

June 24, 2019

General Motors Company
Engine Development & Validation
Global Propulsion Systems
800 N Glenwood Ave
Pontiac, MI 48340
gm.com

To SAE International:

Attached, please find a submission for a SAE Power Certification test that was performed on a 2.0L LSY I4 that is a model year 2020 engine, for the Cadillac CT4/CT5. We used a previous test for the Cadillac XT4, and included an ISOPOWER plot, as there are very minimal differences between the two vehicle applications. The previous test that we used is test number 17681, which was run on March 1, 2018.

Thank You,

Kris Keary
LSY Regional Assistant Chief Engineer

SAE Power Certification
Form J2723 B



Manufacturer Name: Opel Automobile GmbH
Address: Bahnhofspatz
City: Rüsselsheim
State: Hessen
Country: Germany
Postal Code: 65423
Engine: LSY
Type of Certification: Single-Engine Certification
Model Year & Vehicle: MY 20; Carline: A2xL, Cadillac
Application(s): CT4 & CT5
Test Standard: SAE J1349: Mar. 2018
Test Location: Isopower data based on 2019
LSY E2UL Cadillac XT4 witness
testing in Rüsselsheim, Test
Bench 19
Engine Serial Number: Isopower data based on 2019
LSY E2UL Cadillac XT4 witness
testing on 3059A
Test/Run Number: Isopower data based on 2019
LSY E2UL Cadillac XT4 witness
testing 17681
Test Date: Isopower data based on 2019
LSY E2UL Cadillac XT4 witness
testing March 01, 2018

RESULTS:

The engine described herein was calculated on Isopower data based on 2019 LSY E2UL Cadillac XT4 witness testing March 01, 2018 according to SAE J1349: Mar. 2018, Engine Power Test Code in the presence of a qualified SAE Witness, and was determined to produce the following results:

Parameter	Rated Speed [1/min]	Rated Output	Measured Speed [1/min]	Measured Output	Difference [%]
Power [hp/kW]	5000	237 hp/177 kW	5001.38	237.0 hp/176.7 kW*	-0.17
Torque [lb-ft/Nm]	1500 - 4000	258 lb-ft/350 Nm	1500.35 - 4001.06	258.80 lb-ft - 261.61 lb-ft 350.89 Nm - 354.69 Nm	0.31

*determined via isopower

Witness
Date

APPROVALS:

General Motors declares that the engine tested for this report is representative of engines in series production, General Motors 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: Kris Keary
Title: NA Regional Assistant Chief Engineer
Date: 24-06-19

SAE Power Certification
Form J2723 B



Manufacturer Name	Opel Automobile GmbH
Address:	Bahnhofplatz
City:	Rüsselsheim
State	Hessen
Country:	Germany
Postal Code	65423
Engine:	U20SHT
Type of Certification:	Single Engine Certification
Model Year & Vehicle	MY 20; Carline: A2xL, Cadillac
Application(s).	CT4 & CT5
Test Standard:	SAE J1349: Mar. 2018
Test Location:	Isopower data based on 2019 LSY E2UL Cadillac XT4 witness testing in Rüsselsheim, Test Bench 19
Engine Serial Number:	Isopower data based on 2019 LSY E2UL Cadillac XT4 witness testing on 3059A
Test/Run Number:	Isopower data based on 2019 LSY E2UL Cadillac XT4 witness testing 17681
Test Date:	Isopower data based on 2019 LSY E2UL Cadillac XT4 witness testing March 01, 2018

RESULTS:

The engine described herein was calculated on Isopower data based on 2019 LSY E2UL Cadillac XT4 witness testing March 01, 2018 according in SAE J1349: Mar. 2018, Engine Power Test Code in the presence of a qualified SAE Witness, and was determined to produce the following results:

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*determined via isopower

Witness
Date

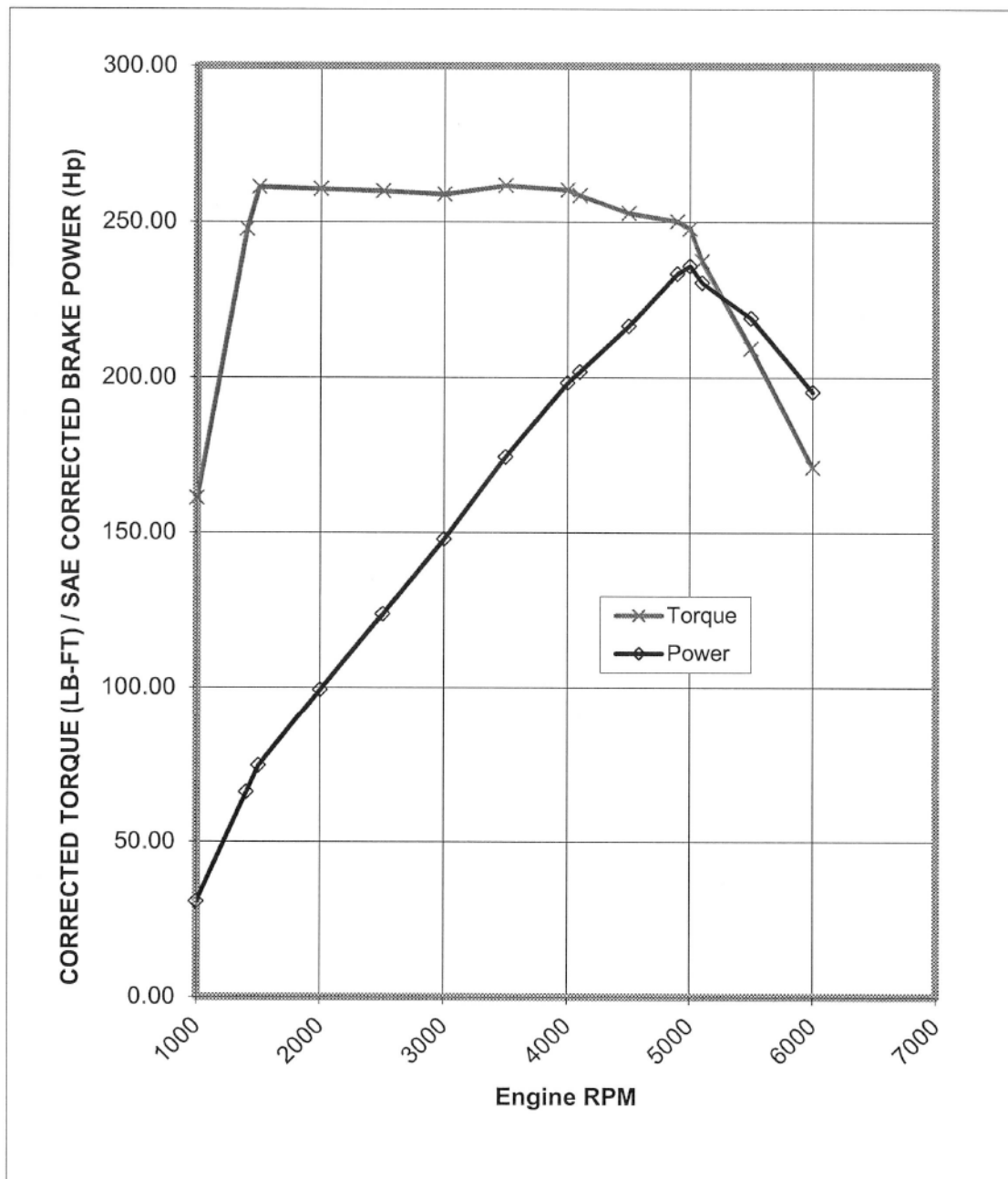
APPROVALS:

General Motors declares that the engine tested for this report is representative of engines in series production.
General Motors 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.

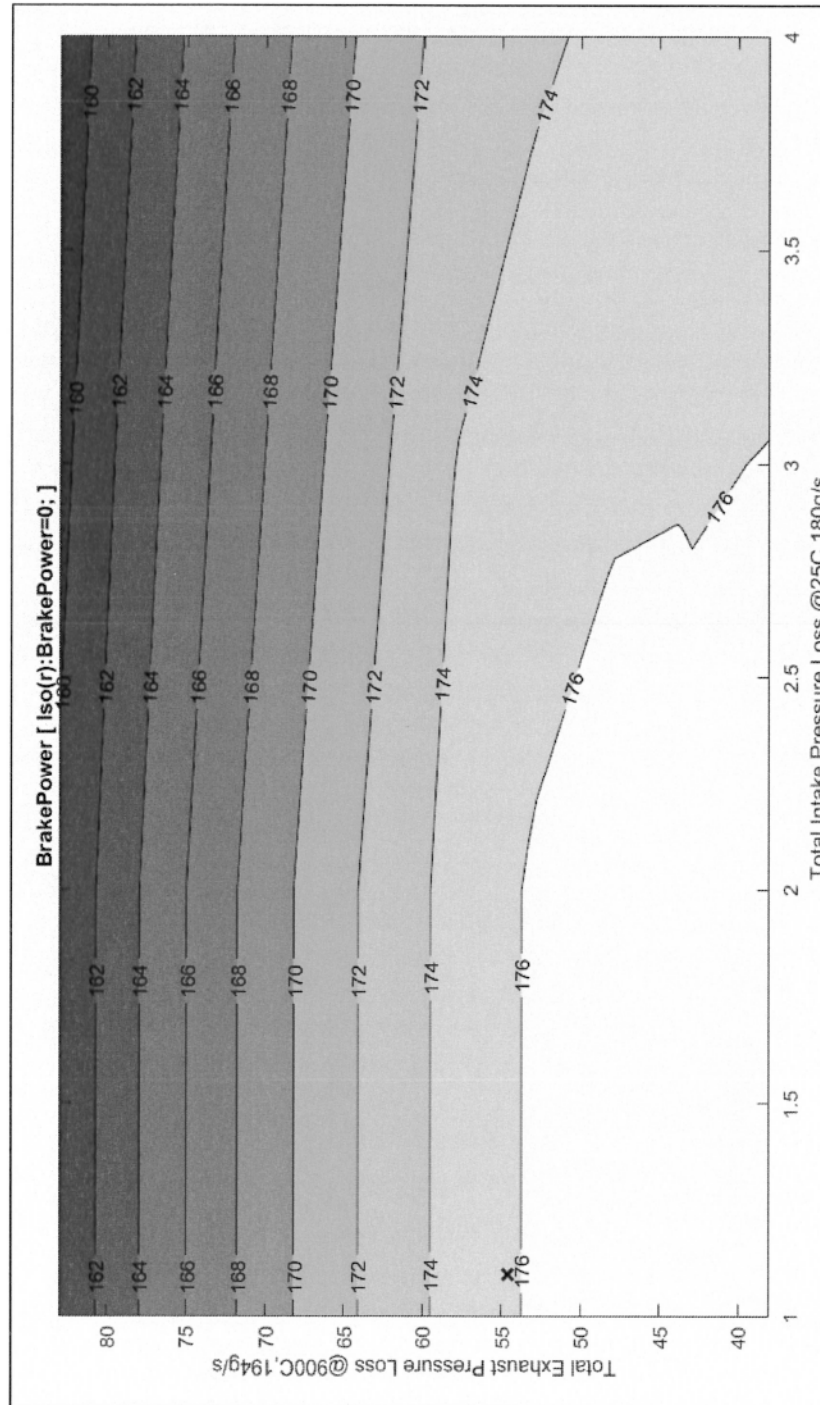
Name: Kris Keary
Title: NA Regional Assistant Chief Engineer
Date: 6/24/2019

WOT Engine Power Plot

Opel Automobile GmbH
1998 (cc) / DICP / Inline-4
MY19 E2UL Cadillac XT4



SAE J2723 AUG2007
WOT ENGINE POWER PLOT (AS TESTED)



SAE J2723 AUG2007
WOT ENGINE POWER PLOT (AS TESTED)

SAE Power Certification SAE J1349 Form J2723 A Certified Power™		
ENGINE DESCRIPTION - Data Entry Form		
Description	Value (Enter Values)	Units
Displacement (cc)	1998	cc
Configuration/Number of Cylinders:	Inline-4	
Valve Train:	DICP	
Type:	Gasoline	
Combustion Cycle:	Four Stroke	
Pressure Charging:	Turbocharged	
Charge Air Cooling:	Forced flow liquid cooling	
Bore (mm)	83	mm
Stroke (mm)	92.3	mm
Cylinder Numbering Convention	From front of crank nose rearward	
Firing Order:	1-3-4-2	
Compression Ratio:	10:1	
Fuel System:	SIDI	
Fuel System Pressure	400 kPa Fuel Supply Line / 35MPa Fuel Rail Pressure	
Ignition System:	Electronic Spark Ignited Coil on Plug	
Knock Control:	flat response knock sensors	
Intake Manifold:	Passive	
Exhaust Manifolds:	Cast Iron	
Cooling System:	Forced flow liquid cooling	
	50% Water and 50% Ethylene Glycol (GM Dex-Cool Antifreeze Long Life)	
Coolant Liquid:	GMW 3420; Mixture defined per: HVACPTC-229	
Thermostat:	Inlet side - block open	
Cooling Fan	Electric motor driven	
Lubricating Oil:	0w20 (Dexos1) Gen II, 2015; GM55492565	
Fuel:	Premium RON 98	
Fuel Shut Off Speed:	6350	RPM
Notes:	ECU: E01, PartNr: 12669007BE Software: 19.19.135.03 Calibration: UNE2ULXT____9992_E01_191913503a_dyno Engine Build Phase: 2017 Gamma	