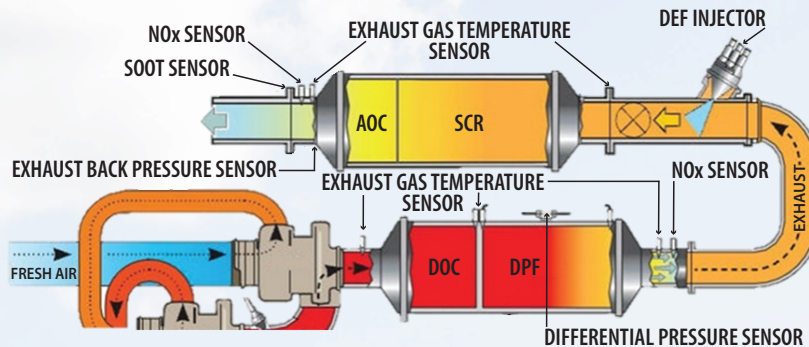




# DIESEL AFTERTREATMENT SYSTEM PREVENTATIVE MAINTENANCE

*Exhaust aftertreatment systems rely on many components to function properly and can benefit from a preventative maintenance replacement schedule to avoid unplanned repairs, maximizing uptime while protecting your engine and exhaust system.*



## ***Oxides of Nitrogen (NOx) sensors***

NOx sensors are the most critical component in control and diagnostic algorithms used by diesel aftertreatment systems, requiring the highest quality data collection capabilities.

NOx sensors installed upstream and downstream of the SCR system measure the conversion efficiency of NOx to Nitrogen by regulating real time DEF injection rates based on the engines demands.

Walker Products NOx sensor are the ONLY 100% NEW Original Equipment (OE) replacement available outside the engine and truck manufacturer dealer network. NOx sensors from Walker Products are made in the USA with OE based sensors and software at a more competitive price and better availability.

Life expectancy of NOx sensors for over the road vehicles is 100,000-150,000 miles, matching common DPF service intervals. Studies show the engine side-out NOx sensor failing sooner than the system side-out NOx sensor and should be considered when refining the preventative maintenance programs for aftertreatment systems.

## ***Exhaust Gas Temperature Sensors***

Aging EGT sensors can drift in and out of tolerance limits causing over fueling and unnecessary regens. Failing sensors may relay misinformation intermittently to the ECU without setting a diagnostic trouble code but are stored as inactive faults and must be considered during DPF service procedures.

Replace EGT sensors as preventative maintenance items when the DPF service is performed rather than waiting for the dashboard warning light and possible engine derating condition occurs.



## Differential Pressure Sensor

The Differential Pressure Sensor (DPS) monitors the performance of the DPF by measuring exhaust gas pressure upstream and downstream of the vehicle's DPF. Hoses can become clogged, the sensor can become contaminated, or damaged from heat and vibration causing failure. Scan tool data, electrical circuit testing and pressure testing combined will determine sensor operation.



## Exhaust Back Pressure Valve

EBP sensors gauge the pressure of the exhaust gases at the turbo inlet and after it passes through the diesel particulate filter (DPF). If it fails or becomes carbon clogged the engine will increase fueling and exhaust pressure producing more power to expel the exhaust gases. This can lead to overheating issues and increased wear and tear on aftertreatment components.



## Particulate Matter/ Soot Sensor

Soot sensors estimate the amount of soot in the diesel particulate filter and detect excessive particulate matter emissions downstream of a DPF in case of a filter failure. Soot sensors use measurements from the differential pressure sensor and will define an accurate DPF regeneration strategy (how often, when to start or stop a regeneration).



## Walker Products Pro Tips

Diagnostic scan tools can provide in depth aftertreatment system health reports prior to removing the DPF for cleaning. Identifying any aftertreatment components that have stored inactive fault codes and further inspecting them for wiring connection issues and proper signal voltages will ensure a more efficient aftertreatment system.

Having Walker Products NOx sensors and Exhaust Temperature Sensors on-hand allows users to replace the most critical components in a preventative manner based on fleet history.

Preventative maintenance is key to lowering cost per mile for fleet customers. Historical parts and service history provide the basis for predictive replacement of common components in house rather than on the road.



***Walker Products Heavy Duty Sensors are 100% OE Based Components***



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