CONDOR AERO CLUB, INC – PIPER DAKOTA CHECKOUT FOR CFIs

This is a cursory checkout for Condor Aero Club Approved Flight Instructors, focuses solely on the differences between Piper Dakota N4335M and Piper Archer N2806M, and assumes the recipient possesses both Complex (for Constant-Speed Prop Operation) and High-Performance endorsements.,

1. AIRFRAME

A. **Dimensions**

i. Wingspan:	35 Feet, 6 Inches

B. **Engine**

i. Manufacturer:	Lycoming
ii. Model:	O-540-J3A5D
iii. Cylinders:	6
iv. Horsepower:	235
v. Max. RPM:	2400

C. **Fuel / Oil**

i. Type:	Avgas, 100LL
ii. Total Capacity:	77 Gallons
iii. Usable Fuel:	72 Gallons
iv. Oil Capacity:	12 Quarts

D. **Weights**

i. Max. Ramp Weight:	3011 Lbs.
ii. Max. Takeoff Weight:	3000 Lbs.
iii. Max. Landing Weight	3000 Lbs.
iv. Useful Load (5/2/2012):	1183.98 Lbs.
v. Payload w/Full Fuel:	721.98 Lbs.
vi. Max. Baggage Weight:	200 Lbs.

2. TAKEOFF, CLIMB, EN ROUTE, DESCENT, APPROACH & LANDING

A. **Airspeeds (KIAS)**

i.	V_{SO}:	56
ii.	V_{S1}:	65
iii.	V_X:	73
iv.	V_Y:	85
v.	V_{FE}:	102
vi.	V_A:	124 @ 3000 Lbs. (96 @ 1761 Lbs.)
vii.	V_{NO}:	137
viii.	V_{NE}:	173

Demonstrated Crosswind:	17
Best Glide:	85
Final Approach (Flaps 40°):	72

B. **Before Takeoff**

i.	Autopilot (KAP-150):	See Attached Excerpts from Pilot's Guide
ii.	Digital Tach:	Check / Explain Operation
iii.	Standby Vacuum:	Check / Explain Operation

C. **Takeoff (Rotate)**

i.	Normal (Flaps 0°):	60-65
ii.	Short/Soft Field (Flaps 25°):	50-60

D. **Climb**

i.	Best Angle:	65
ii.	Best Rate:	85
iii.	Cruise Climb:	100

E. **Cruise**

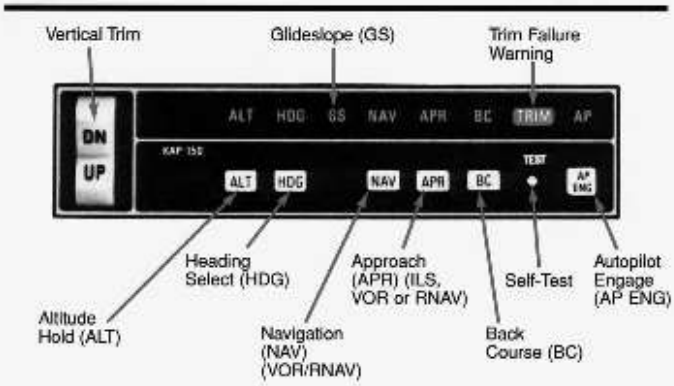
i.	Normal Max. Power:	75%
ii.	Reference Power Setting Table	85
iii.	Fuel Pump Off:	At Desired Altitude

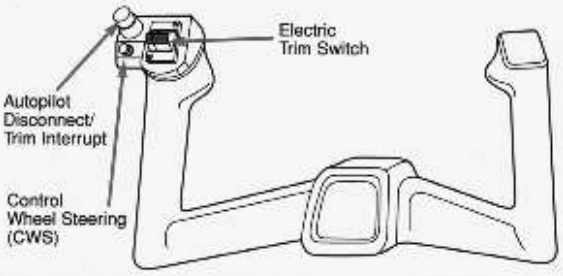
F. **Normal Descent**

i.	As Required for 1000 FPM Descent	
ii.	Propeller:	2400 RPM
iii.	Airspeed:	137 KTS
iv.	Mixture:	Rich

G. **Approach & Landing**

i.	Flaps Down:	102 KTS Max.
ii.	Downwind:	85 KTS, Flaps 10°
iii.	Base:	80 KTS, Flaps 25°
iv.	Final:	75 KTS, Flaps 40°





Mode	Autopilot Action
Attitude Reference	Power on and no modes selected. KG258 displays aircraft attitude and KG 107 displays unslaved heading. Align heading to magnetic compass by pushing and rotating the knob on the lower left of the KG 107 and update periodically to correct for precession. (With optional KCS 55A Compass System a PNI is installed in place of the KG 107. The KI 525A PNI will display slaved aircraft heading and requires no periodic update.)
Autopilot Engage (AP ENG)	Aircraft control surfaces (ailerons and elevators) smoothly respond to satisfy autopilot modes selected by the pilot with automatic pitch trim.

OPERATING THE KAP 150 SYSTEM

Initial Power On

When initially powered (no modes selected), the KAP 150 will display aircraft attitude on the KG 258 and unslaved heading on the KG 107. Align heading to the magnetic compass by pushing and rotating the knob on the lower left of the KG 107 and update periodically to correct for precession. The trim light will be lit on the KC 191 to remind of the need to perform the system self-test. (With optional KCS 55A Compass System, a KI 525A PNI is installed in place of the KG 107. The PNI will display slaved heading.)

System Self-Test

The KAP 150 system incorporates a system self-test function which is activated by a test button on the KC 191 Mode Control/Computer/Annunciator. The test must be performed before the autopilot can be engaged. The test determines, before takeoff, that the system is operating normally. To perform a test — momentarily push the test button:

1. All annunciator lights, the trim light and autopilot light illuminate.
2. The trim light will flash 4 times.
3. The annunciator legends will be blank, an aural tone will beep (approx. 6 times) and the "AP" light will flash (approx. 12-13 times) and go off. (If the AP light fails to flash you will be unable to engage the autopilot.)
4. The KC 191 display will go blank.

The test checks all digital computing capability, the disconnect capability of the autopilot, the auto trim drive and monitor systems, and the failure annunciator system.

CAUTION: If the trim legend flashes or remains on at the end of the test it indicates there is a failure in the trim system and the autopilot will not engage. See a qualified King Service Agency for repair.