

Technical Bulletin

Diesel Engine EURO-IV and EURO-V
Recommended Engine Lubrication & Additives
 R.091022 V1.02

Engine Symptoms

- ▶ Black Smokes and bad emissions, fail emission test.
- ▶ Triggered UPPER OIL LEVEL check light caused by fuel sips into oil sump through piston ring.
- ▶ Triggered DPF or FORCE BURN check light caused by choked DPF and malfunction EGR valve caused by carbon built up.
- ▶ Poor engine performance caused by fuel contamination in the oil sump, choked DPF, malfunction EGR valve caused by carbon built up and poor cooling system.
- ▶ Poor fuel economy caused by fuel contamination in the oil sump, choked DPF, malfunction EGR valve caused by carbon built up and poor cooling system.

Recommended Engine Lubrication for EURO-IV and EURO-V

VOLTRONIC® 0W30 Extremely Low Ash or 5W30 Multi DPF.
 ACEA C3 standard (Extremely Low Ash motoroil). Approved to replace diesel long life motor oil DL-1.

VOLTRONIC® E20 - ENGINE FLUSH

To clean fuel (dropped) contamination in the oil sump.
 Treat every oil change interval.

VOLTRONIC® E55 - VISCO + (PLUS)

To improve oil-film strength on the piston ring crapper, prevent diesel fuel sips to the oil sump and prevent engine oil sips into combustion room. Treat every oil change.

VOLTRONIC® D12 - DIESEL SMOKE STOP

Remove carbon deposit in EGR valve and lubricate EGR valve. Treat every 5000 km into fuel tank.

VOLTRONIC® D25 - DIESEL INTAKE VALVE & THROTTLE BODY CLEANER

To clean throttle body and intake valve seat, improve engine compression and maintain A/F ratio.
 Treat every 10000 km.

VOLTRONIC® R30 - COOLANT AN (Amine-Nitrite Free) Concentrate

Approved by Daimler AG Germany for Mercedes-Benz norm 325.0.
 Boiling point +198°C, Freezing point -76°C. Recommended mixture ratio 1:1 with di-ionize water or distillate water.

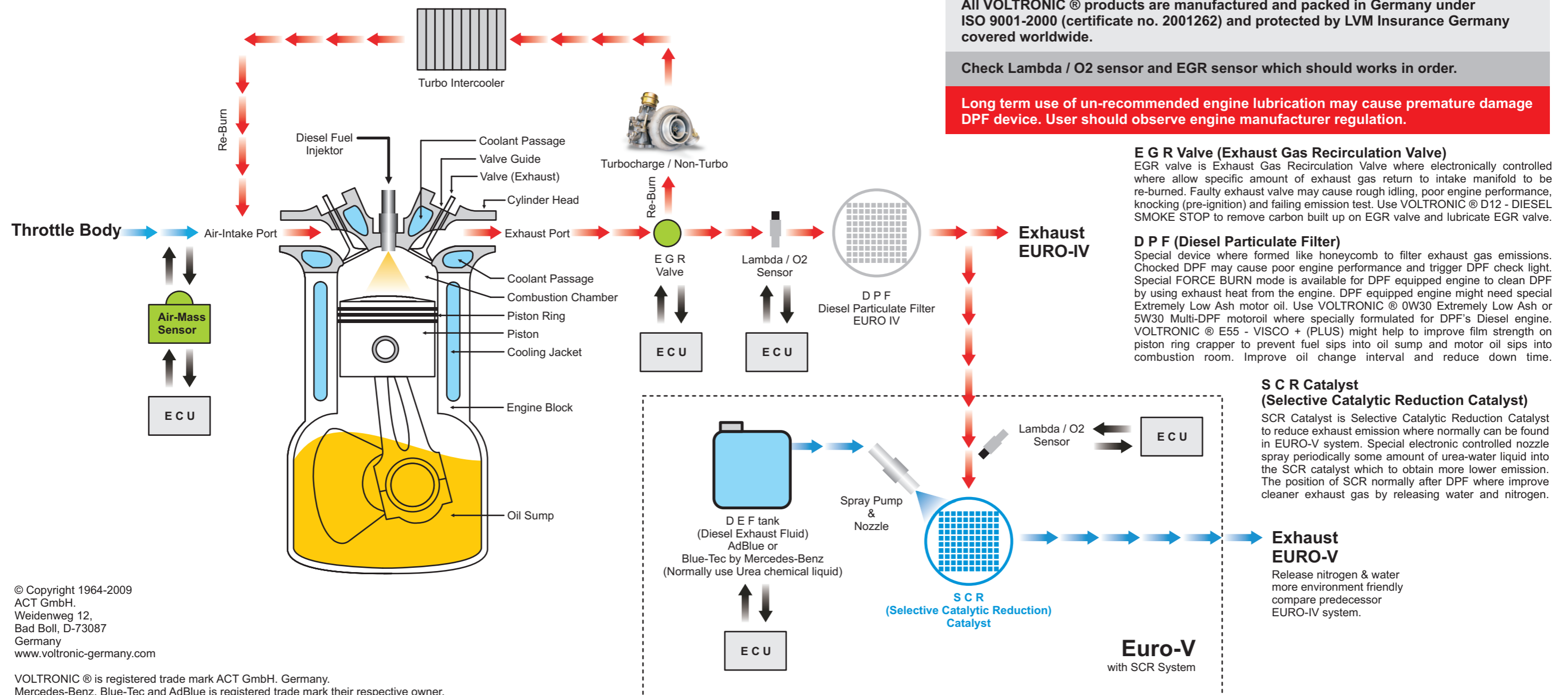
All VOLTRONIC® additives E20, E55, D12 and D25 are LOW ASH approved additives.
 All VOLTRONIC® products are manufactured and packed in Germany under ISO 9001-2000 (certificate no. 2001262) and protected by LVM Insurance Germany covered worldwide.

Check Lambda / O2 sensor and EGR sensor which should works in order.

Long term use of un-recommended engine lubrication may cause premature damage DPF device. User should observe engine manufacturer regulation.

EURO-IV and EURO-V Exhaust System

VOLTRONIC® Schmierstoffe Deutschland



E G R Valve (Exhaust Gas Recirculation Valve)
 EGR valve is Exhaust Gas Recirculation Valve where electronically controlled where allow specific amount of exhaust gas return to intake manifold to be re-burned. Faulty exhaust valve may cause rough idling, poor engine performance, knocking (pre-ignition) and failing emission test. Use VOLTRONIC® D12 - DIESEL SMOKE STOP to remove carbon built up on EGR valve and lubricate EGR valve.

D P F (Diesel Particulate Filter)
 Special device where formed like honeycomb to filter exhaust gas emissions. Choked DPF may cause poor engine performance and trigger DPF check light. Special FORCE BURN mode is available for DPF equipped engine to clean DPF by using exhaust heat from the engine. DPF equipped engine might need special Extremely Low Ash motor oil. Use VOLTRONIC® 0W30 Extremely Low Ash or 5W30 Multi-DPF motoroil where specially formulated for DPF's Diesel engine. VOLTRONIC® E55 - VISCO + (PLUS) might help to improve film strength on piston ring crapper to prevent fuel sips into oil sump and motor oil sips into combustion room. Improve oil change interval and reduce down time.

S C R Catalyst (Selective Catalytic Reduction Catalyst)
 SCR Catalyst is Selective Catalytic Reduction Catalyst to reduce exhaust emission where normally can be found in EURO-V system. Special electronic controlled nozzle spray periodically some amount of urea-water liquid into the SCR catalyst which to obtain more lower emission. The position of SCR normally after DPF where improve cleaner exhaust gas by releasing water and nitrogen.