

# MD530F

## HOT DAY/HIGH ALTITUDE HELICOPTER

### 3.0 Performance Specifications.

<i>Characteristics at Design Gross Weight</i>		<i>Metric 1406 kg</i>	<i>Imperial 3,100 lb</i>
Maximum Cruise Speed:	Sea level	248 km/hr	134 kt (154 mph)
	1524 m (5,000 ft)	249 km/hr	135 kt (155 mph)
Maximum Permitted Speed:	V <sub>NE</sub> at sea level	282 km/hr	152 kt (175 mph)
Maximum Range:	Sea level	381 km	206 nm (237 mi)
	1524 m (5,000 ft)	430 km	232 nm (267 mi)
Maximum Endurance:	Sea level	2.0 hr	2.0 hr
Maximum Rate of Climb: (TOP)	Sea level, Standard day	10.5 m/sec	2,069 fpm
	ISA +20° C day	10.5 m/sec	2,061 fpm
Maximum Operating Altitude:	Density Altitude	6096 m	20,000 ft
Service Ceiling:	ISA	5700 m	18,700 ft
Maximum Hook Capacity:		907 kg	2,000 lb
Hovering Performance:*			
In-ground effect:	Standard day	4877 m	16,000 ft
	ISA + 20° C day	4359 m	14,300 ft
Out-of-ground effect:	Standard day	4389 m	14,400 ft
	ISA + 20° C day	3536 m	11,600 ft

\*No wind

### WEIGHTS

<i>Characteristics</i>		<i>Metric</i>	<i>Imperial</i>
Maximum Gross Weight:	Normal category	1406 kg	3,100 lb
	External load operations	1701 kg	3,750 lb
Empty Weight:	Standard configuration	722 kg	1,591 lb
Useful Load:	Normal category	684 kg	1,509 lb
	External load operations	979 kg	2,159 lb
Usable Fuel Capacity:	242 L (64 gal)	183 kg	403 lb

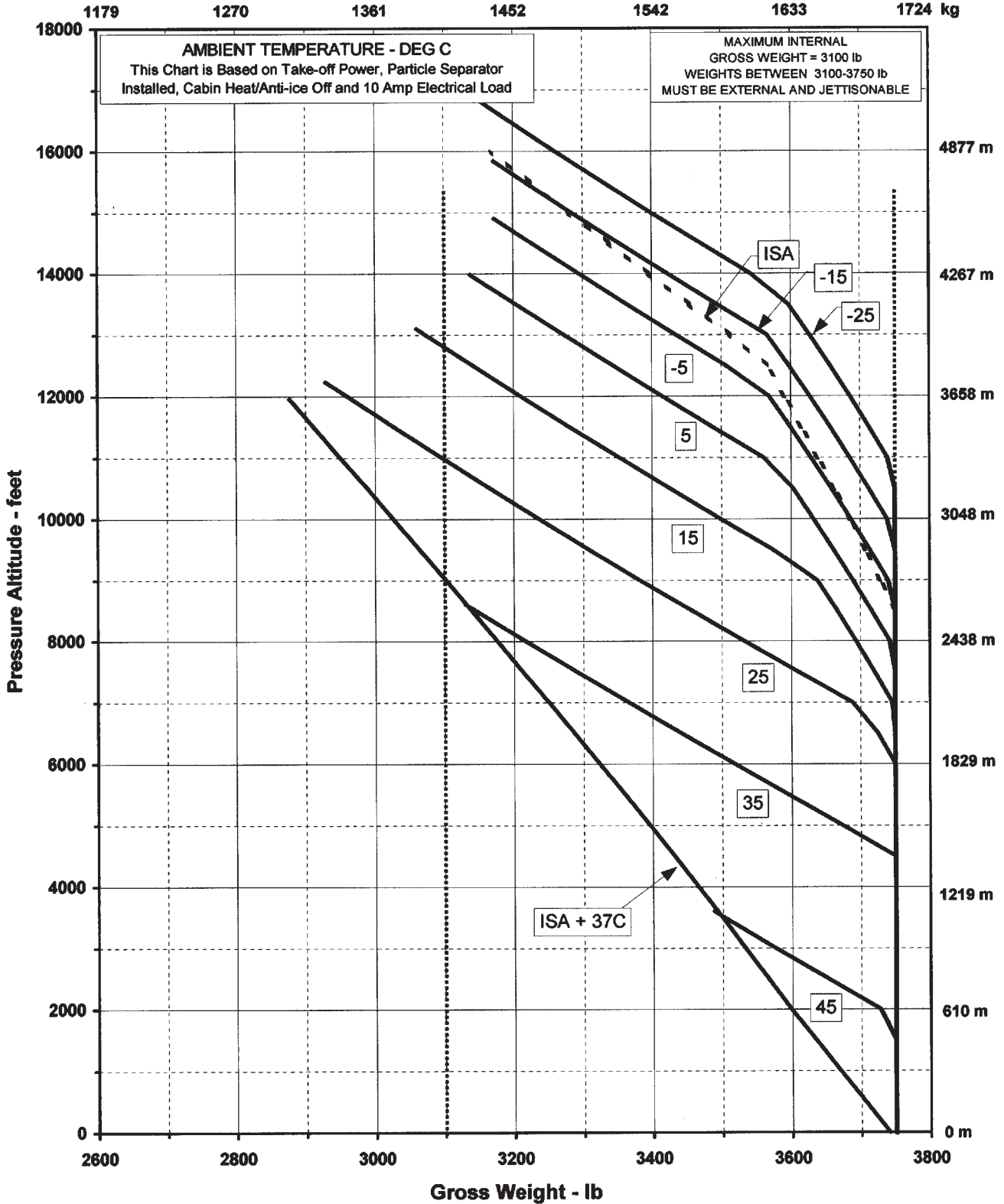
### POWER PLANT

<i>Characteristics</i>		<i>Metric</i>	<i>Imperial</i>
Allison Model 250-C30 gas turbine, Derated for reliability and safety to:	Rated power:	485 kw	650 shp
	Takeoff power:	317 kw	425 shp
	Max. continuous power:	280 kw	375 shp

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## WITH C30 ENGINE

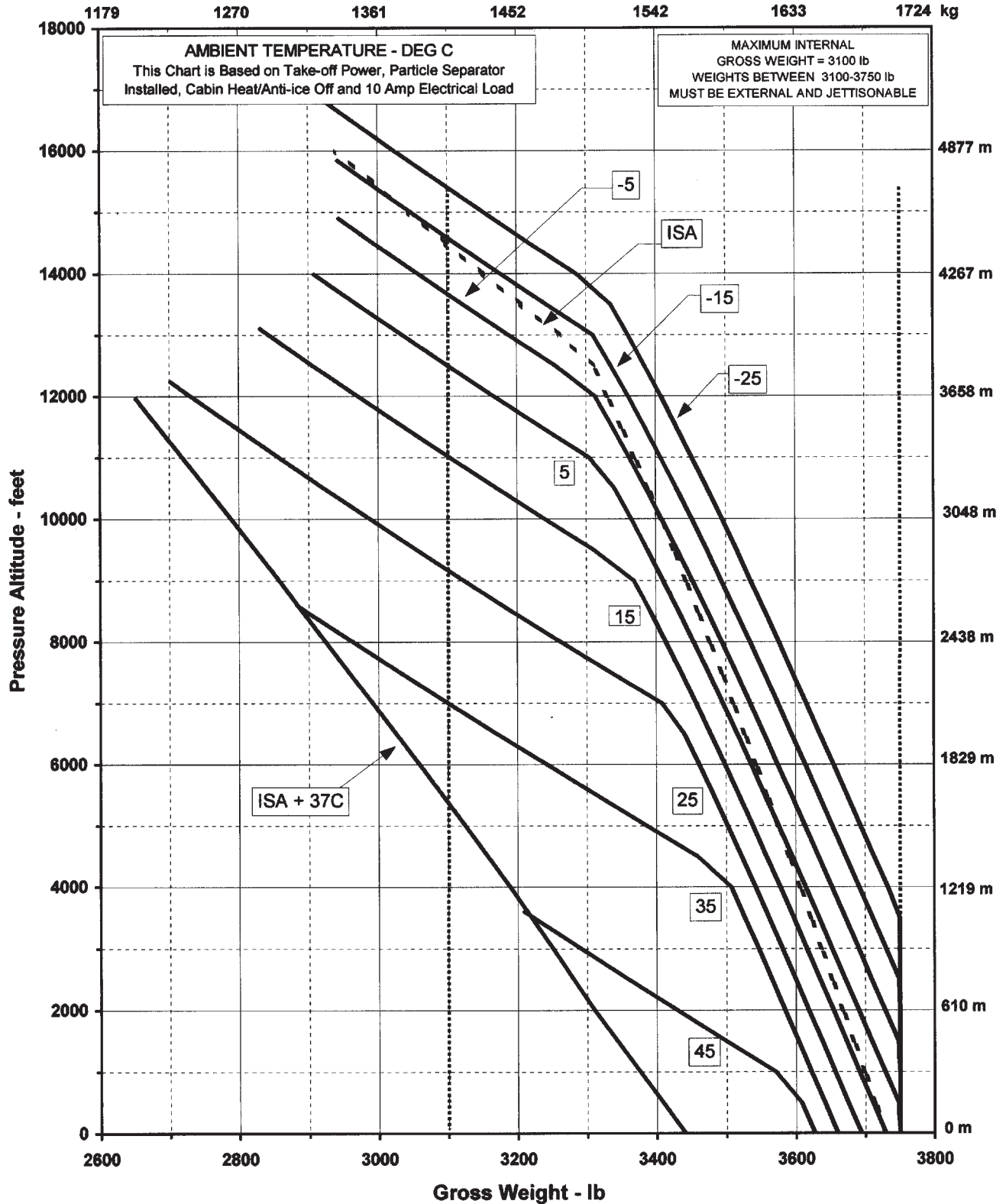
### 3.1 Hover-In-Ground-Effect.



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### 3.2 Hover-Out of-Ground-Effect.



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## WITH C30 ENGINE

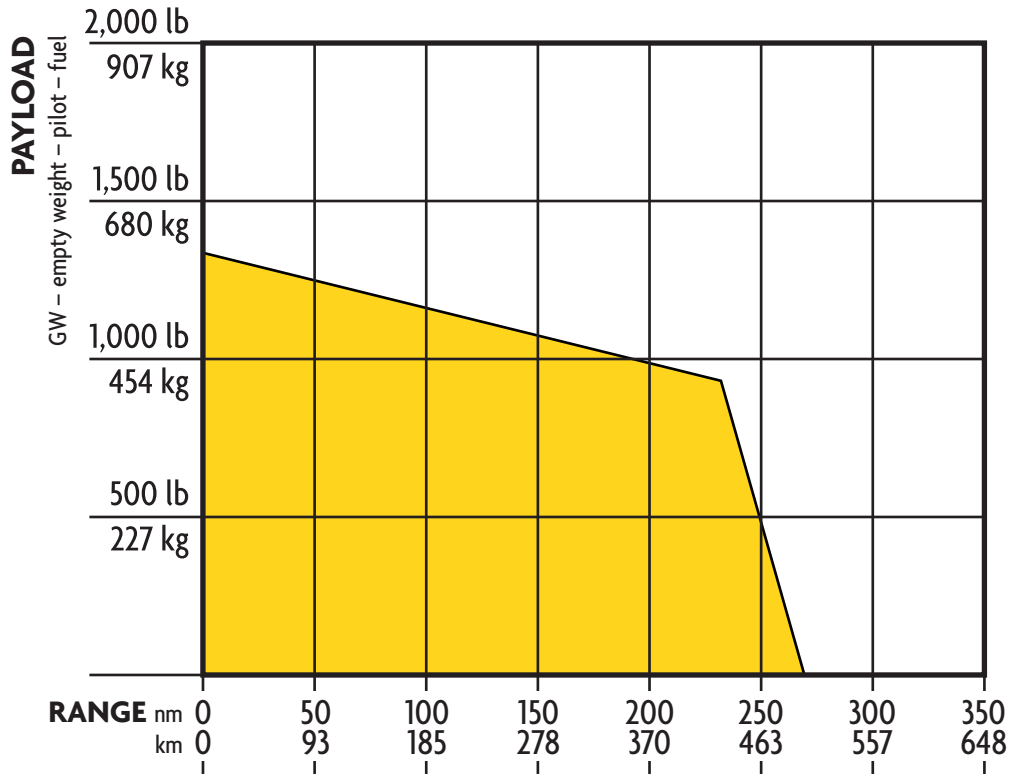
### 3.3 Takeoff Gross Weight Worksheet.

	Example	Mission #1	Mission #2
<b>Empty Weight</b>	1,591 lb (722 kg)		
<b>Pilot</b>	170 lb (77 kg)		
<b>Fuel</b>	403 lb (183 kg)		
<b>Payload</b>	936 lb (424 kg)		
<b>Takeoff GW</b>	3,100 lb (1406 kg)		

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## WITH C30 ENGINE

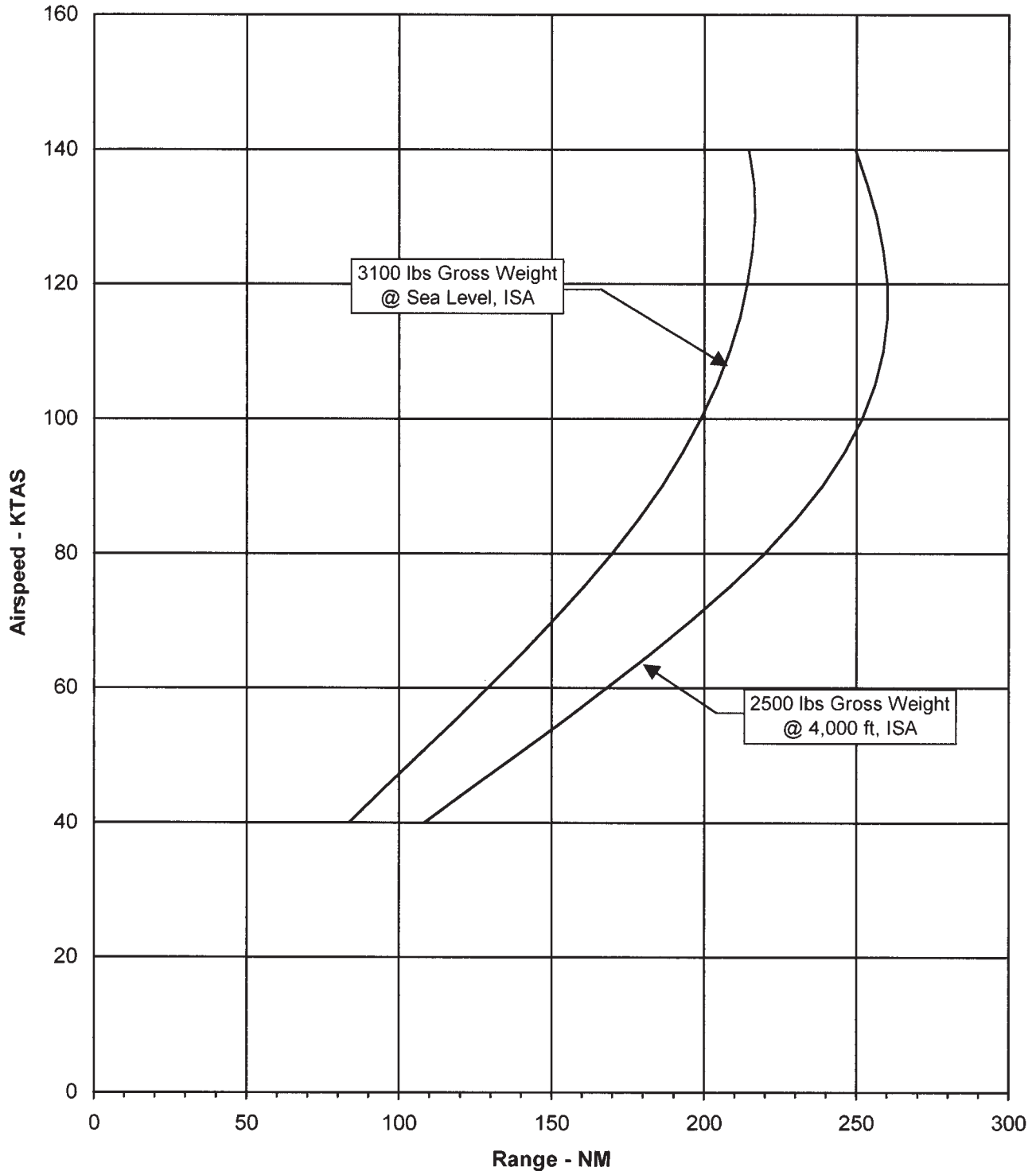
### 3.4 Payload vs Range (5000', ISA).



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## WITH C30 ENGINE

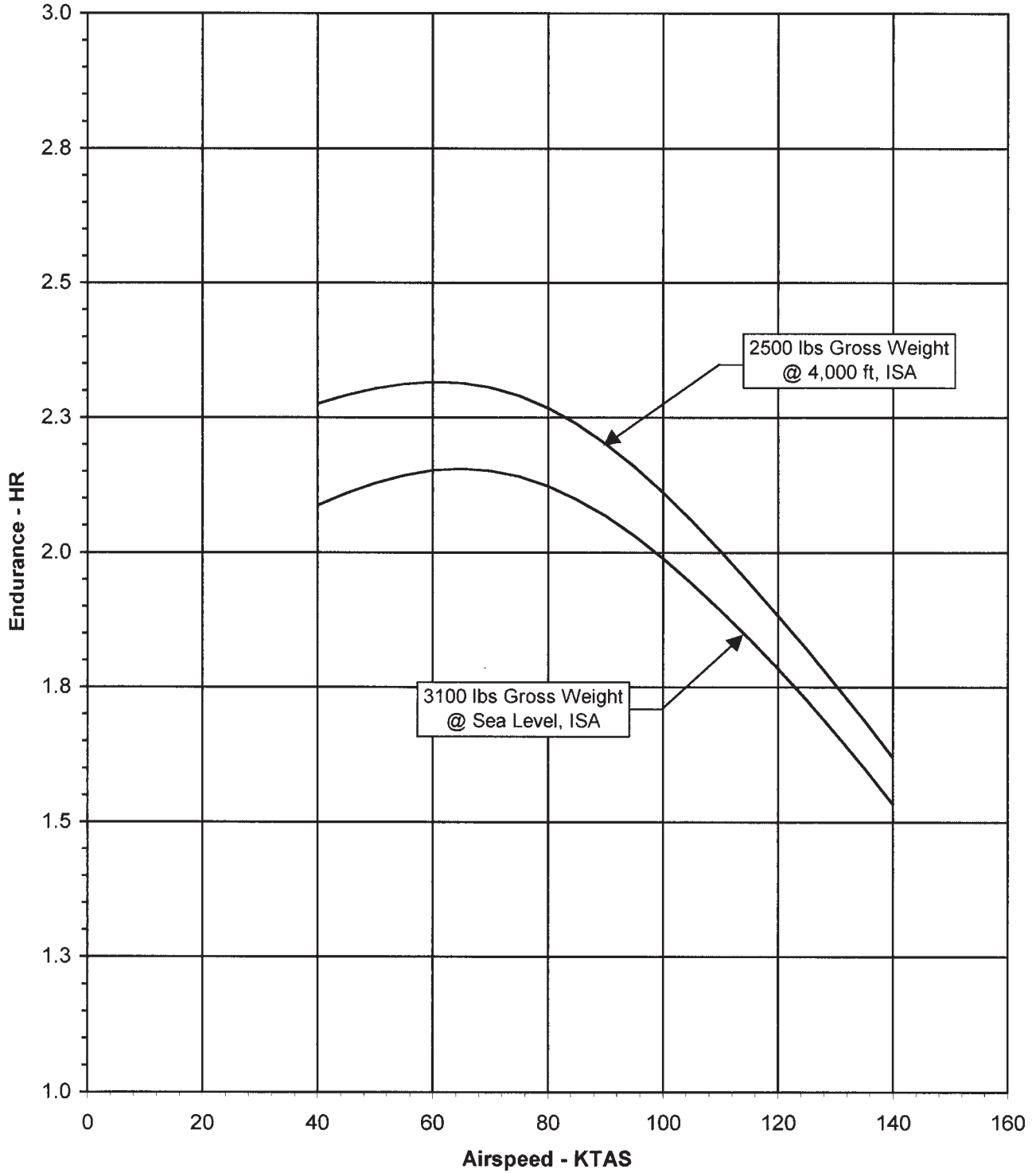
### 3.5 Speed for Best Range.



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## WITH C30 ENGINE

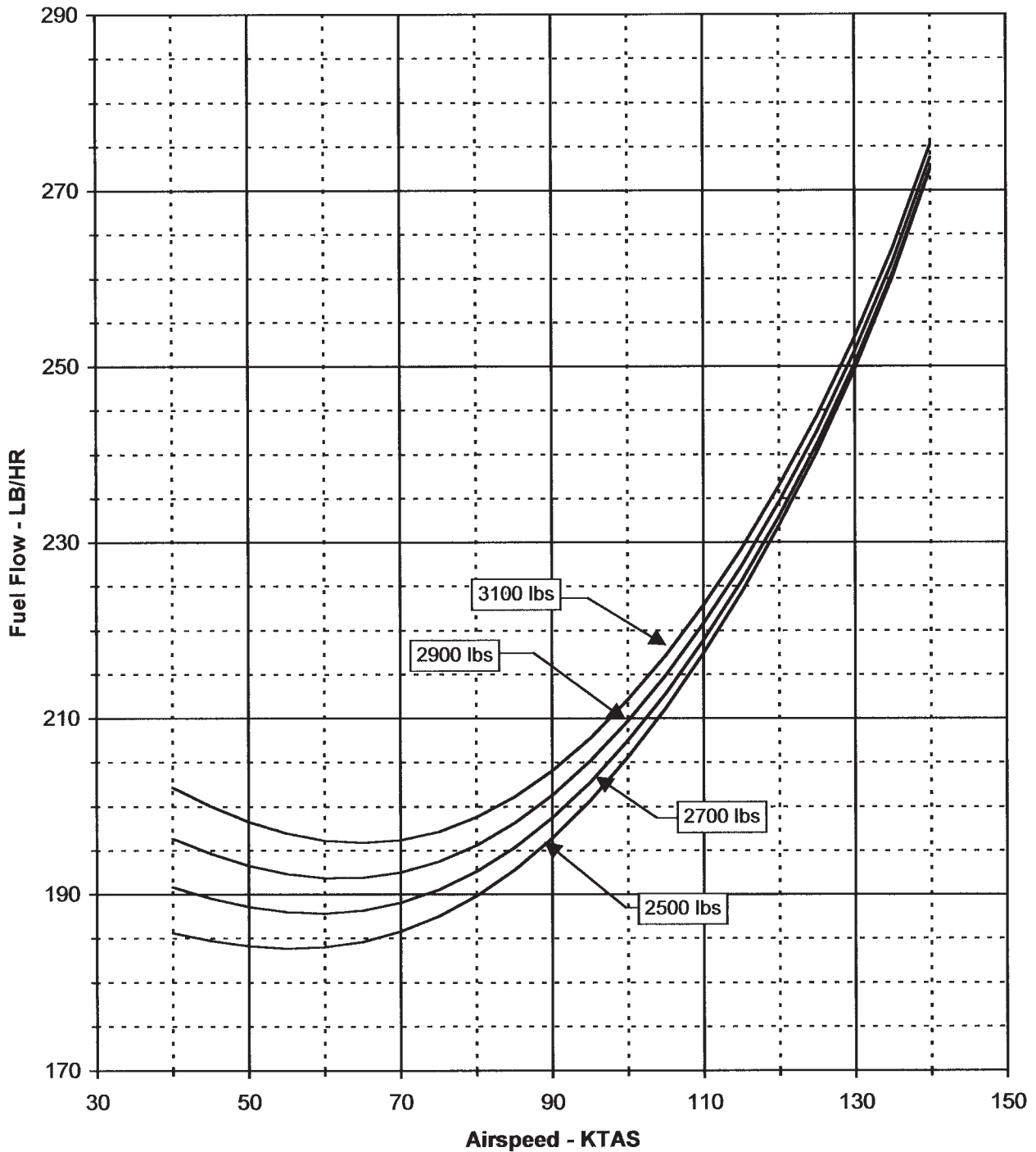
### 3.6 Speed for Best Endurance.



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## WITH C30 ENGINE

### 3.7 Fuel Flow, Sea Level, ISA (15°C).

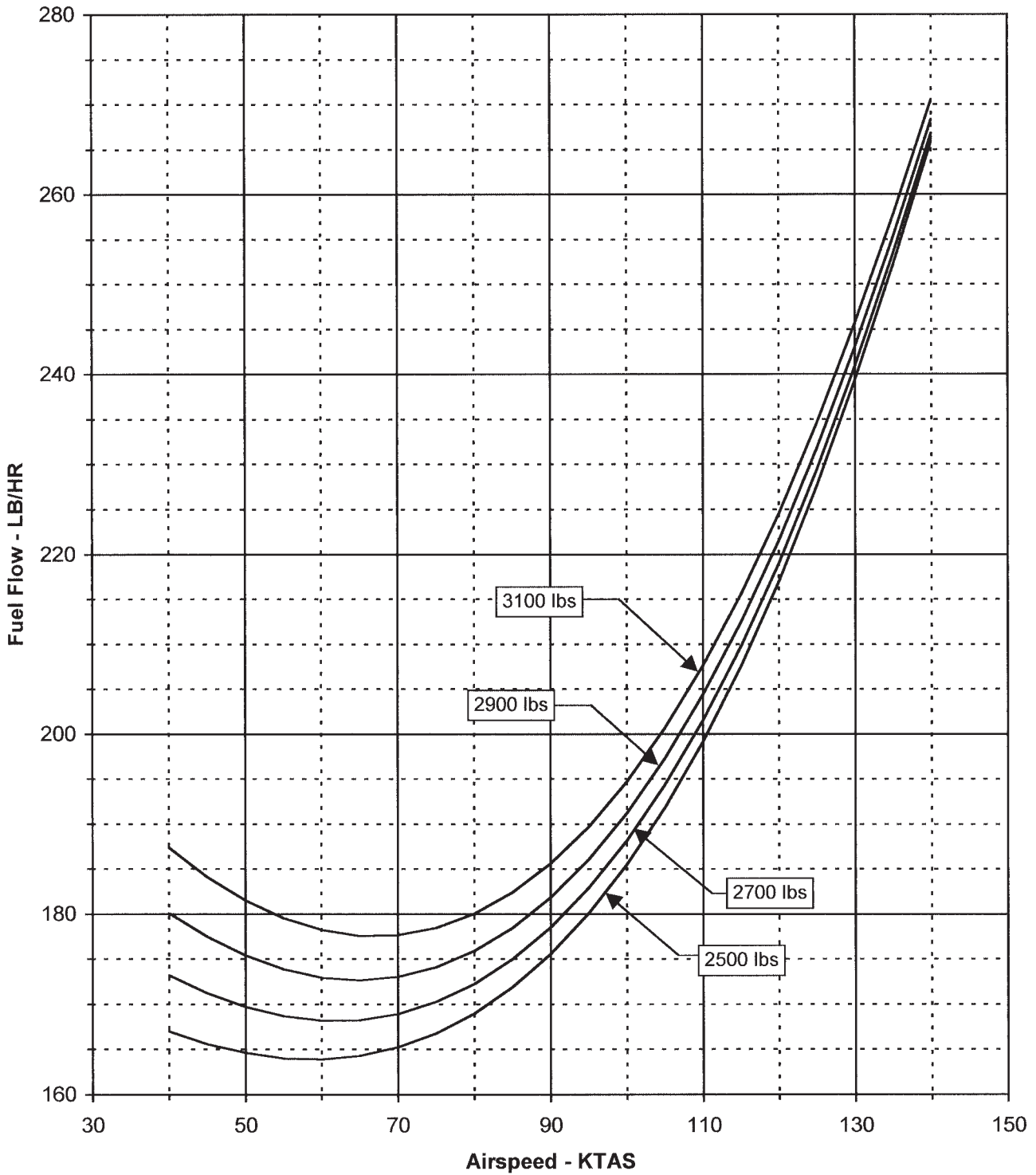


Note: Use for Estimates Only. Not FAA Approved. Based on clean aircraft, level flight performance, minimum specification engine, particle separator and 10 ampere electrical load.

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## WITH C30 ENGINE

### 3.8 Fuel Flow, Sea Level, ISA +20°C (35°C).

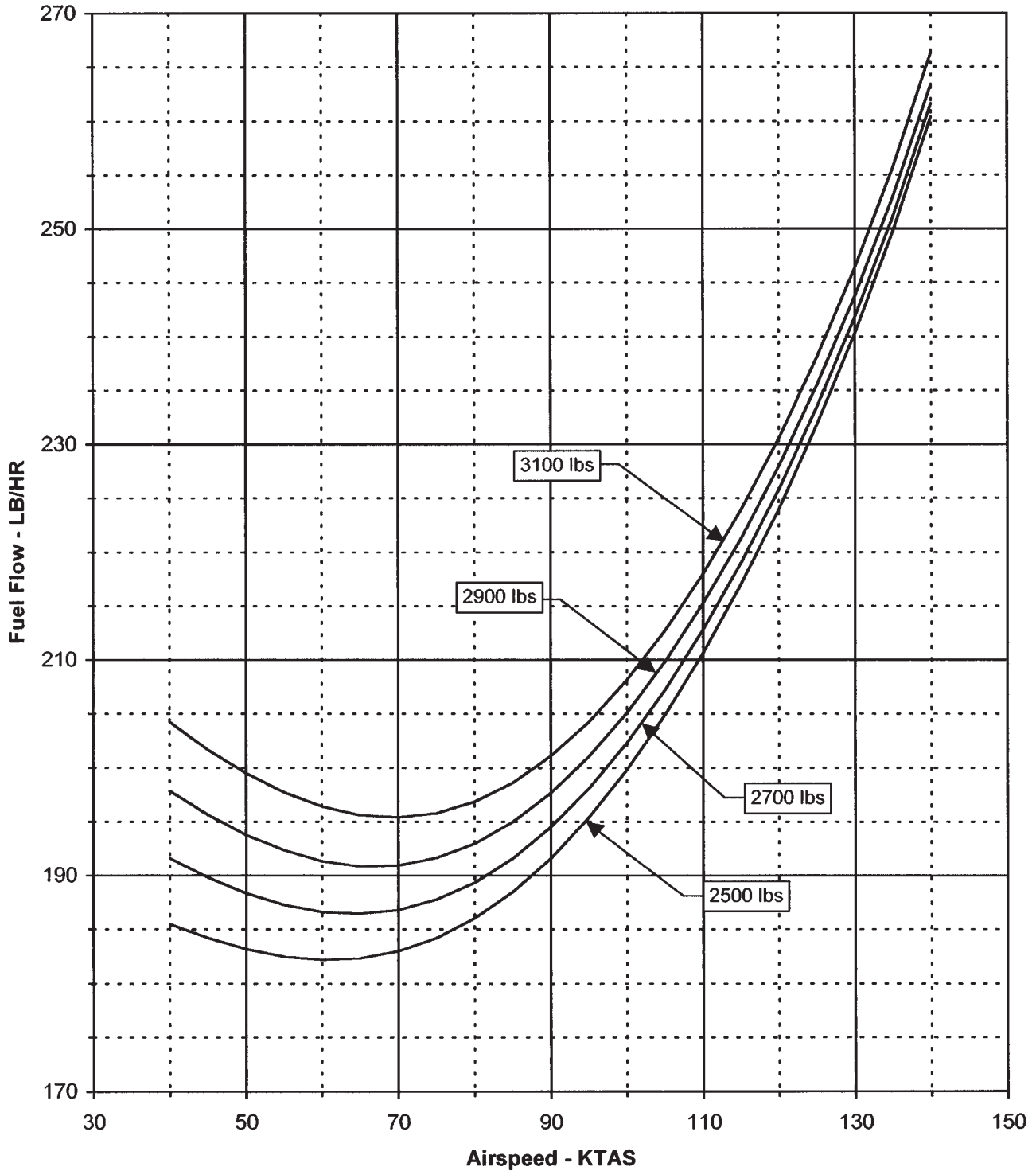


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## WITH C30 ENGINE

### 3.9 Fuel Flow, 4,000 feet, ISA (7°C).

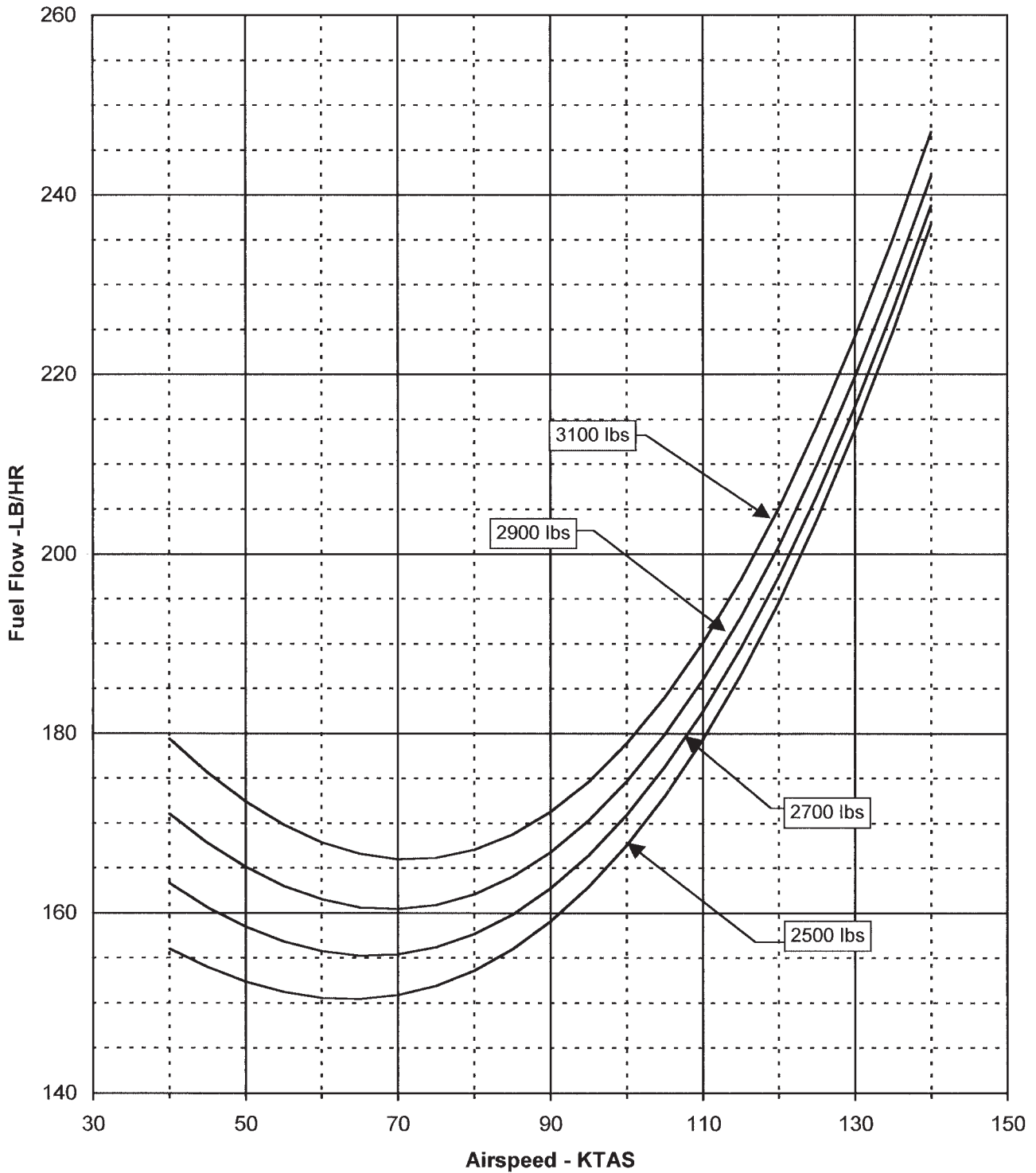


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## WITH C30 ENGINE

### 3.10 Fuel Flow, 4,000 feet, ISA +20°C (27°C).



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