SECTION 7
DESCRIPTION AND OPERATION OF THE AIRPLANE AND ITS SYSTEMS

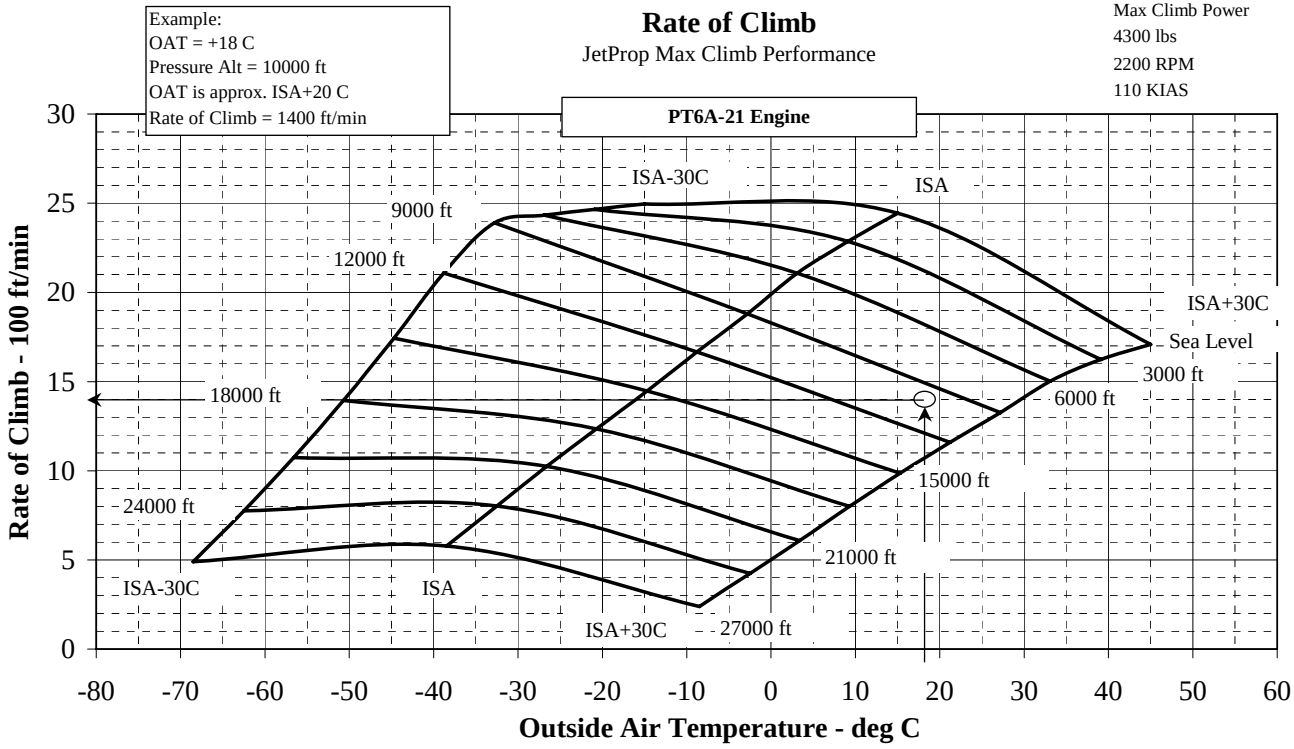
7.1 THE AIRPLANE

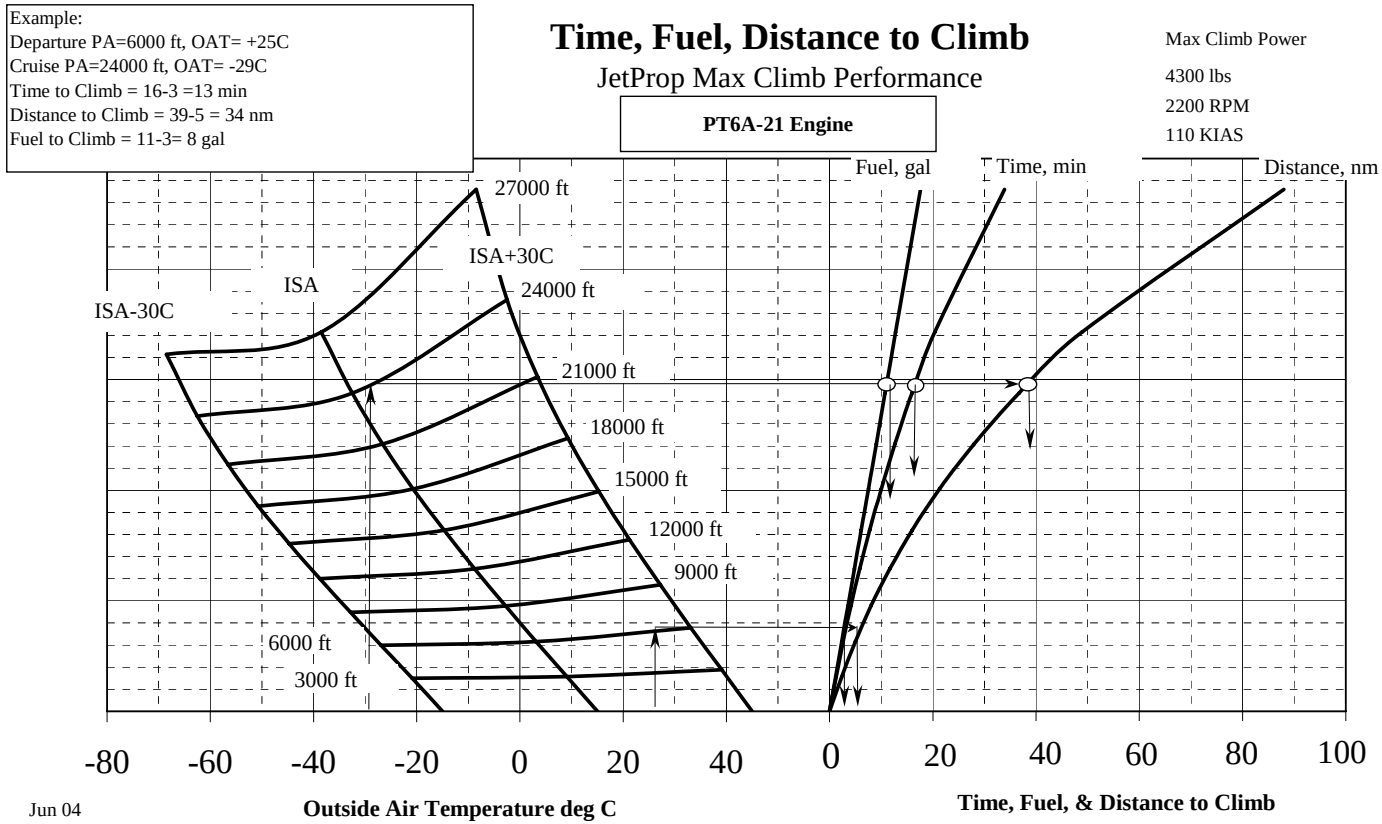
The JetProp DLX is a PA-46-310/350P modified with a turboprop engine and associated systems. It is a single engine, all metal, retractable landing gear, low wing airplane. The JetProp has a pressurized cabin with seating for six occupants and two separate luggage compartments.

7.2 PERFORMANCE INFORMATION

7.2a(1) JetProp with PT6A-21 Engine

Estimated climb, cruise/endurance, and descent performance data for the JetProp equipped with the PT6A-21 engine is shown on page 7-1b through 7-1h. This data is not FAA approved.


Example:
OAT = +18 C
Pressure Alt = 10000 ft
OAT is approx. ISA+20 C
Rate of Climb = 1400 ft/min
Rate of Climb
JetProp Max Climb Performance
Max Climb Power
4300 lbs
2200 RPM
110 KIAS
PT6A-21 Engine
Rate of Climb - 100 ft/min
Outside Air Temperature - deg C
ISA-30C
ISA
ISA+30C
9000 ft
12000 ft
18000 ft
24000 ft
Sea Level
3000 ft
6000 ft
15000 ft
21000 ft
27000 ft
30
25
20
15
10
5
0
-80
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60


Example:
Departure PA=6000 ft, OAT= +25C
Cruise PA=24000 ft, OAT= -29C
Time to Climb = 16-3 =13 min
Distance to Climb = 39-5 = 34 nm
Fuel to Climb = 11-3= 8 gal
Time, Fuel, Distance to Climb
JetProp Max Climb Performance
PT6A-21 Engine
Max Climb Power
4300 lbs
2200 RPM
110 KIAS
Fuel, gal
Time, min
Distance, nm
27000 ft
ISA+30C
ISA
24000 ft
ISA-30C
21000 ft
18000 ft
15000 ft
12000 ft
9000 ft
6000 ft
3000 ft
-80 -60 -40 -20 0 20 40
0 20 40 60 80 100
Outside Air Temperature deg C
Time, Fuel, & Distance to Climb

Jun 04

JetProp Cruise Performance
PT6A-21 Engine/2200 RPM

Pressure Altitude = 6000 ft

Torque	ISA-30° C (-26.9° C)			ISA (3.1° C)			ISA+30° C (33.1° C)		
ft-lb	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr
400	123	178	26.5	124	181	27.1	123	185	27.6
500	144	195	29.1	149	200	29.9	150	205	30.6
600	159	213	31.7	164	218	32.5	168	223	33.2
700	172	229	34.2	177	234	35.0	182	239	35.7
800	181	244	36.4	188	251	37.5	194	258	38.5

Pressure Altitude = 9000 ft

Torque	ISA-30° C (-32.8° C)			ISA (-2.8° C)			ISA+30° C (27.2° C)		
ft-lb	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr
400	125	167	24.9	127	171	25.5	127	174	26.0
500	150	184	27.4	154	188	28.1	156	193	28.8
600	165	201	29.9	170	206	30.7	175	211	31.4
700	177	218	32.6	183	223	33.3	188	228	34.1
800	188	237	35.4	194	242	36.1	200	247	36.9
900	-	-	-	-	-	-	210	266	39.7

Pressure Altitude = 12000 ft

Torque	ISA-30° C (-38.8° C)			ISA (-8.8° C)			ISA+30° C (21.2° C)		
ft-lb	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr
400	129	156	23.3	131	161	24.0	128	165	24.6
500	155	173	25.8	160	178	26.5	162	182	27.2
600	171	191	28.4	177	195	29.0	182	200	29.8
700	183	208	31.1	189	213	31.8	195	218	32.5
800	194	227	33.8	201	232	34.6	207	237	35.4
900	-	-	-	210	250	37.4	-	-	-

Notes:
1) True Airspeeds Above May Exceed Vmo (172 KIAS) and are shown for Interpolation and Illustration Only; Do Not Exceed Vmo
2) Shaded Areas Denote Max Range Conditions (No Wind)

JetProp Cruise Performance
PT6A-21 Engine/2200 RPM

Pressure Altitude = 15000 ft

Torque	ISA-30° C (-44.7° C)			ISA (-14.7° C)			ISA+30° C (15.3° C)		
ft-lb	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr
400	134	147	22.0	137	151	22.6	135	157	23.4
500	160	164	24.5	165	168	25.1	168	172	25.7
600	177	183	27.3	183	186	27.7	188	191	28.5
700	188	200	29.9	195	205	30.6	202	210	31.3
800	200	220	32.9	207	225	33.6	-	-	-
900	209	243	36.2	217	247	36.9	-	-	-

Pressure Altitude = 18000 ft

Torque	ISA-30° C (-50.7° C)			ISA (-20.7° C)			ISA+30° C (9.3° C)		
ft-lb	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr
400	143	139	20.8	146	143	21.3	146	146	21.8
500	168	156	23.3	173	160	23.9	176	163	24.4
600	185	175	26.1	192	178	26.5	197	183	27.3
700	197	195	29.1	206	198	29.5	212	203	30.3
800	209	215	32.1	217	220	32.9	-	-	-
900	219	240	35.8	227	242	36.2	-	-	-

Pressure Altitude = 21000 ft

Torque	ISA-30° C (-56.6° C)			ISA (-26.6° C)			ISA+30° C (3.4° C)		
ft-lb	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr
400	158	130	19.5	161	134	20.0	162	138	20.5
500	184	148	22.2	189	152	22.8	193	156	23.4
600	200	168	25.0	208	172	25.6	215	176	26.2
700	214	190	28.3	222	194	28.9	-	-	-
800	226	213	31.8	235	216	32.2	-	-	-
900**	-	-	-	245**	240**	35.8**	-	-	-

Notes:
1) True Airspeeds Above May Exceed Vmo (172 KIAS) and are shown for Interpolation and Illustration Only; Do Not Exceed Vmo
2) Shaded Areas Denote Max Range Conditions (No Wind)
3) Double Asterisk (**) Indicates Conditions at Higher than P & W Card Deck Torque;
Do Not Exceed Max ITT (680°C)

JetProp Cruise Performance
PT6A-21 Engine/2200 RPM

Pressure Altitude = 23000 ft

Torque	ISA-30° C (-60.6° C)			ISA (-30.6° C)			ISA+30° C (-0.6° C)		
ft-lb	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr
400	161	127	18.9	164	130	19.4	163	133	19.9
500	188	146	21.7	191	149	22.2	198	152	22.6
600	204	166	24.7	212	169	25.2	220	172	25.6
700	218	188	28.1	226	191	28.6	-	-	-
850**	-	-	-	245**	227**	33.9**	-	-	-
900**	-	-	-	250**	240**	35.8**	-	-	-
640*	→	→	→	→	→	→	226	181	27.0
802*	→	→	→	240	215	32.1	-	-	-
776	227	206	30.7	-	-	-	-	-	-

Pressure Altitude = 24000 ft

Torque	ISA-30° C (-62.5° C)			ISA (-32.5° C)			ISA+30° C (-2.5° C)		
ft-lb	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr
400	163	125	18.6	165	128	19.1	167	131	19.6
500	190	144	21.5	195	147	21.9	200	150	22.4
600	207	165	24.6	215	168	25.0	222	171	25.5
700	220	187	28.0	230	190	28.4	-	-	-
800**	-	-	-	242**	213**	31.8**	-	-	-
850**	-	-	-	247**	225**	33.6**	-	-	-
609*	→	→	→	→	→	→	224	173	25.8
778*	→	→	→	240	208	31.0	-	-	-
764*	228	202	30.1	-	-	-	-	-	-

Notes:
1) True Airspeeds Above May Exceed Vmo (172 KIAS) and are shown for Interpolation and Illustration Only; Do Not Exceed Vmo
2) Shaded Areas Denote Max Range Conditions (No Wind)
3) Asterisk (*) Indicates Max Recommended Cruise Torque; Do Not Exceed Max ITT (680° C)
4) Double Asterisk (**) Indicates Conditions at Higher than P & W Card Deck Torque; Do Not Exceed Max ITT (680°C)

JetProp Cruise Performance
PT6A-21 Engine/2200 RPM

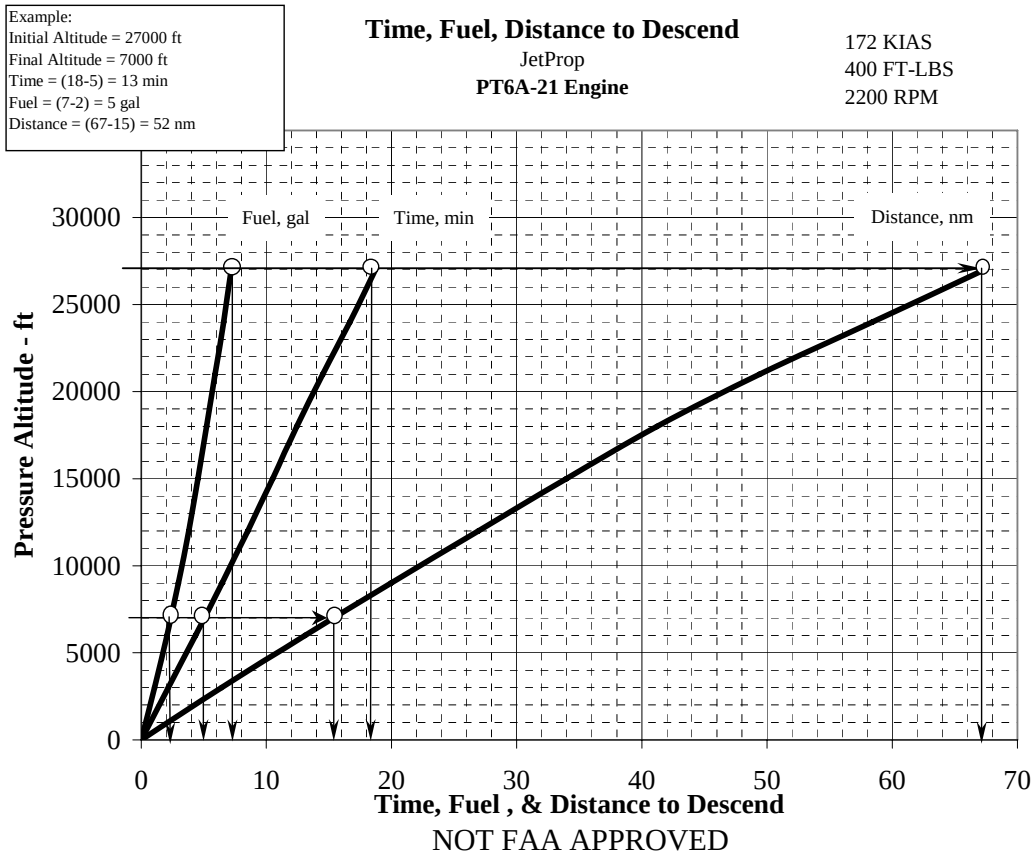
Pressure Altitude = 25000 ft

Torque	ISA-30° C (-64.5° C)			ISA (-34.5° C)			ISA+30° C (-4.5° C)		
ft-lb	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr
400	164	124	18.4	168	126	18.8	165	129	19.3
500	191	142	21.2	197	145	21.7	202	148	22.1
600	208	164	24.4	216	167	24.9	-	-	-
700	222	187	28.0	231	190	28.4	-	-	-
800**	-	-	-	243**	215**	32.1**	-	-	-
850**	-	-	-	251**	227**	33.9**	-	-	-
597*	→	→	→	→	→	→	223	169	25.2
742*	→	→	→	237	200	29.9	-	-	-
723*	226	192	28.7	-	-	-	-	-	-

Pressure Altitude = 27000 ft

Torque	ISA-30° C (-68.5° C)			ISA (-38.5° C)			ISA+30° C (-8.5° C)		
ft-lb	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr	KTAS	FF, lb/hr	FF, gal/hr
400	167	120	18.0	171	122	18.2	171	125	18.7
500	195	140	20.9	201	143	21.4	206	146	21.8
600	213	163	24.3	222	165	24.6	-	-	-
750**	-	-	-	244**	203**	30.3**	-	-	-
800**	-	-	-	250**	215**	32.1**	-	-	-
549*	→	→	→	→	→	→	218	157	23.4
692*	→	→	→	236	188	28.1	-	-	-
645*	220	173	25.8	-	-	-	-	-	-

Notes:
1) True Airspeeds Above May Exceed Vmo (172 KIAS) and are shown for Interpolation and Illustration Only; Do Not Exceed Vmo
2) Shaded Areas Denote Max Range Conditions (No Wind)
3) Asterisk (*) Indicates Max Recommended Cruise Torque; Do Not Exceed Max ITT (680° C)
4) Double Asterisk (**) Indicates Conditions at Higher than P & W Card Deck Torque;
Do Not Exceed Max ITT (680°C)



NOT FAA APPROVED

7.2a(2) JetProp with PT6A-34 Engine

Estimated climb, cruise/endurance, and descent performance data for the JetProp equipped with the PT6A-34 engine is shown on page 7-2 through 7-14.