

M.E. CYLINDER INDICATION - Press/Angle

Προσομειωτής Μηχανοστασίου - ΣΤ' Εξάμηνο
ΑΕΝ Ασπροπύργου

Cylinder Indication - Press/Angle



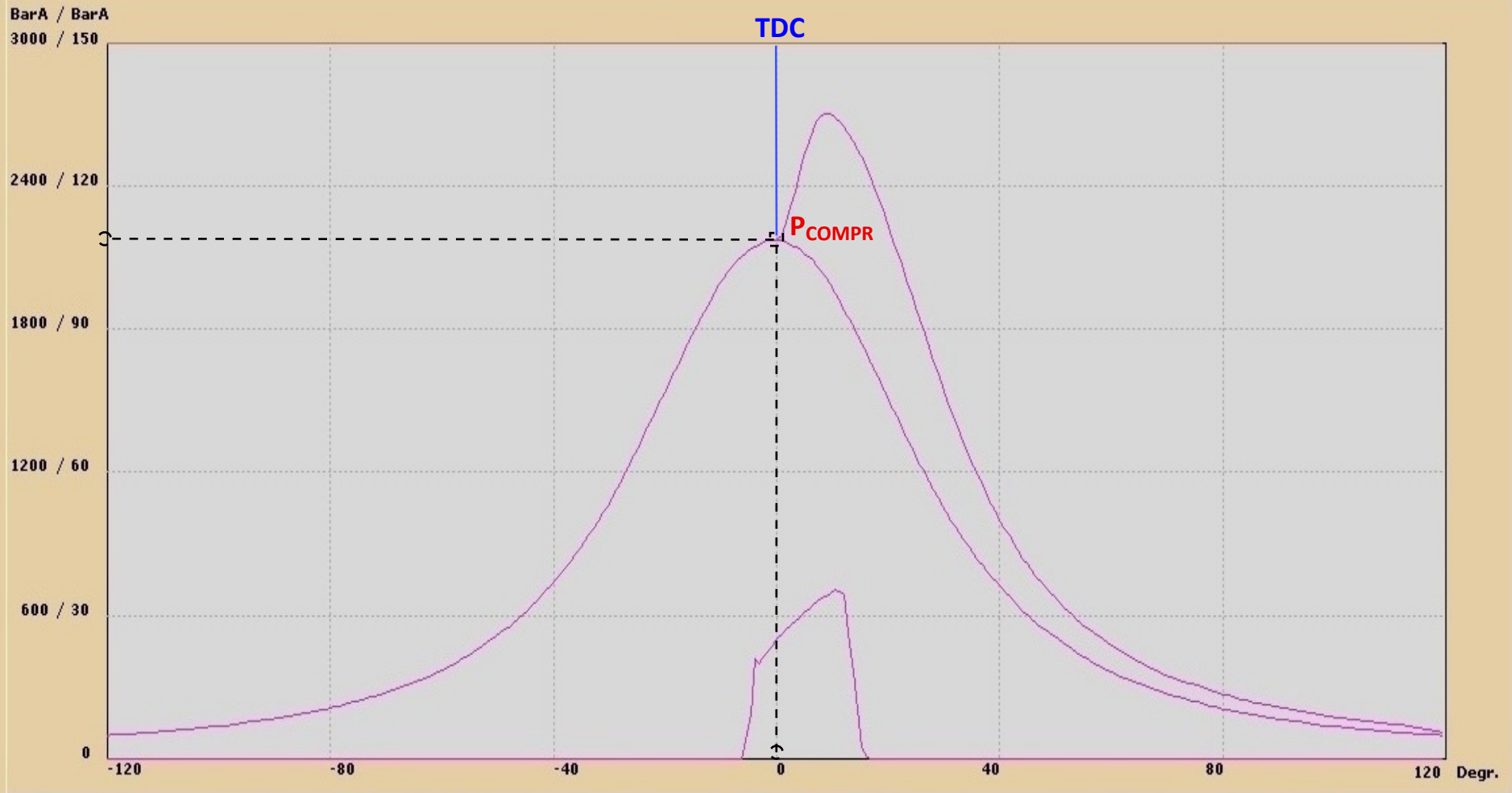
GENERAL			COMBUSTION			INJECTION		
SPEED	74.00	RPM	TIGN	1.72	DGR	PINJO	420.0	BAR
INDEX	55.02	%	PMAX	135.5	BAR	PINJM	714.3	BAR
MIP	15.54	BAR	TMAX	9.25	DGR	TINJO	-3.31	DGR
IKW	3556	KW	PCOMPR	108.7	BAR	LINJ	14.86	DGR

Speed is the engine speed (N) - Index is a measure of the fuel index

MIP is the Mean Indicated Pressure This pressure is the equivalent pressure that acts on the piston throughout its vertical power stroke.

IKW is the Indicated Power of the cylinder ($IKW = MIP \times \text{volume of working piston} \times N$).

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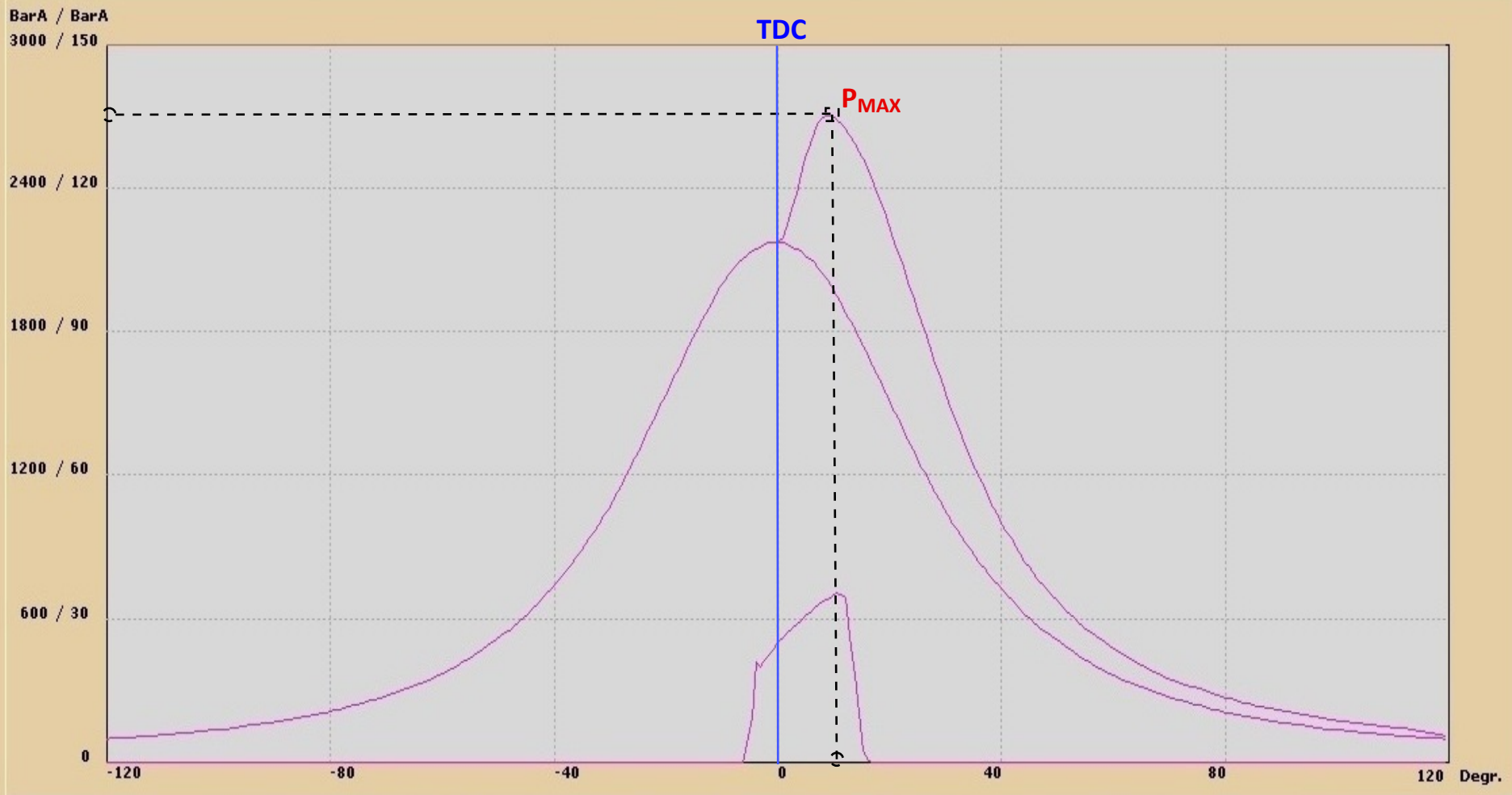


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PCOMPR is the pressure due to compression alone after the compression stroke.

It provides valuable information to the efficiency of the compression stroke, and the sealing efficiency of the piston rings, liner, and cylinder cover valves.

Cylinder Indication - Press/Angle

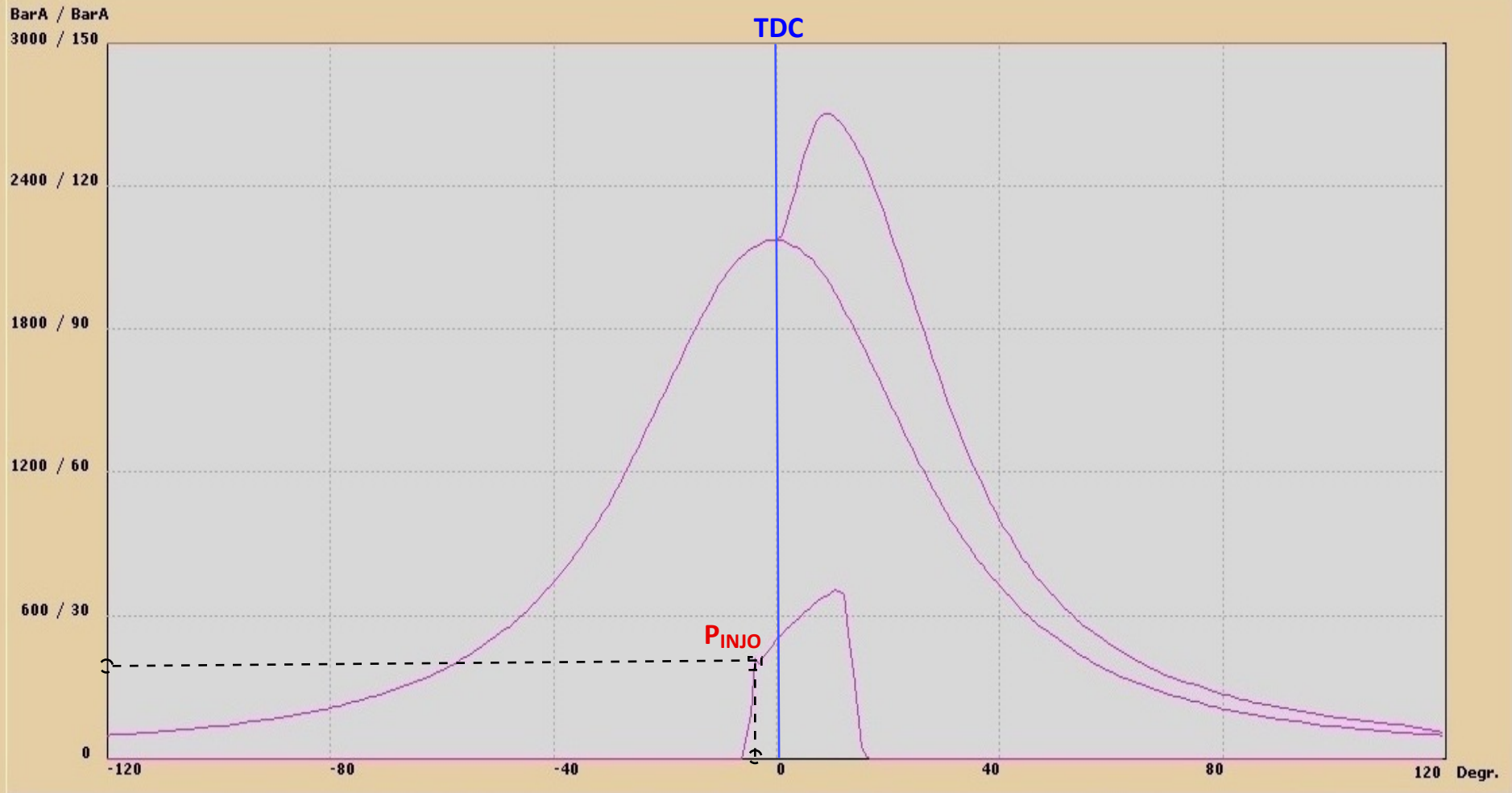


GENERAL			COMBUSTION			INJECTION		
SPEED	: 74.00	RPM	TIGN	: 1.72	DGR	PINJO	: 420.0	BAR
INDEX	: 55.02	%	P _{MAX}	: 135.5	BAR	PINJM	: 714.3	BAR
MIP	: 15.54	BAR	T _{MAX}	: 9.25	DGR	TINJO	: -3.31	DGR
IKW	: 3556	RW	PCOMPR	: 108.7	BAR	LINJ	: 14.86	DGR

P_{MAX} is the maximum pressure present during the working cycle.

This will be affected by the quantity and timing of the fuel admission.

Cylinder Indication - Press/Angle

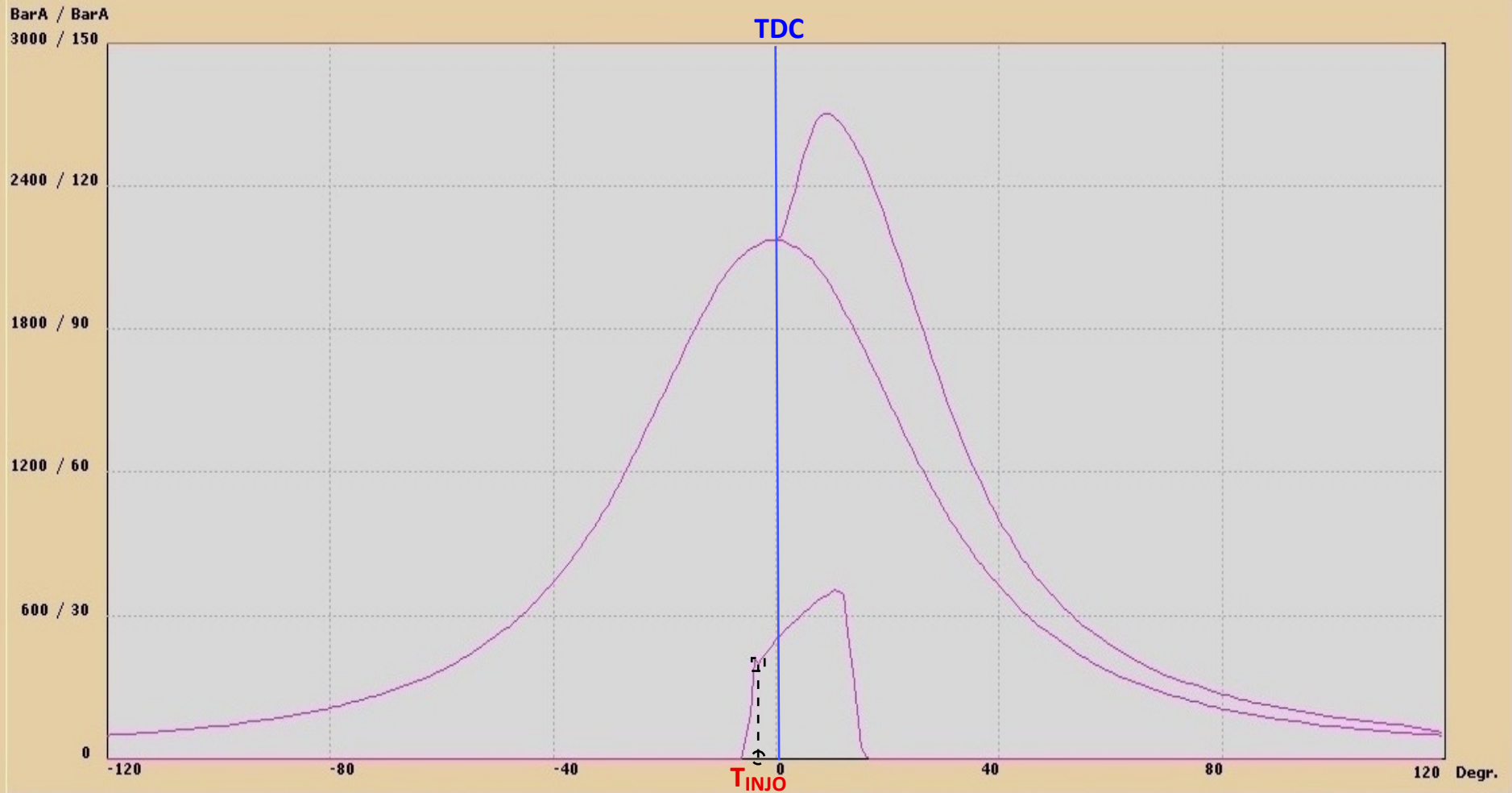


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PINJO is the fuel pressure when the fuel injector opens.

It provides useful information that the fuel injector is correctly adjusted.

Cylinder Indication - Press/Angle

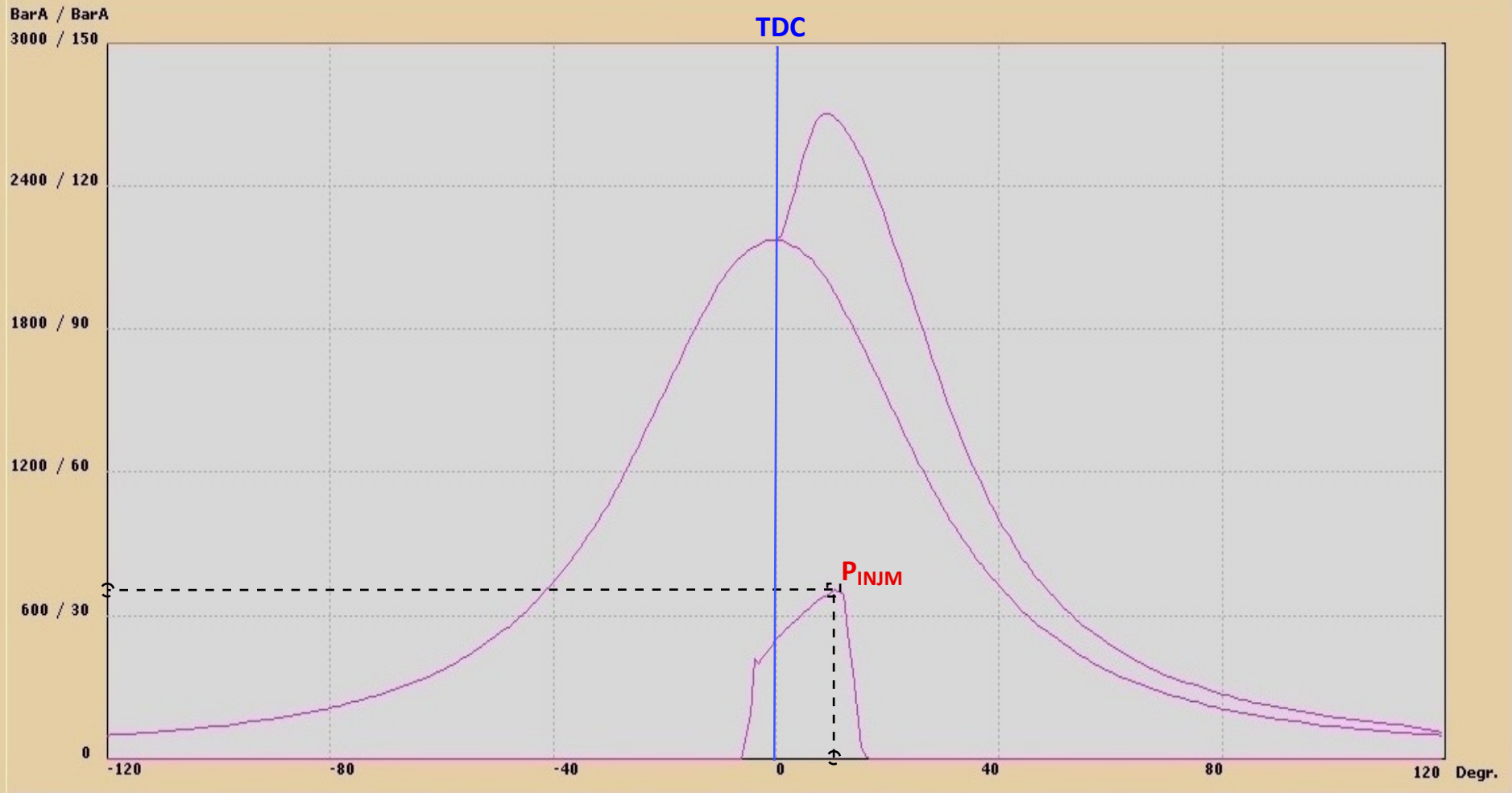


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TINJO is the timing of the fuel injection.

The fuel pump timing will change when the VIT operation is selected (Should be similar for all fuel pumps).

Cylinder Indication - Press/Angle

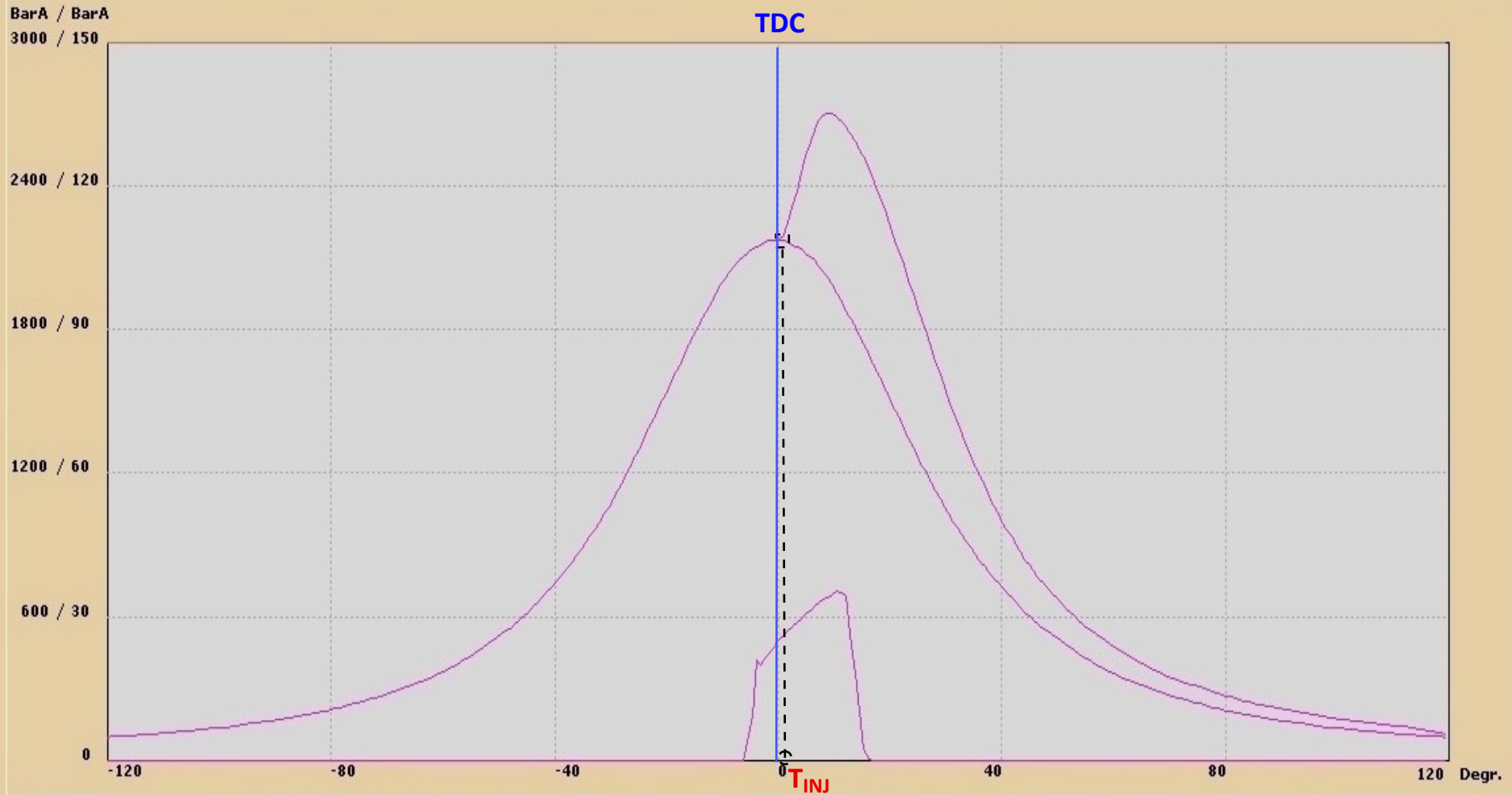


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PINJM is the maximum fuel pressure generated by the fuel pump.

This indicates the internal sealing properties of the pump, and whether internal wear is present.

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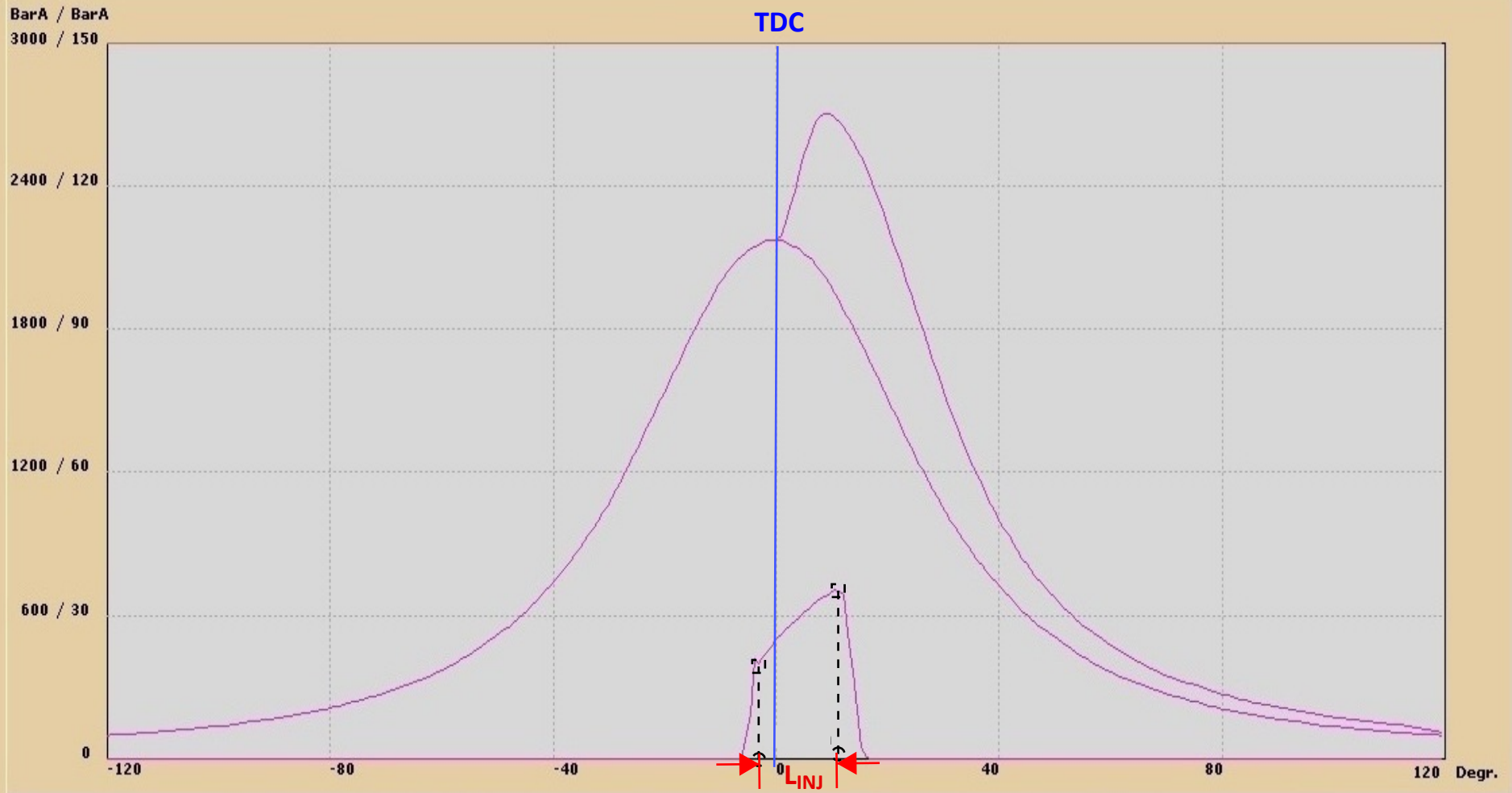


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TIGN is the timing of the ignition. The time between the TINJO and TIGN. Indicates the ignition delay present for that cycle.

Increasing ignition delays will cause increased *P*MAX and large delta pressure/angle ($\delta P/\delta \alpha$)

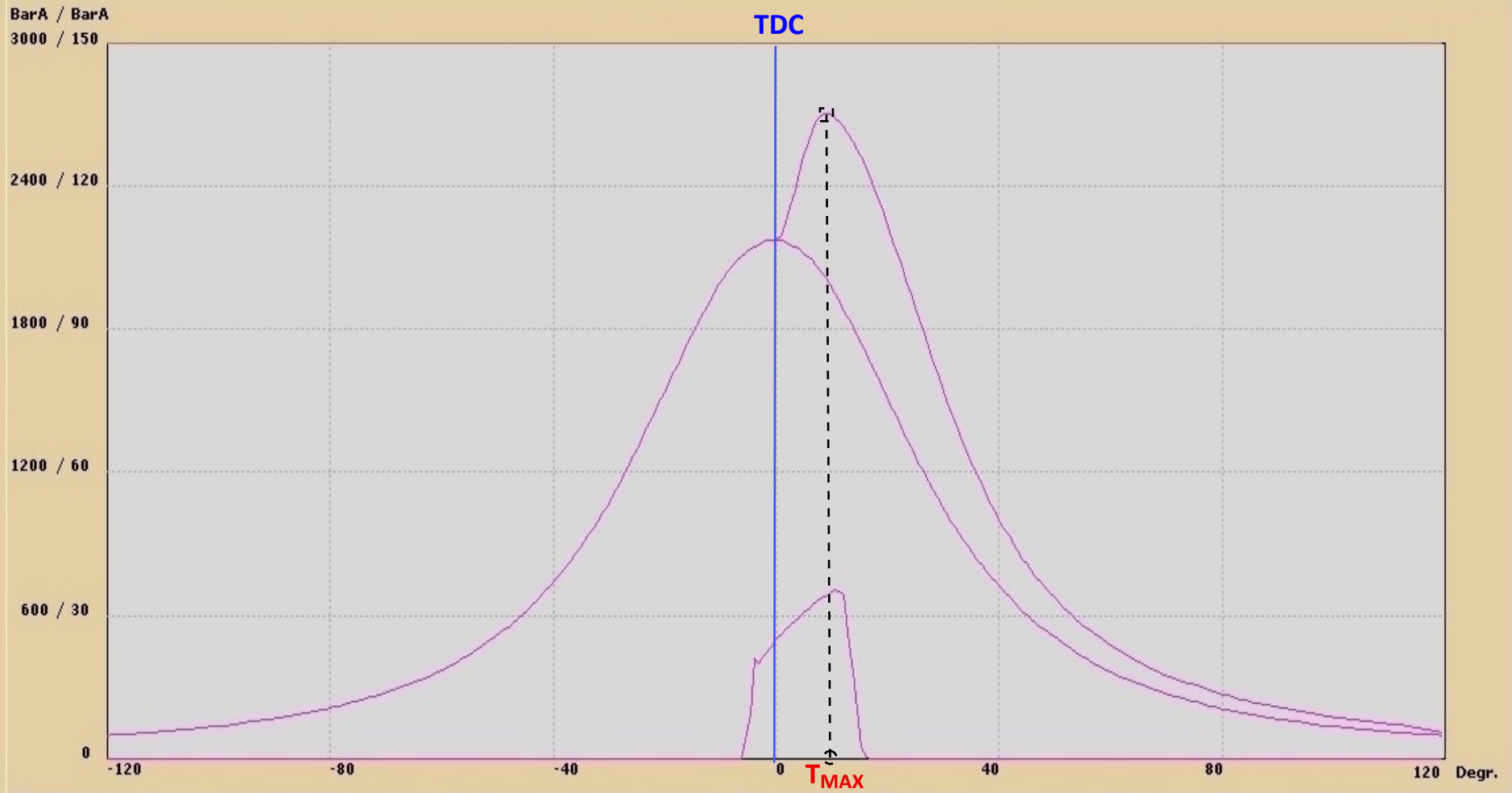
Cylinder Indication - Press/Angle



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LINJ is the length of the fuel injection period, and *is dependant on the setting of the fuel control lever.*

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TMAX is the position of the maximum temperature during the working cycle.