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 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.

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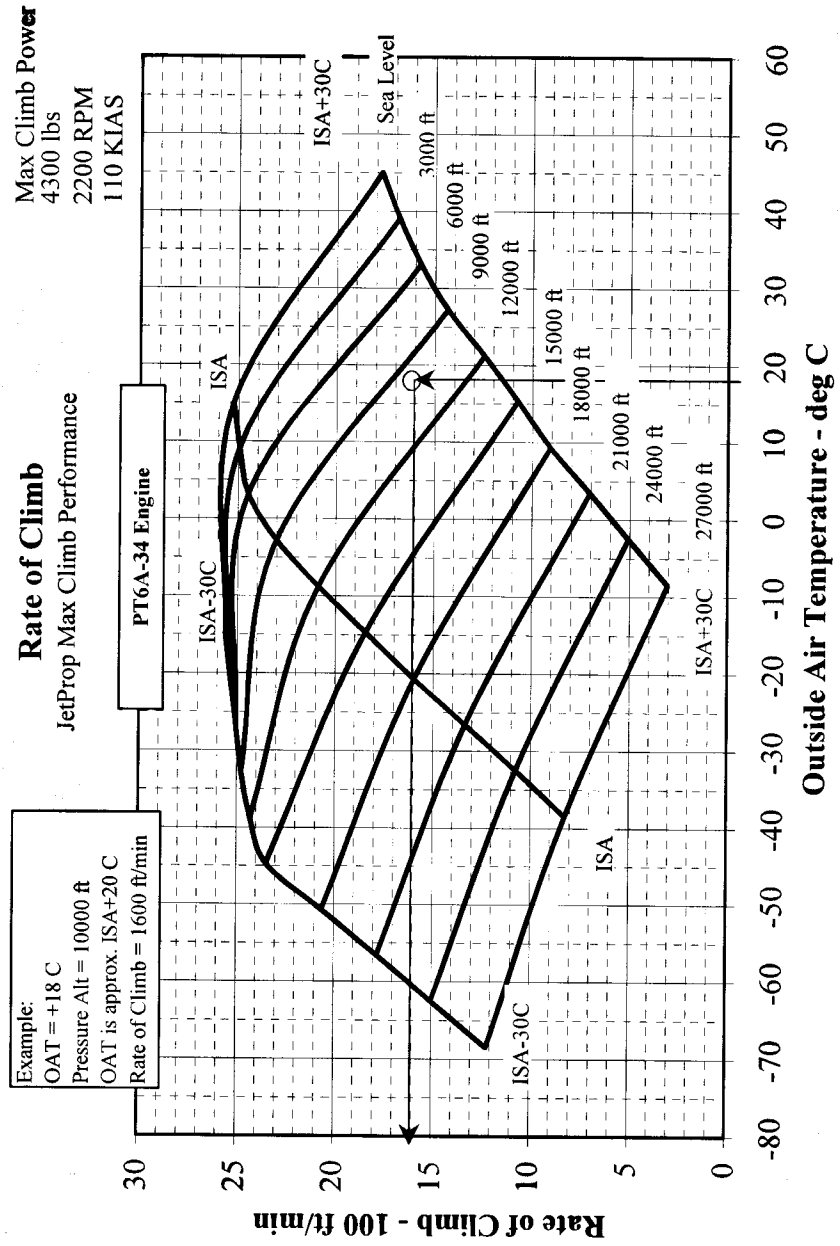
Rate of Climb

JetProp Max Climb Performance



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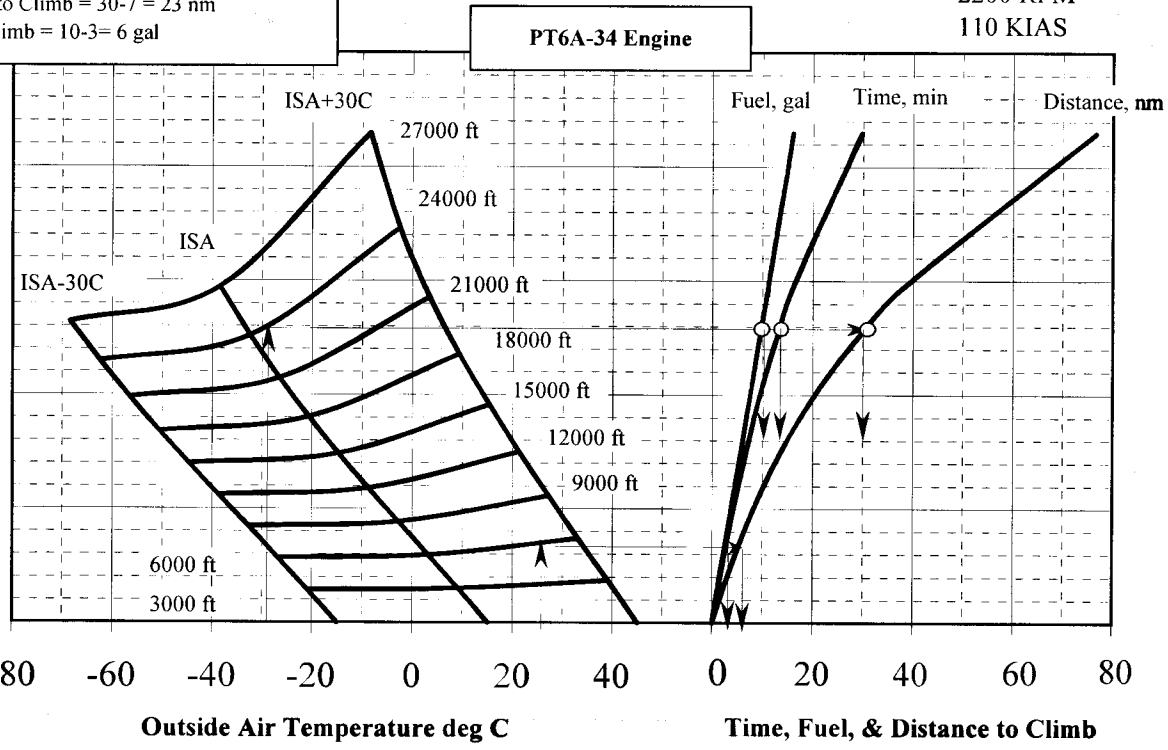
Example:
Departure PA=6000 ft, OAT= +25C
Cruise PA=24000 ft, OAT= -29C
Time to Climb = 14-3 =11 min
Distance to Climb = 30-7 = 23 nm
Fuel to Climb = 10-3= 6 gal

Time, Fuel, Distance to Climb

JetProp Max Climb Performance

Max Climb Power
4300 lbs
2200 RPM
110 KIAS



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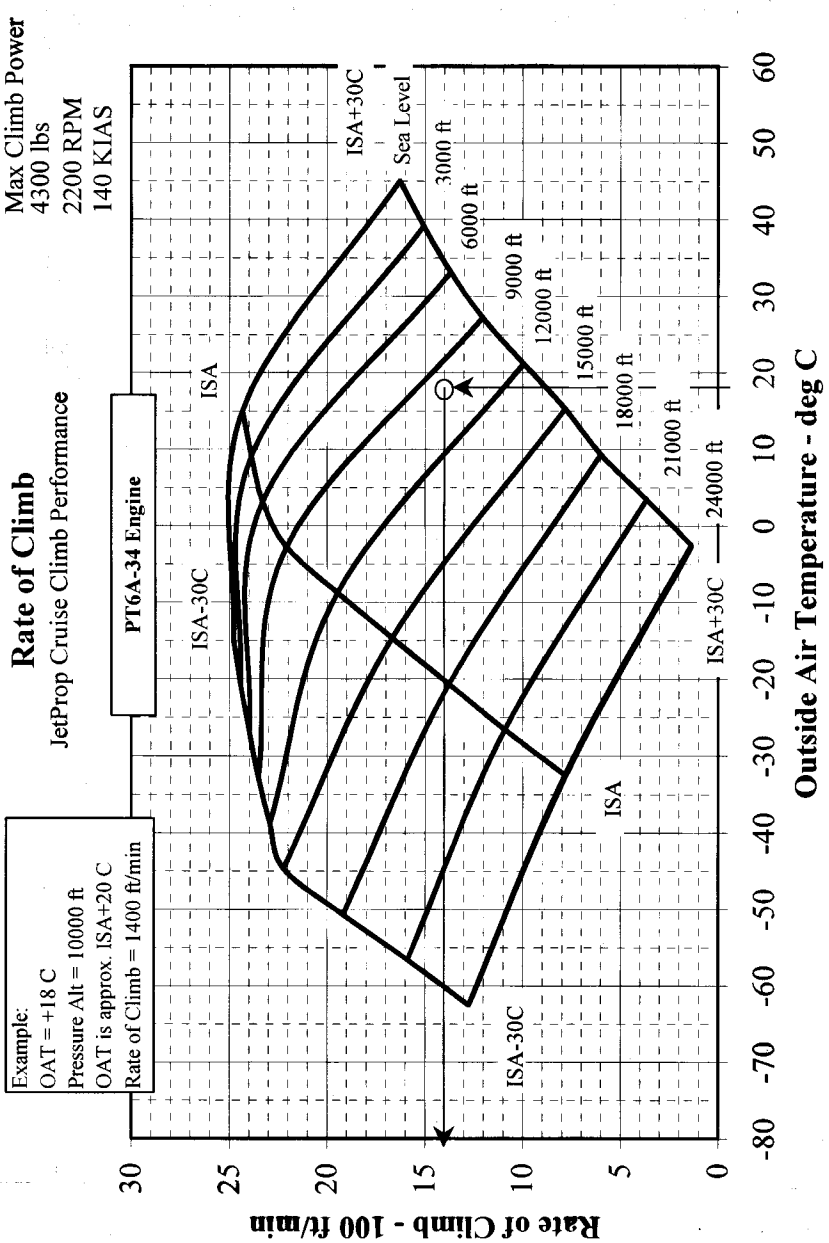
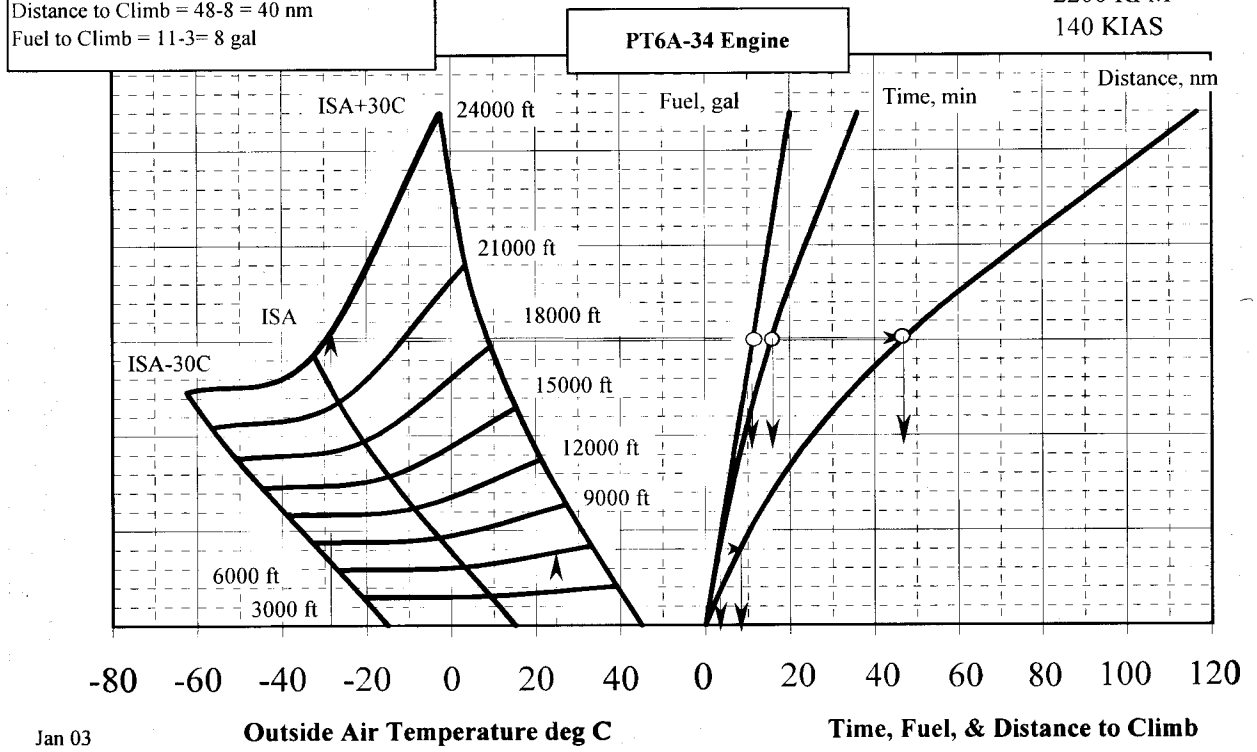


Example:
Departure PA=6000 ft, OAT= +25C
Cruise PA=24000 ft, OAT= -29C
Time to Climb = 17-3 =14 min
Distance to Climb = 48-8 = 40 nm
Fuel to Climb = 11-3= 8 gal

Time, Fuel, Distance to Climb

JetProp Cruise Climb Performance

Max Climb Power
4300 lbs
2200 RPM
140 KIAS



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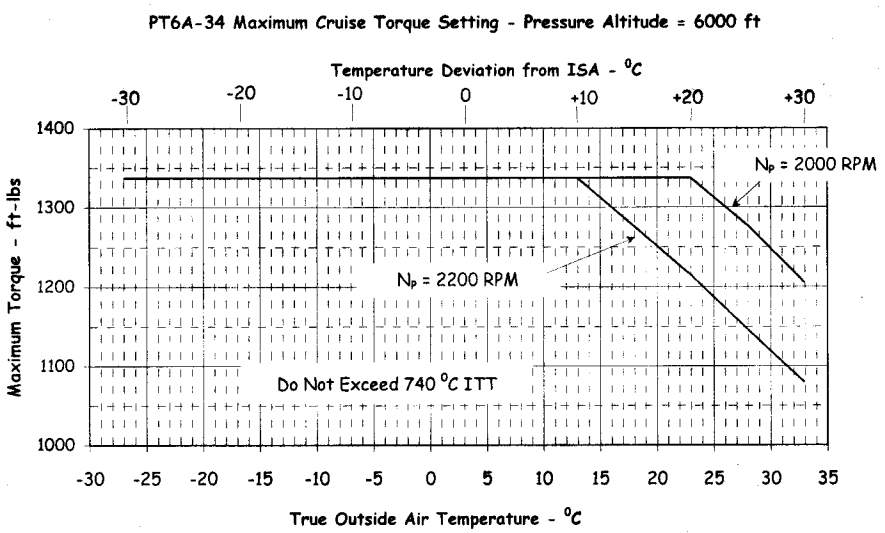
JetProp Cruise Data

PT6A-34 Engine

Pressure Altitude = 6000 ft

N_P	Power (SHP)	Torque (ft-lbs)	ISA-30°C (OAT = -27°C)		ISA (OAT = +3°C)		ISA+30°C (OAT = +33°C)	
			Airspeed (KTAS)	Fuel Flow (pph / gph)	Airspeed (KTAS)	Fuel Flow (pph / gph)	Airspeed (KTAS)	Fuel Flow (pph / gph)
↑	152	400	115	167 / 25	125	175 / 26	129	182 / 27
	190	500	139	184 / 27	148	190 / 28	152	199 / 30
	228	600	154	200 / 30	162	207 / 31	167	216 / 32
2000	267	700	166	215 / 32	174	223 / 33	179	232 / 35
RPM	305	800	176	231 / 34	184	240 / 36	189	249 / 37
	343	900	185	248 / 37	193	256 / 38	199	266 / 40
	381	1000	192	261 / 39	200	270 / 40	206	281 / 42
↓	419	1100	199	278 / 41	208	288 / 43	214	297 / 44
	457	1200	205	293 / 44	214	303 / 45	221	315 / 47

- Shaded Areas are Best Range Conditions for Given Altitude & OAT (No Wind)
- * Indicates Max Torque for the Flight Condition (Do Not Exceed 740C ITT)'
- Temperatues are True Outside Air
- **True Airspeeds Above May Exceed Vmo (172 KIAS) and Are Shown for Interpolation and Illustration Only**
- **Do Not Exceed V_{MO} (172 KIAS)**

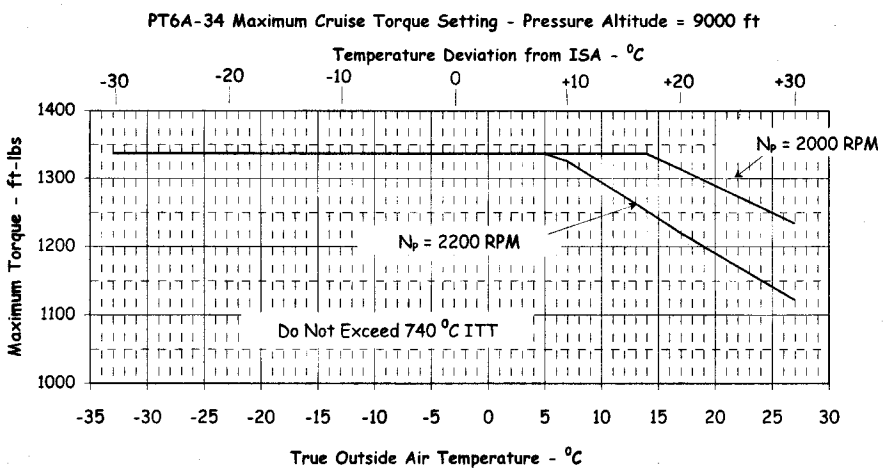


JetProp Cruise Data **PT6A-34 Engine**

Pressure Altitude = 9000 ft

N_P	Power (SHP)	Torque (ft-lbs)	ISA-30°C (OAT = -33°C)		ISA (OAT = -3°C)		ISA+30°C (OAT = +27°C)	
			Airspeed (KTAS)	Fuel Flow (pph / gph)	Airspeed (KTAS)	Fuel Flow (pph / gph)	Airspeed (KTAS)	Fuel Flow (pph / gph)
↑	152	400	120	157 / 23	130	163 / 24	133	171 / 26
	190	500	144	173 / 26	153	180 / 27	156	187 / 28
	228	600	159	190 / 28	166	197 / 29	172	205 / 31
	267	700	171	204 / 30	178	213 / 32	185	221 / 33
2000 RPM	305	800	182	220 / 33	189	228 / 34	196	238 / 36
	343	900	191	237 / 35	198	242 / 36	205	254 / 38
	381	1000	198	251 / 37	206	259 / 39	213	270 / 40
	419	1100	205	267 / 40	213	275 / 41	221	285 / 43
↓	457	1200	212	284 / 42	221	293 / 44	227	302 / 45

- Shaded Areas are Best Range Conditions for Given Altitude & OAT (No Wind)
- * Indicates Max Torque for the Flight Condition (Do Not Exceed 740C ITT)'
- Temperatues are True Outside Air
- **True Airspeeds Above May Exceed Vmo (172 KIAS) and Are Shown for Interpolation and Illustration Only**
- **Do Not Exceed V_{MO} (172 KIAS)**

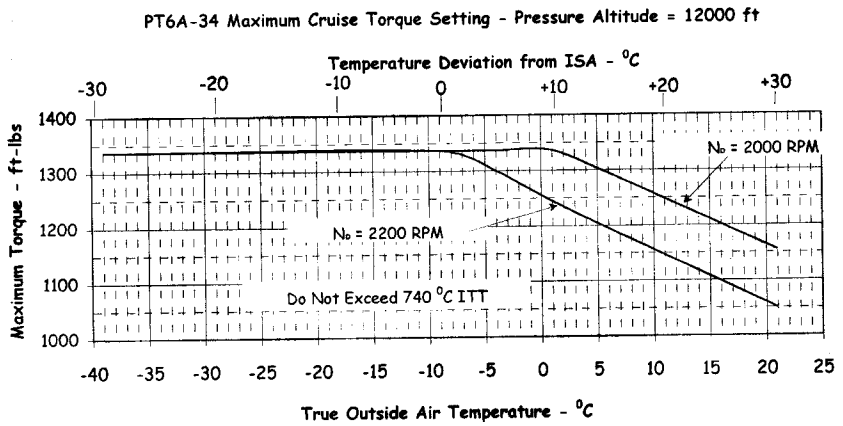


JetProp Cruise Data

PT6A-34 Engine
Pressure Altitude = 12000 ft

N_P	Power (SHP)	Torque (ft-lbs)	ISA-30°C (OAT = -39°C)		ISA (OAT = -9°C)		ISA+30°C (OAT = +21°C)	
			Airspeed (KTAS)	Fuel Flow (pph / gph)	Airspeed (KTAS)	Fuel Flow (pph / gph)	Airspeed (KTAS)	Fuel Flow (pph / gph)
↑	152	400	126	149 / 22	134	154 / 23	138	161 / 24
	190	500	149	164 / 24	157	170 / 25	161	178 / 27
	228	600	164	180 / 27	172	187 / 28	177	195 / 29
	267	700	177	194 / 29	184	203 / 30	191	211 / 31
	305	800	188	210 / 31	195	217 / 32	202	227 / 34
2000 RPM	343	900	197	227 / 34	204	233 / 35	212	244 / 36
	381	1000	204	241 / 36	213	248 / 37	220	260 / 39
	419	1100	212	256 / 38	221	266 / 40	227	275 / 41
↓	457	1200	218	274 / 41	228	285 / 43	-	-

- Shaded Areas are Best Range Conditions for Given Altitude & OAT (No Wind)
- * Indicates Max Torque for the Flight Condition (Do Not Exceed 740C ITT)'
- Temperatues are True Outside Air
- **True Airspeeds Above May Exceed Vmo (172 KIAS) and Are Shown for Interpolation and Illustration Only**
- **Do Not Exceed V_{MO} (172 KIAS)**

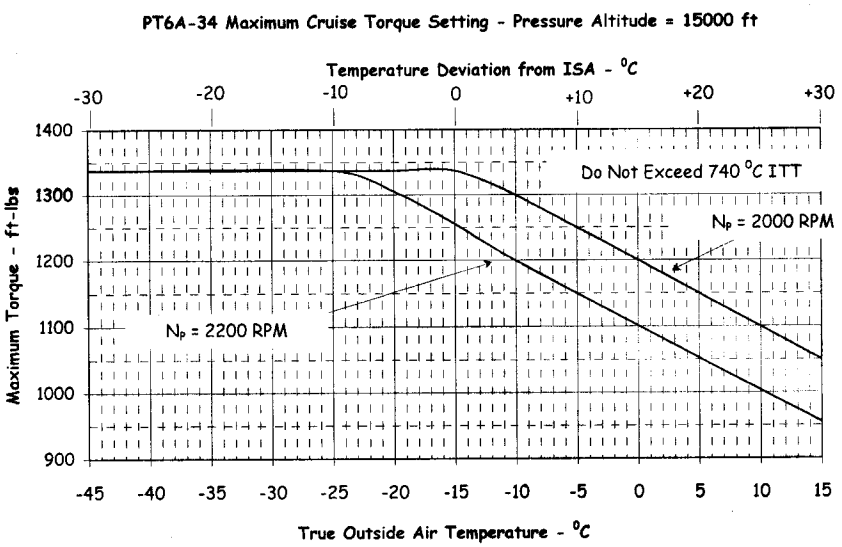


JetProp Cruise Data

PT6A-34 Engine
Pressure Altitude = 15000 ft

N_P	Power (SHP)	Torque (ft-lbs)	ISA-30°C (OAT = -45°C)		ISA (OAT = -15°C)		ISA+30°C (OAT = +15°C)	
			Airspeed (KTAS)	Fuel Flow (pph / gph)	Airspeed (KTAS)	Fuel Flow (pph / gph)	Airspeed (KTAS)	Fuel Flow (pph / gph)
↑	152	400	132	141 / 21	138	147 / 22	142	153 / 23
	190	500	155	156 / 23	162	162 / 24	166	169 / 25
	228	600	171	171 / 26	177	178 / 27	183	185 / 28
	267	700	183	187 / 28	190	192 / 29	197	201 / 30
	305	800	194	201 / 30	202	208 / 31	208	217 / 32
2000 RPM	343	900	203	218 / 33	212	223 / 33	218	234 / 35
	381	1000	211	232 / 35	220	240 / 36	227	251 / 37
	419	1100	218	249 / 37	228	259 / 39	-	-
↓	457	1200	225	267 / 40	235	277 / 41	-	-

- Shaded Areas are Best Range Conditions for Given Altitude & OAT (No Wind)
- * Indicates Max Torque for the Flight Condition (Do Not Exceed 740C ITT)'
- Temperatues are True Outside Air
- **True Airspeeds Above May Exceed Vmo (172 KIAS) and Are Shown for Interpolation and Illustration Only**
- **Do Not Exceed V_{MO} (172 KIAS)**

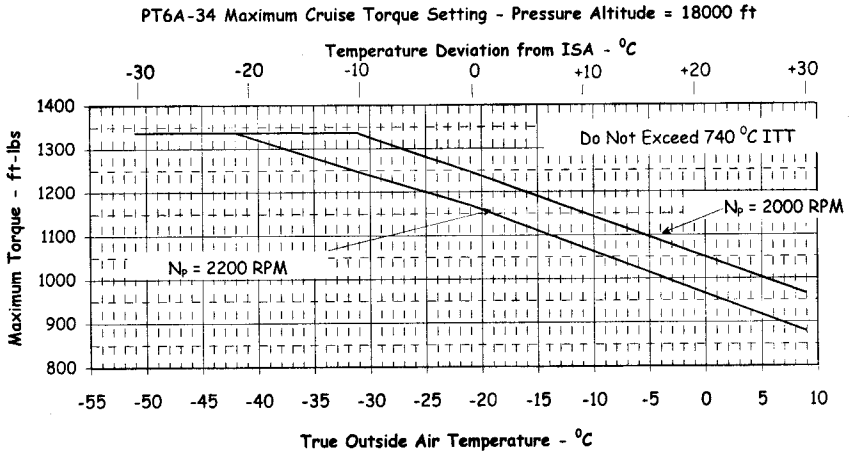


JetProp Cruise Data

PT6A-34 Engine
Pressure Altitude = 18000 ft

N_P	Power (SHP)	Torque (ft-lbs)	ISA-30°C (OAT = -51°C) Airspeed (KTAS)	ISA-30°C (OAT = -51°C) Fuel Flow (pph / gph)	ISA (OAT = -21°C) Airspeed (KTAS)	ISA (OAT = -21°C) Fuel Flow (pph / gph)	ISA+30°C (OAT = +9°C) Airspeed (KTAS)	ISA+30°C (OAT = +9°C) Fuel Flow (pph / gph)
2000 RPM	152	400	140	133 / 20	145	140 / 21	148	144 / 21
	190	500	163	148 / 22	168	154 / 23	174	161 / 24
	228	600	179	163 / 24	186	170 / 25	193	177 / 26
	267	700	192	179 / 27	199	184 / 27	206	193 / 29
	305	800	202	193 / 29	211	201 / 30	218	208 / 31
	343	900	212	211 / 31	221	217 / 32	228	224 / 33
	381	1000	220	226 / 34	229	235 / 35	-	-
	419	1100	228	243 / 36	238	255 / 38	-	-
	457	1200	235	264 / 39	245	275 / 41	-	-
	495	1300	242	286 / 43	-	-	-	-
	368	966*					237	237 / 35
	475	1247*			248	285 / 43	-	-
	509	1337*	244	295 / 44	-	-	-	-
2200 RPM	368	879*					237	237 / 35
	490	1170*			252	282 / 42	-	-
	560	1337*	252	311 / 46	-	-	-	-

- Shaded Areas are Best Range Conditions for Given Altitude & OAT (No Wind)
- * Indicates Max Torque for the Flight Condition (Do Not Exceed 740C ITT)'
- Temperatues are True Outside Air
- **True Airspeeds Above May Exceed Vmo (172 KIAS) and Are Shown for Interpolation and Illustration Only**
- **Do Not Exceed V_{MO} (172 KIAS)**

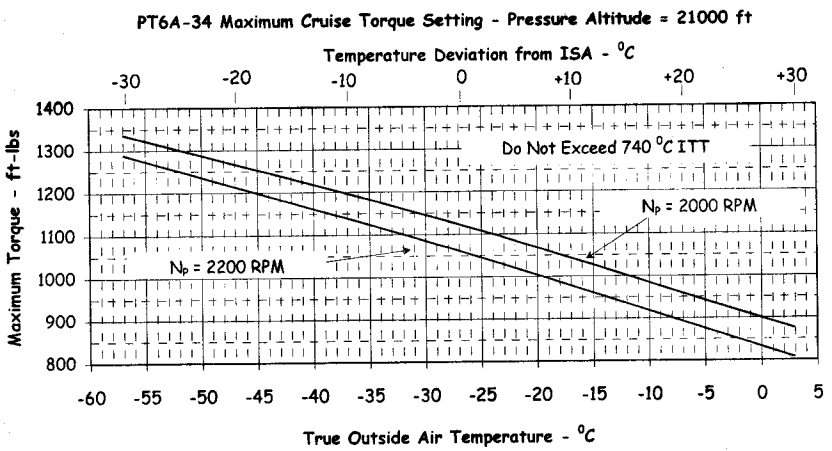


JetProp Cruise Data

PT6A-34 Engine
Pressure Altitude = 21000 ft

N_p	Power (SHP)	Torque (ft-lbs)	ISA-30°C (OAT = -57°C)		ISA (OAT = -27°C)		ISA+30°C (OAT = +3°C)	
			Airspeed (KTAS)	Fuel Flow (pph / gph)	Airspeed (KTAS)	Fuel Flow (pph / gph)	Airspeed (KTAS)	Fuel Flow (pph / gph)
2000 RPM	152	400	153	126 / 19	159	132 / 20	162	137 / 20
	190	500	177	141 / 21	183	147 / 22	189	153 / 23
	228	600	193	155 / 23	201	162 / 24	208	169 / 25
	267	700	207	171 / 26	216	178 / 27	223	185 / 28
	305	800	218	186 / 28	228	194 / 29	235	202 / 30
	343	900	228	205 / 31	238	211 / 31	-	-
	381	1000	237	223 / 33	248	230 / 34	-	-
	419	1100	245	241 / 36	256	250 / 37	-	-
	457	1200	253	264 / 39	-	-	-	-
	495	1300	261	286 / 43	-	-	-	-
	333	875*					243	215 / 32
	428	1124*			258	257 / 38	-	-
	509	1337*	263	292 / 44	-	-	-	-
2200 RPM	338	807*					246	215 / 32
	445	1062*			262	257 / 38	-	-
	540	1289*	269	300 / 45	-	-	-	-

- Shaded Areas are Best Range Conditions for Given Altitude & OAT (No Wind)
- * Indicates Max Torque for the Flight Condition (Do Not Exceed 740C ITT)'
- Temperatues are True Outside Air
- **True Airspeeds Above May Exceed Vmo (172 KIAS) and Are Shown for Interpolation and Illustration Only**
- **Do Not Exceed V_{MO} (172 KIAS)**



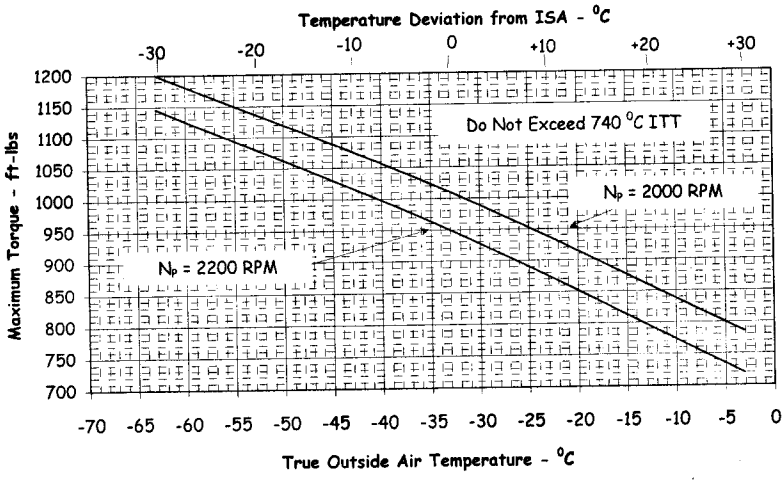
JetProp Cruise Data

PT6A-34 Engine
Pressure Altitude = 24000 ft

N_P	Power (SHP)	Torque (ft-lbs)	ISA-30°C (OAT = -63°C) Airspeed (KTAS)	ISA-30°C (OAT = -63°C) Fuel Flow (pph / gph)	ISA (OAT = -33°C) Airspeed (KTAS)	ISA (OAT = -33°C) Fuel Flow (pph / gph)	ISA+30°C (OAT = -3°C) Airspeed (KTAS)	ISA+30°C (OAT = -3°C) Fuel Flow (pph / gph)
2000 RPM	152	400	157	120 / 18	161	125 / 19	162	131 / 20
	190	500	183	135 / 20	189	140 / 21	195	147 / 22
	228	600	200	149 / 22	208	155 / 23	214	163 / 24
	267	700	214	166 / 25	223	173 / 26	229	178 / 27
	305	800	225	183 / 27	235	191 / 29	-	-
	343	900	236	202 / 30	246	210 / 31	-	-
	381	1000	245	221 / 33	255	230 / 34	-	-
	419	1100	253	242 / 36	-	-	-	-
	299	785*					242	193 / 29
	385	1010*			257	234 / 35	-	-
	457	1200*	262	264 / 39	-	-	-	-
2200 RPM	301	719*					243	193 / 29
	398	950*			260	234 / 35	-	-
	480	1146*	267	268 / 40	-	-	-	-

- Shaded Areas are Best Range Conditions for Given Altitude & OAT (No Wind)
- * Indicates Max Torque for the Flight Condition (Do Not Exceed 740C ITT)'
- Temperatues are True Outside Air
- **True Airspeeds Above May Exceed Vmo (172 KIAS) and Are Shown for Interpolation and Illustration Only**
- **Do Not Exceed V_{MO} (172 KIAS)**

PT6A-34 Maximum Cruise Torque Setting - Pressure Altitude = 24000 ft



JetProp Cruise Data

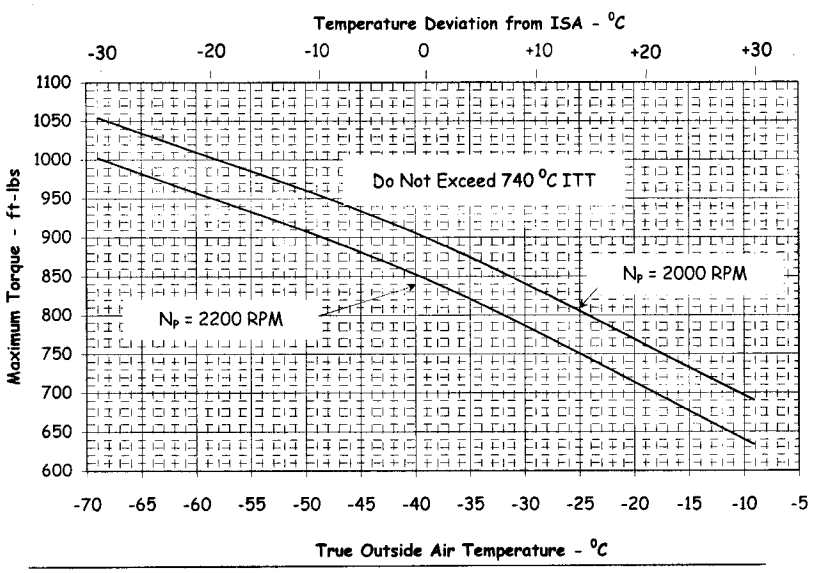
PT6A-34 Engine

Pressure Altitude = 27000 ft

N_P	Power (SHP)	Torque (ft-lbs)	ISA-30°C (OAT = -69°C)		ISA (OAT = -39°C)		ISA+30°C (OAT = -9°C)	
			Airspeed (KTAS)	Fuel Flow (pph / gph)	Airspeed (KTAS)	Fuel Flow (pph / gph)	Airspeed (KTAS)	Fuel Flow (pph / gph)
↑	152	400	160	115 / 17	162	120 / 18	160	125 / 19
	190	500	187	129 / 19	194	134 / 20	198	140 / 21
	228	600	206	144 / 21	214	150 / 22	220	157 / 23
	267	700	220	161 / 24	229	171 / 26	-	-
	305	800	232	179 / 27	242	190 / 28	-	-
2000 RPM	343	900	243	200 / 30	253	207 / 31	-	-
	381	1000	253	221 / 33	-	-	-	-
	263	690*					→ 236	173 / 26
	343	900*			→ 253	207 / 31	-	-
↓	402	1055*	→ 258	232 / 35	-	-	-	-
	265	633*					→ 237	169 / 25
2200 RPM	355	847*			→ 256	207 / 31	-	-
	420	1003*	→ 264	235 / 35	-	-	-	-

- Shaded Areas are Best Range Conditions for Given Altitude & OAT (No Wind)
- * Indicates Max Torque for the Flight Condition (Do Not Exceed 740C ITT)'
- Temperatues are True Outside Air
- **True Airspeeds Above May Exceed Vmo (172 KIAS) and Are Shown for Interpolation and Illustration Only**
- **Do Not Exceed V_{MO} (172 KIAS)**

PT6A-34 Maximum Cruise Torque Setting - Pressure Altitude = 27000 ft



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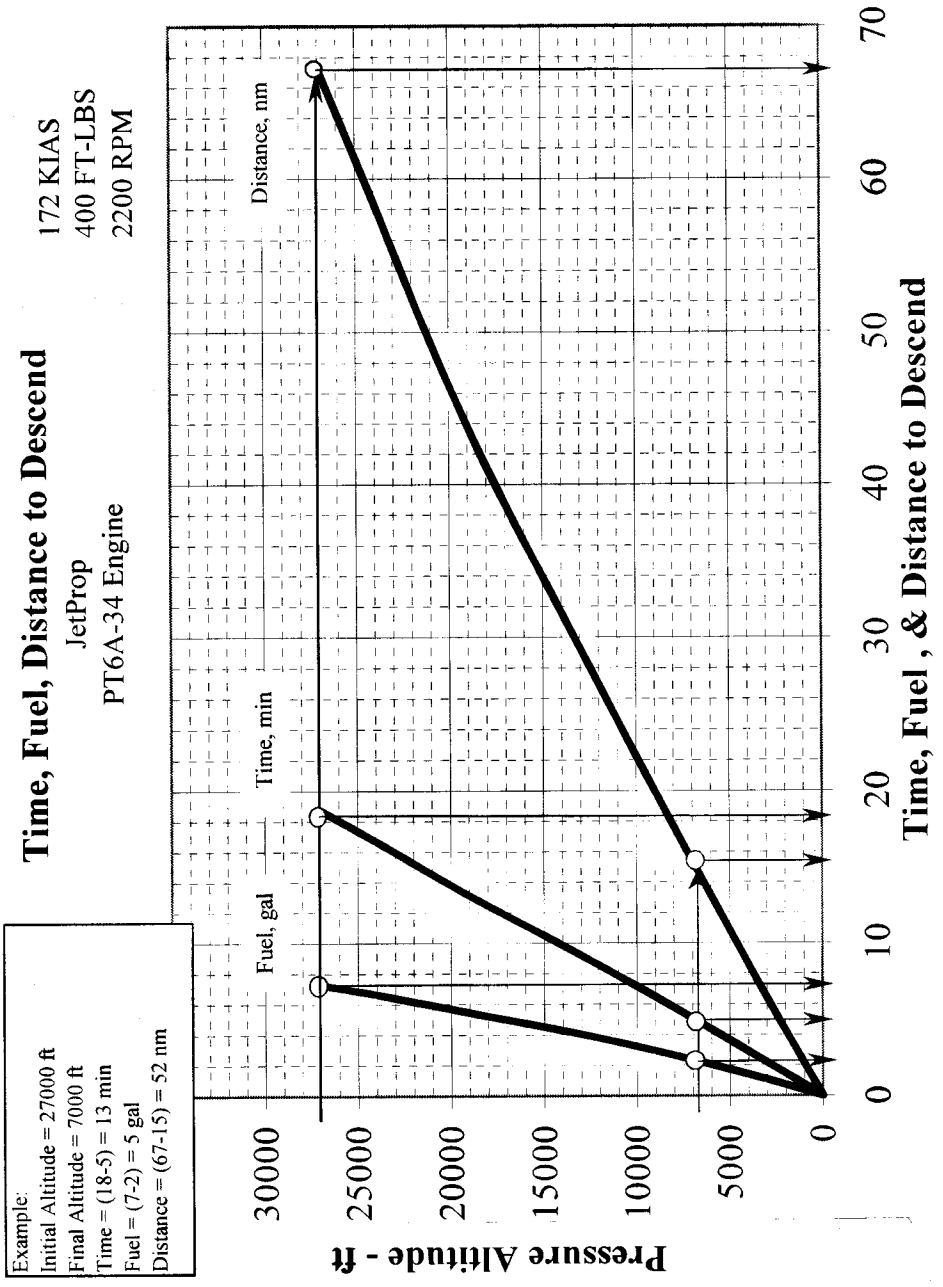

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