

MDEXPLORER

PERFORMANCE SPECIFICATIONS (IMPERIAL)

5.0 Performance Specifications (Imperial).

		5,500 lb	6,000 lb	6,250 lb
Maximum Cruise Speed	KTAS Sea Level Standard	136 (157)	135 (155)	134 kt (154 mph)
	5,000 ft, ISA	139 (160)	136 (157)	135 kt (155 mph)
Maximum Permitted Speed	V _{ne} (KCAS) at Sea Level	140 (161)	140 (161)	140 kt (161 mph)
Maximum Range	Sea Level	262 (302)	259 (298)	257 nm (296 mi)
	5,000 ft, ISA	303 (349)	297 (342)	293 nm (337 mi)
Maximum Endurance	Sea Level	3.1	3.0	2.9 hr
	5,000 ft, ISA	3.4	3.3	3.2 hr
Maximum Rate-of-Climb	Sea Level Standard	2,760	2,420	2,270 ft/min
	ISA + 20 °C Day	2,740	2,390	2,230 ft/min
Maximum Operating Altitude	Density Altitude	20,000	20,000	20,000 ft
Service Ceiling	ISA @ 100 ft/min	20,000+	20,000+	18,600 ft
Hover In-Ground Effect (HIGE)	Standard Day	15,300	13,400	12,200 ft
	ISA + 20 °C Day	13,000	10,300	9,000 ft
Hover Out-of-Ground Effect (HOGE)	Standard Day	14,000	11,400	10,400 ft
	ISA + 20 °C	11,100	8,300	6,900 ft

Certification Limits:

Standard Weight	Normal Category	6,250 lb
	Maximum Internal	6,500 lb
	External Load	6,900 lb
Empty Weight	Standard Configuration	3,375 lb
	Industrial Configuration	3,226 lb
Useful Load	Normal Internal	2,875 lb
	Maximum Internal	3,125 lb
	External	3,525 lb
Cargo Hook Structural Rating		3,000 lb
Fuel Capacity		1078 lb (158.5 gal)

Powerplant: Two Pratt & Whitney Canada PW207E, rated at 477 kw (640 shp) each, derated for reliability and safety to: Take-off 410 kw (550 shp) Max Continuous Power 373 kw (500 shp)

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PERFORMANCE SPECIFICATIONS (METRIC)

Performance Specifications (Metric).

		2495 kg	2722 kg	2835 kg
Maximum Cruise Speed	KTAS Sea Level Standard	252	250	248 kph
	1524 m, ISA	258	252	250 kph
Maximum Permitted Speed	V _{ne} (KCAS) at Sea Level	259	259	259 kph
Maximum Range	Sea Level	485	480	476 km
	1524 m, ISA	561	550	543 km
Maximum Endurance	Sea Level	3.1	3.0	2.9 hr
	1524 m, ISA	3.4	3.3	3.2 hr
Maximum Rate-of-Climb	Sea Level Standard	14.0	12.3	11.5 m/s
	ISA + 20 °C Day	13.9	12.1	11.3 m/s
Maximum Operating Altitude	Density Altitude	6096	6096	6096 m
Service Ceiling	ISA @ 100 ft/min	6096+	6096+	5669 m
Hover In-Ground Effect (HIGE)	Standard Day	4663	4084	3719 m
	ISA + 20 °C Day	3962	3139	2743 m
Hover Out-of-Ground Effect (HOGE)	Standard Day	4267	3475	3170 m
	ISA + 20 °C	3383	2530	2103 m

Certification Limits:

Standard Weight	Normal Category	2835 kg
	Maximum Internal	2948 kg
	External Load	3130 kg
Empty Weight	Standard Configuration	1531 kg
	Industrial Configuration	1463 kg
Useful Load	Internal	1304 kg
	Maximum Internal	1417 kg
	External	1599 kg
Cargo Hook Structural Rating		1361 kg
Fuel Capacity		489 kg (600 l)

Powerplant: Two Pratt & Whitney Canada PW207E, rated at 477 kw (640 shp) each, derated for reliability and safety to: Take-off 410 kw (550 shp) Max Continuous Power 373 kw (500 shp)

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5.1 Gross Weight Worksheet.

	Example	Mission #1	Mission #2
Empty Weight	3,375 lb (1531 kg)		
Pilot	170 lb (77 kg)		
Fuel	1,078 lb (489 kg)		
Payload	1,877 lb (851 kg)		
Take-off GW	6,500 lb (2948 kg)		

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5.1.1 Weight statement summary.

Standard weight empty*	3,375 lb.	(1531 kg)
Crew (1 pilot)	170 lb.	(77 kg)
Operational weight empty	3,545 lb.	(1608 kg)
Maximum standard fuel	1,078 lb.	(489 kg)
Additional payload	1,877 lb.	(851 kg)

Maximum take-off weight,		
internal payloads	6,500 lb.	(2948 kg)

*For baseline configuration, refer to paragraph 4.0 (Please note that many items sold by other manufacturers as “options” are standard in the MD Explorer® [MD 902]).

Maximum take-off weight,		
external payloads**	6,900 lb.	(3130 kg)

** “Industrial configuration” empty weight for maximum external loads may be obtained by removing the following standard baseline items:

Copilot seat	19.2 lb.	(8.7 kg)
6 passenger seats @ 13.8 lb each	82.8 lb.	(37.6 kg)
Interior, utility cabin trim	36.3 lb.	(16.5 kg)
2 cabin doors @ 16.2 lb each	32.4 lb.	(14.7 kg)
2 passenger steps	10.6 lb.	(4.7 kg)

Baseline weight removed	181.3 lb.	(82.2 kg)
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Net “industrial” empty weight	3,194 lb.	(1449 kg)
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Notes:

1. All weight in excess of 6,500 pounds must be jettisonable.
2. Maximum weight permitted on the cargo hook is 3,000 lb (1361 kg)
3. The above example is for comparative purposes only. The aircraft owners are responsible for analyzing their own weight summaries.

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5.2.1 AEO HIGE, Hover-In-Ground Effect, Standard Engine Inlet

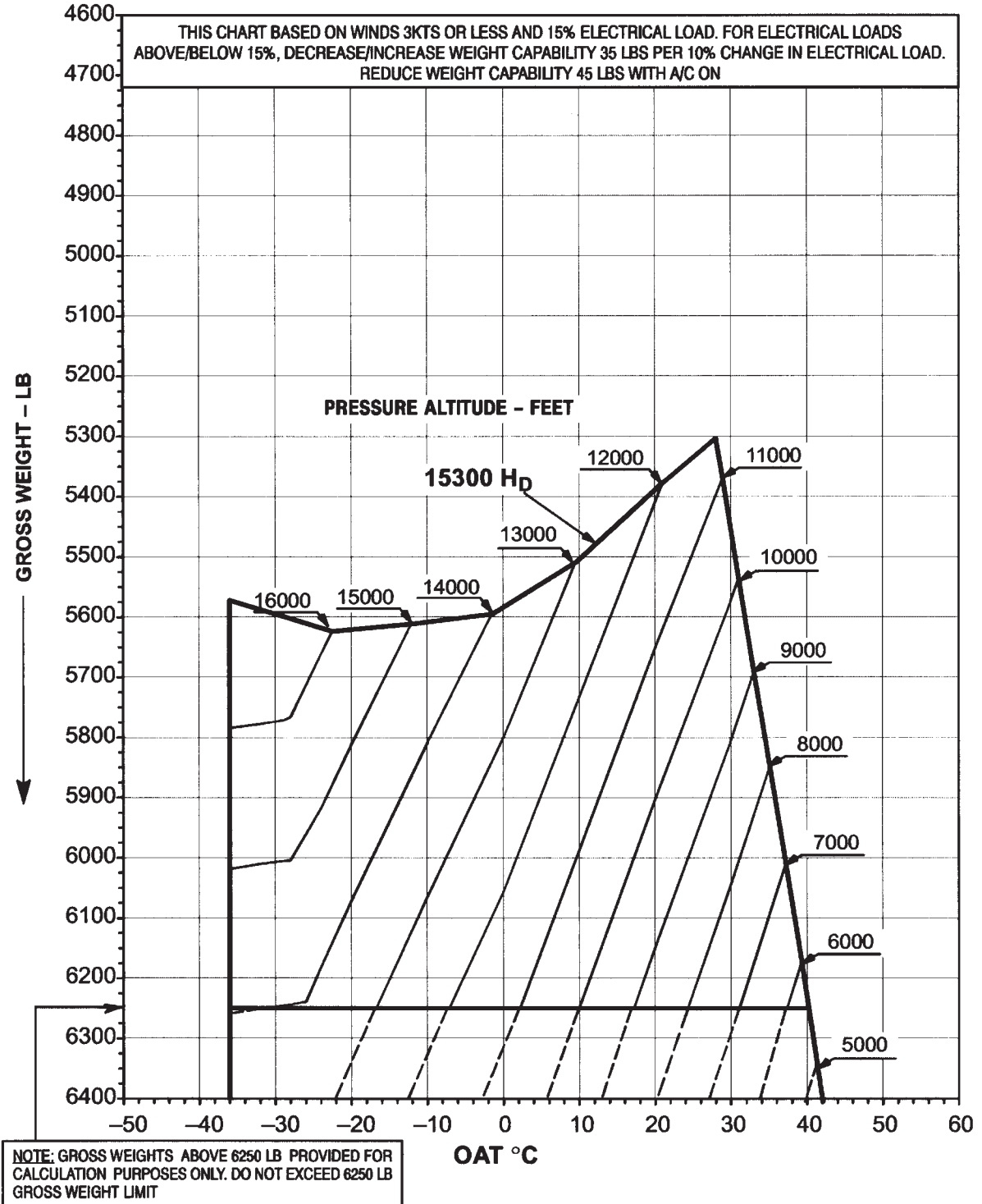


Figure 20. AEO HIGE, Standard Engine Inlet, Take-off Power, Cabin Heat Off

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5.2.2 AEO HOGE, Hover-Out-of-Ground Effect, Standard Engine Inlet

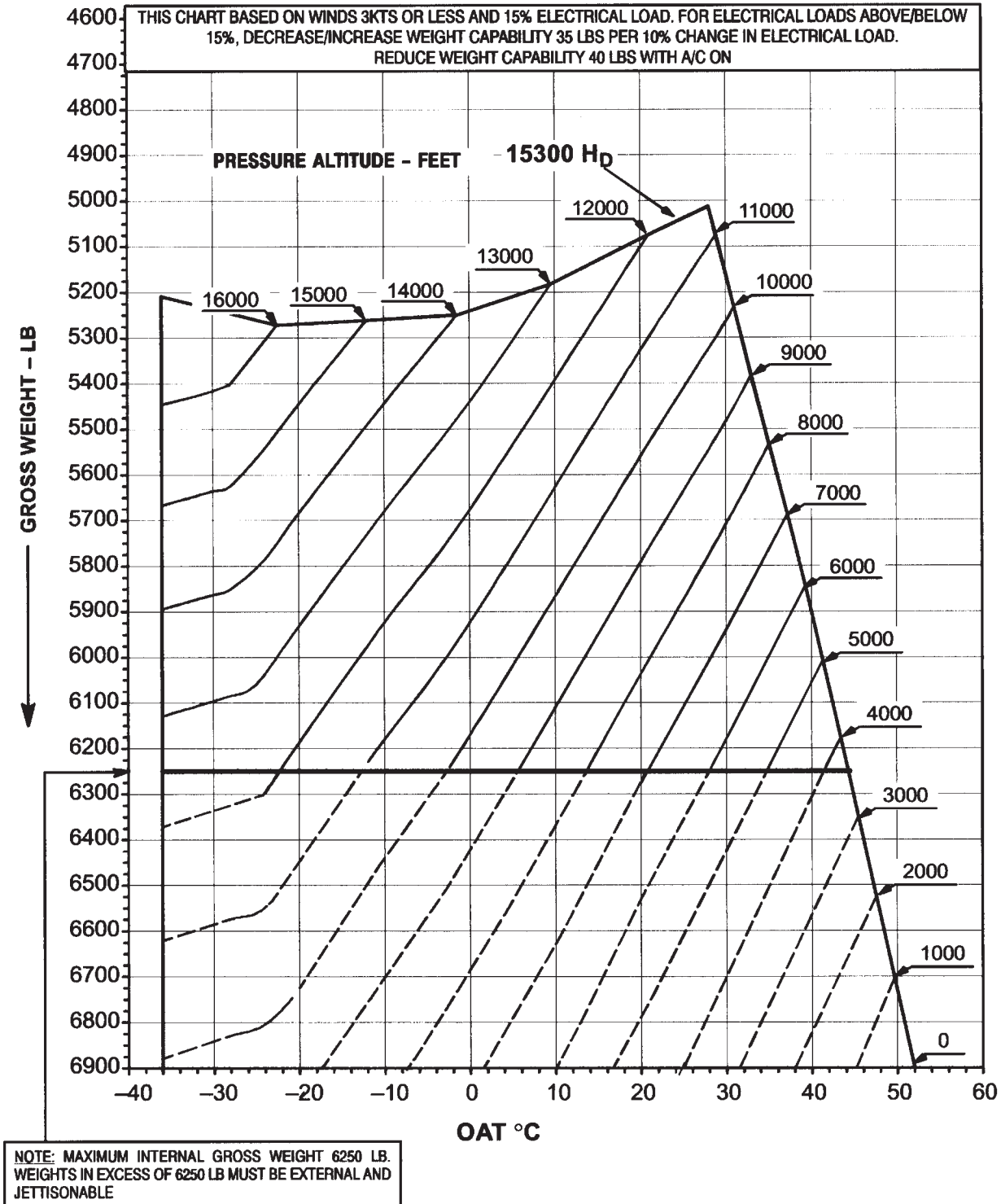


Figure 21. AEO HOGE, Standard Engine Inlet, Take-off Power, Cabin Heat Off

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5.2.3 AEO HIGE, Hover-In-Ground Effect, IPS Installed

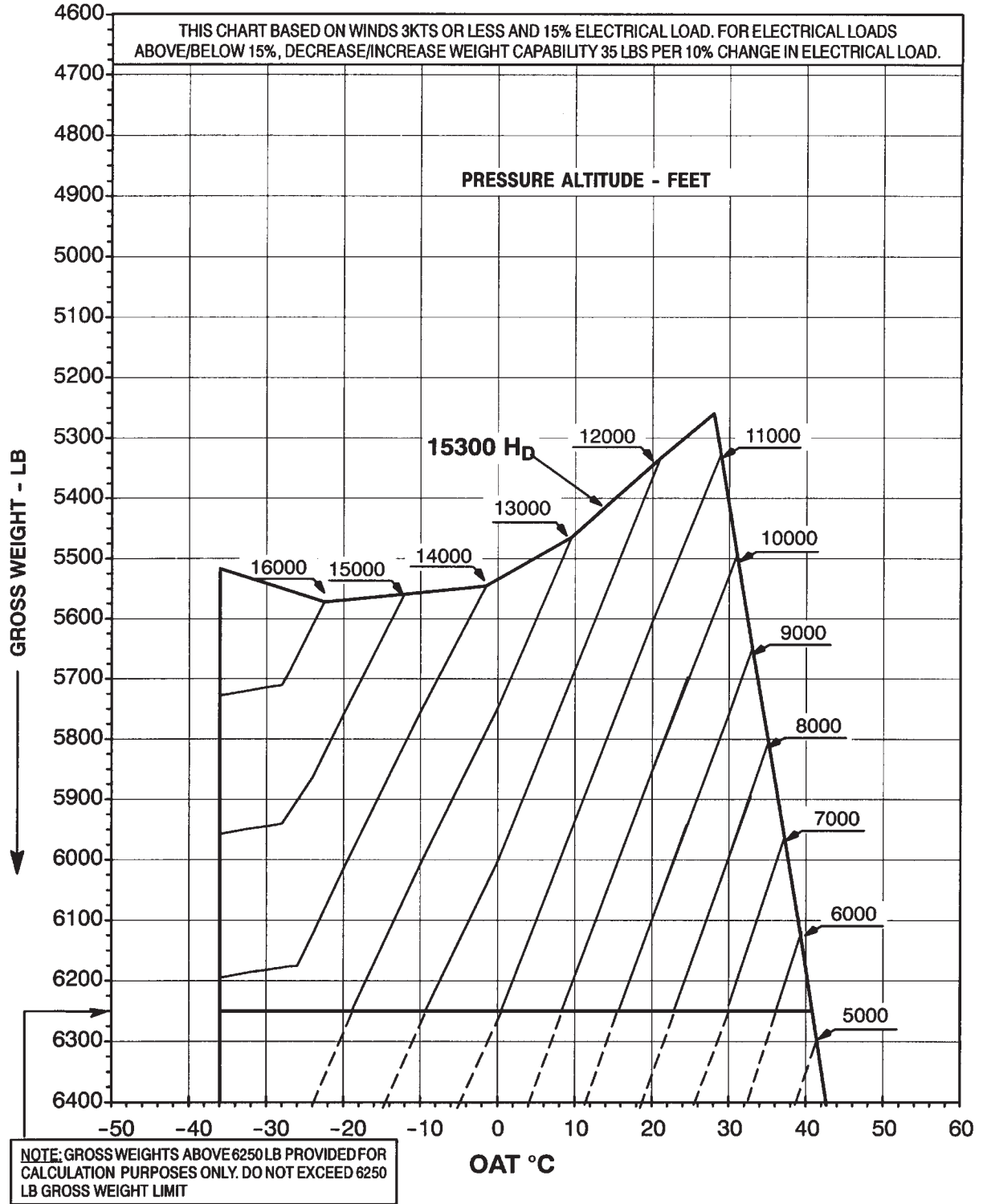


Figure 22. AEO HIGE, IPS Installed, Take-off Power, Cabin Heat Off

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5.2.4 AEO HOGE, Hover-Out-of-Ground Effect, IPS Installed

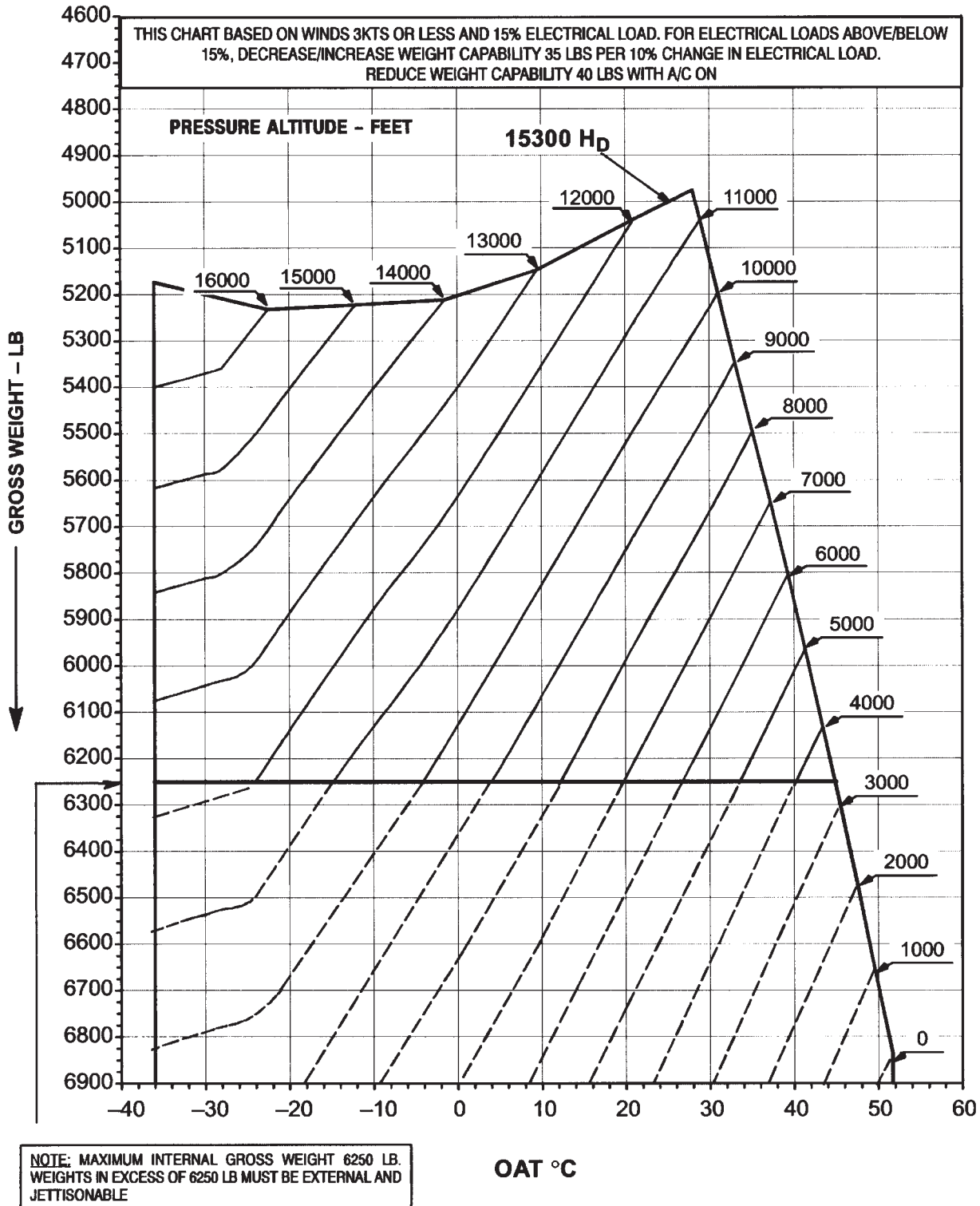


Figure 23. AEO HOGE, IPS Installed, Take-off Power, Cabin Heat Off

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5.2.5 OEI HOGE, Hover-Out-of-Ground Effect, Standard Engine Inlet

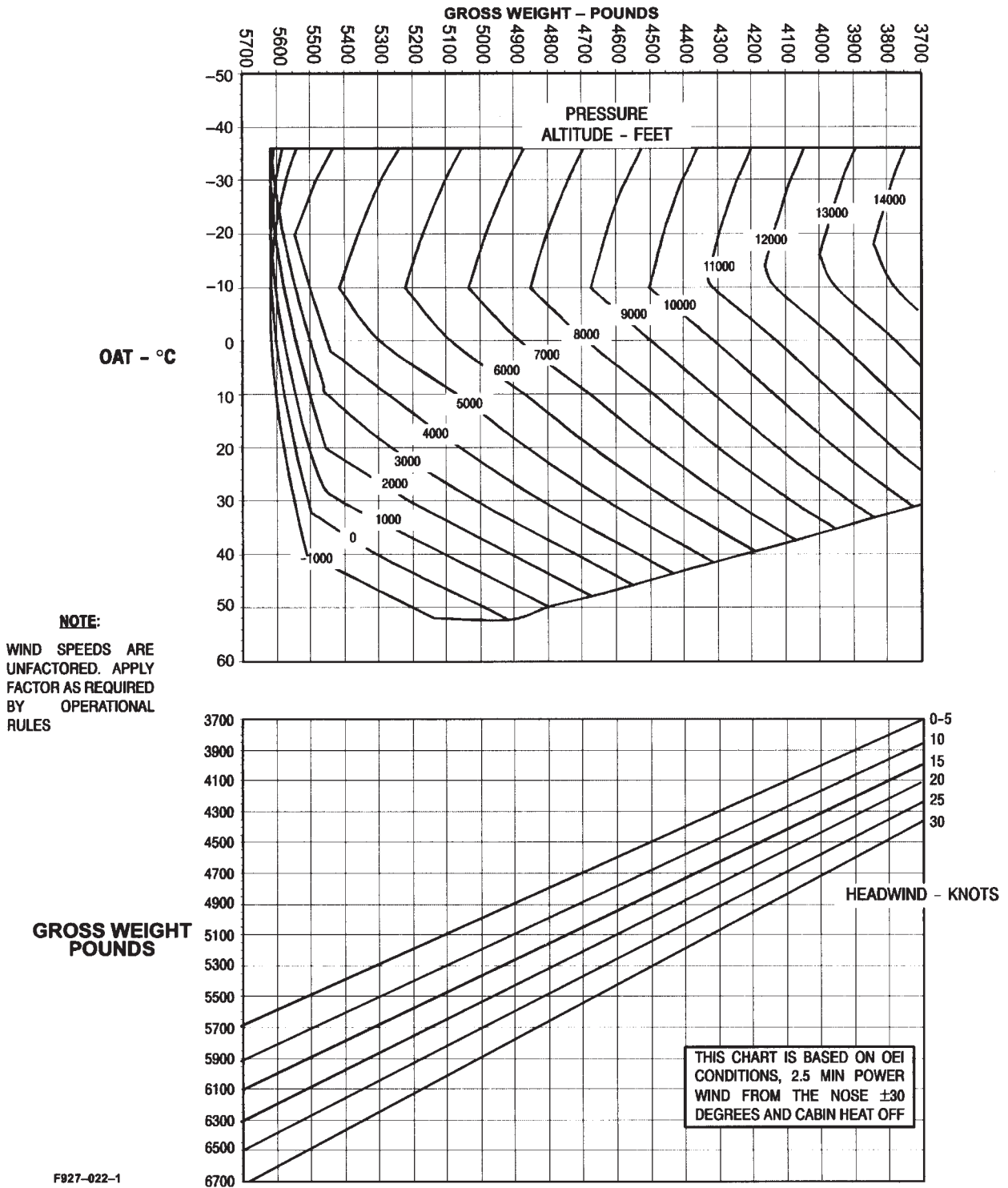


Figure 24. OEI HOGE, Standard Engine Inlet, 2.5 Minute OEI Power

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5.2.6 OEI HOGE, Hover-Out-of-Ground Effect, IPS Installed

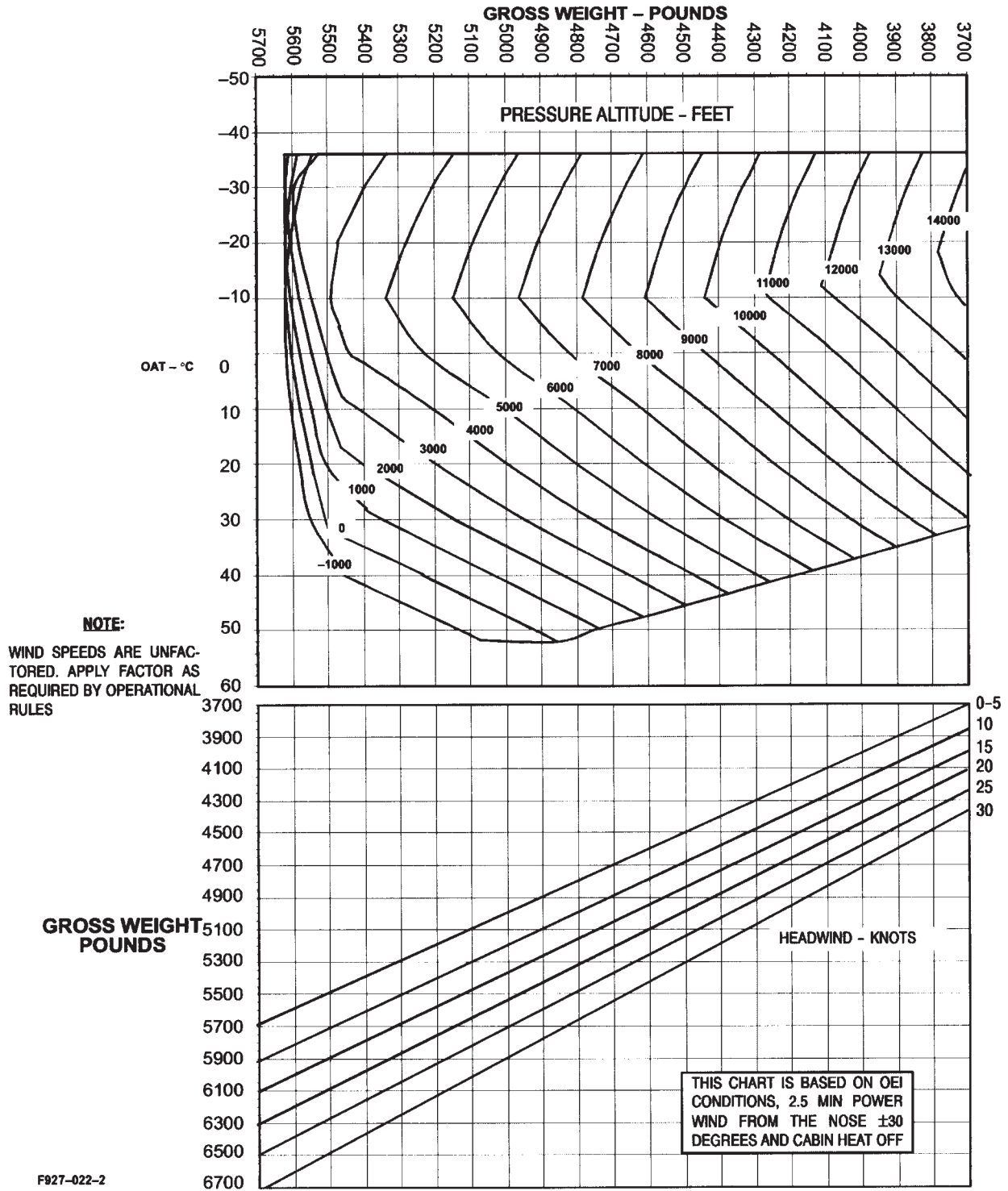


Figure 25. OEI HOGE, IPS Installed, 2.5 Minute OEI Power