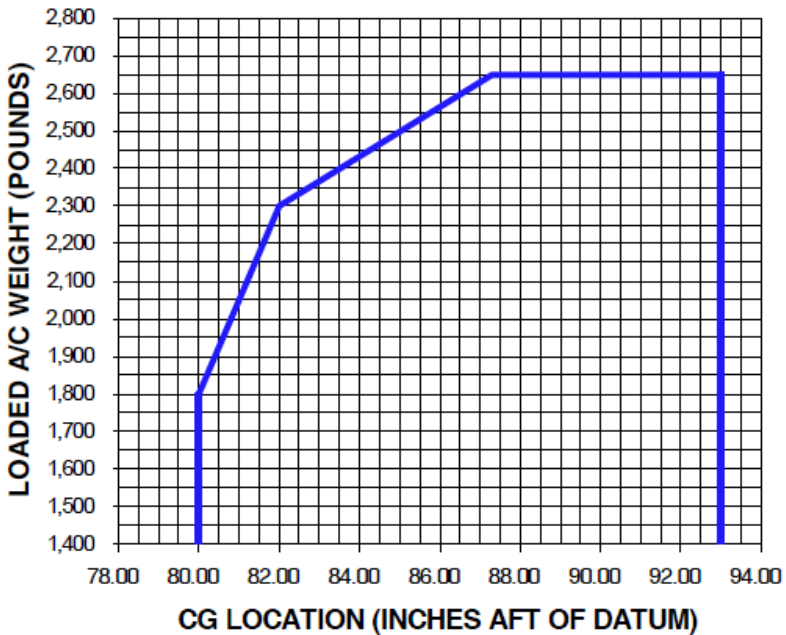
V_{SO}		64
V_{SI}		71
V_R		65
V_X	(gear down/gear up)	85/96
V_Y	(gear down/gear up)	95/100
V_F		125
V_{LO}	(gear up)	125
V_{LE}	(gear down)	150
V_A	(MGW)	131
V_{NO}		170
V_{NE}		214
V_{ref}	(flaps up)	90
	(flaps down)	80
	(short field)	75
V_G		105
Max demonstrated crosswind (mph)		20





WEIGHT AND BALANCE

	Weight (lbs)	Arm (in)	Moment (in-lbs)
Empty Weight	1,637.73	84.06	137667.6
Oil	15	24.5	368
Fuel (48 gal max)		95.0	
Pilot/Front Pass		80.5	
Rear Passengers		118.1	
Baggage Area		142.8	
Gear Retraction			819
TOTAL			
CG LOCATION			





PREFLIGHT INSPECTION

COCKPIT

Trim Tabs.... TAKEOFF RANGE
Magnetos..... OFF
Electrical Switches OFF
Throttle CLOSED
Mixture FULL LEAN
Circuit BreakersCHECK
Gear Handle DOWN
Battery Switch..... ON
Fuel Gauges.....CHECK
Electric Fuel PumpCHECK
Landing Gear Lights....CHECK
Lights, Pitot Heat.....CHECK
Stall WarningCHECK
Battery Switch..... OFF
Flaps..... EXTEND

RIGHT WING

Flap and AileronCHECK
Wing Tip and LightCHECK
Fuel QuantityCHECK
Fuel Vent..... CLEAR
Fuel Sump DRAIN
Wheel Strut..... 2”
Tire, Brake, Gear Door .CHECK
Tiedown, Chocks.....REMOVE

NOSE

OilCHECK (6 QT MIN)
Cowling, IntakesCHECK
Spinner and Propeller ..CHECK
Alternator BeltCHECK
Landing LightCHECK

NOSE (Cont'd)

Air Intake CLEAR
Nosewheel Strut..... 2.75”
Tire CHECK
Linkages CHECK
Fuel Sump..... DRAIN

LEFT WING

Wheel Strut2”
Squat Switch CHECK
Tire, Brake, Gear Door. CHECK
Fuel Vent CLEAR
Fuel Sump..... DRAIN
Pitot/Static Mast CHECK
Fuel Quantity..... CHECK
Wing Tip and Light..... CHECK
Aileron and Flap..... CHECK

LEFT FUSELAGE

Antennas CHECK
Gear Mast CHECK

EMPENNAGE

Rudder..... CHECK
Lights..... CHECK

RIGHT FUSELAGE

External Power Port CHECK
Baggage Door..... CHECK





PREFLIGHT PROCEDURES

BEFORE STARTING ENGINE

Towbar, Chocks..... STOWED
Seats, Belts..... ADJUST
Brakes..... TEST AND SET
Flaps..... UP
Propeller FULL FORWARD
Gear Handle DOWN
Propeller Area CLEAR
Battery Switch..... ON
Strobe..... ON

ENGINE START (COLD)

Throttle OPEN TO CLICK
Electric Fuel Pump ON
Mixture PRIME, LEAN
Starter..... ENGAGE
Mixture ADVANCE

ENGINE START (HOT)

Throttle CLOSED
Mixture FULL LEAN
Electric Fuel Pump OFF
Starter..... ENGAGE
Mixture... ADVANCE SLOWLY

ENGINE START (FLOODED)

Throttle FULL OPEN
Mixture FULL LEAN
Electric Fuel Pump OFF
Starter..... ENGAGE
Mixture ... ADVANCE SLOWLY
Throttle IDLE

BEFORE TAXI

Throttle 1000 RPM
Oil Pressure..... CHECK
Alternator Switch..... ON

Electric Fuel Pump OFF
Radio Master Switch ON
Lights AS REQUIRED
Mixture LEAN FOR TAXI
JPI NOTE HOBBS
JPI ... SET FUEL (see JPI page)
Directional Gyro SET
Brakes TEST

ENGINE RUN-UP

Flight Controls CORRECT
Instruments. CHECK AND SET
Mixture RICH
Throttle 2000 RPM
Magnetos..... CHECK (175/50)
Propeller CYCLE
Mixture CHECK
Alternate Air..... CHECK, OFF
Engine Instruments..... CHECK
Ammeter CHECK
Suction CHECK (4.8-5.2")
Throttle 1000 RPM

BEFORE TAKEOFF

Door and Window..... CLOSED
Door Seal..... AS DESIRED
Seats, Belts..... SECURE
Autopilot OFF
Fuel Selector.. FULLEST TANK
Trim..... TAKEOFF RANGE
Flaps..... AS REQUIRED
Mixture FULL RICH
Propeller FULL FORWARD
Lights AS REQUIRED
Electric Fuel Pump ON
Radios, Transponder SET
Gear Override ... AS REQUIRED





FLIGHT PROCEDURES

NORMAL TAKEOFF

Flaps..... UP
 Throttle FULL OPEN
 Engine Instruments.....CHECK
 Rotation Speed..... 65 MPH
 Climb 95 MPH
 Landing Gear (Rwyt Gone)... UP
 Climb 100 MPH

SHORT FIELD TAKEOFF

Flaps..... 25 DEGREES
 Brakes HOLD
 Throttle FULL OPEN
 Engine Instruments.....CHECK
 Brakes RELEASE
 Rotation Speed..... 60 MPH
 Climb 85 MPH
 Landing Gear (Rwyt Gone)... UP
 Climb 95 MPH
 Flaps (Obstacle Cleared) UP
 Climb 100 MPH

SOFT FIELD TAKEOFF

Flaps..... 25 DEGREES
 Elevator..... FULL UP
 Throttle FULL OPEN
 Engine Instruments.....CHECK
 Flyoff Speed 50-55 MPH
 Climb 85/95 MPH
 Landing Gear (Rwyt Gone)... UP
 Flaps..... UP
 Climb 100 MPH

CLIMB (1000 FT CHECKS)

Airspeed..... 110 MPH
 Throttle AS DESIRED
 Propeller 2500 RPM
 Landing Gear CHECK UP
 Gear Override OFF
 Flaps..... UP
 Electric Fuel Pump OFF
 Lights AS REQUIRED

CRUISE

Power AS REQUIRED
 Mixture LEAN PER JPI
 Lights AS REQUIRED
 Autopilot AS DESIRED

**Note: 75% max continuous power
 - see POH for proper settings**

**Lean settings by EGT (JPI):
 >65% power - 100°F rich of peak
 <65% power - peak EGT**

Maintain CHT <380°F

**Turn electric fuel pump on prior
 to each fuel tank switch**

DESCENT

Altimeter..... SET
 Power AS REQUIRED
 Mixture ENRICH AS REQ'D





FLIGHT PROCEDURES

BEFORE LANDING: GUMPSB

Electric Fuel Pump ON
Fuel Selector.. FULLEST TANK
Landing Gear Handle..... DOWN
Gear Override OFF
Mixture RICH
Propeller FULL FORWARD
Seats, Belts..... SECURED
Brakes RELEASED
Lights AS REQUIRED

LANDING

Flaps..... DOWN
Airspeed..... 90 MPH CLEAN
 80 MPH DIRTY
 75 MPH SHORT FIELD

BALKED LANDING

Power FULL THROTTLE
Flaps..... 25 DEGREES
Climb 85 MPH
Flaps..... RETRACT
Landing Gear Handle..... UP
Climb 100 MPH

AFTER LANDING

Flaps..... UP
Transponder 1200
Lights AS REQUIRED
Electric Fuel Pump OFF
Mixture LEAN FOR TAXI
Door Seal..... RELEASE

SECURING AIRCRAFT

Electrical Switches OFF
Lights OFF EXCEPT STROBE
Magnetos..... GROUND CHECK
Mixture IDLE CUT-OFF
JPI NOTE HOBBS
JPI NOTE FUEL USED

Note: Hobbs time is on JPI and must be read before turning off radio master switch

Radio Master Switch OFF
Magnetos..... OFF
Master Switch..... OFF
Control Lock..... AS REQUIRED
Oil Heater AS REQUIRED

Write aircraft tach/Hobbs times and squawks in aircraft book and on electronic chit form





EMERGENCY PROCEDURES

ENGINE FIRE DURING ENGINE START

Engine .CONTINUE CRANKING

If engine starts:

Power 1000 RPM (1-2 MIN)

Engine .. NORMAL SHUTDOWN

If engine fails to start:

Throttle FULL OPEN

Mixture IDLE CUT-OFF

Master Switch..... OFF

Magneto/Start Switch OFF

Fuel Selector OFF

Aircraft ABANDON

FireEXTINGUISH

ENGINE FIRE IN FLIGHT

Fuel Selector OFF

ThrottleCLOSE

Mixture IDLE CUT-OFF

Electric Fuel Pump OFF

Master Switch..... OFF

Cabin Air and Heat OFF

Vents OPEN

Do not attempt engine restart

ELECTRICAL FIRE (SMOKE IN CABIN)

Master Switch..... OFF

Electrical Switches OFF

Vents OPEN

Cabin Heat..... OFF

FireEXTINGUISH

If fire is extinguished:

Circuit BreakersCHECK

Master Switch..... ON

Vents OPEN

Electrical Switches ON

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**





EMERGENCY PROCEDURES

ENGINE FAILURE - TAKEOFF

Throttle CLOSED
Brakes APPLY

ENGINE FAILURE - FLIGHT

If sufficient altitude:

Airspeed 105 MPH
Electric Fuel Pump ON
Fuel Selector .CHANGE TANKS
MixtureADJUST
Alternate Air..... ON
Magnetos.....CHECK

If no restart:

Propeller FULL AFT

POWER OFF LANDING

Throttle CLOSED
Fuel Selector OFF
Magneto/Start Switch OFF
Mixture IDLE CUT-OFF
Landing Gear ... AS REQUIRED
Gear Override ... AS REQUIRED
Master Switch..... OFF
Seat Belts SECURE
Door..... UNLATCH
Airspeed..... 90 MPH ON FINAL
Flaps..... AS REQUIRED

PROPELLER OVERSPEED

Throttle RETARD
Oil Pressure.....CHECK
Propeller Control FULL AFT

If no prop control available:

Airspeed..... DECREASE
Throttle AS REQUIRED

LOSS OF FUEL PRESSURE

Electric Fuel Pump ON
Mixture FULL RICH
Fuel Selector .. FULLEST TANK

LOSS OF OIL PRESSURE OR HIGH OIL TEMPERATURE

Land as soon as possible
Prepare for power off landing

ALTERNATOR FAILURE

Electrical Load..... REDUCE
Circuit BreakersCHECK
Alternator Switch..... CYCLE

If condition persists:

Alternator Switch..... OFF
Electrical Load..... REDUCE

Land as soon as practical.

**Perform emergency landing gear
extension procedure if total
electrical failure occurs**





EMERGENCY PROCEDURES

LANDING GEAR

EXTENSION FAILURE

* Landing Gear Handle .. DOWN
Master Switch..... CHECK ON
Circuit BreakersCHECK
Panel Lights .. OFF (DAYTIME)
Gear Indicator BulbsCHECK

If gear not down and locked:

Airspeed.....BELOW 100 MPH
Gear Handle . RECHECK DOWN

If gear not down and locked:

Emergency Gear Lever..... UP
Emergency Gear Lever.. DOWN
Yaw airplane abruptly

* **Leave handle up in training scenarios. See POH p. 3-11.**

EMERGENCY DESCENT

Throttle IDLE
Propeller FULL FORWARD
Airspeed..... 150 MPH
Landing Gear DOWN
Flaps..... UP
Dive 150 MPH

Recovery:

Airspeed..... 125 MPH
Landing Gear UP

SPIN RECOVERY

Throttle IDLE
Rudder FULL OPPOSITE
Elevators..... FULL FORWARD

When rotation stops, neutralize controls and recover from dive

NOTE: Intentional spins are prohibited

OPEN DOOR

Airspeed..... REDUCE
Cabin Vents..... CLOSE
Storm Window OPEN

Open door slightly, then firmly pull closed and latch.





CONNECTING AN IPAD TO THE IFD 540

To connect an iPad to the IFD 540 *for the first time*, this procedure has been verified in 380. The IFD Wi-Fi allows 10 devices to be stored in the 540; you can have up to 5 connected at one time.

Be patient while waiting for each device to connect; it may take 5-10 minutes. Make all selections with lower right inner/outer knobs.

Procedure:

1. Wait until the wireless icon on the 540 turns green, indicating the IFD WiFi is ready.
2. Open “Settings” and select “WiFi” on your iPad.
3. Look for a network that has IFD in its name; log onto that network with password NSFLYERS.
4. Select AUX and SETUP on the 540.
5. Open CONNECTIVITY tab; scroll down to the devices list. You will see “no devices” – *be patient!* An IP address or your iPad’s name will appear with a tab next to it that says BLOCKED. Change that to ALWAYS.
6. On your iPad, in ForeFlight, you will eventually see a device titled “Avidyne IFD connected;” this provides GPS and flight plan send/receive.
7. Shortly afterwards, another device will appear titled “AVIDYNE ADSB connected;” this provides ADS-B.

You will now see traffic and weather on your iPad.

Many thanks to Dave Autio for writing and verifying this procedure.





JPI EDM 730 REFERENCE PAGE

NOTES:

1. Do not adjust parameters via “Pilot Programming” mode.
2. Use PEAK EGT for power settings 65% and below ONLY.
3. Use 100° RICH OF PEAK for any power setting >65%.
4. Best practice (economy, engine life): 65% (22.5”/2400 rpm).
5. Do not attempt LEAN OF PEAK operations.

STARTUP

Note Hobbs on first startup and compare to last aircraft book entry.
If refueled, note Fuel Used indication and compare to actual fuel added.
Set fuel level when fuel is added by selecting “full” or “tabs.”
See JPI Quick Reference Guide for adding other fuel amounts.

RUNUP

Note EGT rise for each cylinder when on one magneto.
Note lack of change when alternate air selected.
Select Normalized View if desired for runup (hold LF 3 sec.)
Return to Percentage View and select Automatic Scan for takeoff
(hold LF 3 sec., then tap LF and tap STEP)

TAKEOFF

Note takeoff fuel flow (16-18 gph) and rising CHT/EGT indications.

CLIMB

Note EGT indication (hottest cylinder) at 1000 AGL.
IF DESIRED, lean during prolonged climb to maintain this EGT.

CRUISE

Pre-Lean: 75% power - 11 gph; 65% power - 9.5 gph
Tap LF to enter Lean Find Mode and ensure “ROP” is indicated.
Begin leaning slowly (whole process should take at least 1-2 min.).
When first cylinder peaks (flashes), hold LF to memorize peak.
Leave at peak EGT for power settings 65% and below.
Enrichen 100° for power settings >65%.
See “Leaning Rich of Peak” section of JPI Quick Reference Guide.

DESCENT

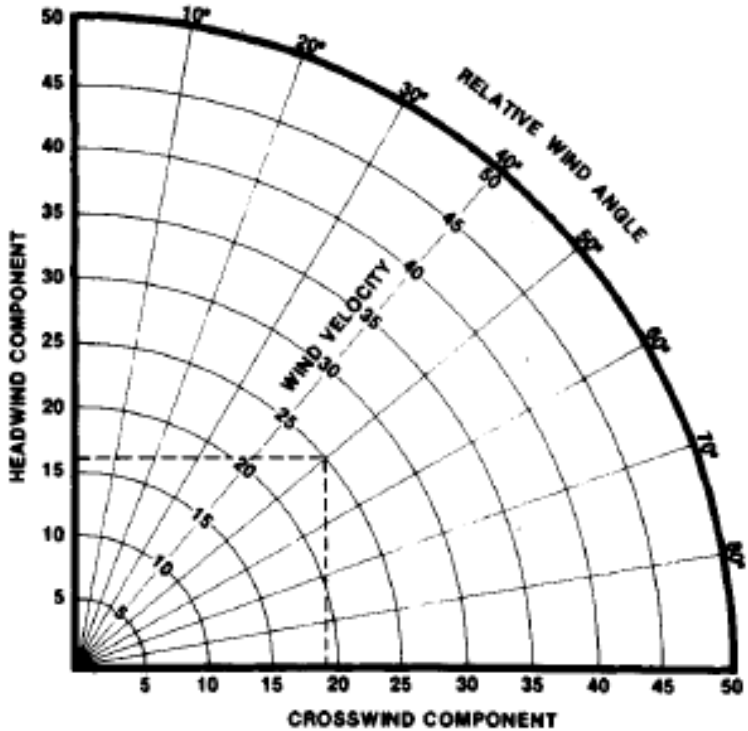
Enrichen as desired to maintain a constant EGT or smooth engine.

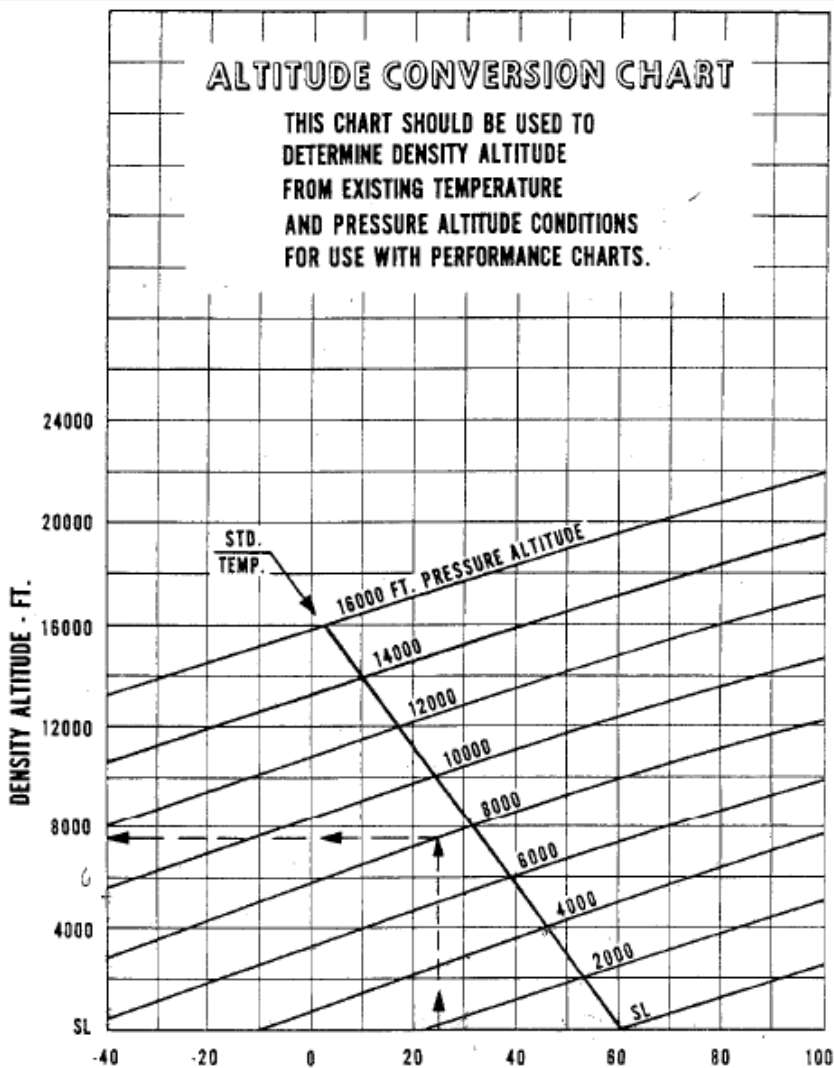
SECURING AIRCRAFT

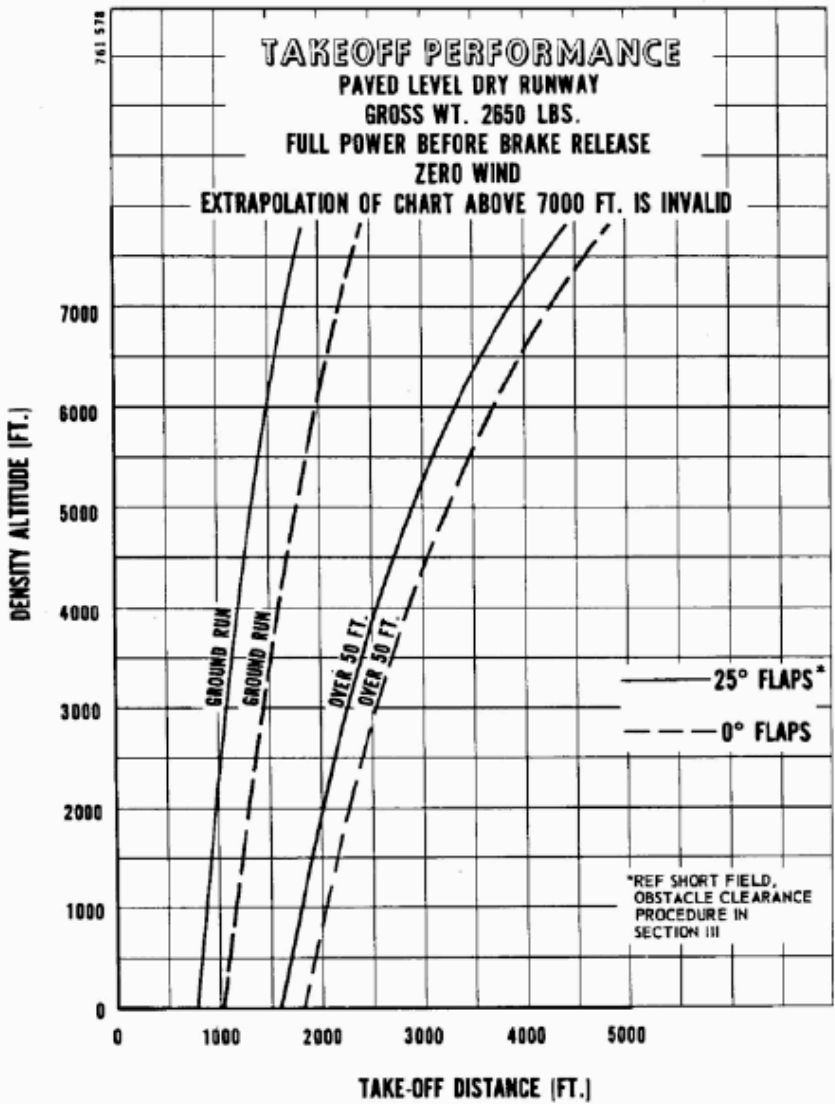
Note Hobbs (appears briefly after engine stops).
If refueling, note Fuel Used indication and compare to actual fuel added.

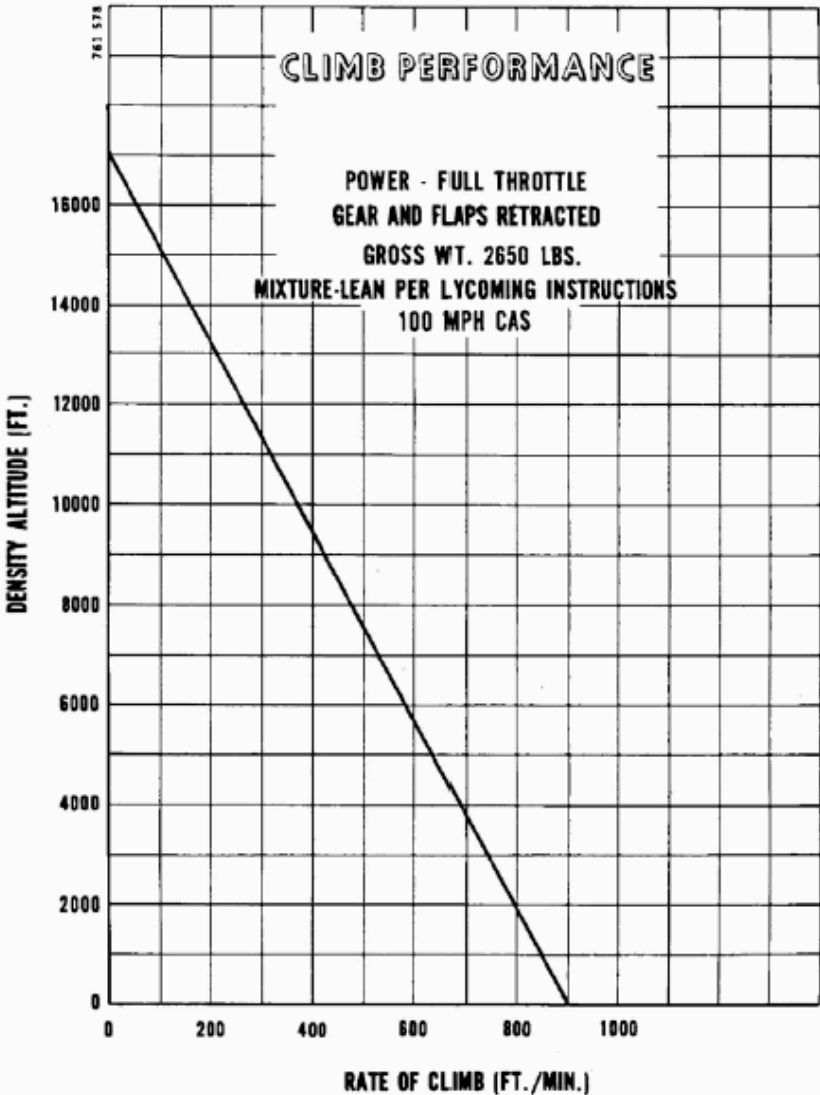


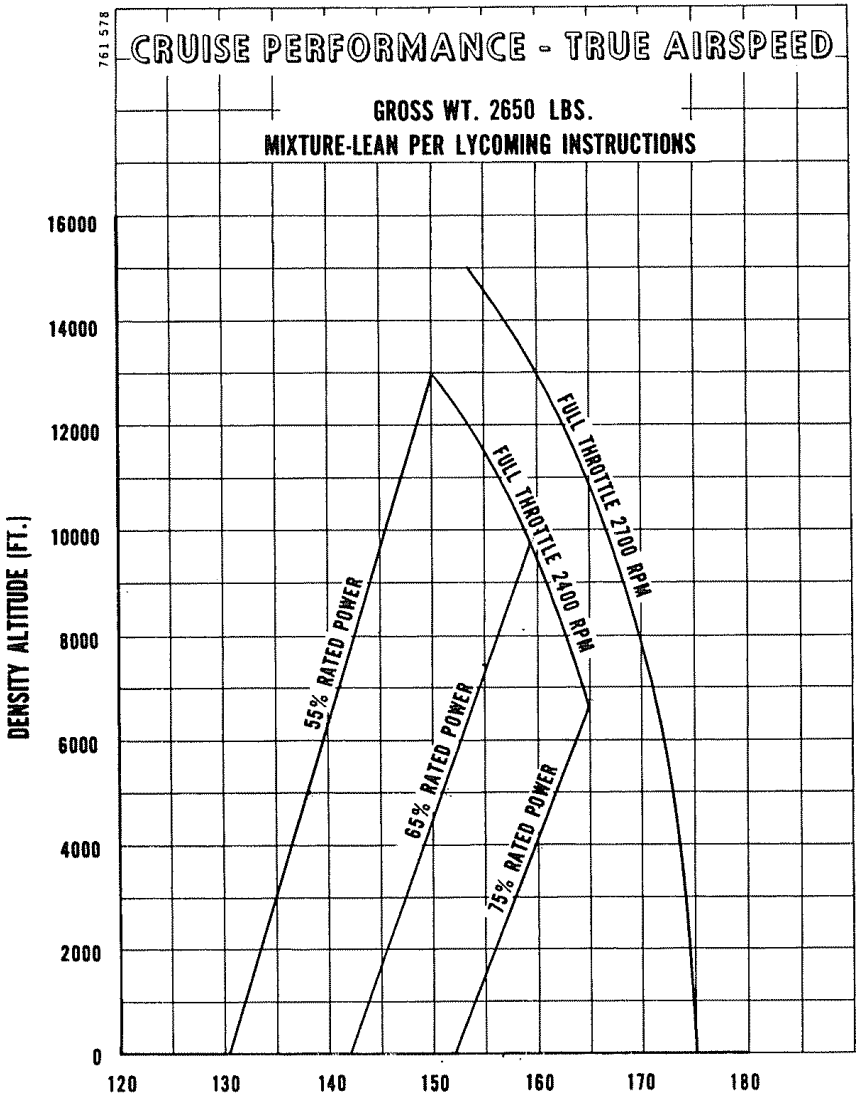
Crosswind Component Chart



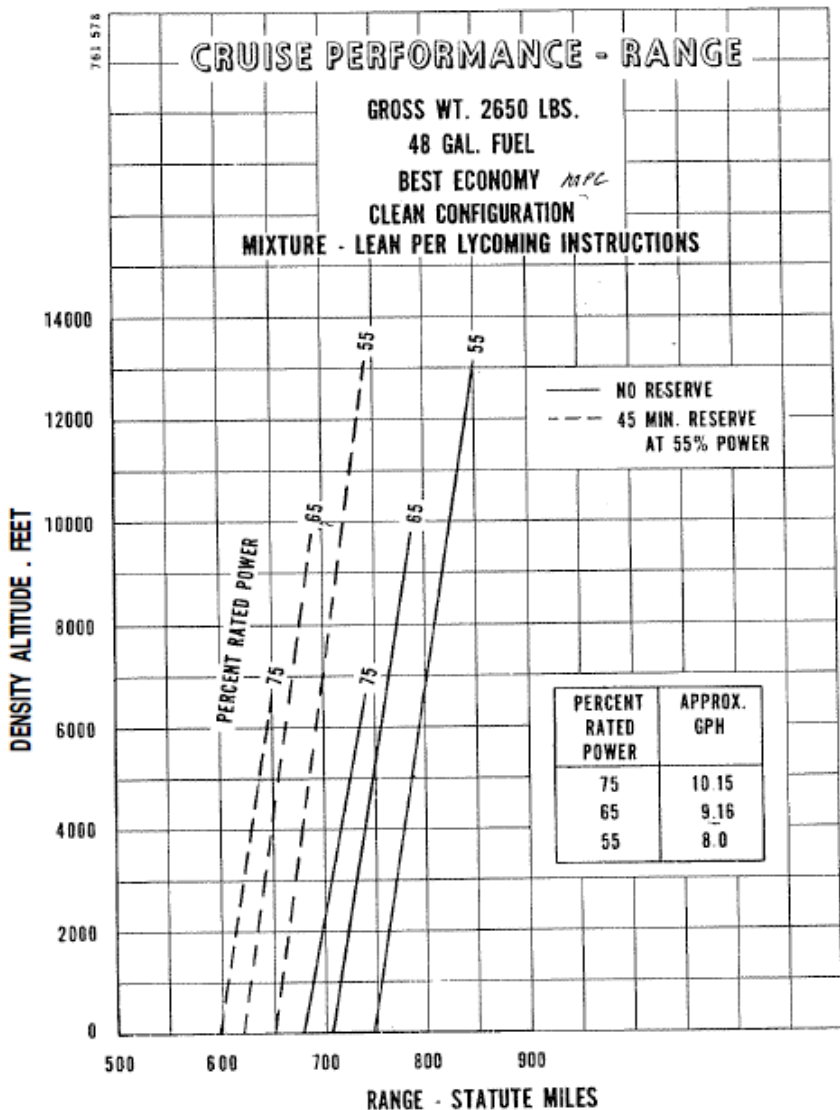








Piper Arrow PA28R-200 Arrow II
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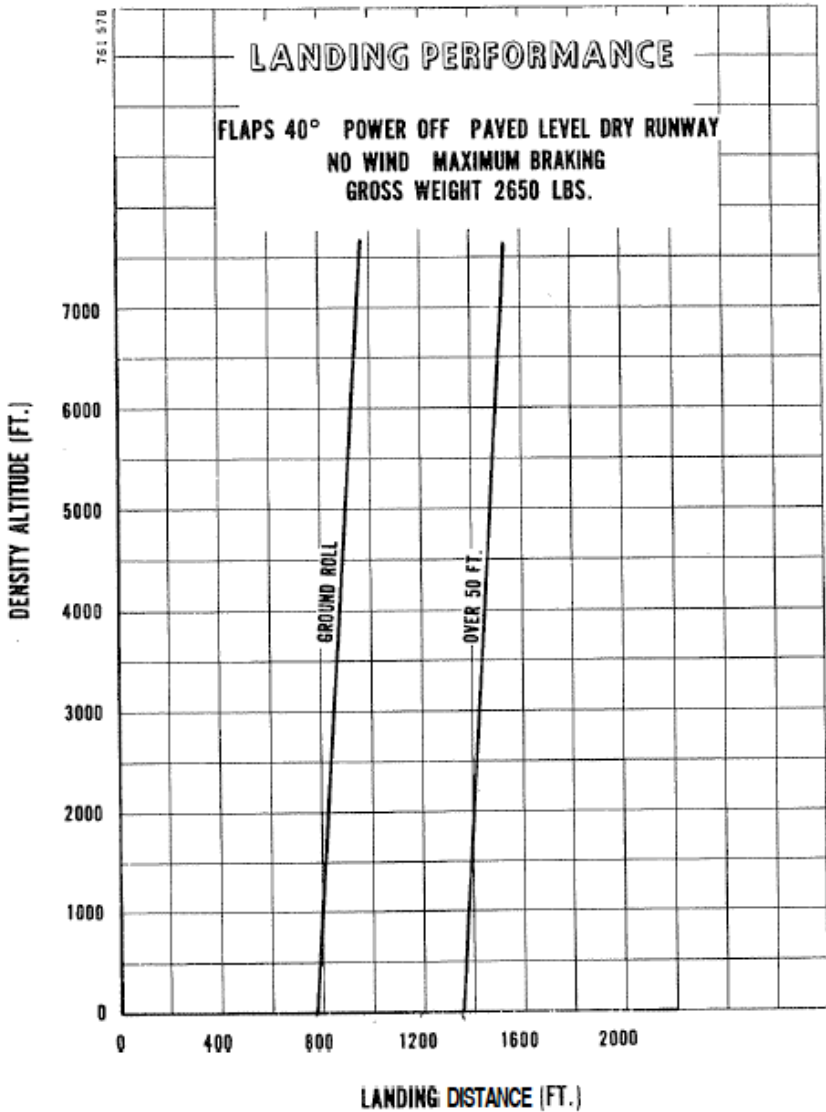


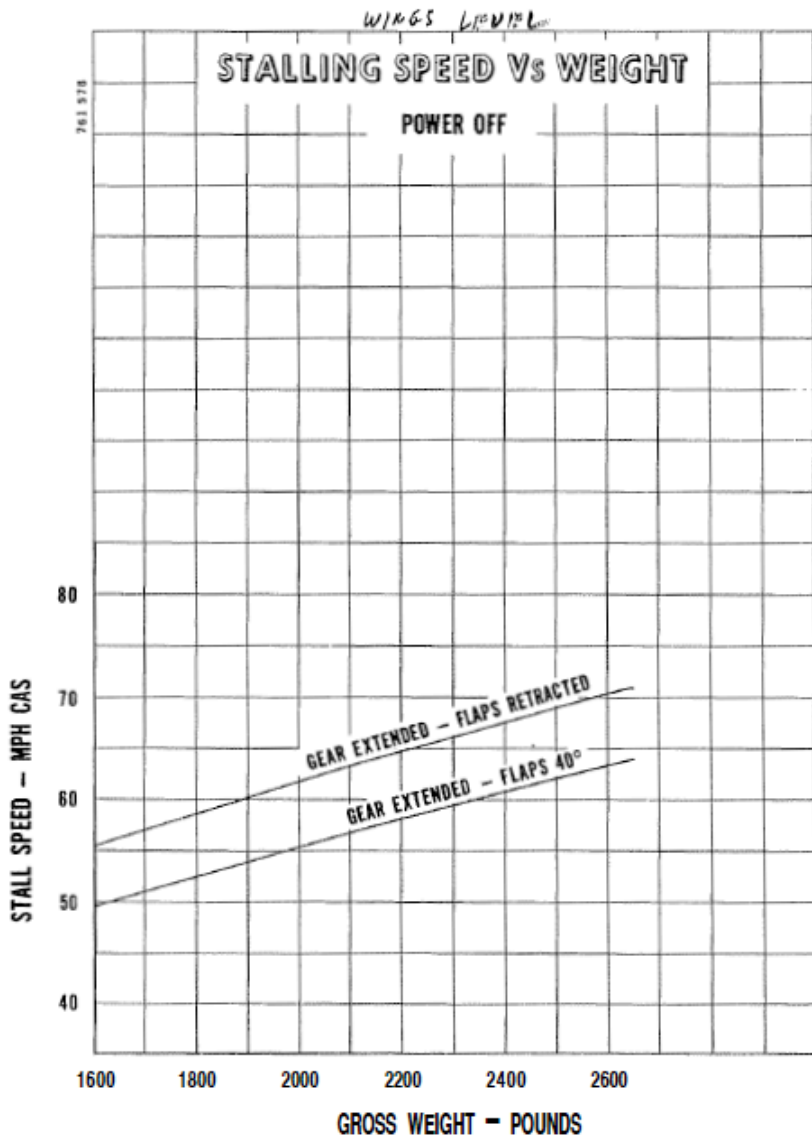
Piper Arrow PA28R-200 Arrow II
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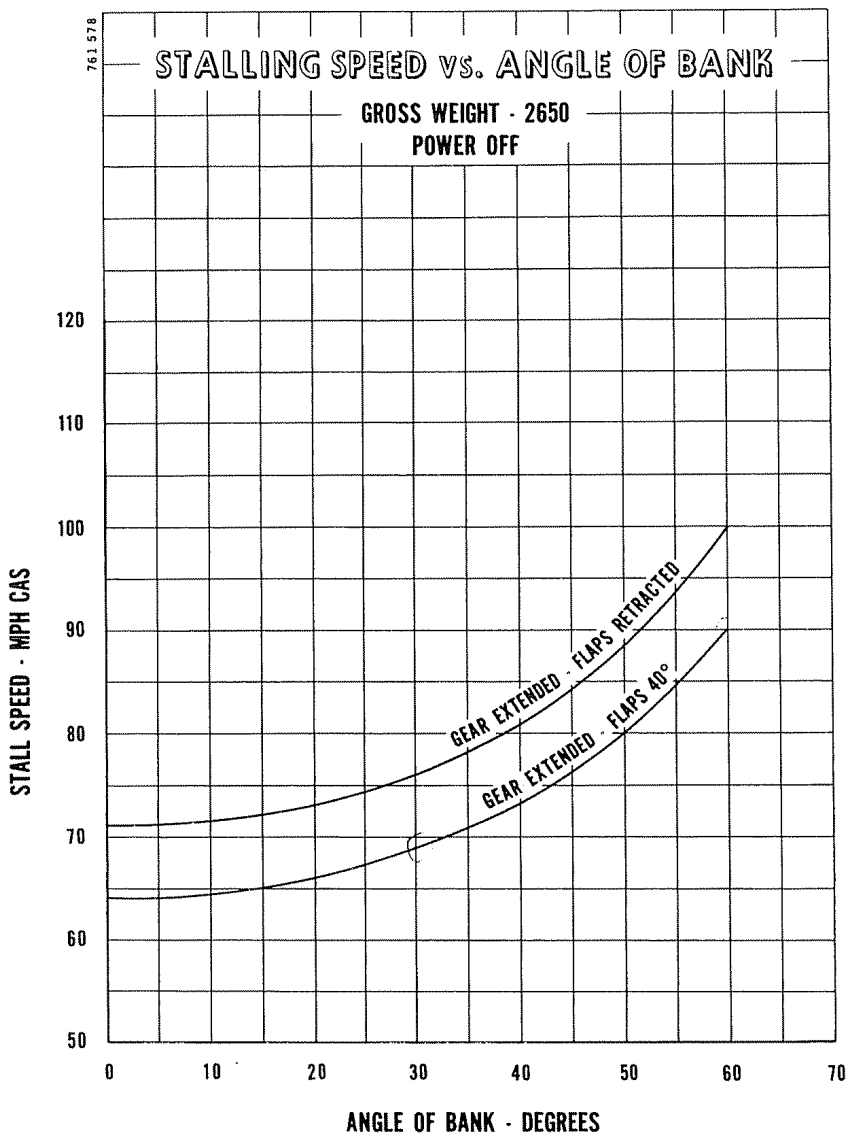
Power Setting Table - Lycoming Model IO-360-C Series, 200 HP Engine

Press. Alt Feet	Std. Air Temp ° F	110 HP - 55% Rated RPM AND MAN. PRESS.		130 HP - 65% Rated RPM AND MAN. PRESS.		150 HP - 75% Rated RPM AND MAN. PRESS.		Press. Alt Feet
		2100	2400	2100	2400	2100	2400	
SL	59	22.9	20.4	25.9	22.9	25.5	24.4	SL
1,000	55	22.7	20.2	25.6	22.7	25.2	24.4	1,000
2,000	52	22.4	20.0	25.4	22.5	25.0	24.4	2,000
3,000	48	22.2	19.8	25.1	22.2	24.7	24.4	3,000
4,000	45	21.9	19.5	24.8	22.0	24.4	24.4	4,000
5,000	41	21.7	19.3	FT	21.7	FT	24.4	5,000
6,000	38	21.4	19.1	---	21.5	---	24.4	6,000
7,000	34	21.2	18.9	---	21.3	---	24.4	7,000
8,000	31	21.0	18.7	---	21.0	---	24.4	8,000
9,000	27	FT	18.5	---	FT	---	24.4	9,000
10,000	23	---	18.3	---	---	---	24.4	10,000
11,000	19	---	18.1	---	---	---	24.4	11,000
12,000	16	---	17.8	---	---	---	24.4	12,000
13,000	12	---	17.6	---	---	---	24.4	13,000
14,000	9	---	FT	---	---	---	24.4	14,000

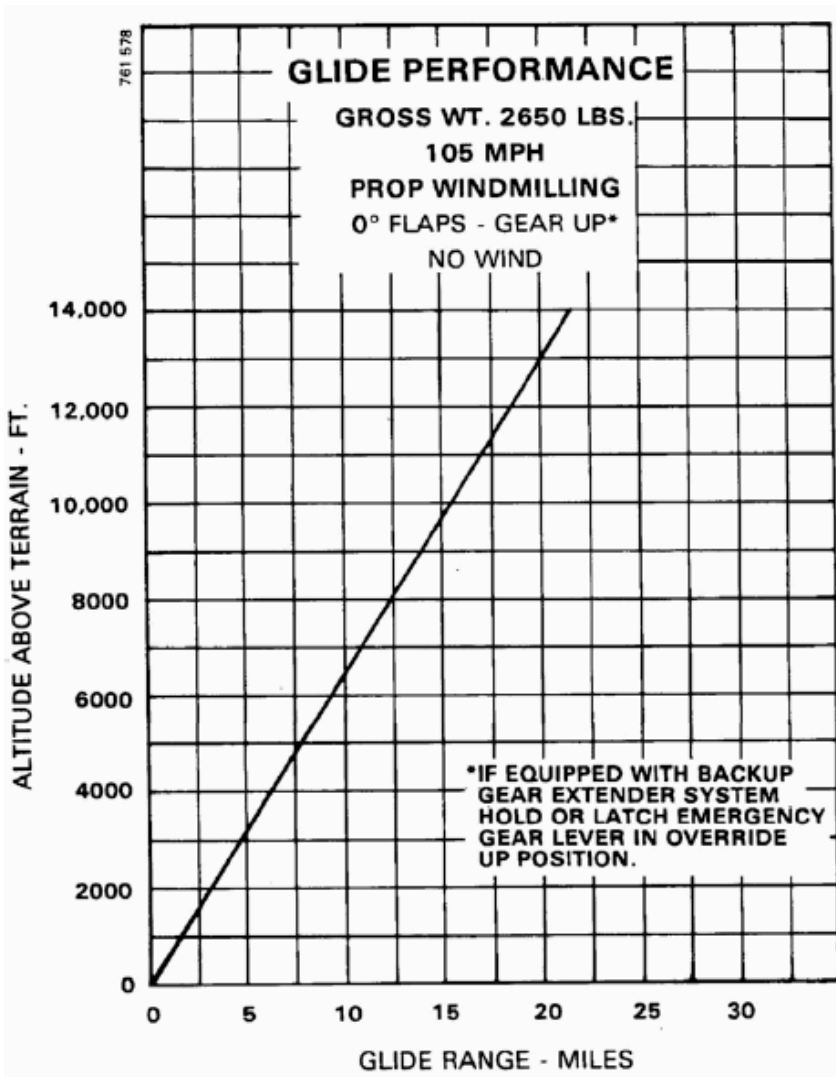
To maintain constant power, correct manifold pressure approximately 0.16" Hg for each 10° F variation in inlet air temperature from standard altitude temperature. Add manifold pressure for air temperatures above standard; subtract for temperatures below standard.







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