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Reality Expansion Pack for X-Plane

Piper P28R Arrow III

Checklists & References

Pre Start

- 1. Seats and Belts ADJUST
- 2. Passengers INSTRUCT
- 3. Flaps UP
- 4. Circuit Breakers CHECK
- 5. Alternate Air OFF
- 6. Parking Brake SET
- 7. Prop HIGH RPM
- 8. Gear DOWN
- 9. Avionics OFF

Start

- 1. Master ON
- 2. Gear Lights THREE GREEN
- 3. Fuel Selector DESIRED TANK
- 4. DAY Anti-collision Lts ON
- 5. NIGHT Nav Lts ON
- 6. Throttle 1/2 in OPEN
- 7. Fuel Pump ON
- 8. Mixture RICH THEN ICO
- 9. Prop CLEAR
- 10. Starter ENGAGE
- 11. Mixture RICH
- 12. Warmup 800-1000 RPM
- 13. Oil Pressure CHECK
- 14. Radios ON
- 15. Transponder STANDBY

Taxi

- 1. Parking Brake OFF
- 2. Strobes OFF FOR TAXI
- 3. Taxi CHECK BRAKES
- 4. Fuel Pumps OFF

Before Takeoff

- 1. Parking Brake SET
- 2. Propeller HIGH RPM
- 3. Mixture RICH
- 4. Throttle 2000
- 5. Mags CHK (175 MAX, 50 Diff)
- 6. Vacuum 4.8 - 5.1
- 7. Oil Temp / Press CHECK
- 8. Ammeter CHECK
- 9. Annunciator Panel TEST
- 10. Alternate Air CHECK
- 11. Propeller EXERCISE
- 12. Fuel Pump ON
- 13. Fuel Pressure CHECK
- 14. Throttle 1000
- 15. Trim NEUTRAL

Takeoff

- 1. Fuel Selector SET
- 2. Fuel Pump ON
- 3. Engine Guages CHECK
- 4. Alt Air CLOSED
- 5. Seat Backs ERECT
- 6. Seatbelts FASTENED
- 7. Mixture SET
- 8. Propeller HIGH RPM
- 9. Flaps SET
- 10. Trim SET
- 11. Controls FREE
- 12. Instruments CHECK/SET
- 13. Door LATCHED

Normal

- 1. Flaps SET
- 2. Trim SET
- 3. Rotate 65 - 75
- 4. Gear UP

After Takeoff

- 1. Gear CHECK UP
- 2. Flaps UP
- 3. Climb speed ESTABLISHED
- 4. Man Pressure 25in
- 5. Prop 2500
- 6. Fuel Pump OFF
- 7. Engine Temp CHECK

Cruise

- 1. Man Pressure AS REQUIRED
- 2. Props AS REQUIRED
- 3. Mixture LEAN

Descent

- 1. Fuel Selector SET
- 2. Seats/Belts ADJUST
- 3. Fuel Pumps ON
- 4. Mixture RICH
- 5. Prop HIGH RPM
- 6. Gear DOWN
- 7. Flaps SET
- 8. Man Press 17-18 in
- 9. Landing Light ON

After Landing

- 1. Flaps UP
- 2. Trim NEUTRAL
- 3. Landing Light OFF
- 4. Taxi Light AS REQ
- 5. Transponder OFF
- 6. Mixture LEAN for TAXI
- 7. Fuel Pump OFF

Shutdown

- 1. Electrical Equip OFF
- 2. Avionics OFF
- 3. Prop HIGH RPM
- 4. Throttle 1000 RPM
- 5. Fuel Pump OFF
- 6. Mixture IDLE CUTOFF
- 7. Magneto OFF
- 8. Master OFF
- 9. Controls LOCKED

Engine Out Procedure

- 1. Trim 79 KIAS
- 2. Emergency landing field LOCATE
- 3. Turn TO FIELD
- 4. Radio call EXECUTE

Engine Troubleshoot

- 1. Fuel Flow CHECK
- 2. Fuel Pump ON
- 3. Fuel Selector SET
- 4. Alternate Air ON
- 5. Engine Gauges CHECK

If Engine Still Dead Continue:

Securing Engine

- 1. Fuel Pump OFF
- 2. Selector OFF
- 3. Mixture ICO
- 4. Magnetos OFF
- 5. Master OFF
- 6. Door CRACK OPEN
- 7. Belts TIGHT

Landing Gear Emergency Extension

- 1. Gear Selector DOWN
- 2. Master ON
- 3. Circuit Breaker CHECK IN
- 4. Nav Lights CHECK OFF
- 5. Gear Bulbs CHECK
- 6. Airspeed < 87 KIAS
- 7. Manual Extn ARM & PULL
- 8. Yaw Aircraft to Drop Gear EXECUTE
- 9. Gear Indicators 3 GREEN

Gear Up Landing

- 1. Flaps AS DESIRED
- 2. Engine SECURE

Electrical Fire

- 1. Master Switch OFF
- 2. Air Vents OPEN
- 3. Cabin Heat OFF
- 4. Land AS SOON AS PRACTICAL

Engine Fire (Ground)

- 1. Starter CRANK
- 2. Mixtures ICO
- 3. Throttles FULL OPEN
- 4. Fuel Selectors OFF
- 5. Fuel Pumps OFF

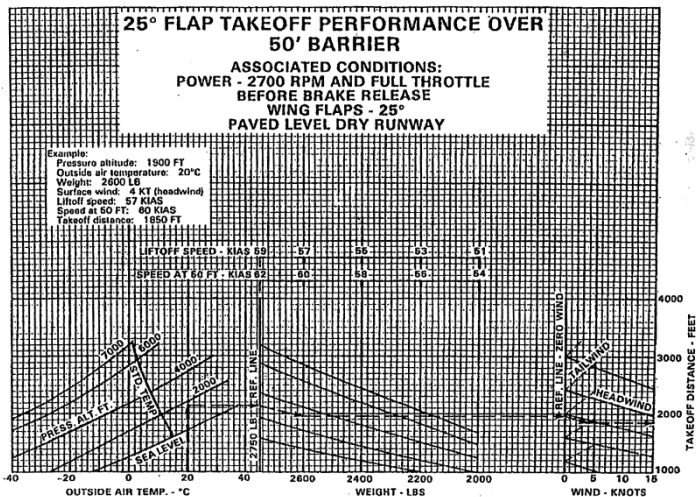
Engine Fire (Flight)

- 1. Fuel Selector OFF
- 2. Mixture ICO
- 3. Prop FULL FWD
- 4. Fuel Pump OFF
- 5. Magnetos OFF
- 6. Alternator OFF
- 7. Cabin Heat OFF

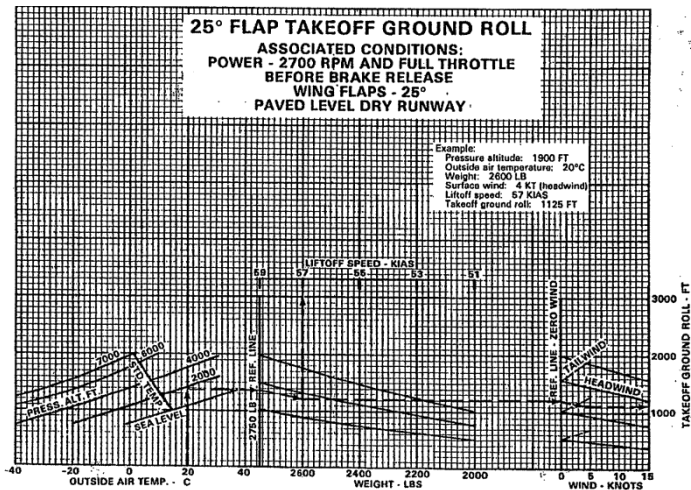
Reference Speeds

Vso	55 KIAS
Vs1	60 KIAS
Vx	78 KIAS
Vldmax	79 KIAS
Vy	90 KIAS
Vfe	103 KIAS
Vlo	107 KIAS
Vle	129 KIAS
Va	118-96 KIAS
Vno	146 KIAS
Vne	183 KIAS

25° FLAP TAKEOFF PERFORMANCE
Figure 5-9



25° FLAP TAKEOFF GROUND ROLL
Figure 5-11



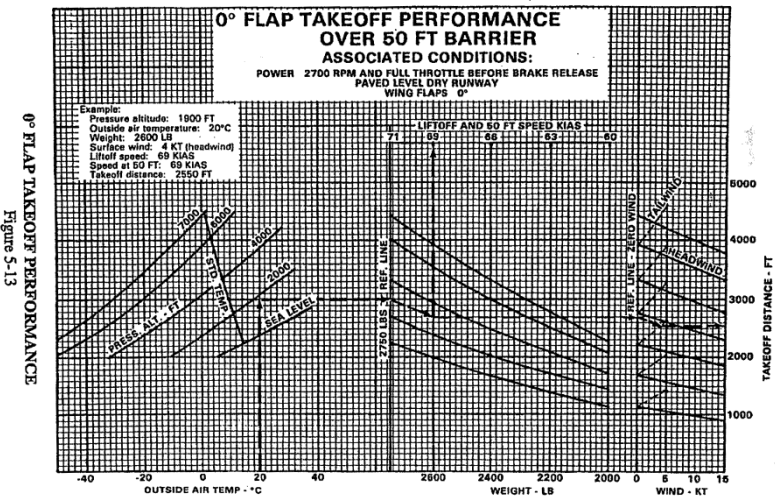
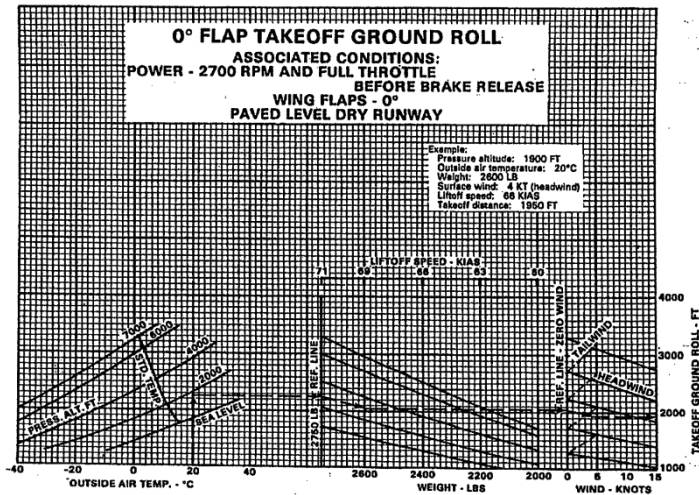
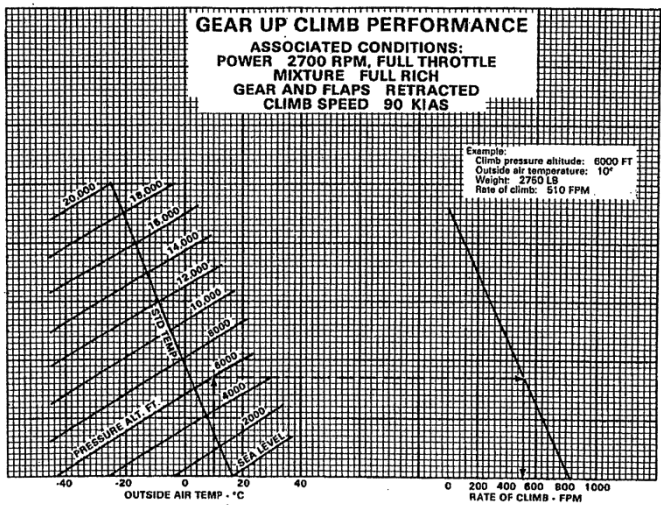


Figure 5-13

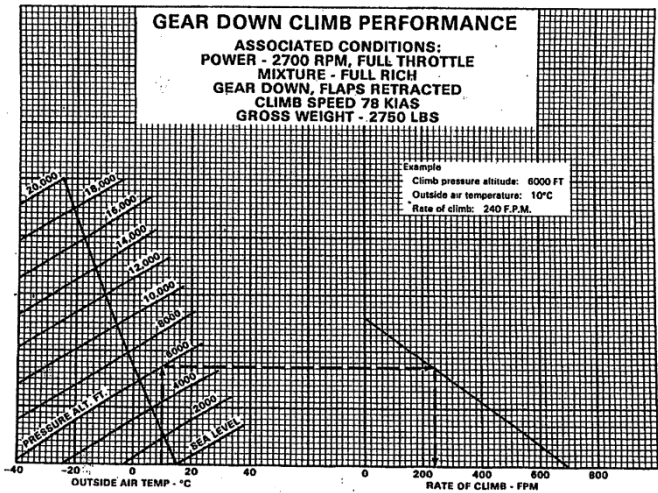
0° FLAP TAKEOFF GROUND ROLL
Figure 5-15



GEAR UP CLIMB PERFORMANCE
Figure 5-17



GEAR DOWN CLIMB PERFORMANCE
Figure 5-19



POWER SETTING TABLE

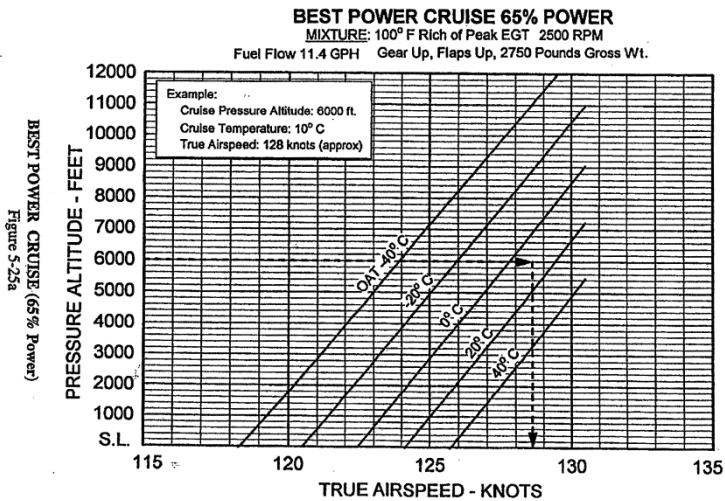
Best Power Mixture

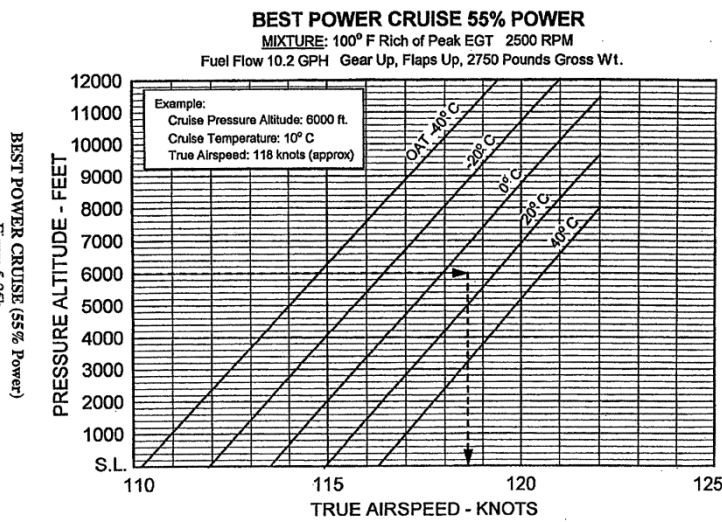
Press. Alt.	ISA Temperature		55% power 110BHP		65% power 130BHP		75% power 150BHP
			100°F ROP RPM and M.P.	100°F ROP RPM and M.P.	100°F ROP RPM and M.P.		
Feet	°F	°C	2200	2500	2200	2500	2500
S.L.	59	15	23.7	21.7	26.1	24.1	26.3
1000	55	13	23.4	21.4	25.8	23.7	26.0
2000	52	11	23.0	21.1	25.4	23.4	25.6
3000	48	9	22.6	20.8	25.1	23.1	25.3
4000	45	7	22.3	20.5	24.7	22.8	24.9
5000	41	5	21.9	20.2	24.3	22.4	24.6
6000	38	3	21.6	19.9	24.0	22.1	24.3
6800	35	2	21.3	19.7	23.7	21.9	F.T.
7000	34	1	21.2	19.6	23.6	21.8	
7500	32	0	21.0	19.4	F.T.	21.6	
8000	30	-1	20.8	19.3		21.5	
9000	27	-3	20.5	19.0		21.1	
9400	25	-4	20.3	18.9		F.T.	
10000	23	-5	F.T.	18.7			
11000	19	-7		18.4			
12000	16	-9		18.1			
13000	12	-11		17.8			
14000	9	-13		17.5			

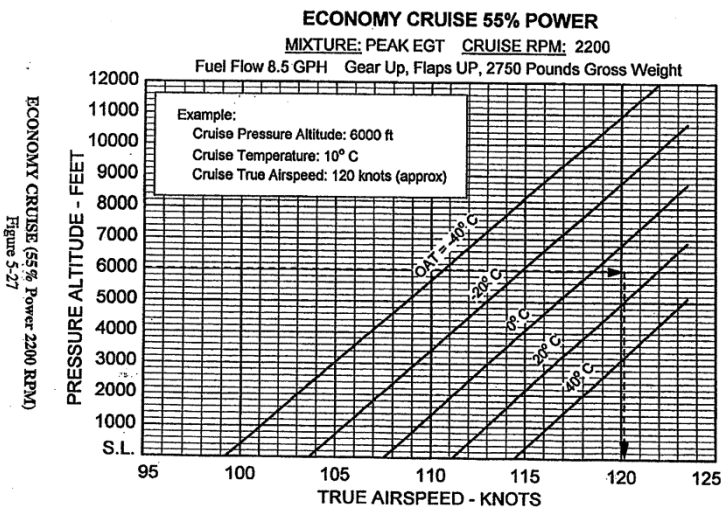
POWER SETTING TABLE

Best Economy Mixture

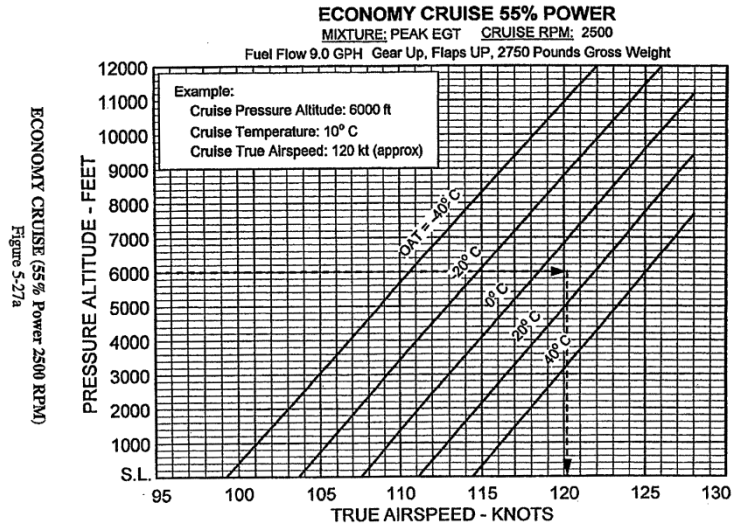
Press. Alt.	ISA Temperature		55% power 110BHP Peak EGT RPM and M.P.		65% power 130BHP Peak EGT RPM and M.P.	
	°F	°C	2200	2500	2200	2500
Feet						
S.L.	59	15	24.8	22.2	27.5	24.5
1000	55	13	24.4	22.0	27.1	24.3
2000	52	11	24.0	21.8	26.7	24.1
3000	48	9	23.7	21.5	26.3	23.8
4000	45	7	23.3	21.3	26.0	23.6
5000	41	5	22.9	21.1	25.6	23.3
5250	38	3	22.8	21.0	F.T.	23.2
6000	35	2	21.5	20.8		23.1
7000	34	1	22.1	20.4		22.8
8000	32	0	21.8	20.2		22.6
8750	30	-1	21.5	20.1		F.T.
9000	27	-3	F.T.	19.9		
10000	25	-4		19.9		
11000	23	-5		19.7		
12000	19	-7		F.T.		

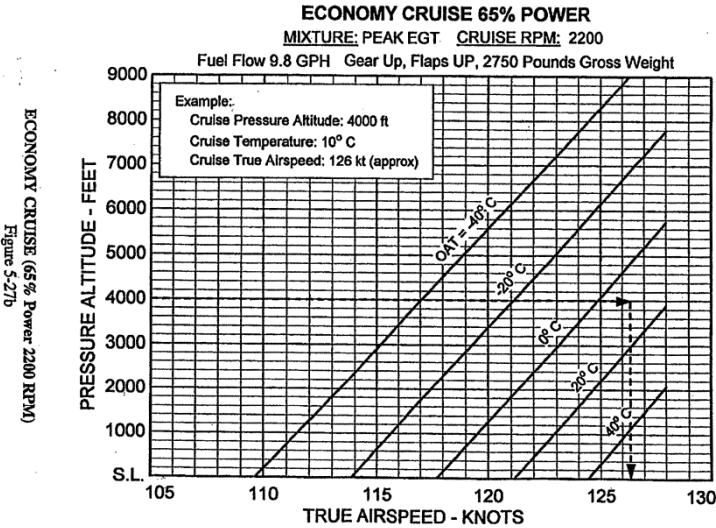




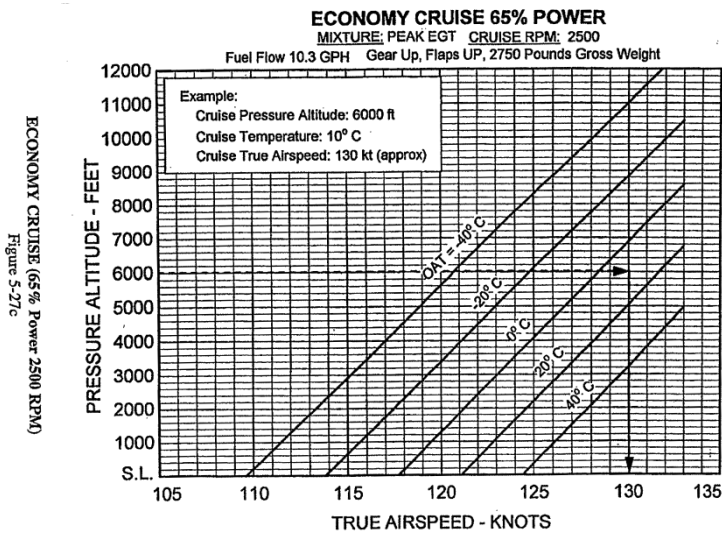


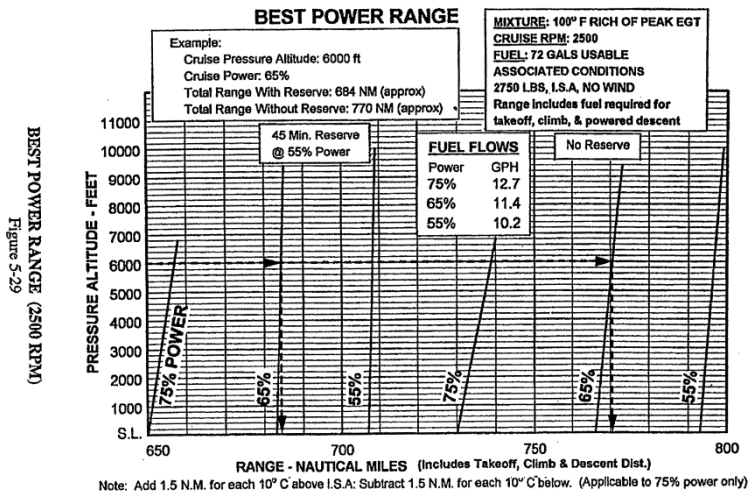
ECONOMY CRUISE (55% Power 2200 RPM)
Figure 5-27

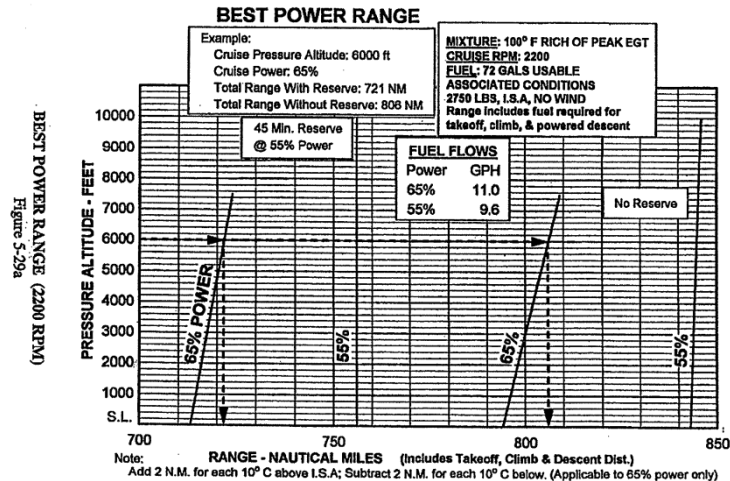


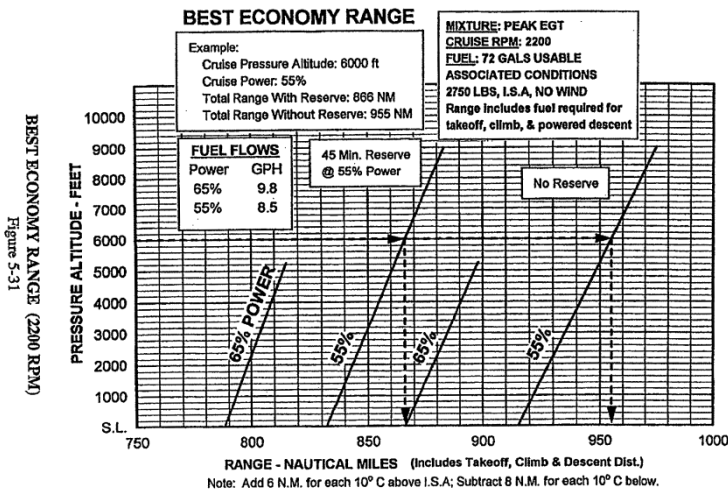


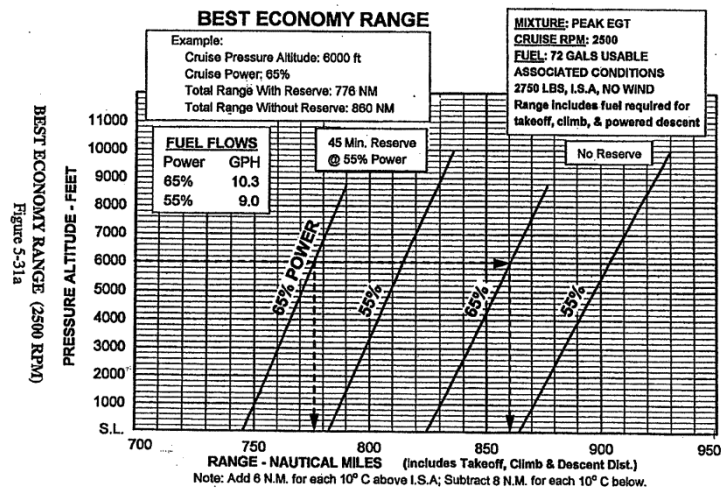
ECONOMY CRUISE (65% Power 2200 RPM)
Figure 5-27b

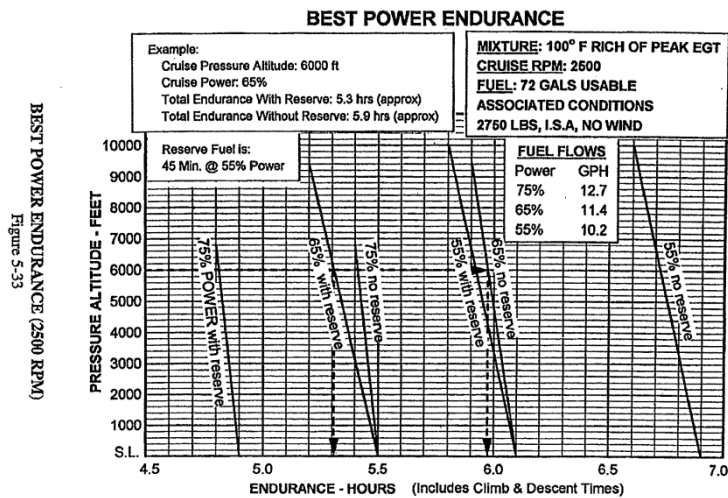


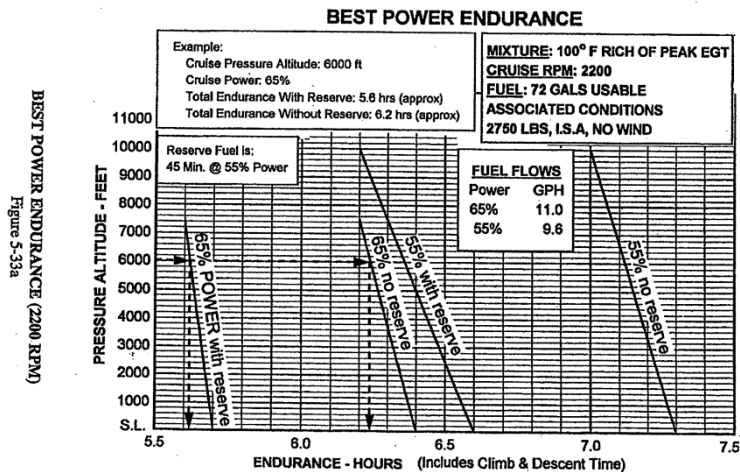




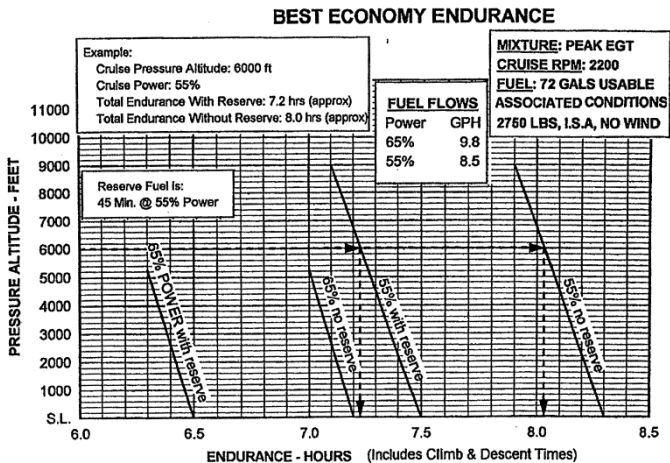


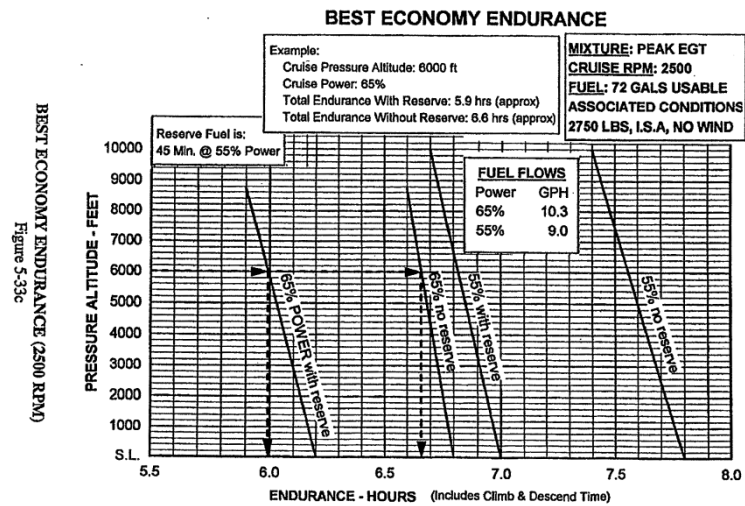






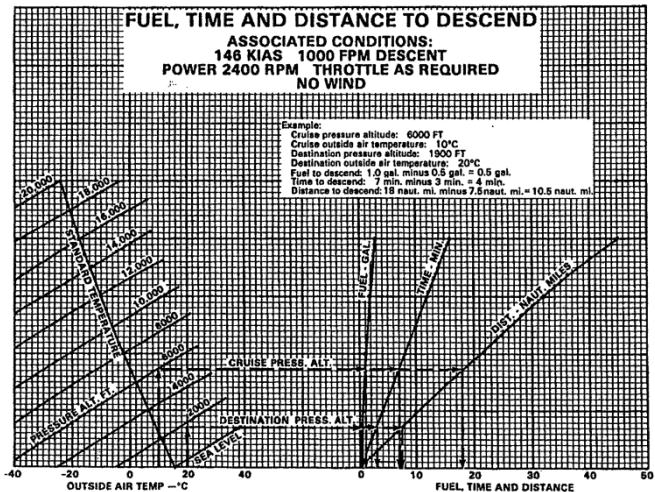
BEST ECONOMY ENDURANCE (2200 RPM)
Figure 5-33b





BEST ECONOMY ENDURANCE (2500 RPM)
Figure 5-33c

FUEL, TIME AND DISTANCE TO DESCEND
Figure 5-35



GLIDE TIME AND DISTANCE
Figure S-37

