2019.10.23 v002.0

Engine Map Data Sheet

Regulatory references: 40 CFR 1065.510 and 106

	Engine Family
	Date of Map
	Ambient Conditions of Engine Map
	Barometer
	Temperature
	Humidity
	Indicate Step or Continuous Sweep Map (1065(b)(5)(i)
	Record Checkpoint Speed
	If Checkpoint Speed Not Achieved, Provide explanation
YES/NO	Unsafe-- (you should describe why it is unsafe)
YES/NO	Unachievable (rev Limiter or Governor)
	If Engine Governed indicate Speed Setting
YES/NO	Governor?
YES/NO	Rev Limiter?
	Speed Setting of Above
	Describe the method of speed limitation
	Describe how you notify your customers or the installer of a pro speed range this engine can be operated, and what maximum r
	On The Map Data Sheet, Identify the following values from 106
	P_{max}
	High and Low values of 98% P_{max} (interpolate if needed)
	F_nP_{max}
	Maximum Value of $\Sigma(P_{norm}^2 + f_{norm}^2)$
	High and low 98% points of $\Sigma(P_{norm}^2 + f_{norm}^2)$ (interpolate if neces
	$f_{ntest,}$ maximum test speed
	If the provisions of 1045.501(f) is used, state the declared Maxim of the measured maimum test speed)
	Additionally you should supply the following information in sprea
	Provide the timebase, speed, load, and power data for the powe
	Show your work in tabulating P_{norm} (notmalized power) and f_{norm} (
	Show your work in tabulating $\Sigma(P_{norm}^2 + f_{norm}^2)$
	Identify all of the above values in the analysis
	If you cannot identify the higher 98% power or higher 98% $\Sigma(P_{nor}$ terminated too soon, you may use the highest speed achieved du nominal governor or rev limiter speed. You are attesting with thi function is installed and functioning for this family's production a expected that in-use engines would be limited in this way.

	If any alternate procedures were used in mapping the engine, inc 1065.510(b)(5)(iv), or any other regulatory provision, you should to request approval.

Paperwork Reduction Act Notice

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5.610

op or of the engine into a vessel, of the ecommended speed is?

5.610:

sary)

num Test Speed (it must be within 500 rpm

adsheet format:

r map on the noted worksheet

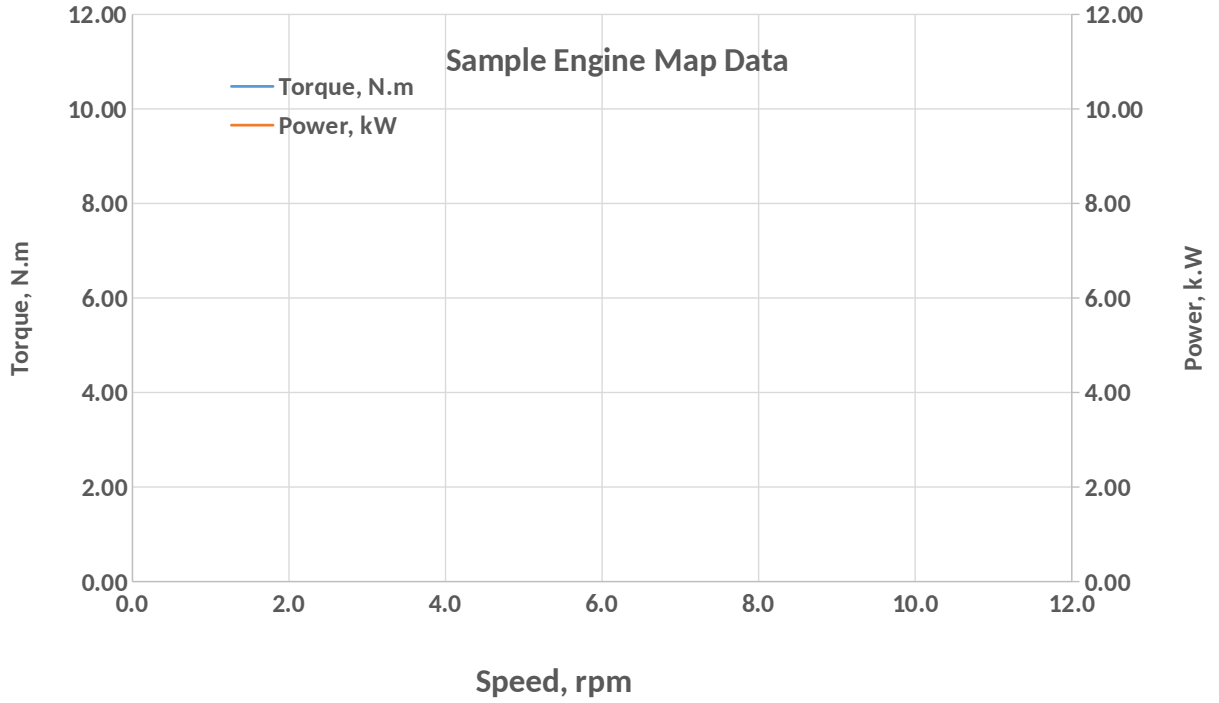
normalized speed).

$_m^2 + f_{norm}^2$) value, because the map
uring the map if it is at least as high as the
is application that this speed limiting
nd at the stated nominal speed, and it is

cluding as provided for in 1065.10 or
describe the procedure and contact EPA

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EPA Form 5900-459

Engine Family-MAP



Pmax	0.00
.98*Pmax	0

.98*P_{max}-high	#DIV/0!	
.98*P_{max}-low	#DIV/0!	
Speed at Pmax	#DIV/0!	
Σmax, maximum sum of squares	0	
.98*Σ_{max}	0	
.98*Σ_{max}-low	#DIV/0!	
.98*Σ_{max}-high		point of engagement of rev limiter
Fnorm	#DIV/0!	Maximum Test Speed
		Declared maximum test speed +/- 500 rpm (40 CFR 1

VARIABLE SPEED MAP DATA			
Time, sec	**Speed, rpm**	**Torque, N.m**	**Power, kW**
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.045.501(f) only)

WORKSHEET		
P_{norm}	f_{norm}	Σ squares $_{max}$

