

SENECA III

PA-34-220T

REFERENCE ONLY

THIS ELECTRONIC VERSION
OF THE POH IS
NOT APPROVED TO
REPLACE ANY OPERATING
INFORMATION REQUIRED
BY THE REGULATIONS.

PILOT'S OPERATING HANDBOOK

AND

FAA APPROVED AIRPLANE FLIGHT MANUAL

AIRPLANE
SERIAL NO. _____

AIRPLANE
REGIST. NO. _____

PA-34-220T

REPORT: VB-1110 FAA APPROVED BY: _____

WARD EVANS
D.O.A. NO. SO-1
PIPER AIRCRAFT CORPORATION
VERO BEACH, FLORIDA

DATE OF APPROVAL:
JANUARY 8, 1981

FAA APPROVED IN NORMAL CATEGORY BASED ON FAR 23. THIS HANDBOOK INCLUDES THE MATERIAL REQUIRED TO BE FURNISHED TO THE PILOT BY FAR 23 AND CONSTITUTES THE APPROVED AIRPLANE FLIGHT MANUAL AND MUST BE CARRIED IN THE AIRPLANE AT ALL TIMES.



2.23 NOISE LEVEL

The corrected noise level of this aircraft is 71.4d B(A) with the two blade propeller and 74.2d B(A) with the three blade propeller.

No determination has been made by the Federal Aviation Administration that the noise levels of this airplane are or should be acceptable or unacceptable for operation at, into, or out of, any airport.

The above statement notwithstanding, the noise level stated above has been verified by and approved by the Federal Aviation Administration in noise level test flights conducted in accordance with FAR 36, Noise Standards - Aircraft Type and Airworthiness Certification. This aircraft model is in compliance with all FAR 36 noise standards applicable to this type.

2.25 HEATER LIMITATIONS

Operation of the combustion heater above 25,000 feet is not approved.

2.27 OPERATING ALTITUDE LIMITATIONS

Flight above 25,000 feet is not approved. Flight up to and including 25,000 feet is approved if equipped with oxygen in accordance with FAR 23.1441 and avionics in accordance with FAR 91 or FAR 135.

2.29 GYRO SUCTION LIMITS

The operating limits for the suction system are 4.8 to 5.1 inches of mercury for all operations as indicated by the gyro suction gauge.

2.31 OPERATION WITH AFT DOORS REMOVED

The maximum speed with the aft doors removed is 129 KIAS and the minimum single engine control speed is 67 KIAS. Door off operation is approved for VFR non-icing conditions only.

2.32 ICING INFORMATION

"WARNING"

Severe icing may result from environmental conditions outside of those for which the airplane is certified. Flight in freezing rain, freezing drizzle, or mixed icing conditions (supercooled liquid water and ice crystals) may result in ice build-up on protected surfaces exceeding the capability of the ice protection system, or may result in ice forming aft of the protected surfaces. This ice may not be shed using the ice protection systems, and may seriously degrade the performance and controllability of the airplane.

POWER SETTING TABLE (I.S.A. - 15° C)
T.C.M. TSIO-360K SERIES
PA-34-220T

Press Alt.	Outside Air Temp.	Economy Cruise Power			Recommended Cruise Power			Maximum Cruise Power	
		°F	°C	2400	2500	2600	2400	2500	2600
S.L.	32.0	0.0		28.0	27.2	26.3	32.8	31.6	30.9
2000	24.9	-4.0		27.3	26.6	25.8	32.4	31.3	30.5
4000	17.7	-7.9		26.7	26.0	25.2	32.0	30.9	30.0
6000	10.6	-11.9		26.1	25.4	24.7	31.6	30.6	29.6
8000	3.5	-15.8		25.5	24.8	24.2	31.2	30.2	29.1
10000	-3.7	-19.8		24.9	24.2	23.7	30.8	29.9	28.9
12000	-10.8	-23.8		24.2	23.6	23.1	30.5	29.5	28.6
14000	-17.9	-27.7		24.0	23.4	22.9		29.2	28.4
16000	-25.1	-31.7		23.8	23.2	22.7		28.8	28.2
18000	-32.2	-35.7		23.6	23.0	22.5			27.9
20000	-39.3	-39.6			22.8	22.3			27.7
22000	-46.5	-43.6				22.1			
24000	-53.6	-47.5				21.9			
25000	-57.2	-49.5				21.8			
Mixture		25° F Rich of Peak EGT Peak EGT 1650° F Max.							
Approx. Fuel Flow per Engine GPH		9.9			10.0			10.2	
		13.1			13.4			13.5	
								14.8	
								15.0	

NOTE: For temperatures colder than ISA-15° C reduce M.P. given in this table by 0.3" for each 5° C

EXAMPLE:

Cruise Altitude: 10000 ft.
Cruise Power: Economy
Engine Speed: 2500 rpm
Mixture Setting: 25° F rich of peak EGT
Manifold Press.: 24.2 In Hg
Approx Fuel Flow: 10 GPH

POWER SETTING TABLE - ISA -15°C
Figure 5-43

POWER SETTING TABLE (I.S.A.)
T.C.M. TSIO-360K SERIES
PA-34-220T

Press Alt.	Outside Air Temp.		Economy Cruise Power			Recommended Cruise Power			Maximum Cruise Power		
	°F	°C	2400	2500	2600	2400	2500	2600	2500	2600	
Feet											
S.L.	59.0	15.0	28.9	28.0	27.2	33.8	32.7	31.8	34.2	33.2	
2000	51.9	11.0	28.3	27.4	26.6	33.4	32.3	31.4	33.9	32.9	
4000	44.7	7.1	27.6	26.8	26.1	33.1	32.0	31.0	33.6	32.6	
6000	37.6	3.1	27.0	26.3	25.5	32.7	31.7	30.6	33.3	32.3	
8000	30.5	-0.8	26.4	25.7	25.0	32.4	31.3	30.2	33.0	31.9	
10000	23.3	-4.8	25.8	25.1	24.4	32.0	31.0	30.0	32.7	31.8	
12000	16.2	-8.8	25.2	24.5	23.9	31.7	30.7	29.8	32.4	31.8	
14000	9.1	-12.7	25.0	24.3	23.7		30.4	29.6	32.1	31.7	
16000	1.9	-16.7	24.8	24.1	23.5		30.0	29.4		31.7	
18000	-5.2	-20.7	24.6	23.9	23.3			29.2		31.6	
20000	-12.3	-24.6		23.7	23.1			29.0			
22000	-19.5	-28.6			22.9						
24000	-26.6	-32.5			22.7						
25000	-30.2	-34.5			22.6						
Mixture			← 25° F Rich of Peak EGT → Peak EGT 1650° F Max.								EGT 1525° F
Approx. Fuel Flow per Engine GPH			9.9	10.0	10.2	13.1	13.4	13.5	14.8	15.0	

EXAMPLE:

Cruise Altitude: 10000 ft.
Cruise Power: Economy
Engine Speed: 2500 rpm

Mixture Setting: 25° F rich of peak EGT
Manifold Press.: 25.1 In Hg
Approx Fuel Flow: 10 GPH

POWER SETTING TABLE - ISA

Figure 5-45

POWER SETTING TABLE (I.S.A. + 10° C)

T.C.M. TSIO-360K SERIES

PA-34-220T

Press Alt.	Outside Air Temp.		Economy Cruise Power			Recommended Cruise Power			Maximum Cruise Power		
Feet	°F	°C	2400	2500	2600	2400	2500	2600	2500	2600	
S.L.	77.0	25.0	29.5	28.6	27.8	34.4	33.4	32.5	34.9	33.8	
2000	69.9	21.0	28.9	28.0	27.2	34.1	33.1	32.1	34.6	33.6	
4000	62.7	17.1	28.3	27.5	26.7	33.8	32.8	31.7	34.4	33.3	
6000	55.6	13.1	27.7	26.9	26.1	33.5	32.4	31.3	34.1	33.1	
8000	48.5	9.2	27.1	26.3	25.5	33.2	32.1	31.0	33.8	32.8	
10000	41.3	5.2	26.5	25.7	25.0	32.9	31.8	30.8	33.6	32.6	
12000	34.2	1.2	25.8	25.1	24.4		31.5	30.7	33.3	32.6	
14000	27.1	-2.7	25.6	24.9	24.2		31.2	30.6		32.5	
16000	19.9	-6.7	25.4	24.7	24.0						
18000	12.8	-10.7		24.5	23.8						
20000	5.7	-14.6		24.3	23.6						
22000	-1.5	-18.6			23.4						
Mixture		← 25° F Rich of Peak EGT ————— → Peak EGT 1650° F Max.								EGT 1525° F	
Approx. Fuel Flow per Engine GPH		9.9 10.0 10.2			13.1 13.4 13.5			14.8 15.0			

EXAMPLE:

Cruise Altitude: 10000 ft.

Cruise Power: Economy

Engine Speed: 2500 rpm

Mixture Setting: 25° F rich of peak EGT

Manifold Press.: 25.7 In Hg

Approx Fuel Flow: 10 GPH

POWER SETTING TABLE - ISA +10°C

Figure 5-47

POWER SETTING TABLE (I.S.A. + 20° C)
T.C.M. TSIO-360K SERIES
PA-34-220T

Press Alt.	Outside Air Temp.		Economy Cruise Power			Recommended Cruise Power			Maximum Cruise Power			
	°F	°C	2400	2500	2600	2400	2500	2600	2500	2600		
S.L.	95.0	35.0	30.2	29.3	28.4	35.1	34.1	32.9	35.6	34.2		
2000	87.9	31.0	29.6	28.7	27.8	34.9	33.8	32.7	35.3	34.1		
4000	80.7	27.1	29.0	28.1	27.3	34.6	33.5	32.5	35.1	34.0		
6000	73.6	23.1	28.4	27.5	26.7	34.3	33.3	32.3	34.9	33.9		
8000	66.5	19.2	27.8	27.0	26.2	34.1	33.0	32.0	34.7	33.7		
10000	59.3	15.2	27.1	26.4	25.6	33.8	32.7	31.8	34.5	33.6		
12000	52.2	11.2	26.5	25.8	25.0		32.4	31.6	34.3	33.5		
14000	45.1	7.3	26.3	25.6	24.8		32.1	31.4		33.4		
16000	37.9	3.3	26.1	25.4	24.6			31.2		33.3		
18000	30.8	-0.7		25.2	24.4			30.9				
20000	23.7	-4.6			24.2							
Mixture			← 25° F Rich of Peak EGT → Peak EGT 1650° F Max.								EGT 1525° F	
Approx. Fuel Flow per Engine GPH			9.9	10.0	10.2	13.1	13.4	13.5	14.8	15.0		

EXAMPLE:

Cruise Altitude:	10000 ft.	Mixture Setting:	25° F rich of peak EGT
Cruise Power:	Economy	Manifold Press.:	26.4 In Hg
Engine Speed:	2500 rpm	Approx Fuel Flow:	10 GPH

POWER SETTING TABLE - ISA +20°C

Figure 5-49

POWER SETTING TABLE (I.S.A. + 30° C)
T.C.M. TSIO-360K SERIES
PA-34-220T

Press Alt.	Outside Air Temp.		Economy Cruise Power			Recommended Cruise Power			Maximum Cruise Power	
	°F	°C	2400	2500	2600	2400	2500	2600	2500	2600
Feet										
S.L.	113.0	45.0	30.9	29.9	29.0	35.8	34.9	33.6	36.1	34.9
2000	105.9	41.0	30.3	29.3	28.4	35.6	34.6	33.4	36.0	34.8
4000	98.7	37.1	29.7	28.8	27.9	35.4	34.3	33.2	35.8	34.7
6000	91.6	33.1	29.1	28.2	27.3	35.2	34.1	33.1	35.7	34.6
8000	84.5	29.2	28.5	27.6	26.8	34.9	33.8	32.9	35.6	34.5
10000	77.3	25.2	27.9	27.1	26.2		33.5	32.7	35.4	34.4
12000	70.2	21.2	27.3	26.5	25.7		33.3	32.5		34.3
14000	63.1	17.3	27.1	26.3	25.5			32.3		34.2
16000	55.9	13.3		26.1	25.3			32.2		
18000	48.8	9.3		25.9	25.1					
20000	41.7	5.4			24.9					
Mixture			← 25° F Rich of Peak EGT			Peak EGT 1650° F Max. →			EGT 1525° F	
Approx. Fuel Flow per Engine GPH			9.9	10.0	10.2	13.1	13.4	13.5	14.8	15.0

EXAMPLE:

Cruise Altitude:	10000 ft.	Mixture Setting:	25° F rich of peak EGT
Cruise Power:	Economy	Manifold Press.:	27.1 In Hg
Engine Speed:	2500 rpm	Approx Fuel Flow:	10 GPH

POWER SETTING TABLE - ISA +30°C
Figure 5-51