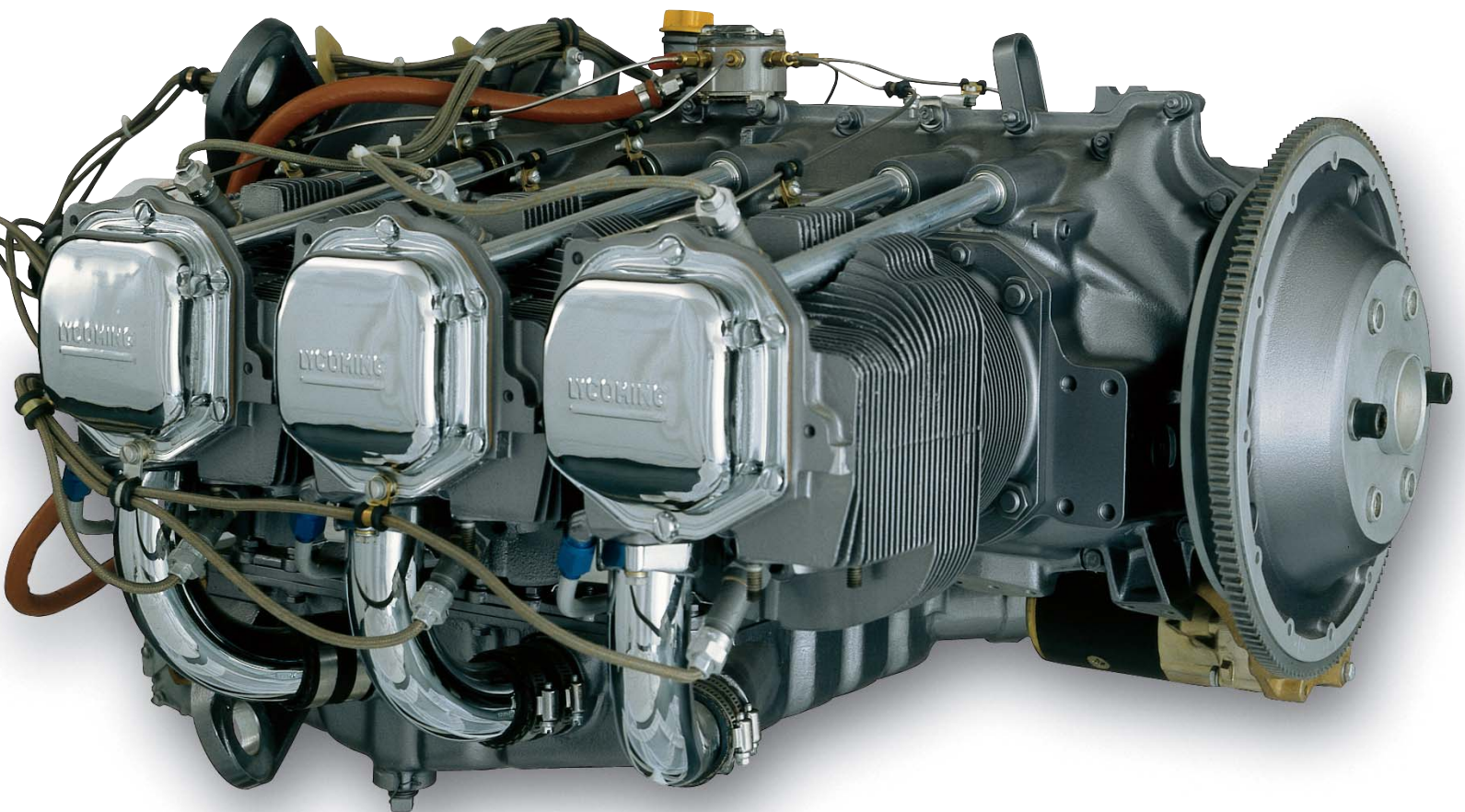


540 Series

LYCOMING

This beast handles any burden.

The Lycoming O-540 series engines are six-cylinder, direct-drive, horizontally opposed, air-cooled models. The cylinders are of conventional air-cooled construction with heads made from an aluminum-alloy casting and a fully machined combustion chamber. Rocker-shaft bearing supports are cast integral with the head, along with housings to form the rocker boxes. The cylinder barrels have deep integral cooling fins, and the inside of the barrels are ground and honed to a specified finish. The IO-540 and TIO-540 (turbocharged) series engines are equipped with a fuel-injection system, which schedules fuel flow in proportion to airflow. Fuel vaporization takes place at the intake ports. A turbocharger(s) is mounted as an integral part of the TIO-540 series. Automatic waste-gate control of the turbocharger provides constant air density to the fuel-injector inlet from sea level to critical altitude.



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O-540 & IO-540 SERIES

CURVE NO. 12613-A

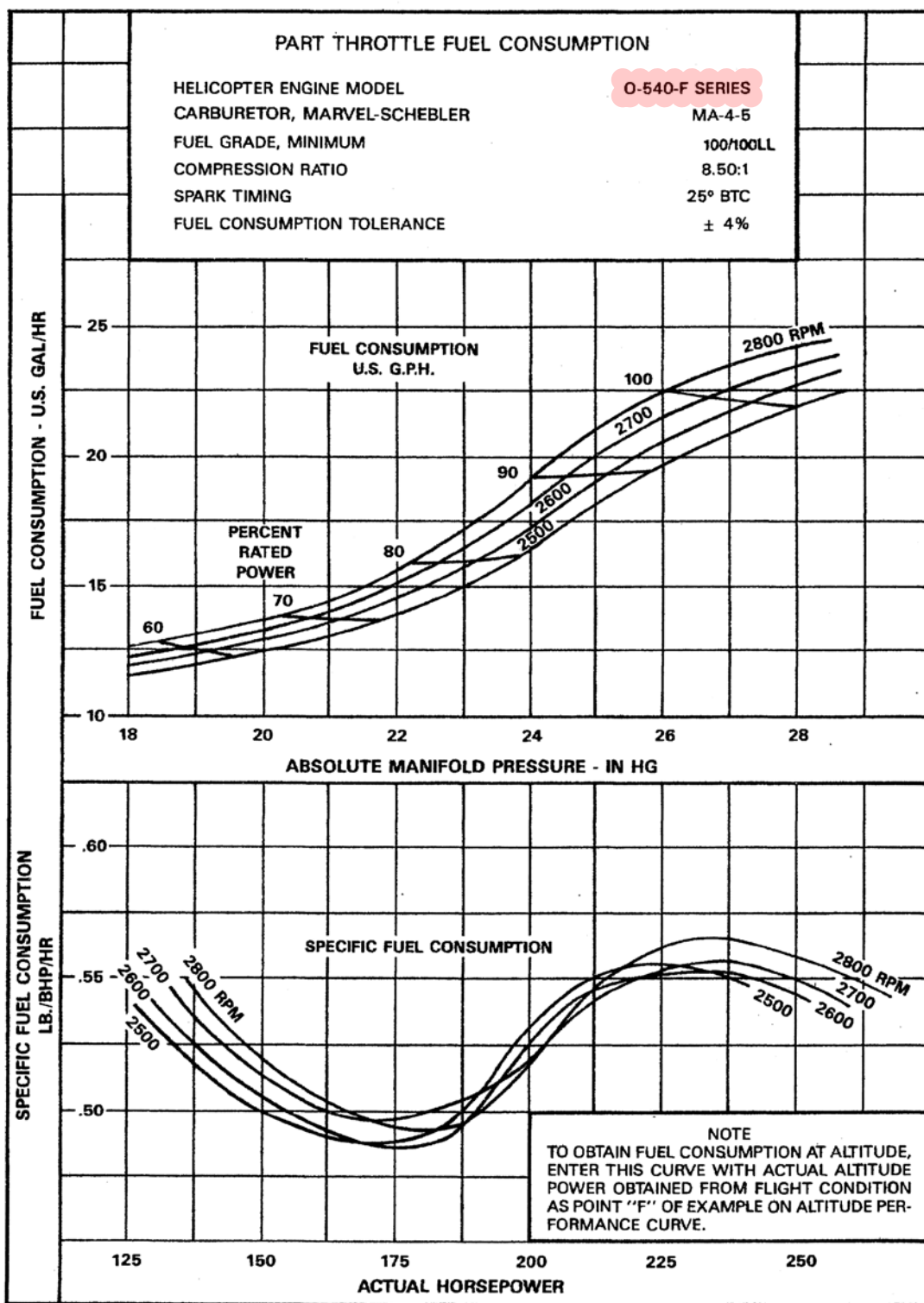


Figure 3-11. Part Throttle Fuel Consumption
O-540-F Series

TEXTRON LYCOMING OPERATOR'S MANUAL

O-540 & IO-540 SERIES

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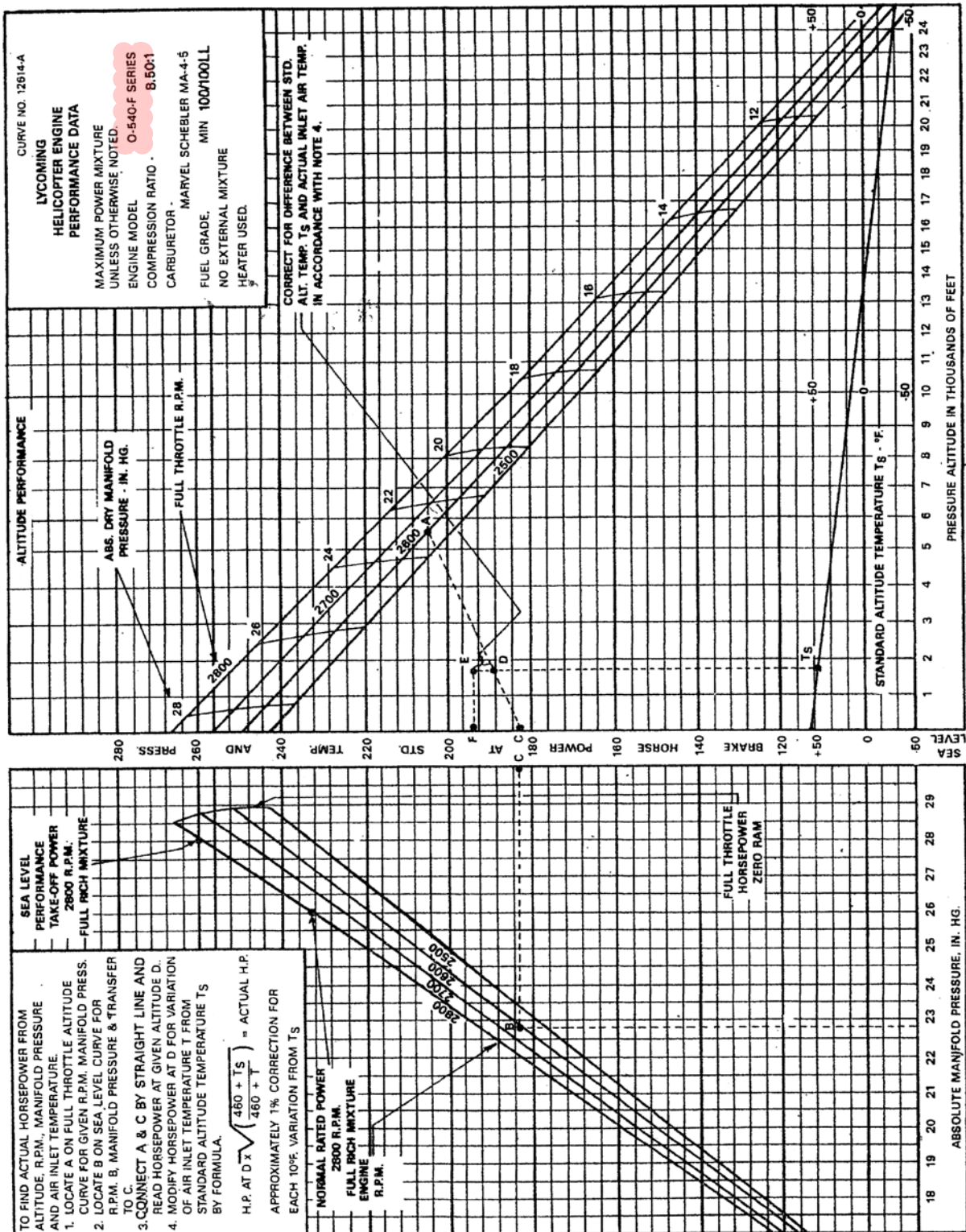


Figure 3-12. Sea Level and Altitude Performance Curve - O-540-F Series

NOTE 4. Spark Plugs: See latest revision of Lycoming Service Instruction no. 1042 for approved equipment

NOTE 5. Model similarities and differences:

	<u>Models</u>	<u>Weight *</u> <u>(dry) lb.</u>	<u>Fuel Injection **</u>	<u>Characteristics</u>
IO-540	-A1A5	414	PAC RS-10ED1	Basic model - 6 cylinder, - horizontally opposed aircooled direct drive, with fuel injection, tuned induction, downdraft cooling and bottom side exhaust ports.
	-AA1A5	448	PAC RSA-10ED1	Same as -S1A5 except has low compression (7.3:1) ratio pistons.
	-AA1B5	448	PAC RSA-10ED1	Same as -AA1A5 except uses a Slick pressurized impulse magneto instead of a retard magneto.
	-AB1A5	372	PAC RSA-5AD1	Similar to IO-540-W1A5 Except has more effective counterweights , two Slick impulse magnetos and the fuel injector is located on the bottom of the sump
	-AC1A5	444	PAC RSA-10ED1	Similar to IO-540-K1C5 except top intake down exhaust
	-AE1A5	416	PAC RSA-10ED1	Similar to O-540-F1B5 with IO-540-K angle valve cylinders, pistons, piston squirts and fuel injection and induction system
	-AF1A5	384	PAC RSA-5AD1	Same as -D4B5 except has an oil sump from an O-540-J3A5D modified to accept an injector.
	-B1A5	411	PAC RS-10B1	Same as -A1A5 except has updraft cooling air and top side exhaust ports.
	-B1B6	406	Simmonds 530	Same as -B1A5 except has a Simmonds fuel injector.
	-B1C5	411	PAC RS-10B1	Same as -B1A5 except servo-bleed removed from PAC injector servo vent.
	-C1B5	374	PAC RSA-5AD1	Differs from A & B series in that it has parallel valve cylinders, untuned induction system, an RSA-5AD1 PAC fuel injector mounted on the bottom of the sump and a diaphragm fuel pump.
	-C1C5	373	PAC RSA-5AD1	Similar to -C1B5 except accessory housing converted with an AN fuel pump drive to provide for turbocharging.
	-C2C	373	PAC RSA-5AD1	Similar to -C1B5 except has two 6th order dampers and S6LN-21, S6LN-20 TCM magnetos and an AN fuel pump drive.
	-C4B5	374	PAC RSA-5AD1	Similar to -C1B5 except incorporates heavier crankshaft counterweights, eligible for use with Hartzell compact propeller.
	-C4D5	373	PAC RSA-5AD1	Similar to -C4B5 except uses an impulse magneto in place of the retard breaker magneto.
	-C4D5D	379	PAC RSA-5AD1	Similar to -C4B5 except has a TCM D6LN-2031 impulse coupling dual magneto.
	-C4C5	373	PAC RSA-5AD1	Same as -C1C5 except incorporates heavier crankshaft counterweights, eligible for use with Hartzell compact propeller.
	-C4B5D	379	PAC RSA-5AD1	Similar to C4D5D except has retard breaker magneto instead of an impulse magneto.
	-D4A5	379	PAC RSA-5AD1	Similar to -C4B5 except for hybrid camshaft.
	-D4B5	381	PAC RSA-5AD1	Same as -D4A5 except has TCM S1200 series magnetos with impulse coupling instead of S-200 series with retard breaker.
	-D4C5	380	PAC RSA-5AD1	Same as -D4B5 except has a S6LN-1208 magneto instead of S6LN-1277 magneto.
	-E1A5	411	PAC RS-10B1	Same as -B1A5 except has internal piston cooling oil jets, thereby increasing maximum heat rejected to oil to 1150 BTU per minute.
	-E1B5	412	PAC RS-10B1	Same as -E1A5 except has TCM S6LN-1208 and -1209 magnetos.
	-E1C5	416	PAC RSA-10ED1	Same as -E1B5 except for fuel injector.
	-G1A5	416	PAC RS-10ED1	Similar to -A1A5 except has internal piston cooling oil jets thereby increasing maximum heat rejected to oil to 1150 BTU per minute.
	-G1B5	419	PAC RSA-10ED1	Similar to -G1A5 except incorporates TCM 1200 series magnetos and different fuel control.
	-G1C5	420	PAC RSA-10ED1	Similar to -G1B5 and -G1D5 but has a 38 1/2° angle fuel injector adapter.
	-G1D5	420	PAC RSA-10ED1	Similar to -G1B5 except TCM S6LN-1227 impulse coupling magneto on left side.

* Less starter and alternator

** Precision Airmotive Corp. (PAC) formally Bendix

TEXTRON LYCOMING OPERATOR'S MANUAL

O-540 & IO-540 SERIES

SECTION 3

CURVE NO. 13012

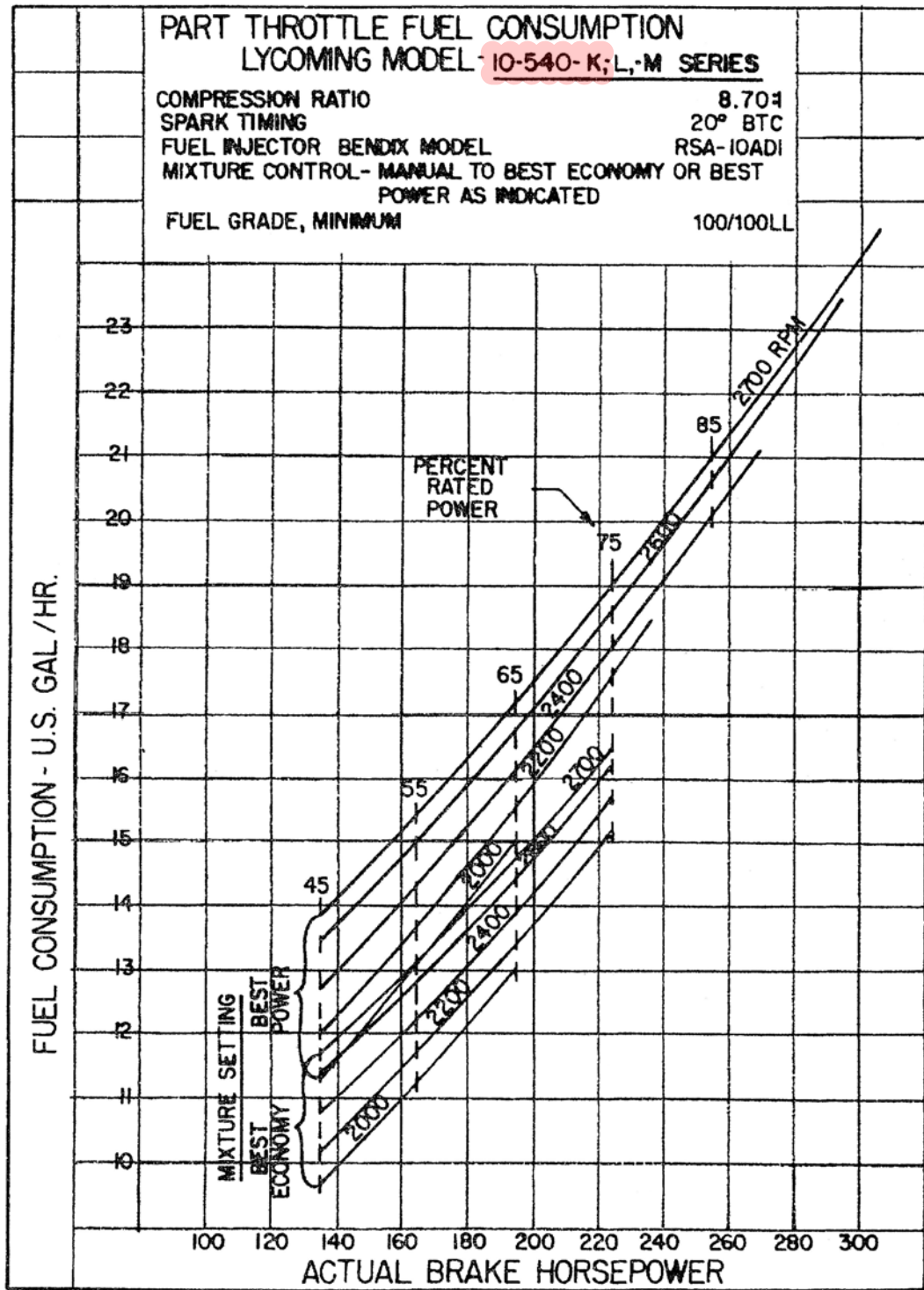


Figure 3-22. Part Throttle Fuel Consumption Curve -
IO-540-K, -L, -M, -S

TEXTRON LYCOMING OPERATOR'S MANUAL

SECTION 3

O-540 & IO-540 SERIES

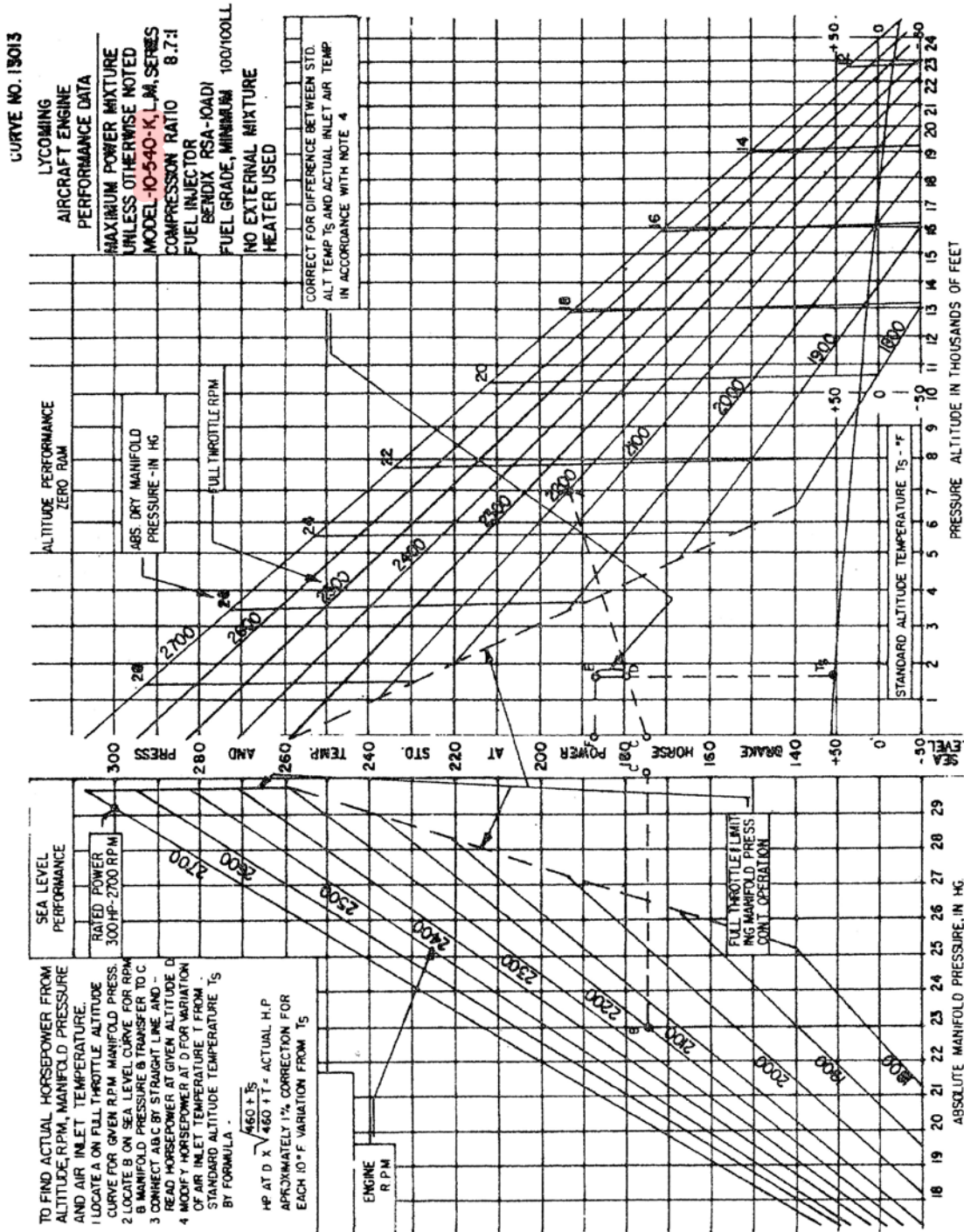


Figure 3-23. Sea Level and Altitude Performance Curve - IO-540-K, -L, -M, -S