POM Supplement

Estimated Rate of Climb

Fm POM Fig 5.3 SL R/C = 670 fpm

$$\underset{(fpm)}{R/C} = \frac{\text{excess hp} \times 33{,}000}{\text{Weight (lbs)}}$$

Find excess hp for 150hp airplane

$$\text{excess hp} = \frac{2350 \times 670}{33{,}000}$$

$$\text{excess hp} = 47.7$$

For 180 hp airplane, $\eta = .9$ (efficiency)

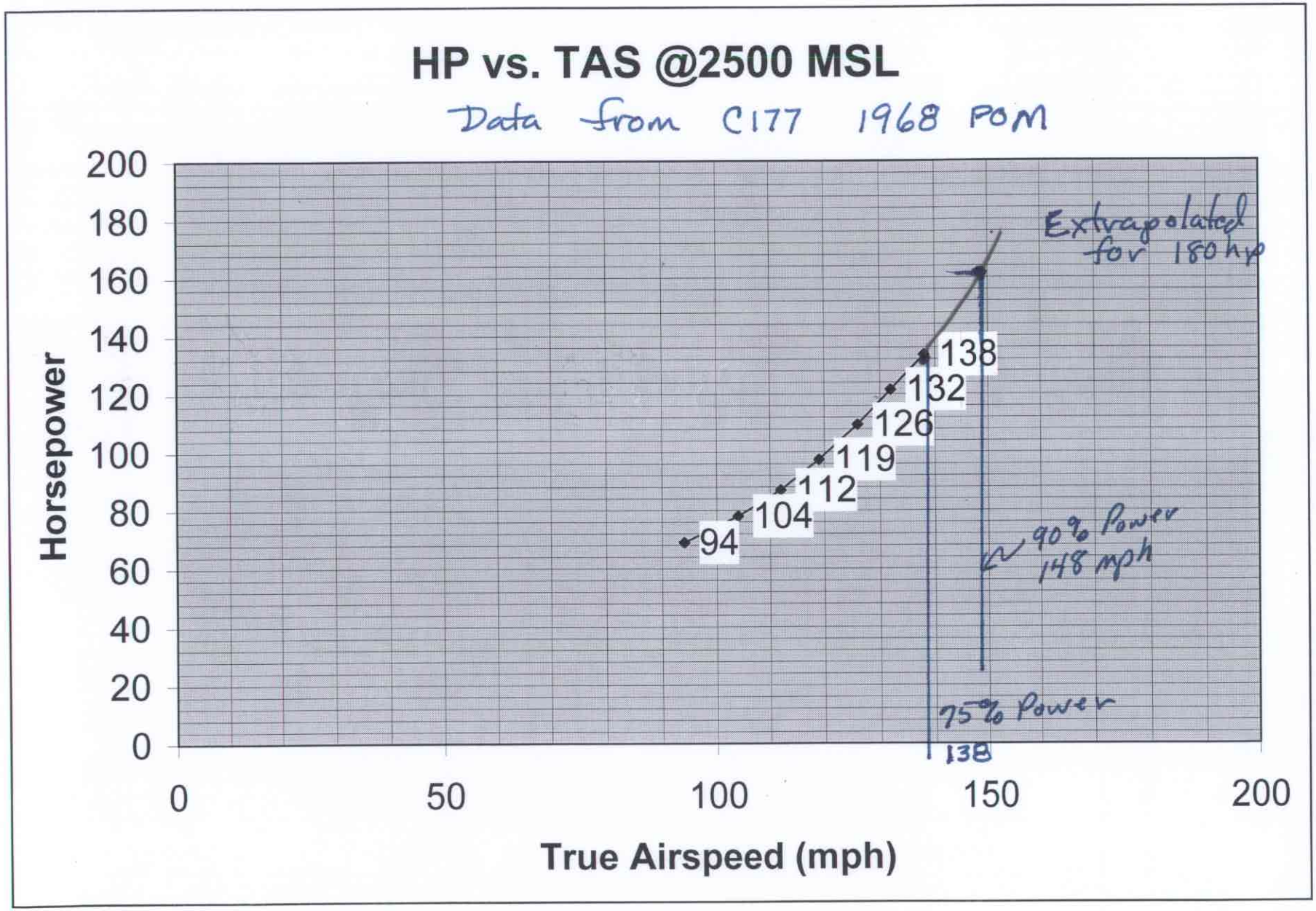
30 additional hp

$$R/C_{180hp} = \frac{(47.7 + (30(.9))) \times 33{,}000}{2350}$$

$$R/C_{180hp} = 1039 \text{ fpm}$$

- Use similar procedure for determing MAX R/C at different altitudes

Supplemental to POM



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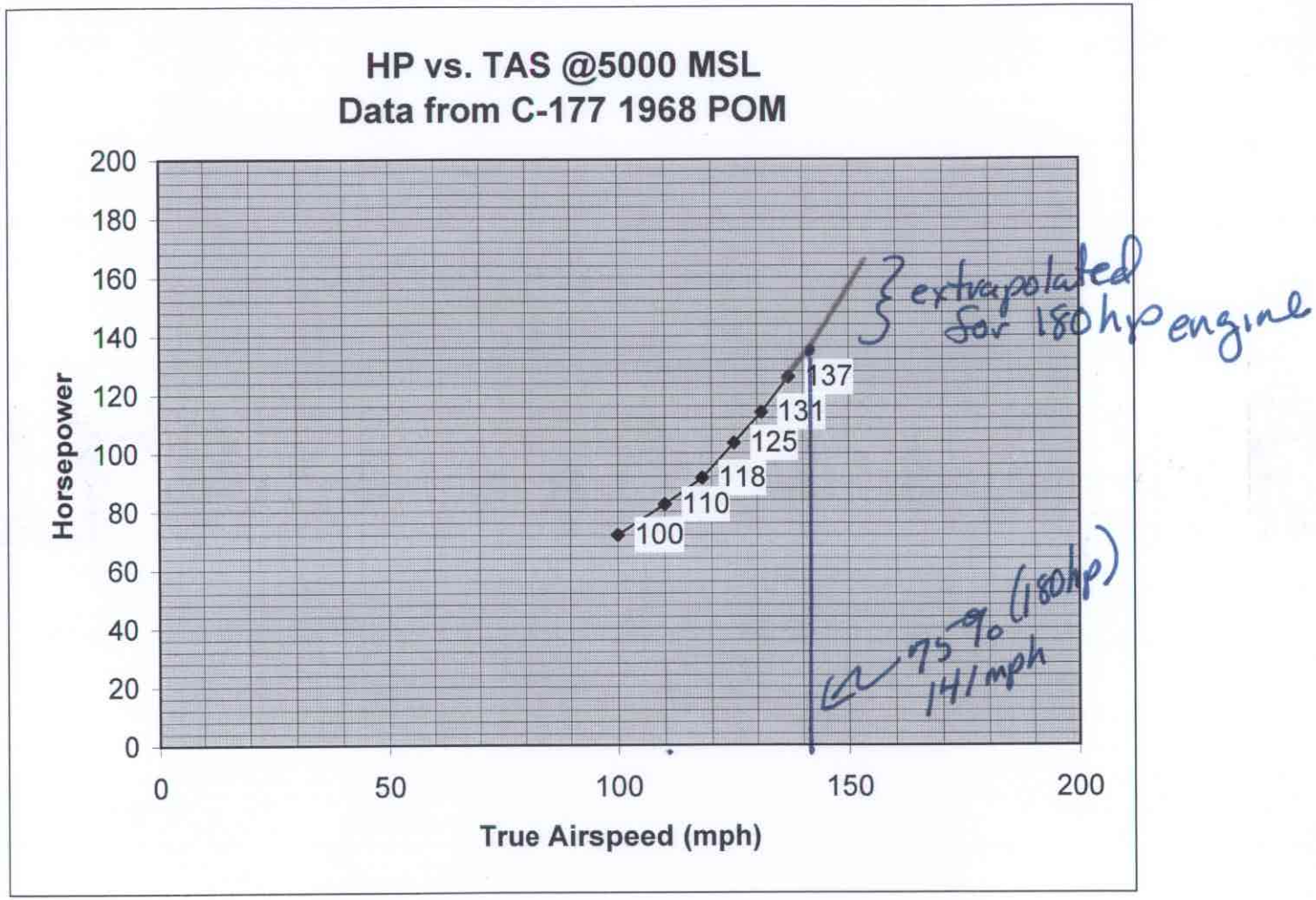
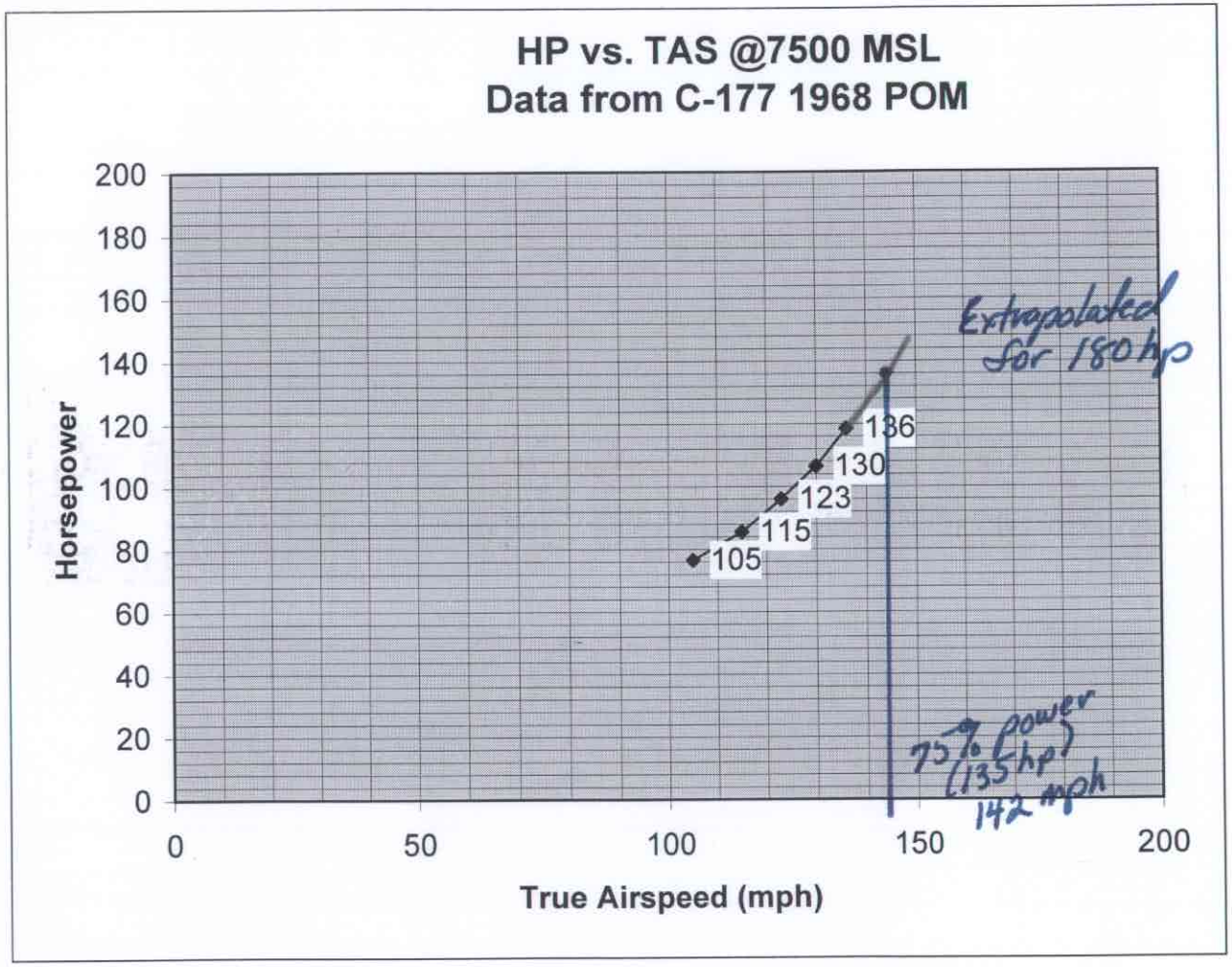


Supplemental to POM

HP	TAS
118.5	136
106.5	130
96	123
85.5	115
76.5	105

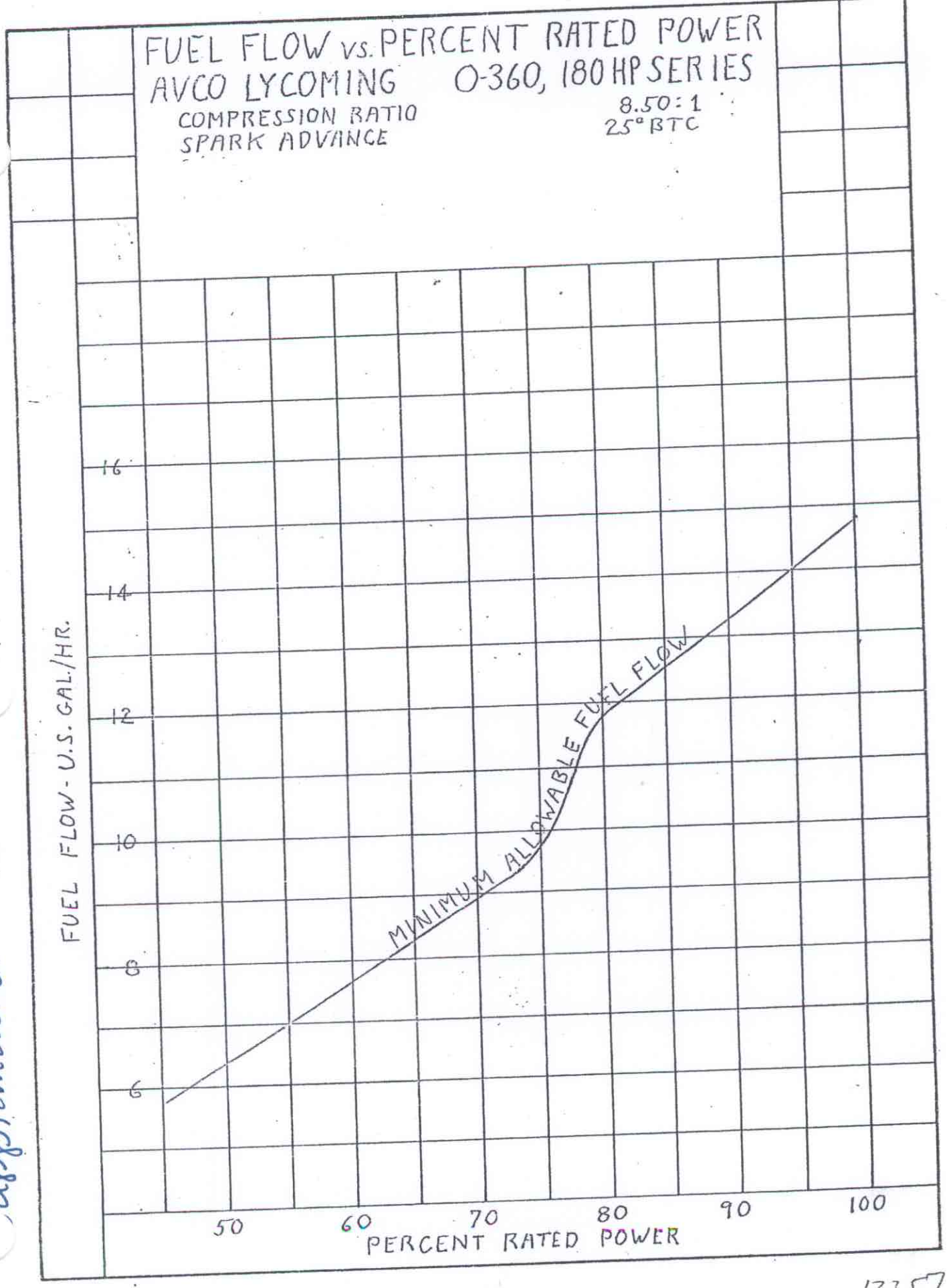


Supplemental to PO

SUMMARY OF SPECIFICATIONS

MODEL	O-360-A1A, -A2A* -A3A***	-A4A****	-A1F, -A2F*	-A1D, -A2D* -A3D***	-A4D*****	-A2E**	-A1F6******	-A4M****
FAA Type Certificate	286	--	--	--	--	--	--	--
Rated Maximum Continuous HP @ RPM & BSFC	180 @ 2700 & .52+	--	--	--	--	--	--	--
Performance Cruise (75% Rated)	135 @ 2450	--	--	--	--	--	--	--
Economy Cruise (65% Rated)	117 @ 2350	--	--	--	--	--	--	--
Fuel Consumption, gph @ 75% Rated Power	9.7	--	--	--	--	--	--	--
65% Rated Power	8.3	--	--	--	--	--	--	--
60% Rated Power	7.7	--	--	--	--	--	--	--
Propeller Drive Ratio	1:1	--	--	--	--	--	--	--
Propeller Shaft Rotation	Clockwise	--	--	--	--	--	--	--
Bore, Inches	5.125	--	--	--	--	--	--	--
Stroke, Inches	4.375	--	--	--	--	--	--	--
Displacement, Cubic Inches	361	--	--	--	--	--	--	--
Compression Ratio	8.50:1	--	--	--	--	--	--	--
Dry Weight (With Starter and Generator)	290	298	291	289	297	289	298	295
Dimensions: Height, Inches	24.59	--	--	--	--	--	--	--
Width, Inches	33.37	--	--	--	--	--	--	--
Length, Inches	29.56	--	30.70	29.81	--	--	30.70	29.05
Oil, SAE Number, Above 80°F	60	--	--	--	--	--	--	--
Above 60°F	50	--	--	--	--	--	--	--
30° to 90°F	40	--	--	--	--	--	--	--
0° to 70°F	30	--	--	--	--	--	--	--
Below 10°F	20	--	--	--	--	--	--	--
Oil Sump Capacity, Quarts	8	--	--	--	--	--	--	--
Fuel, Aviation Grade, Octane	100/100LL	--	--	--	--	--	--	--
Carburetor, Marvel Schebler	MA-4-5	--	--	--	--	--	--	--
Magnetos (2), Bendix	S4LN-20 (Right)	S4LN-20 or 204	S4LN-1209	S4LN-204	--	--	S4LN-1209	
	S4LN-21 (Left)	--	S4LN-1227	S4LN-200	--	--	S4LN-1227	
Slick								4250 (Right) 4251 (Left)
Tachometer Drive, Ratio to Crankshaft & Rotation	0.5:1 - Clockwise	--	--	--	--	--	--	--
Starter Drive, Ratio to Crankshaft at Bendix & Rotation	16.55:1 - C'Clockwise	--	--	--	--	--	--	--
Starter, Prestolite, Geared With Switch 3.38:1) 12 Volt	Standard	--	--	--	--	--	--	--
) 24 Volt	Optional	--	--	--	--	--	--	--

* Models O-360-A2A, -A2D, -A2F similar to O-360-A1A, -A1D, -A1F respectively, but do not have provision for controllable propeller.
** Model O-360-A2E similar to O-360-A2D but has provision for AN fuel pump drive.
*** Models O-360-A3A and O-360-A3D similar to O-360-A2A and O-360-A2D respectively, but have six special length bushings in prop flange.
**** Models O-360-A4A, -A4D and O-360-A4M similar to O-360-A3A but have stronger crankshaft which decreases propeller blade stress.
***** Model O-360-A1F6 similar to O-360-A1F but has one (1) sixth order and one (1) eighth order dynamic counterweight.
\+ These engines have an alternate rating of 165 HP at 2500 RPM.



Supplemental to POR

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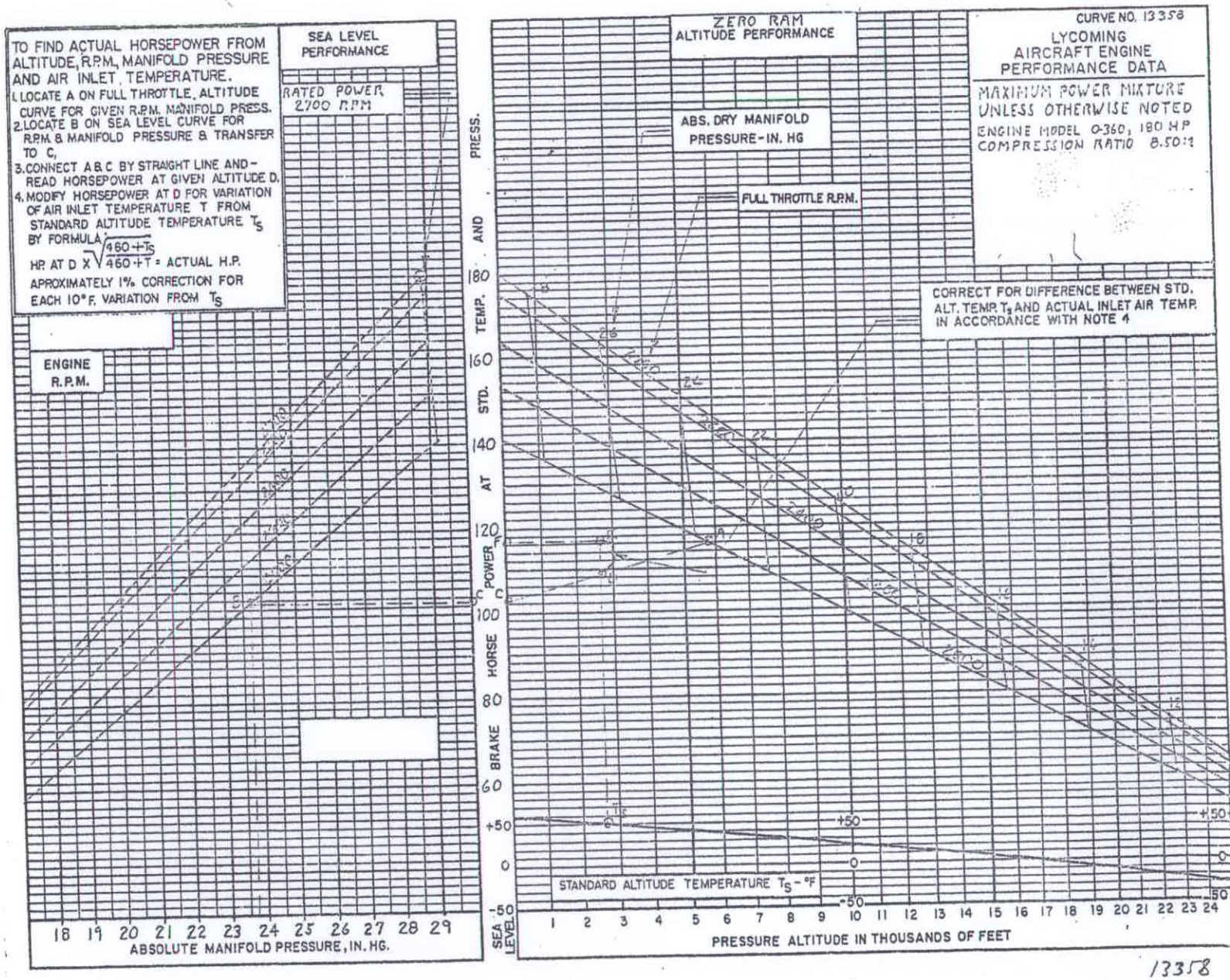
Supplemental to POM



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