



SOLID SHEET

“Protect Your Investment”

Contact your rep for more detailed GDI engine deposit information.

GDI EMISSIONS CONTROL SYSTEM CLEANER

Safe and effective for GDI and PFI engines, all gasoline and diesel fueled engines.

INTRODUCTION: GDI (Gasoline Direct Injection) engines inject fuel directly into the combustion chamber versus PFI (Port fuel Injection) engines injecting fuel into the intake runner. Potential GDI benefits include smaller engines providing increased power with reduced fuel consumption and emissions.

THE CHALLENGE: With GDI engine introductions by Mercedes in 1954 and Ford in 1968, what delayed GDI engine popularity? An SAE Paper gives the answer, “Early direct injection engines ... suffered from **severe deposit problems**, which could not be overcome at the time.”

Today, engine manufacturers respond to mandated CAFE fuel economy requirements and increased fuel costs by applying GDI technology while addressing deposit issues with complex, expensive systems such as VVT (Variable Valve Timing), complicated Atkinson engine concepts, PCV oil catch pans, etc. But an SAE Paper reports, “... engine fuel system deposits ... are formed in higher amounts in the GDI engine than in the PFI engine.”

Left unchecked, deposits can accumulate to negate GDI engine benefits and create expensive repair costs.

With more than 20% of new engines using GDI today and projections that GDI is becoming the technology of the future, it's important to address GDI engine deposit problems. [GDI Emissions Control System Cleaner addresses two significant GDI engine crankcase deposit issues:](#)

1. To improve combustion efficiency, GDI engines often increase cylinder compression from 9:1 to 14:1.
2. To improve fuel economy, today's engines reduce piston ring drag with low tension rings, reducing pressure against the cylinder wall by 50% or more.

These combine to increase blow-by of unburned fuel and combustion by-products into the crankcase:

1. Causing increased oily vapors expelled from the crankcase thru the PCV (Positive Crankcase Ventilation) system into the intake air stream where they increase intake valve deposit accumulation due to GDI's absence of intake runner fuel injection to wash and clean intake valves.
2. Causing increased crankcase engine oil degradation with varnish, sludge and carbon deposit formation.

THE SOLUTION: [True Brand® GDI Emissions Control System Cleaner addresses both issues by:](#)

1. Cleaning oily deposits and debris from the PCV emissions system, helping clean intake valve deposits.
2. Dissolving crankcase varnish, sludge and carbon deposits and improving oil drain.

APPLICATION / DIRECTIONS

Use Step 2 before applying Induction Cleaner and before oil change. 1. **Shake contents** and pour into crankcase. 2. Immediately start engine and idle for two (2) minutes, turn engine off. 3. Promptly apply GDI Induction Cleaner 4. Change Oil and Filter.

For engine deposits related to the fuel and induction systems, apply True Brand® GDI Fuel System Cleaner and True Brand® GDI Induction Cleaner.

FEATURES / BENEFITS

[True Brand® GDI Emissions Control System Cleaner provides a unique formula to safely address two deposit issues with today's complex, expensive, deposit-sensitive engines:](#)

1. Contaminant-removing formula helps clean the PCV emissions system and intake valve deposits.
2. Dissolves crankcase varnish, sludge and carbon deposits that pollute the emissions system and trap heat in the crankcase to degrade engine oil and increase crankcase deposit accumulation.