



# CASE STUDY: BG ENGINE PERFORMANCE SERVICE

**SERVICE** BG Engine Performance Service

**PRODUCTS** BG EPR® Engine Performance Restoration®, PN 109  
BG Advanced Formula MOA®, PN 115  
BG Platinum® 44K®, PN 208



**VEHICLE:**  
2019 BMW X3, 2.0L Turbo  
38,194 miles (61,467 km)

## PROBLEM

In GDI engines, high heat and extended oil change intervals create an environment that rapidly breaks down engine oil. This creates oil acids, varnish, sludge, and carbon buildup, which has a substantial effect on internal engine components. Affected areas include oil passages, piston rings, combustion chambers, and injectors. The result is oil consumption, compression loss, and drivability issues such as misfires, power loss, and reduced fuel economy.

## SOLUTION

The BG Engine Performance Service is an oil change with specially formulated chemistry to clean and remove deposits from the engine and the fuel system.



**BG EPR®** is added prior to oil change, dissolves deposits, and is removed with the used oil.

- Dissolves fuel gums
- Restores compression
- Restores power



**BG MOA®** is added to new oil to protect the engine...extending the life of the engine.

- Fortifies oil
- Protects engine
- Smooths engine operation



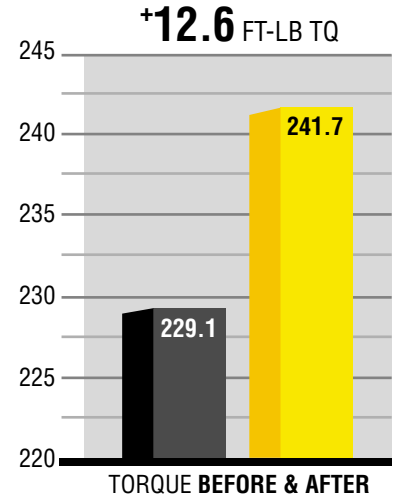
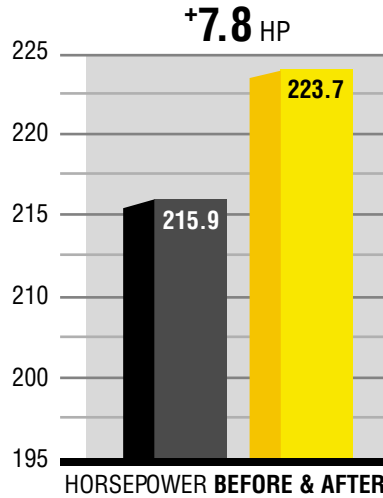
**BG 44K®** is added to fuel tank and continues to clean the fuel system as the vehicle is driven.

- Restores flow in fuel injectors
- Improves drivability
- Restores fuel economy

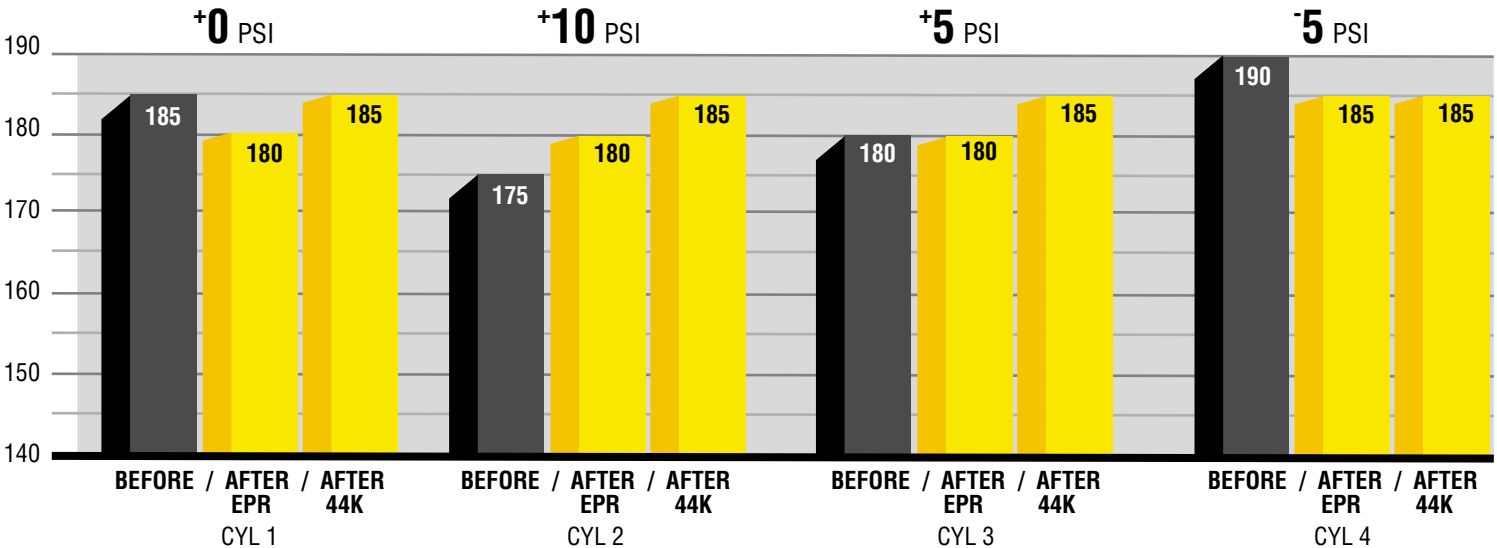


# PERFORMANCE TESTING RESULTS

**DYNO RESULTS:** We were able to restore the vehicle to 223.7 horsepower and 241.7 ft-lbs of torque.



**COMPRESSION RESULTS:** Compression was restored across all cylinders after the BG service was performed. Results show improvement in the dyno readings for “After EPR” (taken immediately after the service), and “After 44K” (taken after running a full tank of fuel with BG 44K®).



## SUMMARY

- Modern engine technology offers impressive performance and fuel economy; however, these engines are highly complex and require additional service and preventive maintenance to maximize these benefits and prolong the life of the engine.
- A BG Engine Performance Service will keep your vehicle's engine and fuel system clean, treated, and protected which will reduce costly repairs, restore performance, and improve drivability.

[Conducted by BG Proving Ground. June 2021]