

February 2, 2017

General Motors Global Propulsion Systems
M/C 483-710-270
850 Glenwood Avenue
Pontiac, MI 48340-2920

Gary Pollak
SAE
400 Commonwealth Drive
Warrendale, PA 15096

Gary,

For Model Year 2018, General Motors will offer the LHN engine in the Buick LaCrosse Passenger Car. The LHN is same as the Regular Production Option (RPO) LCV engine previously SAE certified via witness testing for the Model Year 2017 GMC Acadia. The restriction levels of the LaCrosse have been reflected in the attached SAE Power Rating. The SAE rating was generated from the 2017 GMC Acadia using isopower per the torque and horsepower plots, also attached.

Please accept this as an application for SAE certification of the 2018 Buick LaCrosse power and torque performance.

Thank you,



Joseph Kelly
Development Validation System Manager
Large Gas Engines



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**SAE Power Certification
Form J2723 B**

J2723 Aug2007



Manufacturer Name: **General Motors Global Propulsion Systems**

Address: 850 Glenwood Ave

City: Pontiac

State: MI

Country: USA

Postal Code: 48340

Engine: ECOTEC Gen2 LHN

Model Year & Vehicle:

Application(s): 2018 LHN / E2LB
Buick Lacrosse

Test Standard: J1349:Sep2011

Test Location: IsoPower Data - Based on 2017 LCV /
C1UG (GMC Acadia) Test conducted
in Pontiac Dyno Lab Test Cell D231

Engine Serial Number: IsoPower Data - Based on 2017 LCV /
C1UG (GMC Acadia) SAE Witness
Testing of N7CVZ941

Test/Run Number: IsoPower Data - Based on 2017 LCV
C1UG
(GMC Acadia) SAE Witness Testing
of engine N6CVZ941

RESULTS:

The engine described above was tested on 17Dec15 according to the requirements prescribed
in J1349:Sep2011, Engine Power Test Code in the presence of a qualified SAE Witness. The IsoPower
results below are based on that previously certified test.

Parameter	Rated Speed	Rated Output	Measured Speed	Measured * Output **	% Difference
Power [kW/hp]	6300	144.3/193.5	6300	144.3/193.5	0.00%
Torque [Nm/lb-ft]	4400	253.5/187.0	4400	253.5/187.0	0.00%

*Determined via isopower

** Accounted for Accessory Drive Losses

SAE Certified Witness

Date

APPROVALS:

General Motors Global Propulsion Systems declares that the engine tested for this report is representative of engines
in series production. General Motors Global Propulsion Systems further declares that the performance of engines in series
production will characteristically be at least 98% of the rated torque and power values indicated on this report.

Name:

Title:

Date:

Authorization Date:

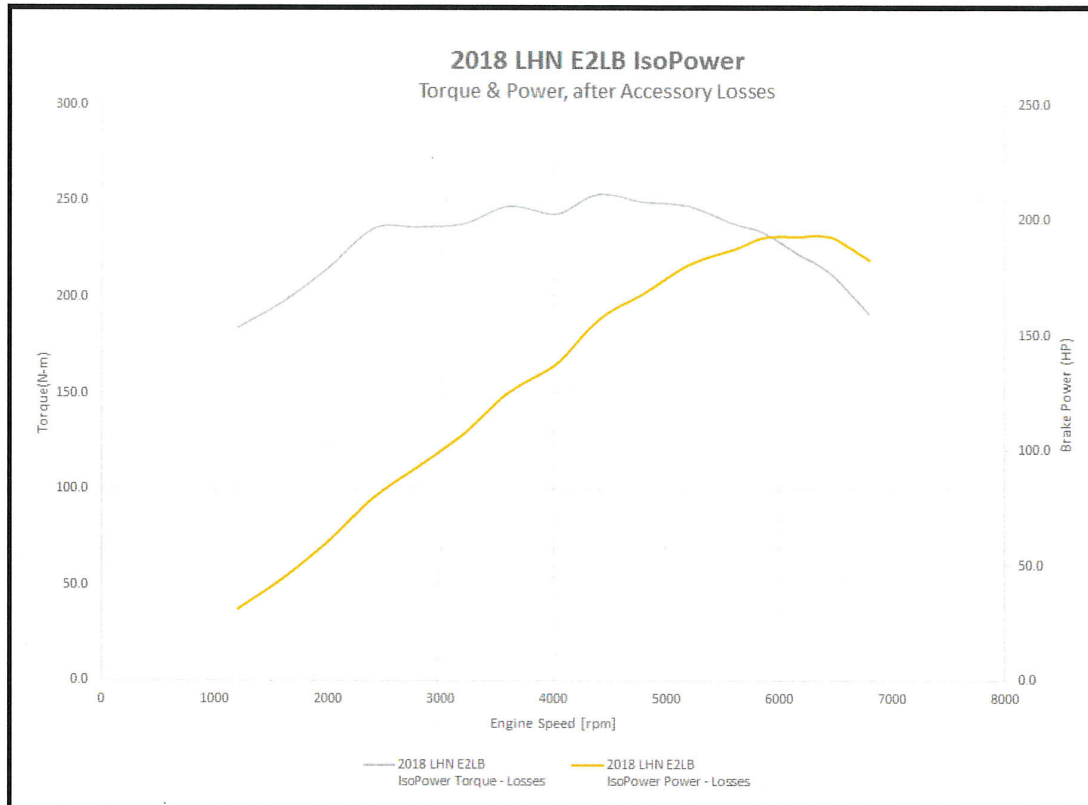
Assistance Chief Engineer



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2018 LHN LaCrosse Isopower Analysis Data, after accessory losses



Engine Speed rpm	PRE-ACCESSORY		POST-ACCESSORY LOSSES	
	2018 LHN E2LB IsoPower Torque	2018 LHN E2LB IsoPower Power	2018 LHN E2LB IsoPower Torque - Losses	2018 LHN E2LB IsoPower Power - Losses
	N-m	HP	N-m	HP
1200	185.7	31.3	183.9	31.0
1600	199.1	44.7	197.5	44.4
2000	216.8	60.9	215.1	60.5
2400	237.2	79.9	235.6	79.5
2800	237.7	93.5	236.4	93.1
3200	239.2	107.5	238.0	107.1
3600	248.5	125.6	247.2	125.1
4000	244.3	137.2	243.0	136.7
4200	249.4	147.1	248.1	146.5
4300	253.0	152.8	251.8	152.2
4400	254.8	157.4	253.5	156.8
4500	254.7	160.9	253.4	160.3
4600	253.6	163.8	252.3	163.2
4800	250.7	169.0	249.4	168.3
5200	248.6	181.5	247.3	180.8
5600	239.4	188.3	238.1	187.5
5800	236.3	192.5	235.1	191.7
5900	233.7	193.6	232.4	192.8
6000	230.2	193.9	228.9	193.1
6100	226.3	193.9	225.1	193.1
6200	222.6	193.8	221.4	193.0
6300	219.7	194.4	218.4	193.5
6400	216.0	194.1	214.7	193.2
6500	211.3	192.9	210.0	191.9
6800	192.4	183.7	191.1	182.8