## Weight & Balance Load Sheet VH -TRR

| Position: | Detalis: | Weight (Kg): |
|---|---|---|
| Front Left (Pilot) | Pilot | 80 |
| Front Right (Co-pilot) | Pax 1 | 80 |
| Passenger (Rear Left) | Pax 2 | 80 |
| Passenger (Rear Right) | Pax 3 | 10 |
| Luggage | | 40 |

Fuel (litres)

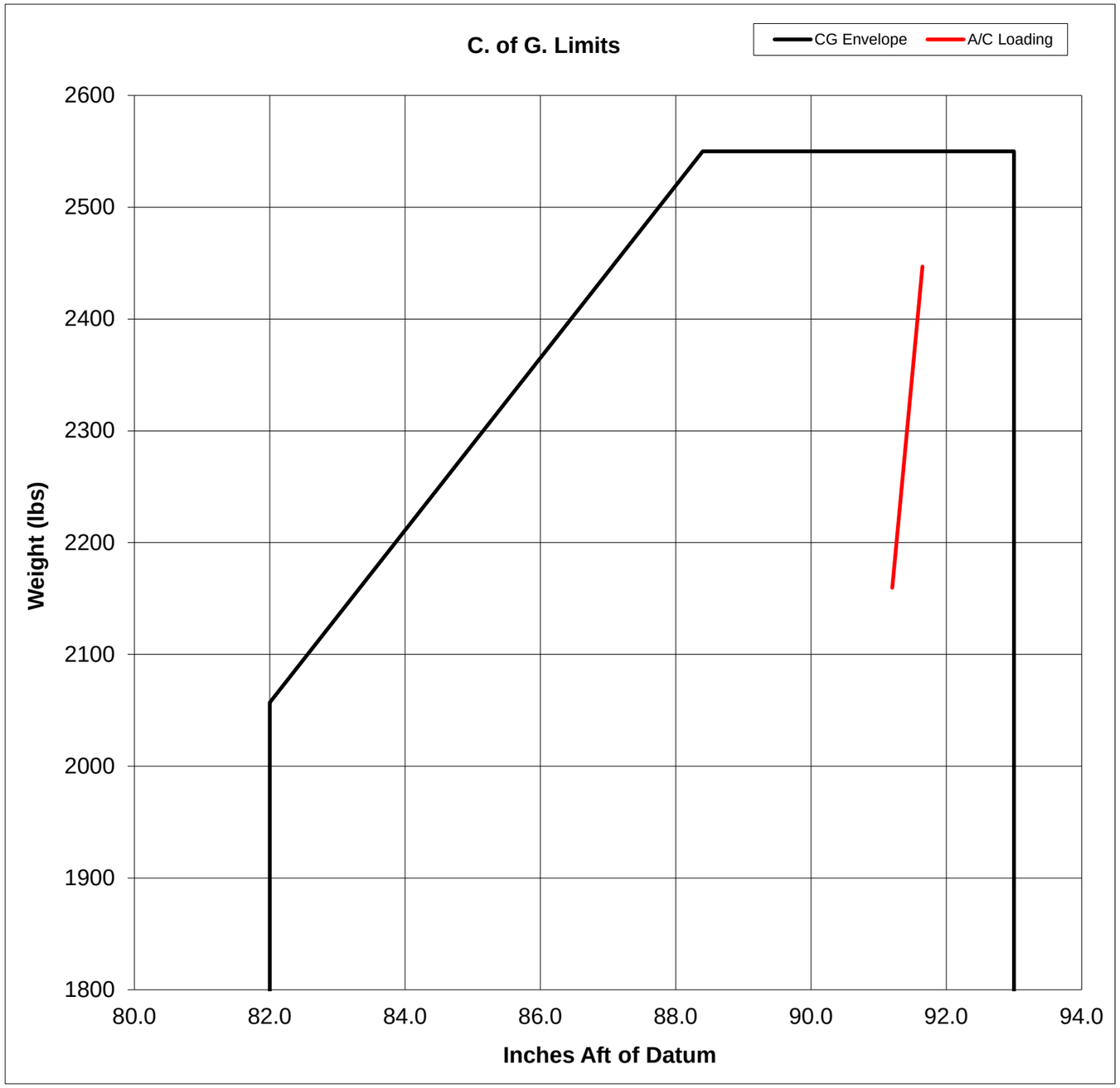
181

Full = 181

Tabs = 129

| Weight & Balance Check Archer II (VH-TRR) (lb-in) | | | | |
|---|---|---|---|---|
| **Description** | **Item** | **Weight (lbs)** | **Arm (in)** | **Index Units (lb-in/1000)** |
| | **Basic Empty** | 1520 | 87.2 | 132.5 |
| Kg => lbs (2.2046) | **Oil** | 0 | | 0.0 |
| mm => in ( div 25.4) | **Pilot + Front Pax** | 353 | 80.5 | 28.4 |
| | **Rear Pax** | 198 | 118.1 | 23.4 |
| | **Baggage** | 88 | 142.8 | 12.6 |
| | **Zero Fuel** | 2160 | 91.2 | 197.0 |
| | **Fuel** | 287 | 95.0 | 27.3 |
| Max=2550 lbs (1157 kg) | **Max Fuel** | 2447 | 91.6 | 224.3 |

| Description | Item | Weight (kg) | Arm (mm) | Index Units (kgmm/1000) |
|---|---|---|---|---|
| | **Basic Empty** | 689.5 | 2214 | 1527 |
| lbs => kgs ( div 2.2046) | **Oil** | 0.0 | 0 | 0 |
| in => mm (x 25.4) | **Pilot + Front Pax** | 160.0 | 2045 | 327 |
| | **Rear Pax** | 90.0 | 3000 | 270 |
| | **Baggage** | 40.0 | 3627 | 145 |
| | **Zero Fuel** | 979.5 | 2317 | 2269 |
| 0.72 x no. of litres | **Fuel** | 130.3 | 2413 | 314 |
| | **Max Fuel** | 1109.9 | 2328 | 2584 |



| Arm (mm) | | Arm (Inches) | |
|---|---|---|---|
| Wgt (Kg) | Min | Wgt (lbs) | Min |
| 544 | 2082.8 | 1200 | 82.0 |
| 933 | 2082.8 | 2057 | 82.0 |
| 1157 | 2245.4 | 2550 | 88.4 |
| 1157 | 2362.2 | 2550 | 93.0 |
| 544 | 2362.2 | 1200 | 93.0 |
| 544 | 2082.8 | 1200 | 82.0 |

0.384615

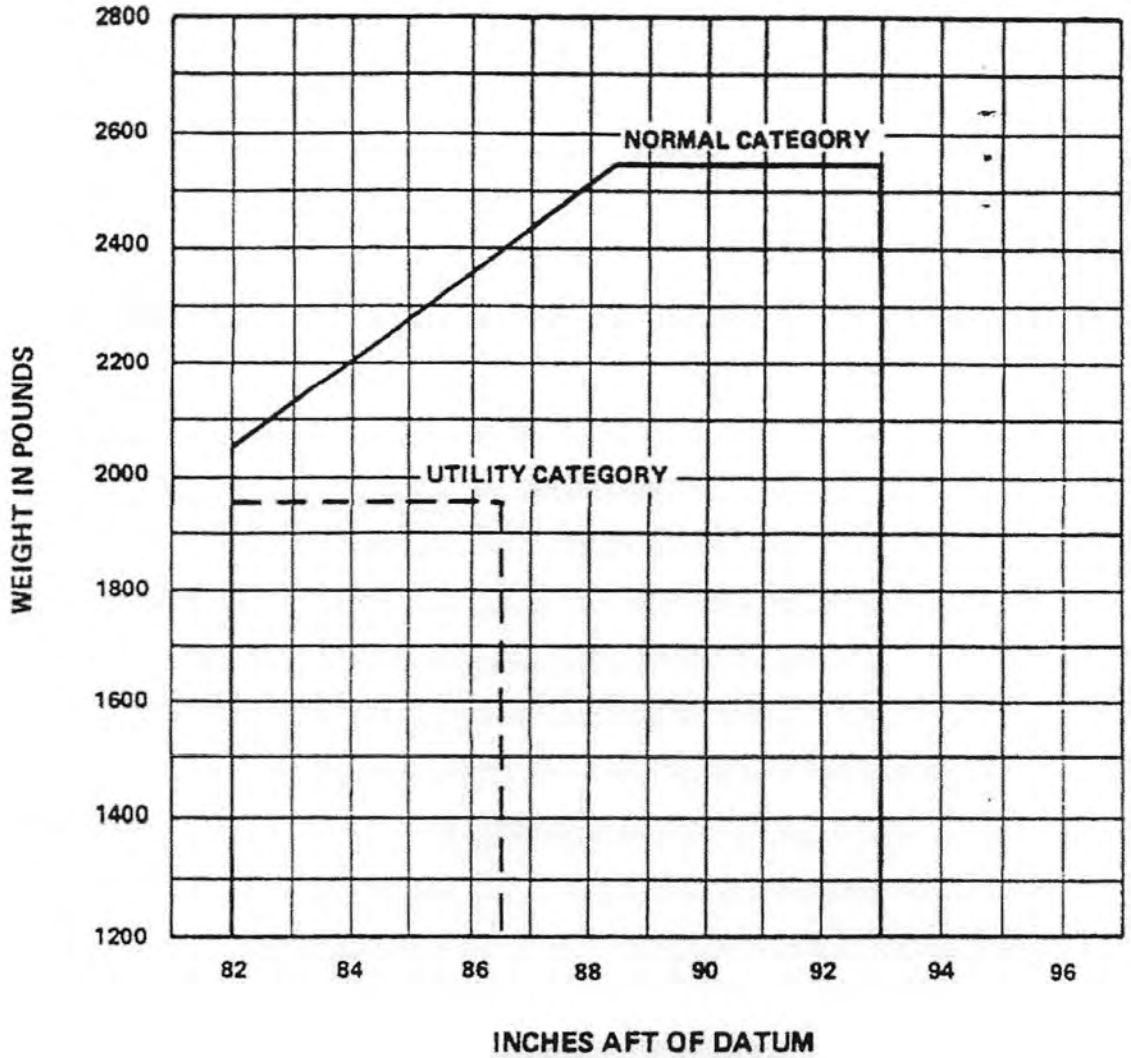
| | Weight (Lbs) | Arm Aft Datum (Inches) | Moment (In-Lbs) |
|---|---|---|---|
| Basic Empty Weight | | | |
| Pilot and Front Passenger | | 80.5 | |
| Passengers (Rear Seats)* | | 118.1 | |
| Fuel (48 Gallon Maximum) | | 95.0 | |
| Baggage* | | 142.8 | |
| Total Loaded Airplane | | | |

Totals must be within approved weight and C.G. limits. It is the responsibility of the airplane owner and the pilot to insure that the airplane is loaded properly. The Basic Empty Weight C.G. is noted on the Weight and Balance Data Form (Figure 6-00). If the airplane has been altered, refer to the Weight and Balance Record for this information.

*Utility Category Operation - No baggage or rear passengers allowed.

WEIGHT AND BALANCE LOADING FORM

Figure 6-11




C.G. RANGE AND WEIGHT

Figure 6-15

6.2 - AEROPLANE WEIGHT

Aeroplane Type : PA28-181

Registration Marking : VH- TRR

| Issue | Date | Date of Expiry |
|---|---|---|
| 2 | 26/7/91 | INDEFINITE |

Aeroplane Weight and Centre of Gravity Data :

| Item | Weight kg | Arm mm aft of datum | Index Unit kg mm | Cabin Configuration |
|---|---|---|---|---|
| | | | | |
| 1 | 689.6 | 2214.3 | 1527026.8 | 4 SEATS |
| | 1520 lbs | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

NOTE : The above weight(s) include INCLUDES UNUSEABLE FUEL AND FULL ENGINE OIL

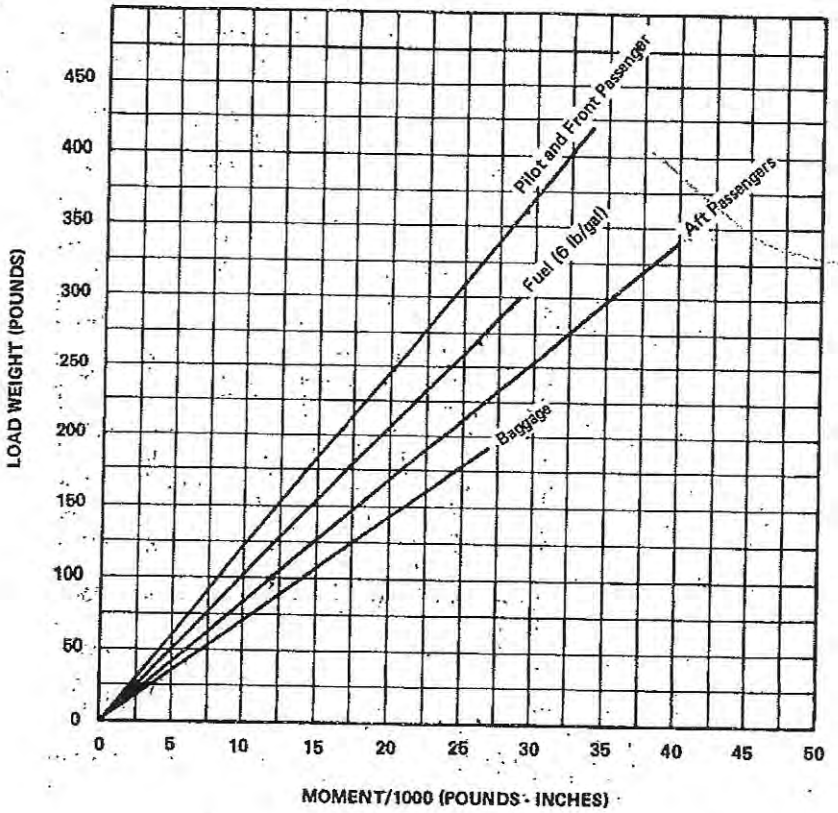
AIRCRAFT WEIGHT
CONTROL AUTHORITY
A.W.3.
Approval Stamp

| | Weight (Lbs) | Arm Aft Datum (Inches) | Moment (In-Lbs) |
|---|---|---|---|
| Basic Empty Weight | | | |
| Pilot and Front Passenger | | 80.5 | |
| Passengers (Rear Seats)* | | 118.1 | |
| Fuel (48 Gallon Maximum) | | 95.0 | |
| Baggage (200 Lbs. Maximum)* | | 142.8 | |
| Ramp Weight (2558 Lbs. Normal, 2138 Lbs. Utility Maximum) | | | |
| Fuel Allowance For Engine Start, Taxi and Run Up | -8 | 95.0 | -760 |
| Takeoff Weight (2550 Lbs. Normal, 2130 Lbs. Utility Maximum) | | | |

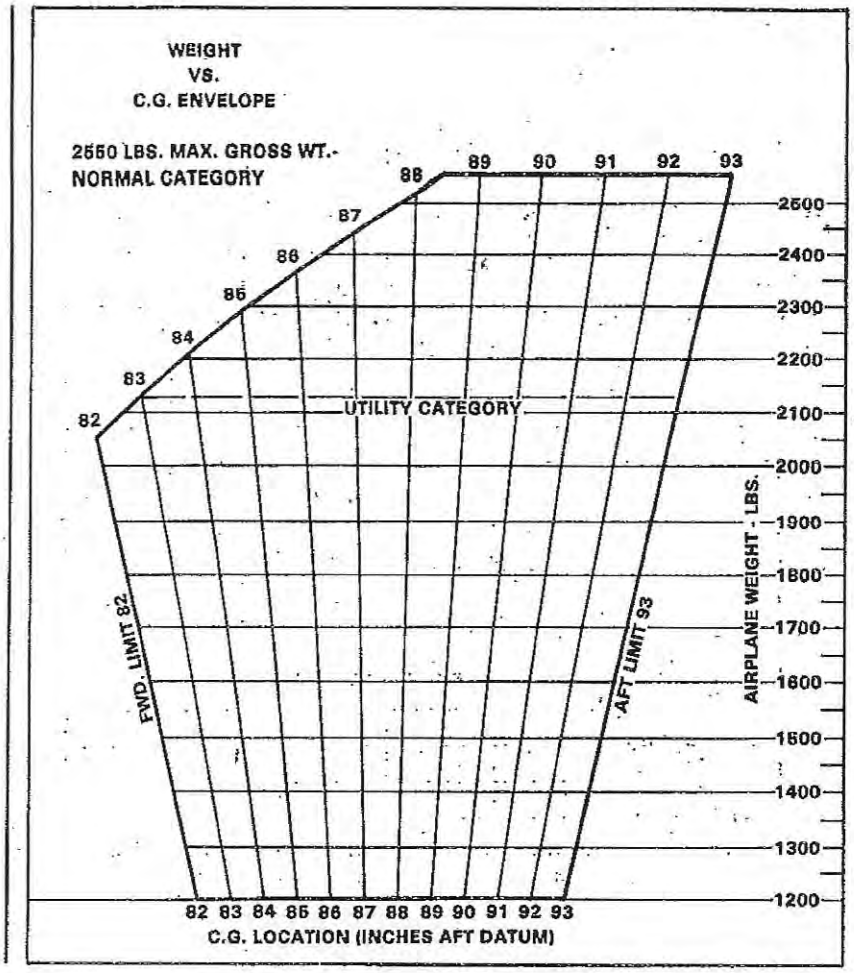
Totals must be within approved weight and C.G. limits. It is the responsibility of the airplane owner and the pilot to insure that the airplane is loaded properly. The Basic Empty Weight C.G. is noted on the Weight and Balance Data Form (Figure 6-5). If the airplane has been altered, refer to the Weight and Balance Record for this information.

*Utility Category Operation - No baggage or rear passengers allowed.

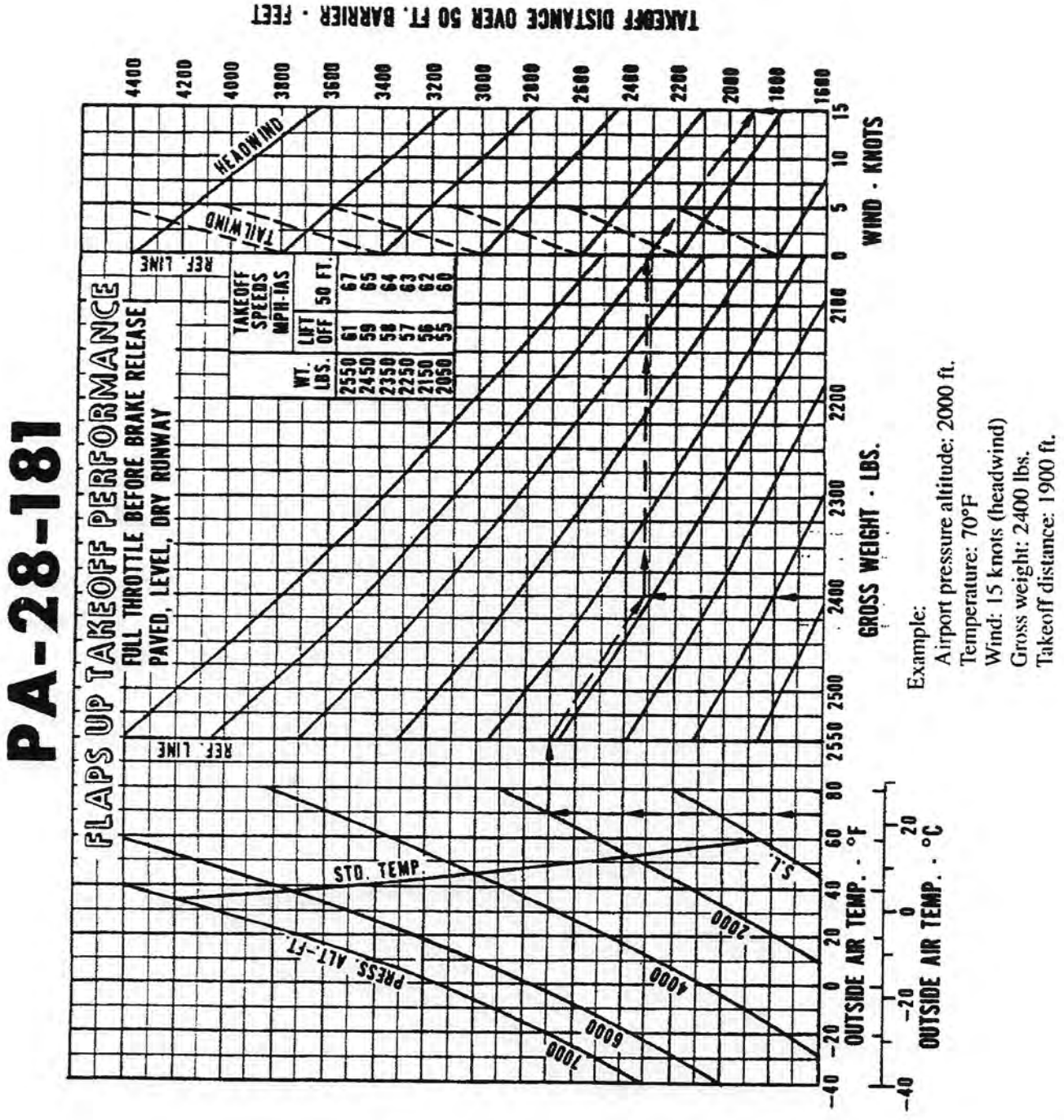
WEIGHT AND BALANCE LOADING FORM
Figure 6-11




**LOADING GRAPH**
Figure 6-13



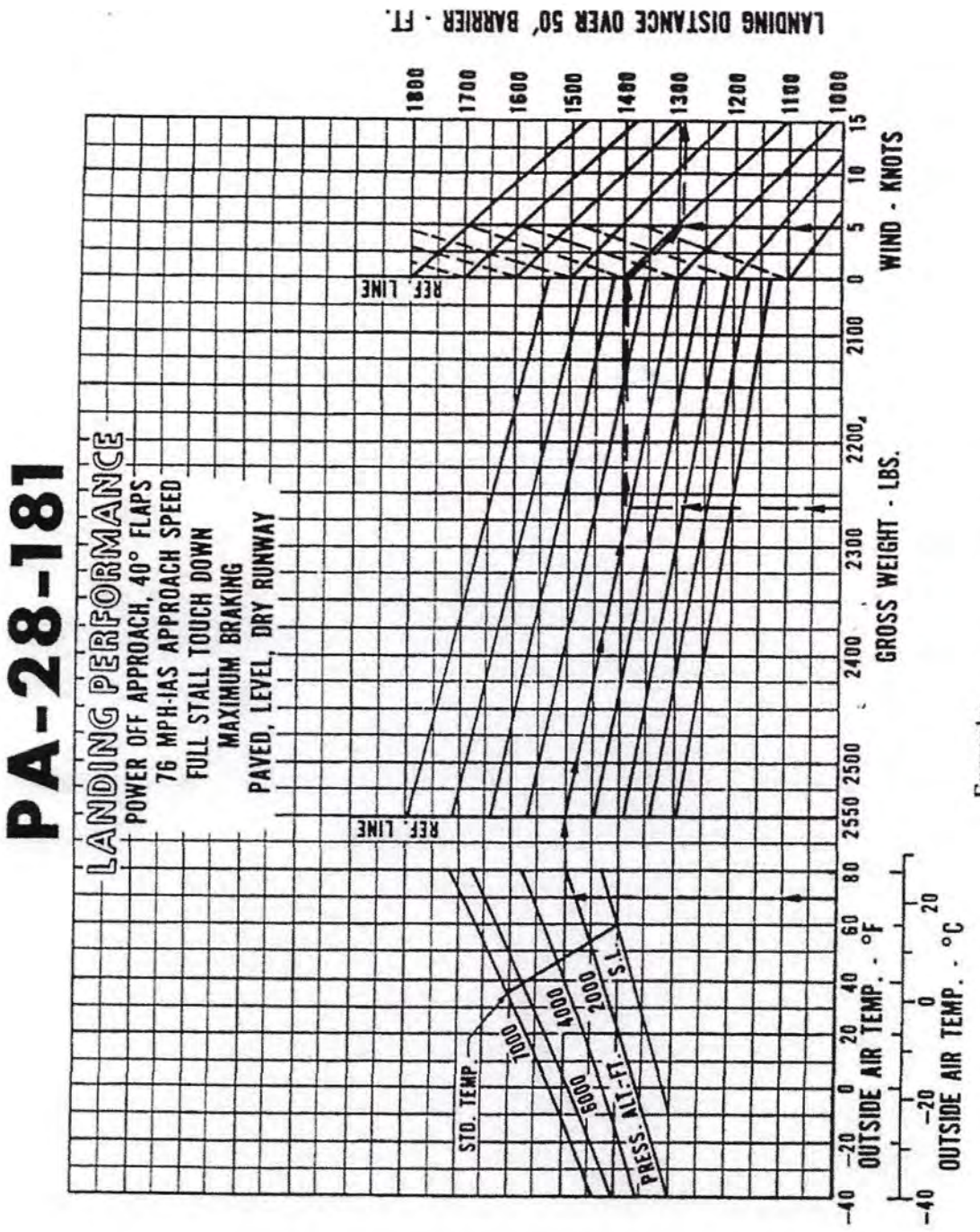

**C.G. RANGE AND WEIGHT**
Figure 6-15




Example:
Airport pressure altitude: 2000 ft.
Temperature: 70°F
Wind: 15 knots (headwind)
Gross weight: 2400 lbs.
Takeoff distance: 1900 ft.

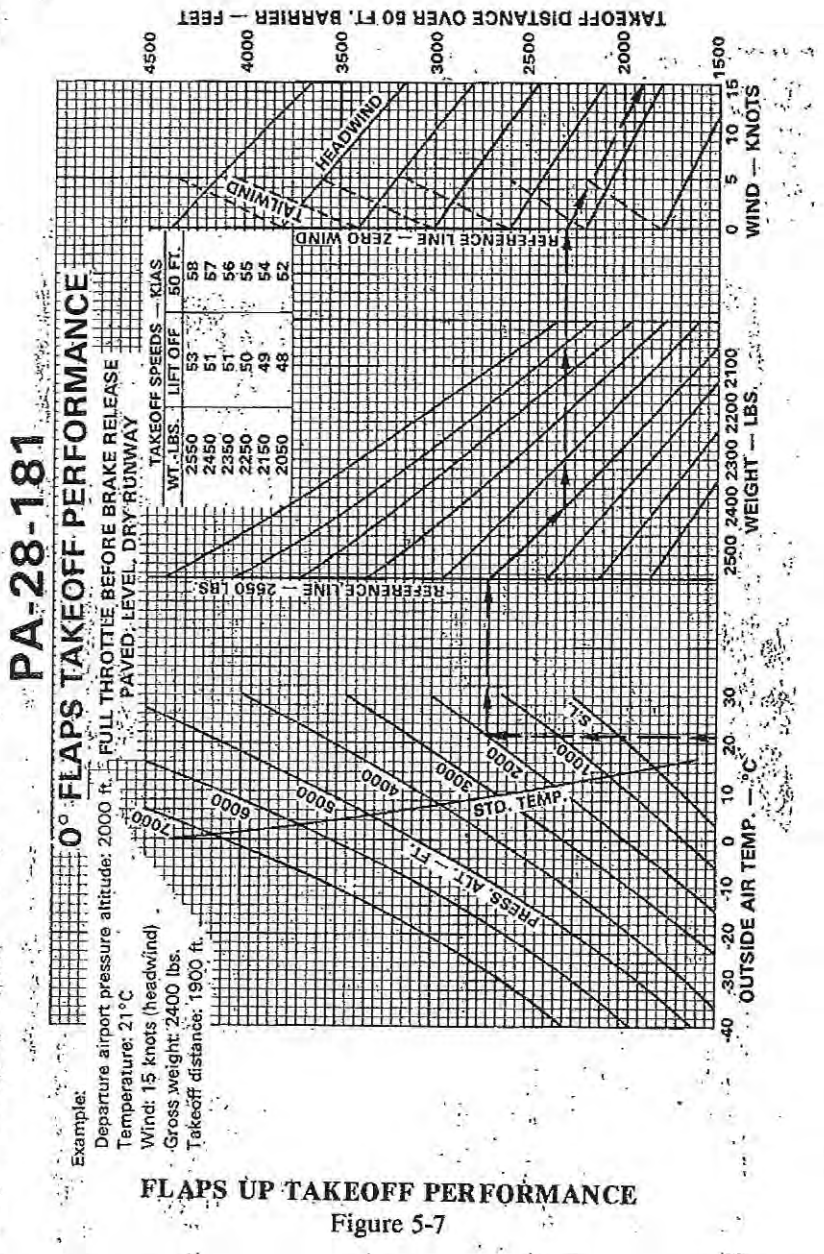
**FLAPS UP TAKEOFF PERFORMANCE**

Figure 5-5

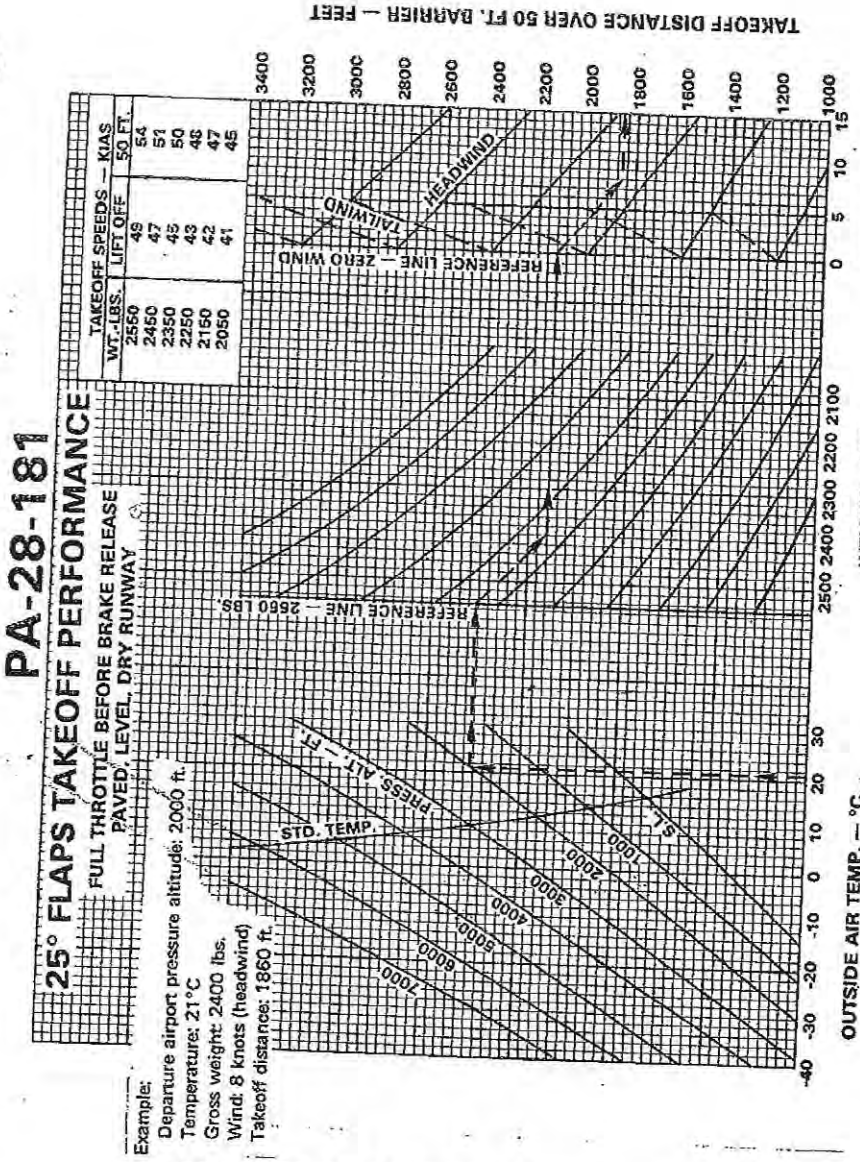



LANDING PERFORMANCE

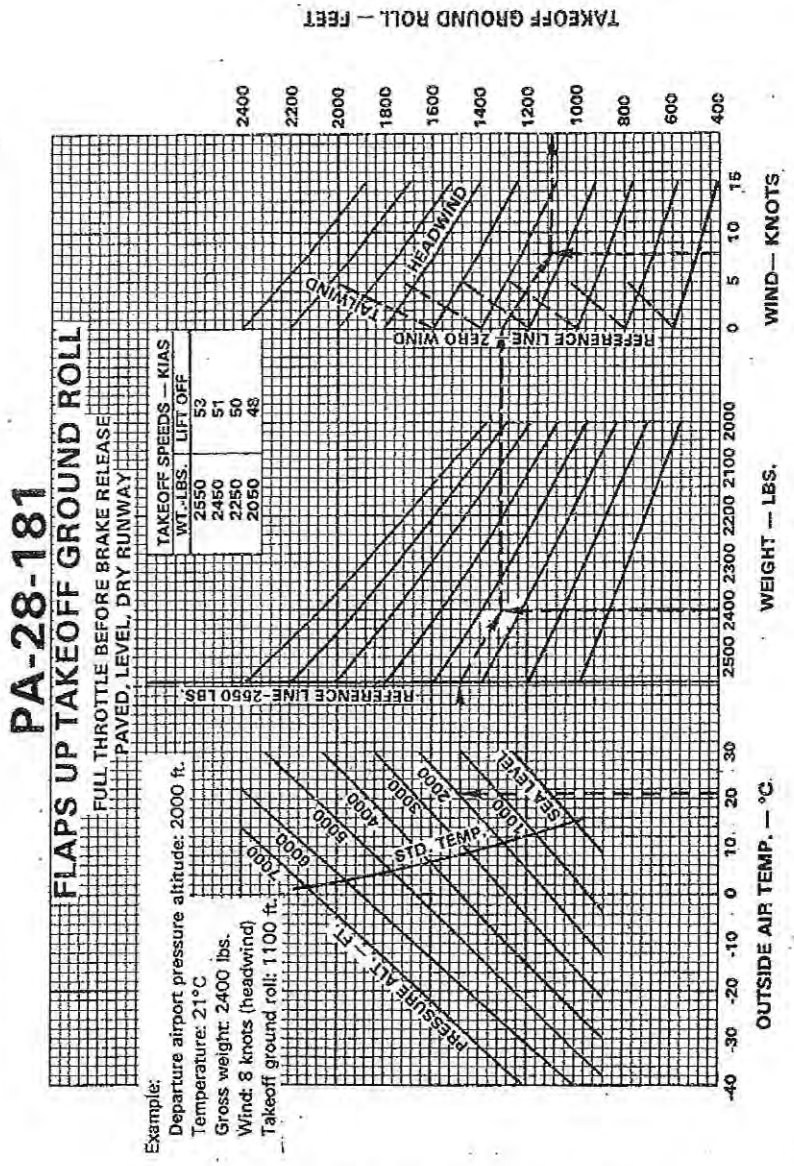
Figure 5-29



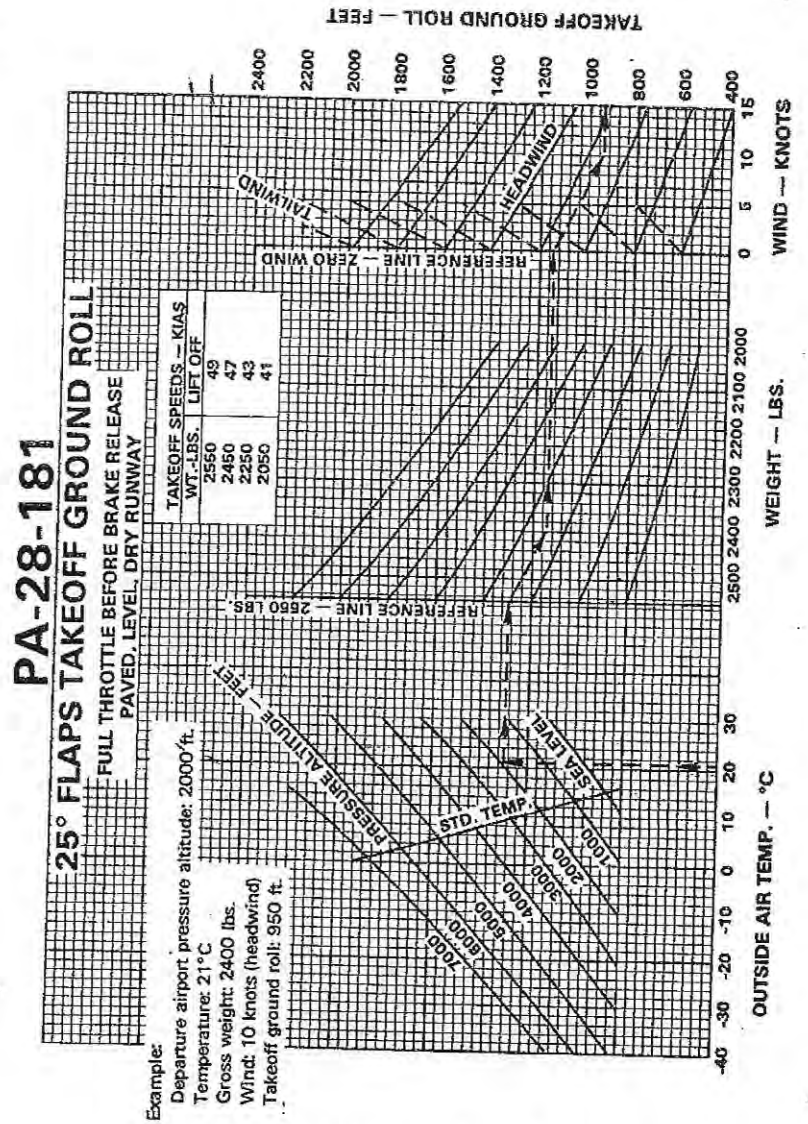

**FLAPS UP TAKEOFF PERFORMANCE**
Figure 5-7



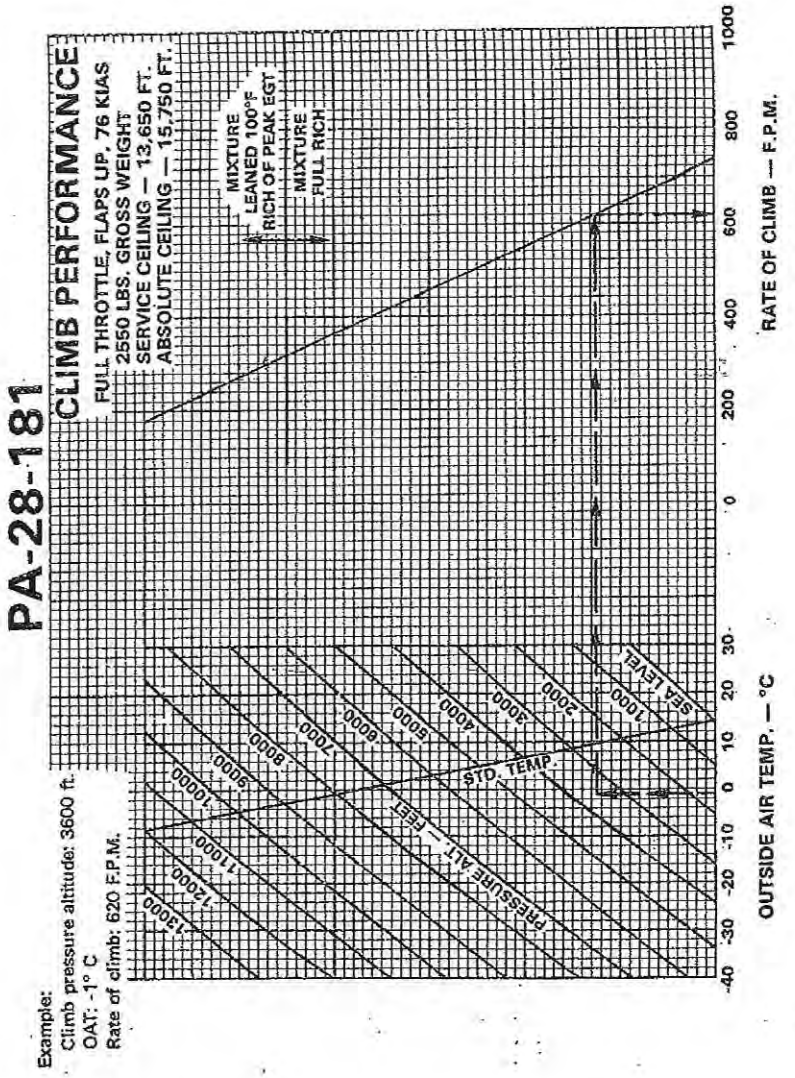

**25° FLAPS TAKEOFF PERFORMANCE**
Figure 5-9



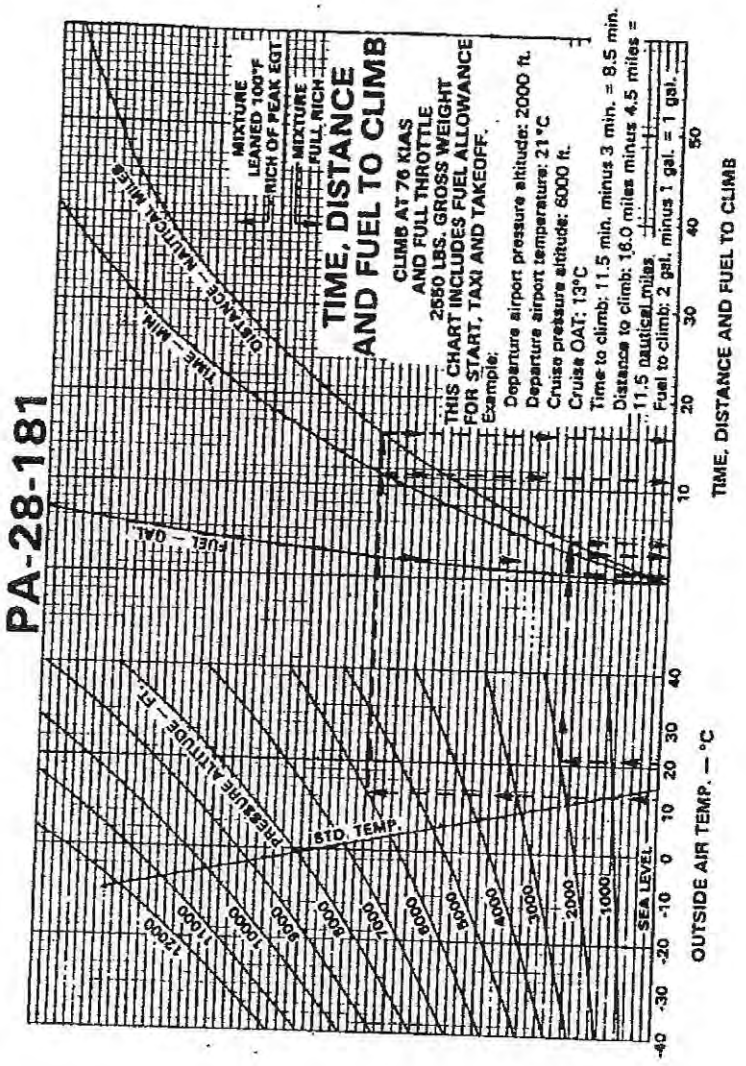

**FLAPS UP TAKEOFF GROUND ROLL**
Figure 5-11



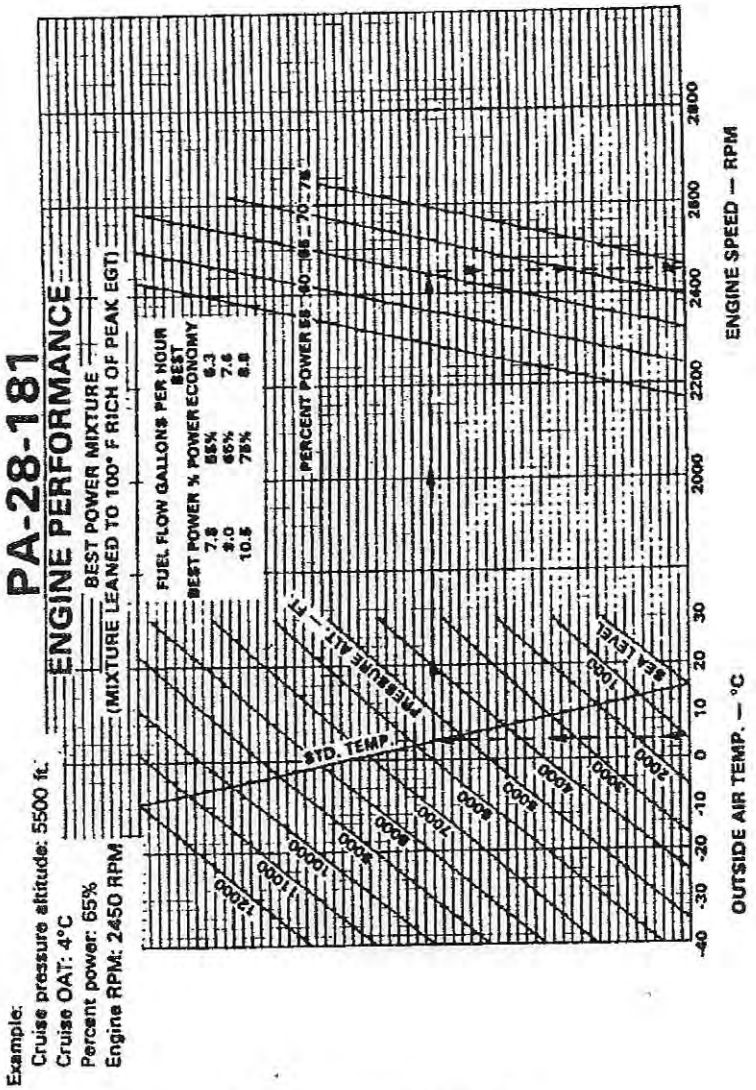

**25° FLAPS TAKEOFF GROUND ROLL**
Figure 5-13



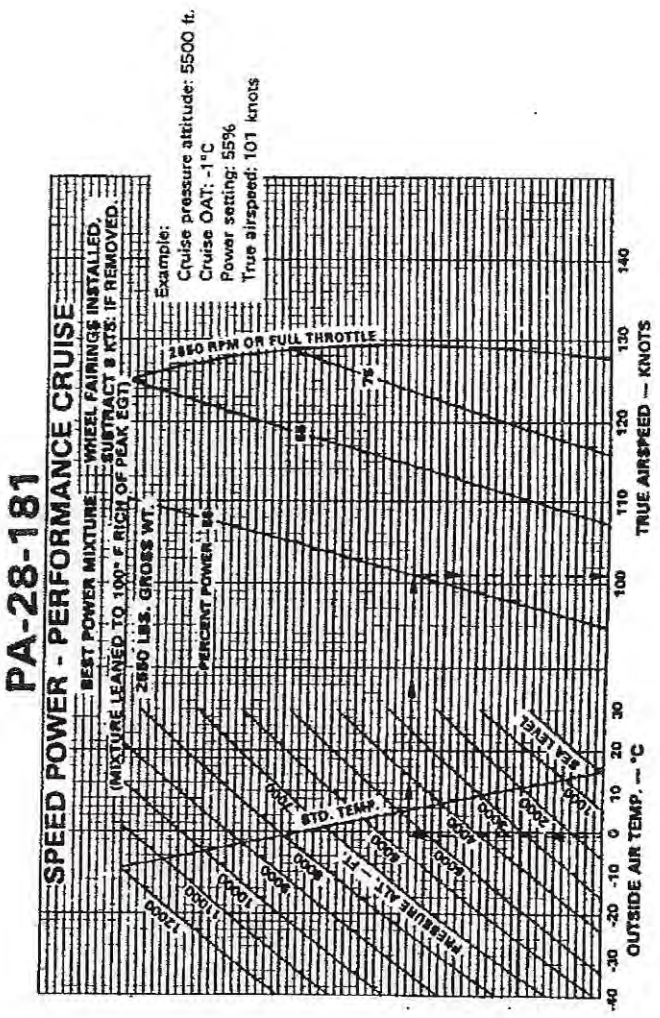

**CLIMB PERFORMANCE**
Figure 5-15



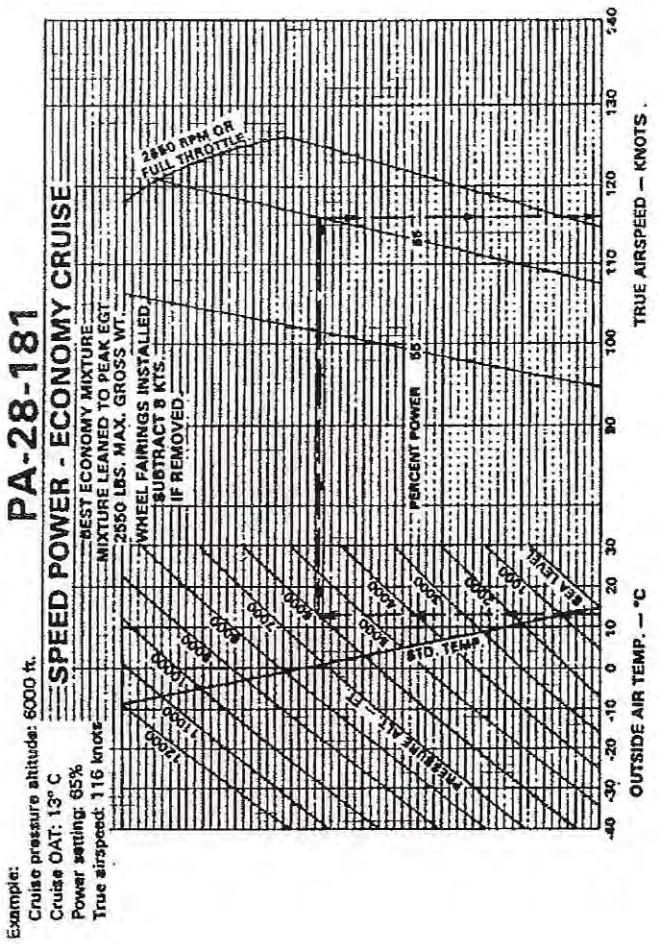

TIME, DISTANCE AND FUEL TO CLIMB
Figure 5-17



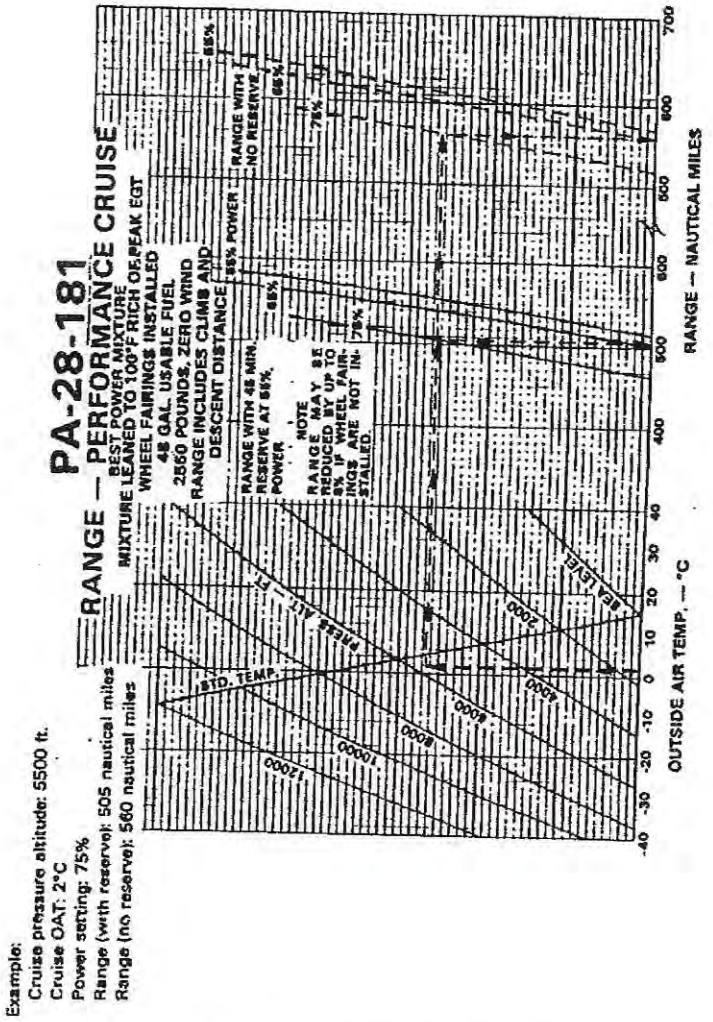

ENGINE PERFORMANCE
Figure 5-19



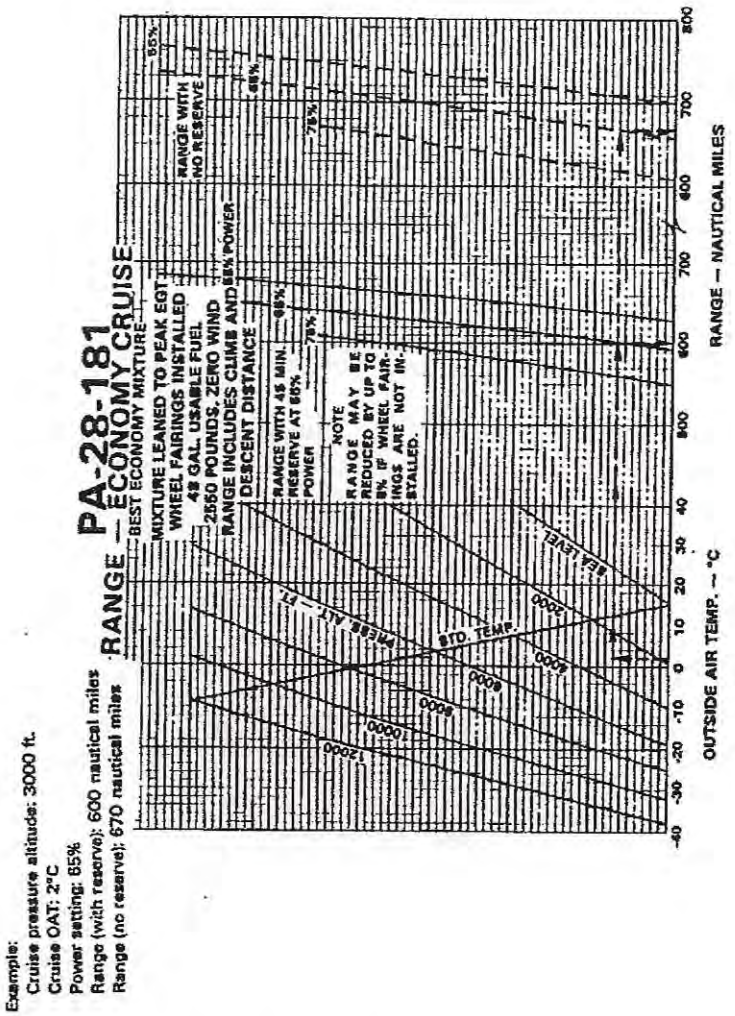

SPEED POWER - PERFORMANCE CRUISE
Figure 5-21



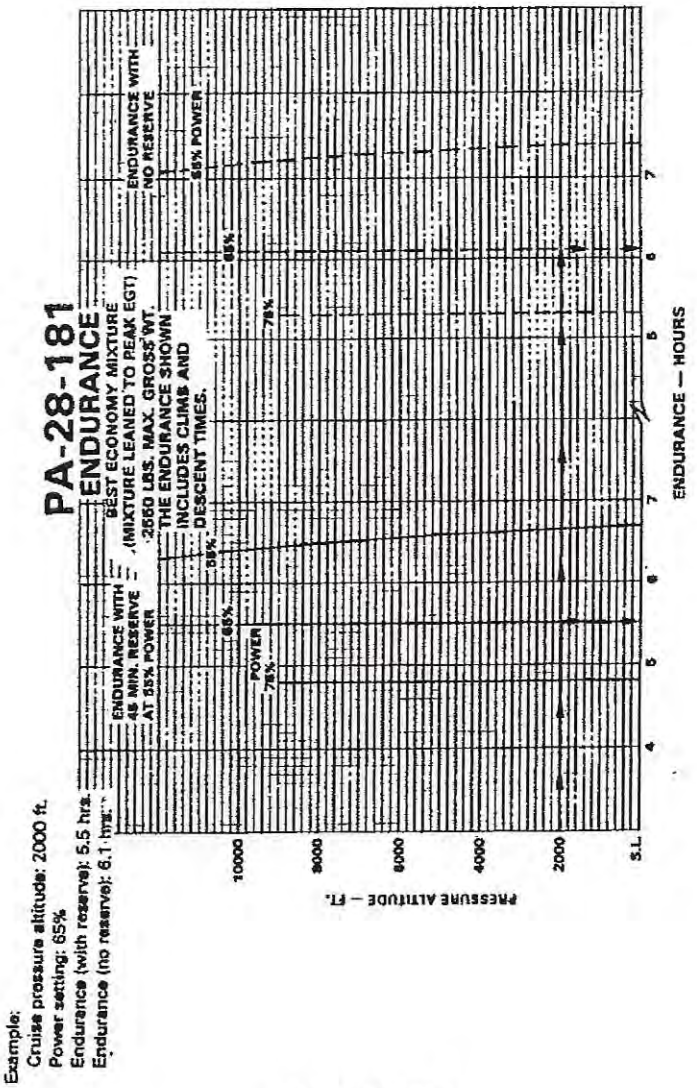

SPEED POWER - ECONOMY CRUISE
Figure 5-23



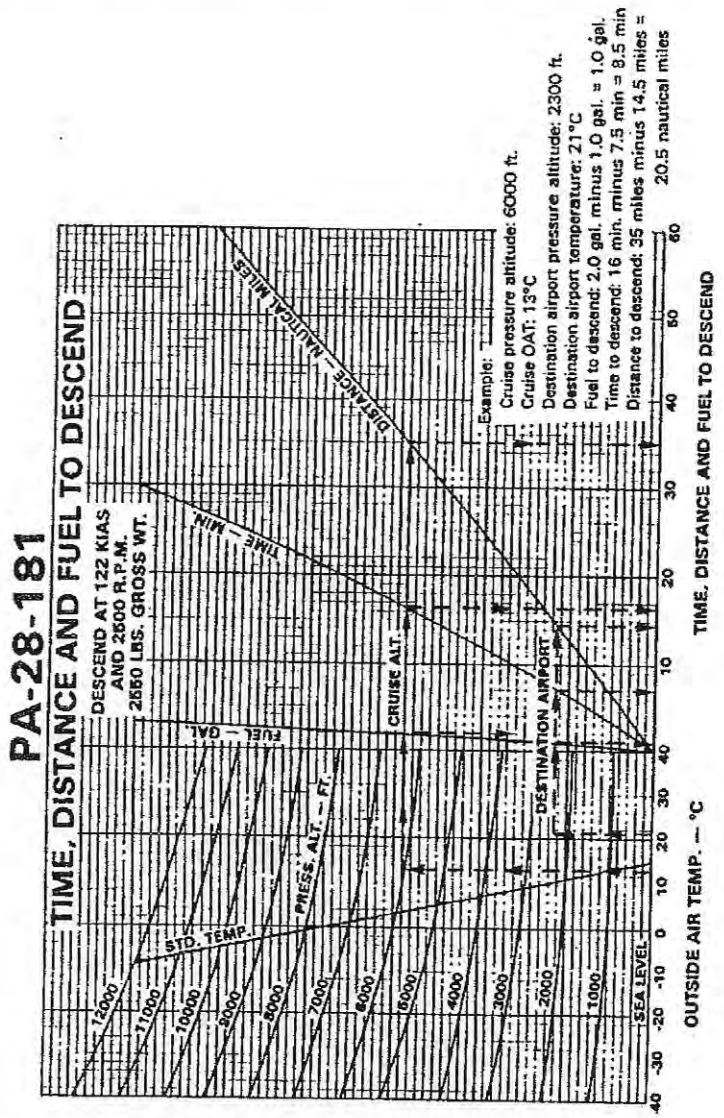

BEST POWER MIXTURE RANGE
Figure 5-25



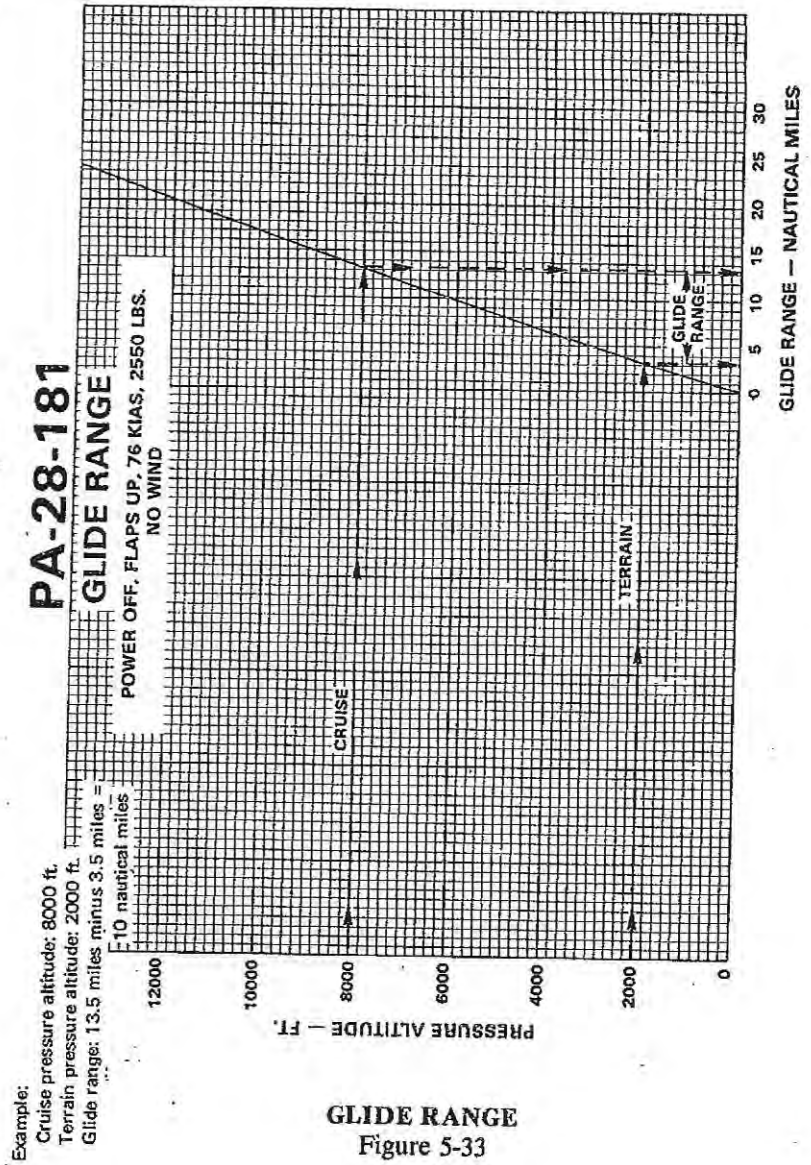

BEST ECONOMY MIXTURE RANGE
Figure 5-27



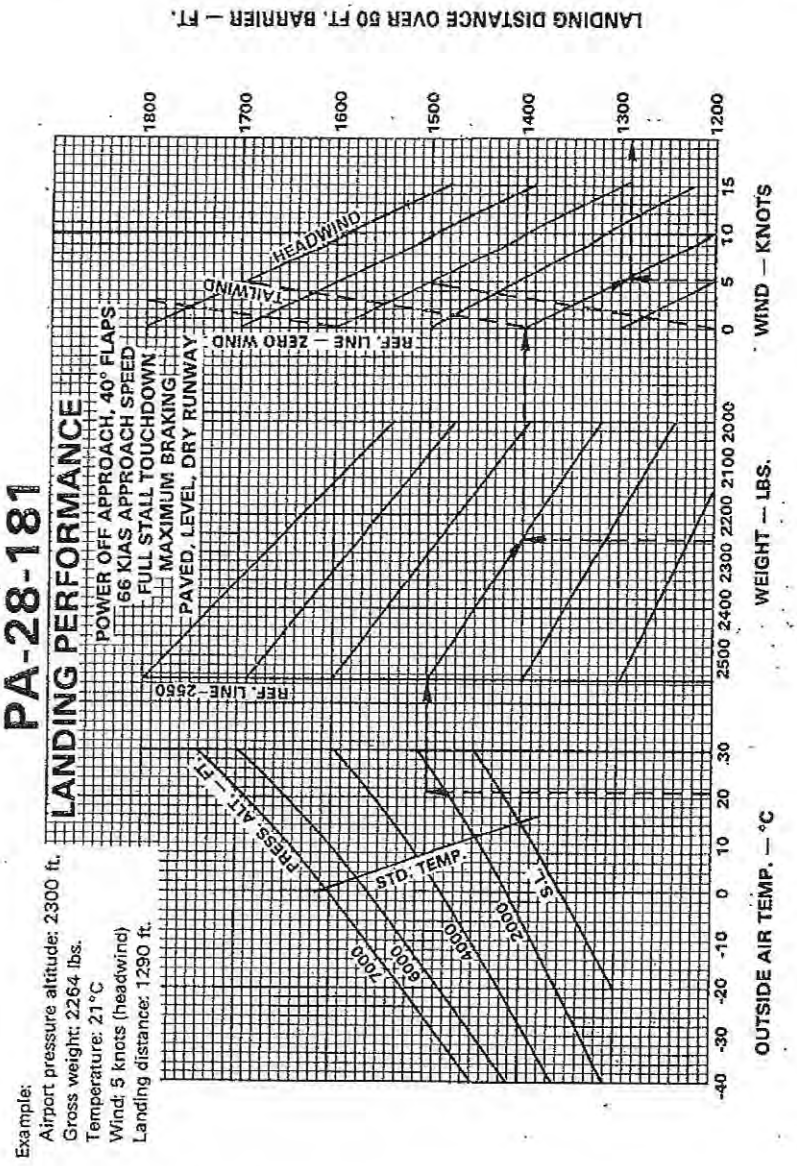

ENDURANCE
Figure 5-29



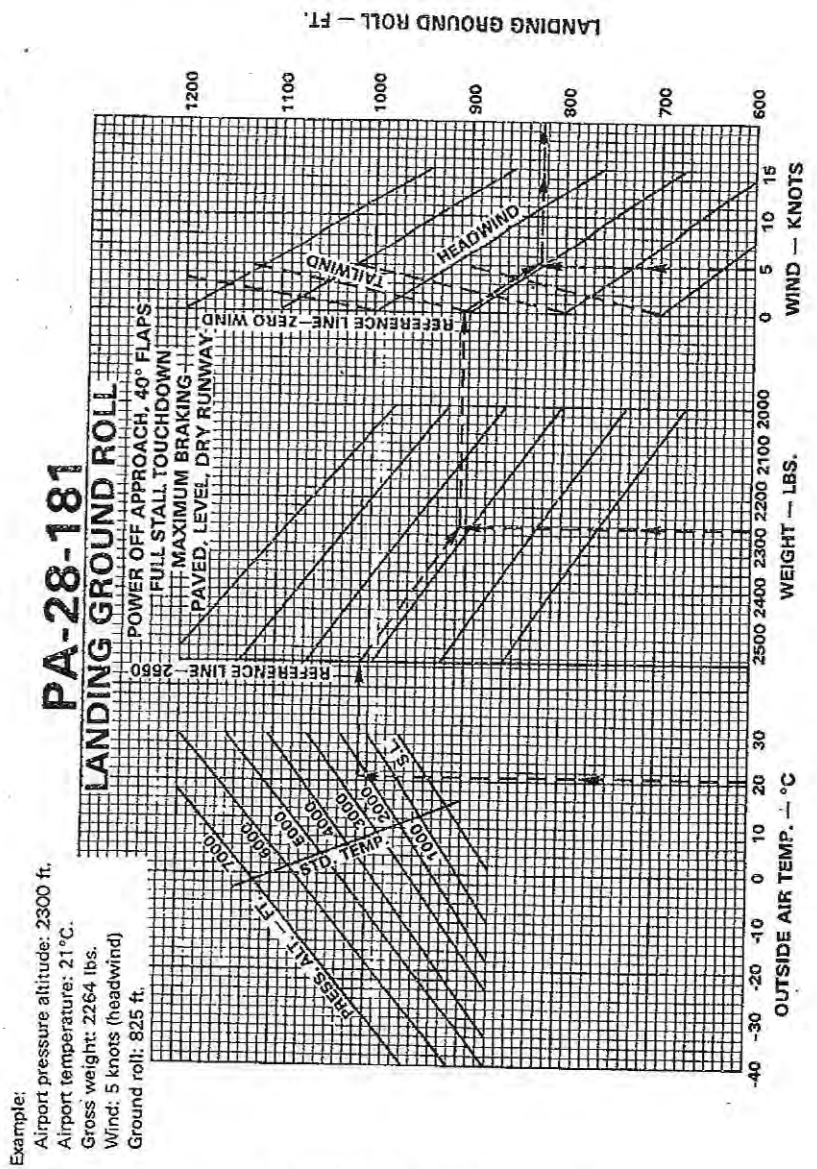

TIME, DISTANCE AND FUEL TO DESCEND
Figure 5-31




**GLIDE RANGE**
Figure 5-33




**LANDING PERFORMANCE**
Figure 5-35




**LANDING GROUND ROLL**
Figure 5-37