

ABOUT US

Tripurari Enterprises Pvt. Ltd (TEPL) Exclusive channel partner with "Automoto Genset" specializes in advanced emission control technology for Diesel Generator Sets. Dedicated to sustainability, we offer cost-effective solutions that ensure compliance with regulatory standards, enhance operational efficiency, and minimize environmental impact.

TEPL-Automoto has been at the forefront of the natural gas industry, dedicated to safeguarding the environment and paving the way for a greener future for generations to come. TEPL-Automoto is leading provider of certified Retrofit Emission Control Devices and Dual Fuel Kits.

We pride ourselves on delivering cutting-edge, customized solutions tailored to meet the specific needs of our customers. Our team of experts is dedicated to providing comprehensive support, from system design and integration to installation, training, and ongoing maintenance.

15+ years in the Automotive industry



Leading OEM Supplier



Dedicated to innovative solutions for emission control



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THE AIR WE BREATHE: CONFRONTING THE PM EMISSION CHALLENGE

Particulate matter (PM) is recognized as the most deadly form of air pollution globally.

India is the world's second most polluted country.

In past two decades average annual particulate pollution has increased by 67.7 percent.

The contribution of diesel fuel to the total PM_{2.5} ambient concentration can be as high as 23 per cent in Delhi and 25 per cent in Mumbai.

Exposure to particulate matter for a long time leads to respiratory and cardiovascular diseases.

Over a million Indians die prematurely every year due to air pollution.

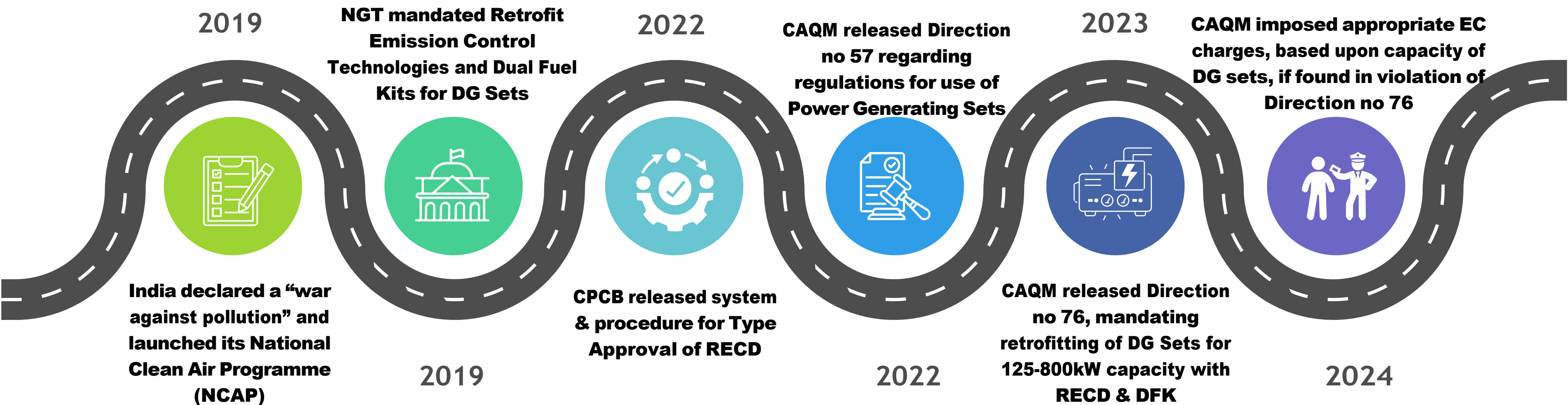
IARC-WHO has classified diesel exhaust as carcinogen.

Air pollution is shortening lives by 11.9 years in Delhi-NCR.



Retrofit Emission Control Devices

A Government-Mandated Leap Towards Cleaner DG Sets



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GOVT. NOTIFICATIONS : PAN INDIA

2020



J&K



Tamil Nadu



Haryana

2021



Goa



Delhi

2023

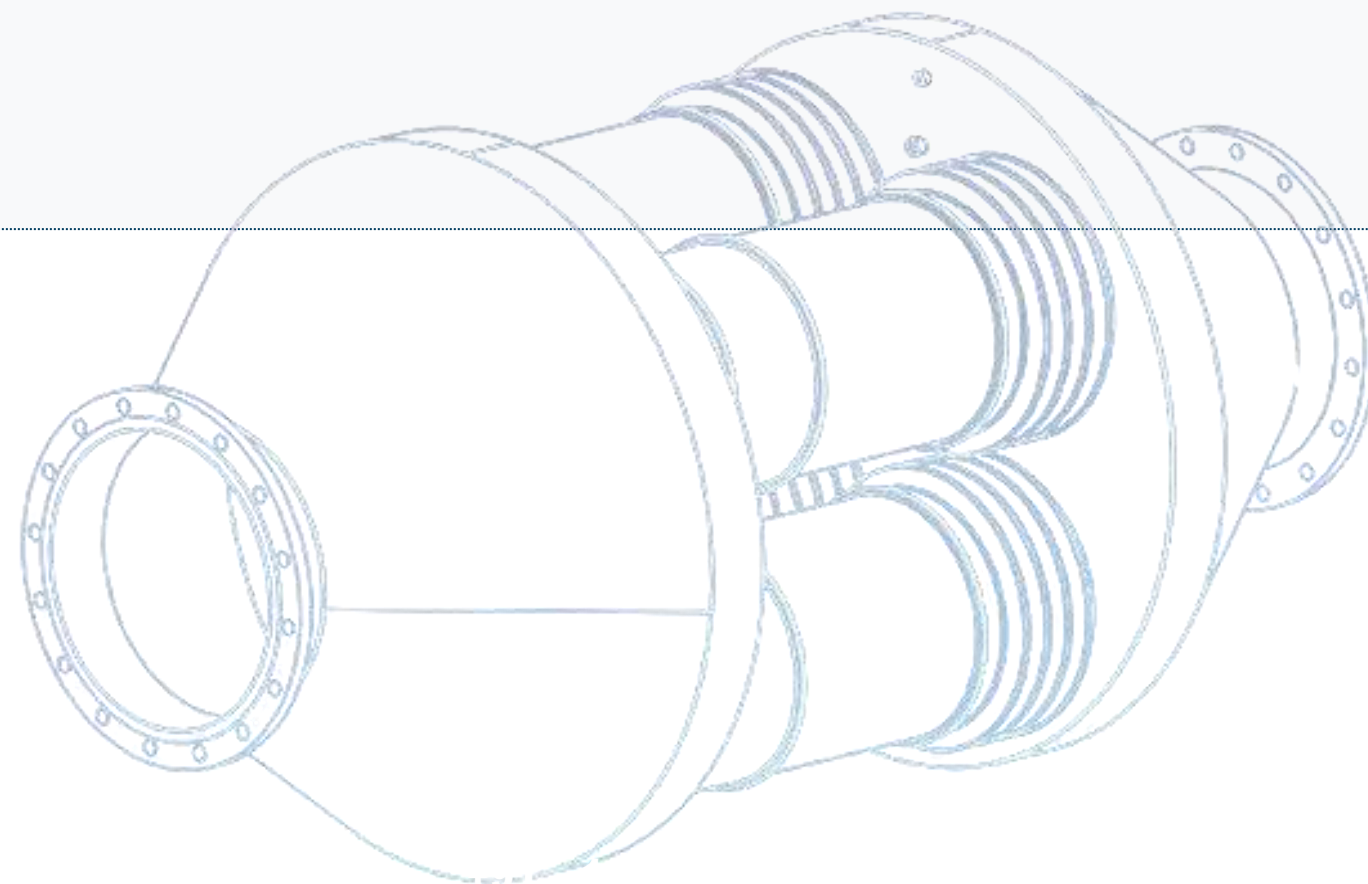


Maharashtra

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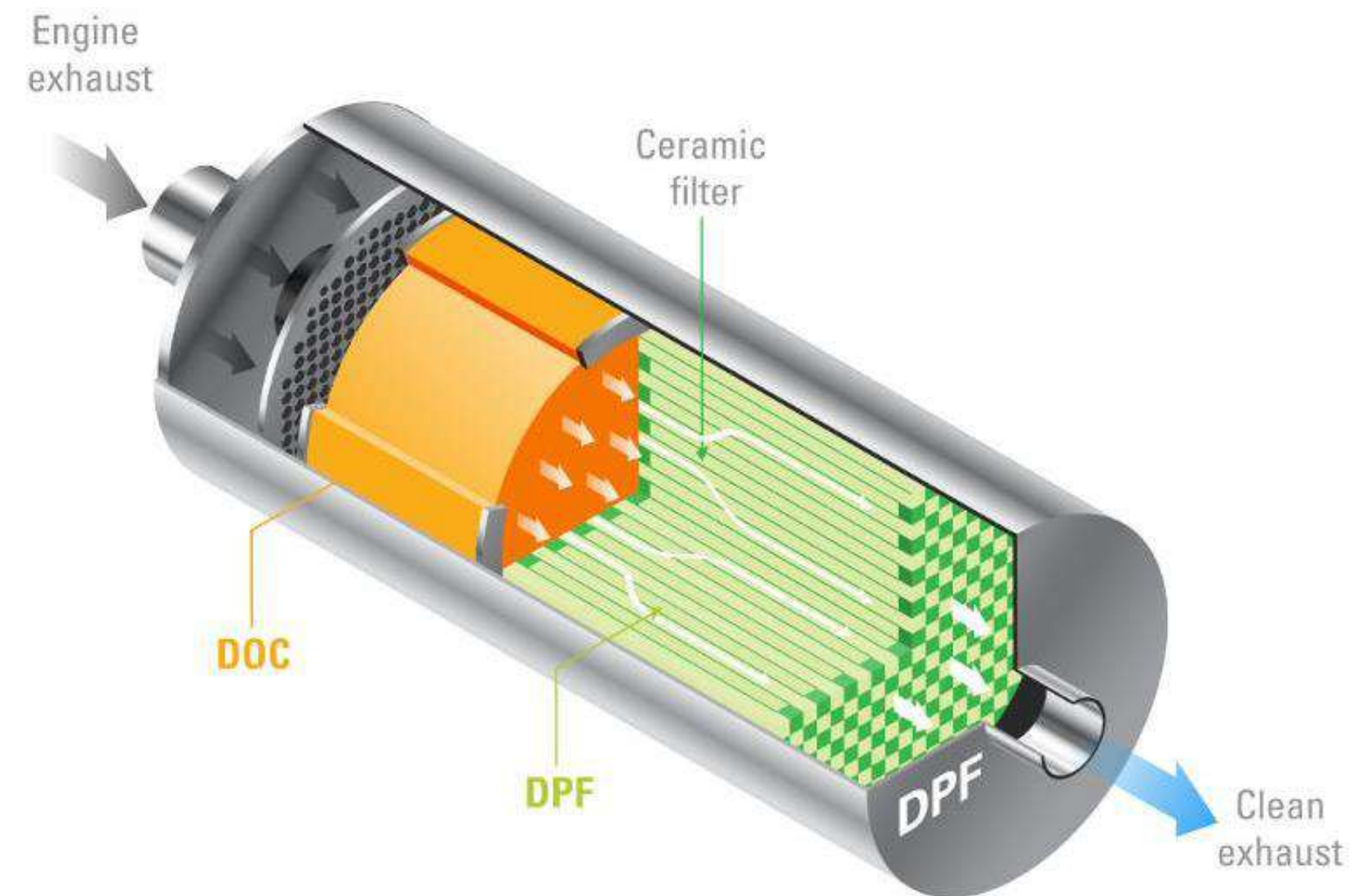
TEPL-AUTOMOTO RETROFIT EMISSION CONTROL DEVICE



TEPL-AUTOMOTO RECD

TECHNOLOGICAL SPECIFICATION

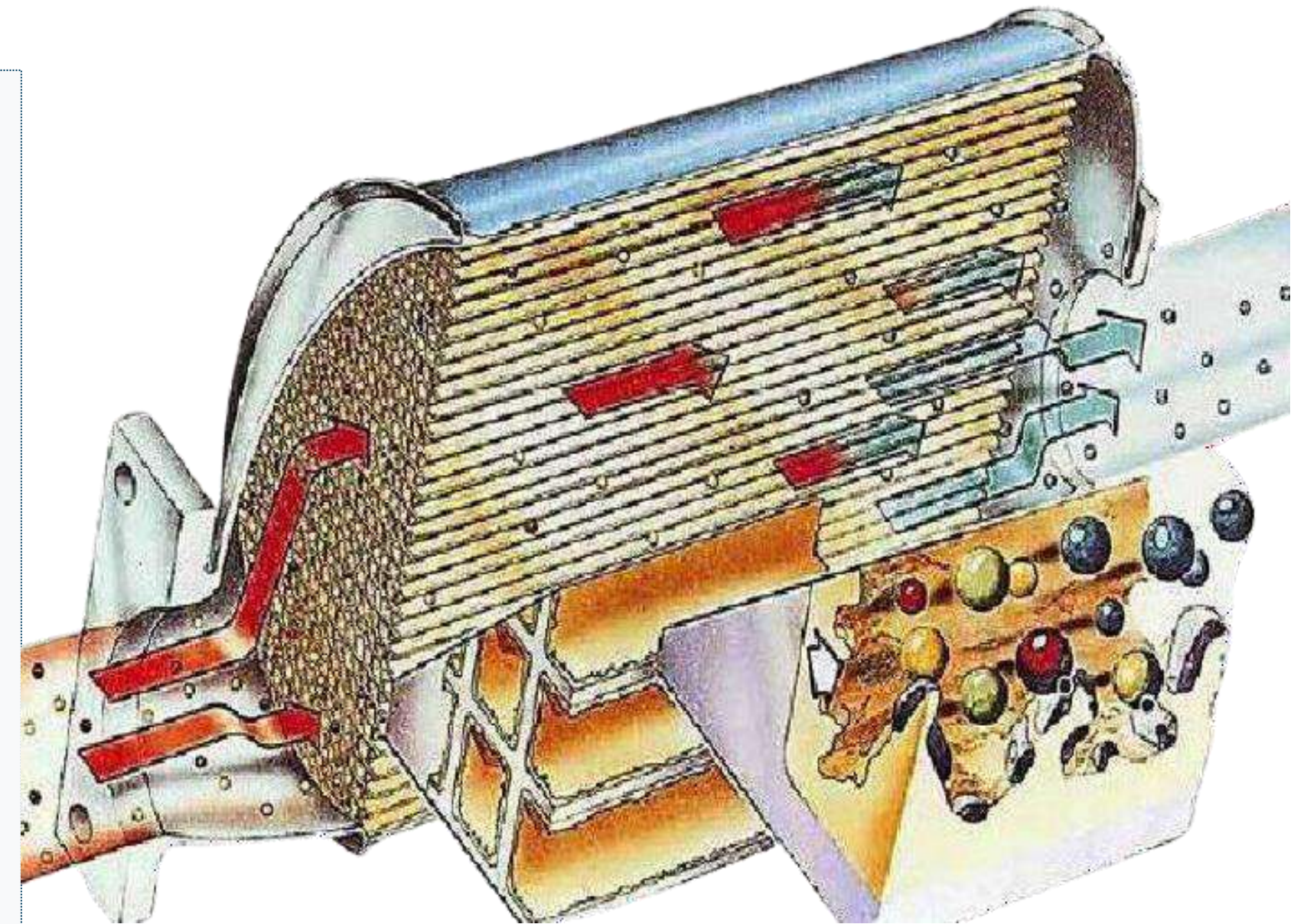
- **RECD is used in diesel generators to reduce Particulate Matter (PM) from the exhaust gases. It is designed to capture and remove the fine particles that are produced during the combustion process of diesel generators.**
- **The pollutants in the generator's exhaust first pass through the catalyst along the airflow.**
- **Hydrocarbons (HC) and Carbon monoxide (CO) undergo a redox reaction with oxygen, converting them into harmless carbon dioxide (CO₂) and water (H₂O).**



TEPL-AUTOMOTO RECD

WORKING MECHANISM - DIESEL OXIDATION CATALYST (DOC)

- ▶ **Structure:** Honeycomb-shaped ceramic carrier coated with an oxidized noble metal catalyst.
- ▶ **Function:** Oxidizes Carbon monoxide (CO), Hydrocarbons (HC), and soluble organic fraction (SOF) in Particulate Matter (PM) in tail gas.
- ▶ **Conversion Efficiency:** Approximately 80%-90% for HC and CO, and around 30% for SOF.
- ▶ **Heat Generation:** The oxidation process generates significant heat, facilitating the required temperature for SCR reaction or passive regeneration of CDPF.



TEPL-AUTOMOTO RECD



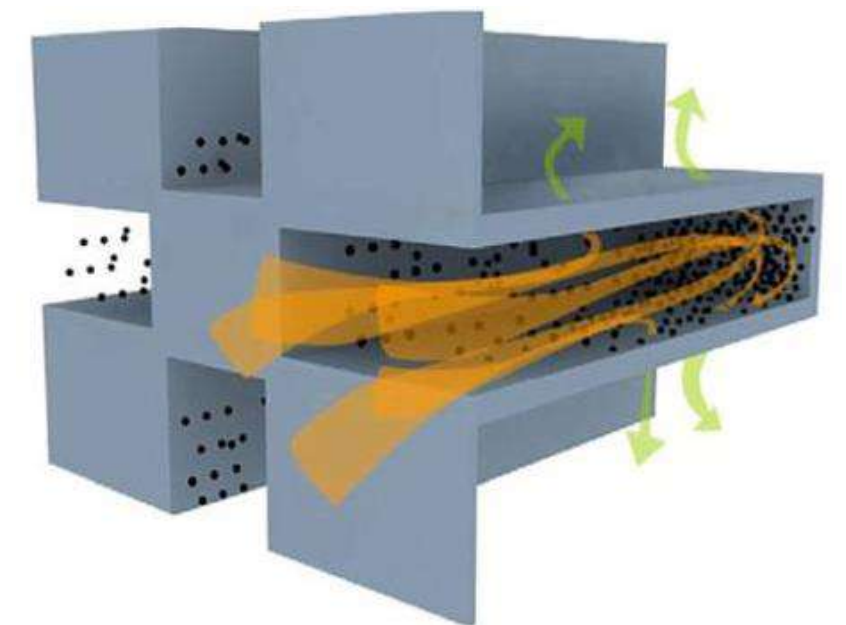
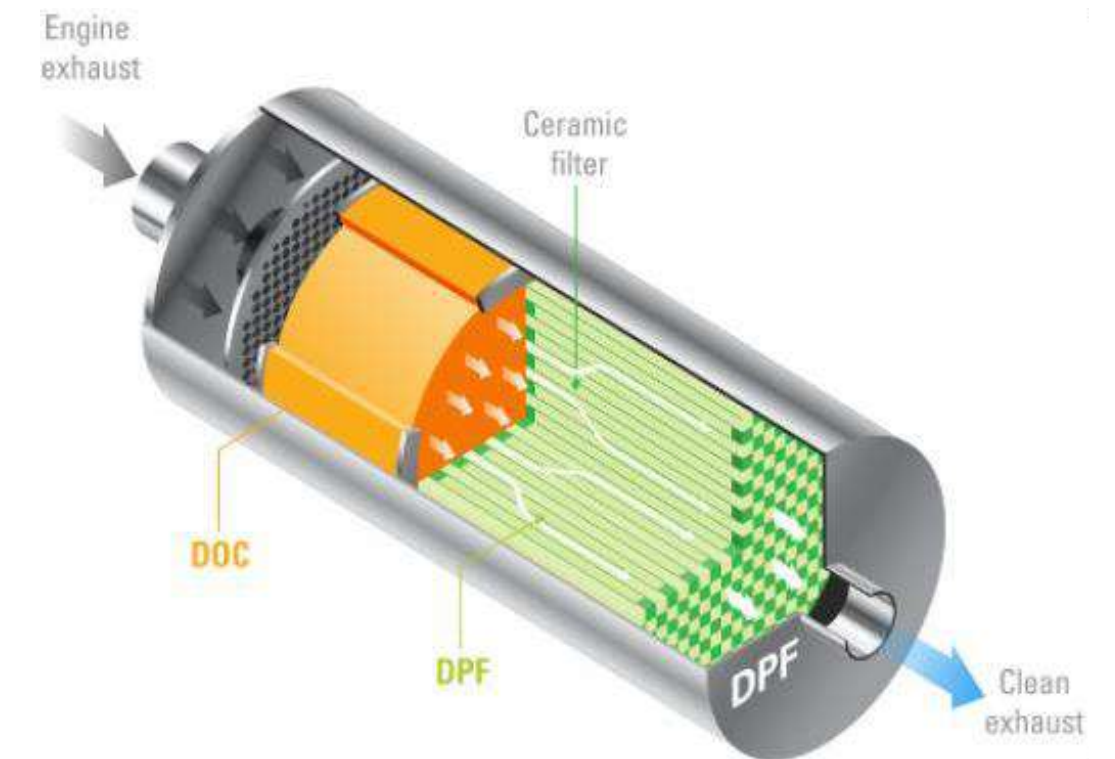
WORKING MECHANISM - DIESEL PARTICULATE FILTER (DPF)

Function: Utilizes inertial collision, interception, diffusion, and gravity settling mechanisms to filter Particulate Matter (PM) from exhaust gas.

Capture Efficiency: Achieves approximately 95% capture efficiency for PM in exhaust gas.

Regeneration: Regeneration uses high temperature to effectively burn away the collected particles. In passive regeneration operating temperature of a diesel generator engine will be high enough to maintain a state of continuous regeneration.

Regeneration Reactions: This involves removal of captured PM through passive regeneration. This relies on NO_2 as a reactant to optimize the temperature for continuous regeneration and successful removal of Particulate Matter.



TEPL-AUTOMOTO RECD



COMPATIBILITY



TEPL-Automoto RECDs are compatible with all leading brand Engines.



TEPL-Automoto RECD covers the Diesel Generators of all Power range used in the Industry.



TEPL-Automoto RECD has been Type Approved by CPCB accredited lab ICAT

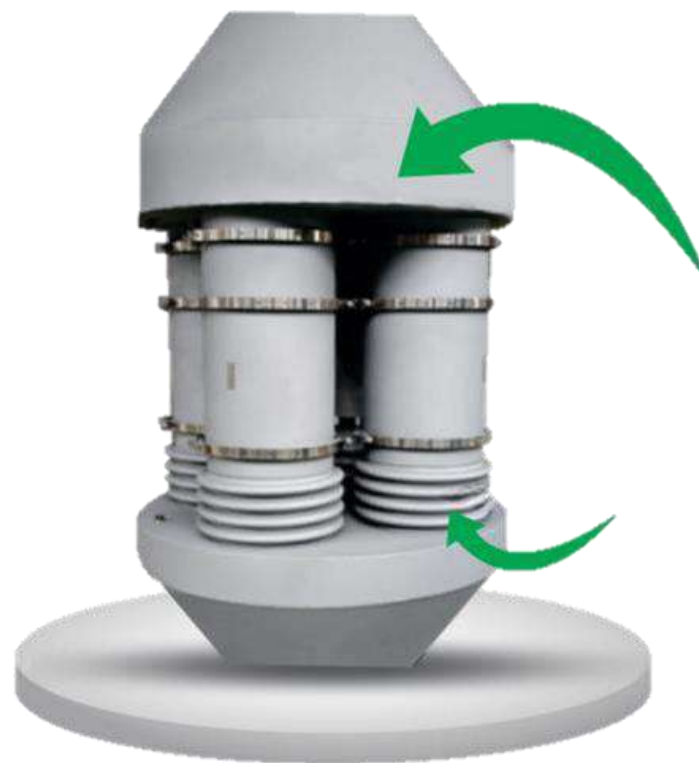


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MATERIAL & STRUCTURE



- **Material : 409SS**
Heat resistant ferritic stainless steel
Corrosion Resistance



COMPENSATOR

- **Material : 304SS**
- **Reduction in Noise**
- **Reduce Thermal Expansion of material**
- **Longer life of the RECD**



UNIQUE CLAMP MECHANISM

- **Easy to Remove filters**
- **Service in less than 2 Hours**
- **Hassle free service**
- **Minimal Downtime**



TEPL-AUTOMOTO RECD

AUTOMOTO SMART DIAGNOSTIC SYSTEM

TEPL-Automoto RECDs are equipped with cutting-edge telematics technology, enabling users and service teams to remotely access comprehensive data regarding the RECD's health and relevant information.

Monitors Back Pressure & Temperature

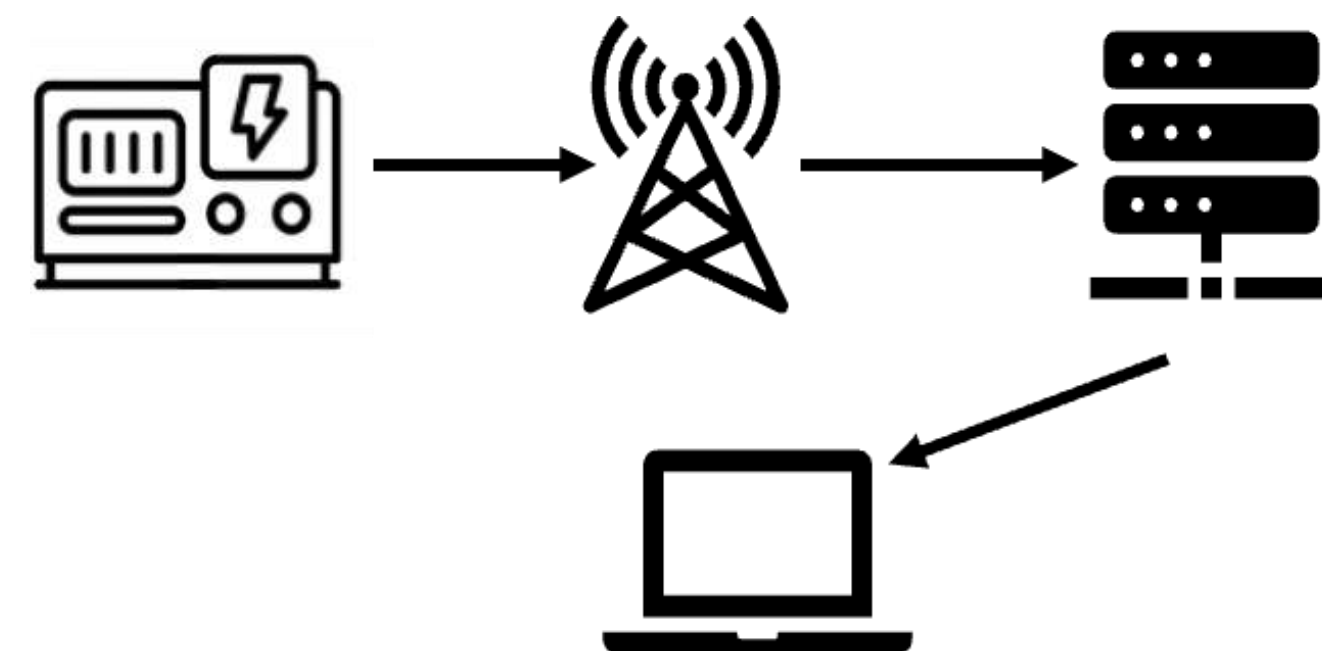
Indicates health alarms

Facilitates after-sales service

Swiftly identify any issues or anomalies that may arise

Facilitates prompt and efficient maintenance and repairs

Enhances the reliability & durability of your Genset

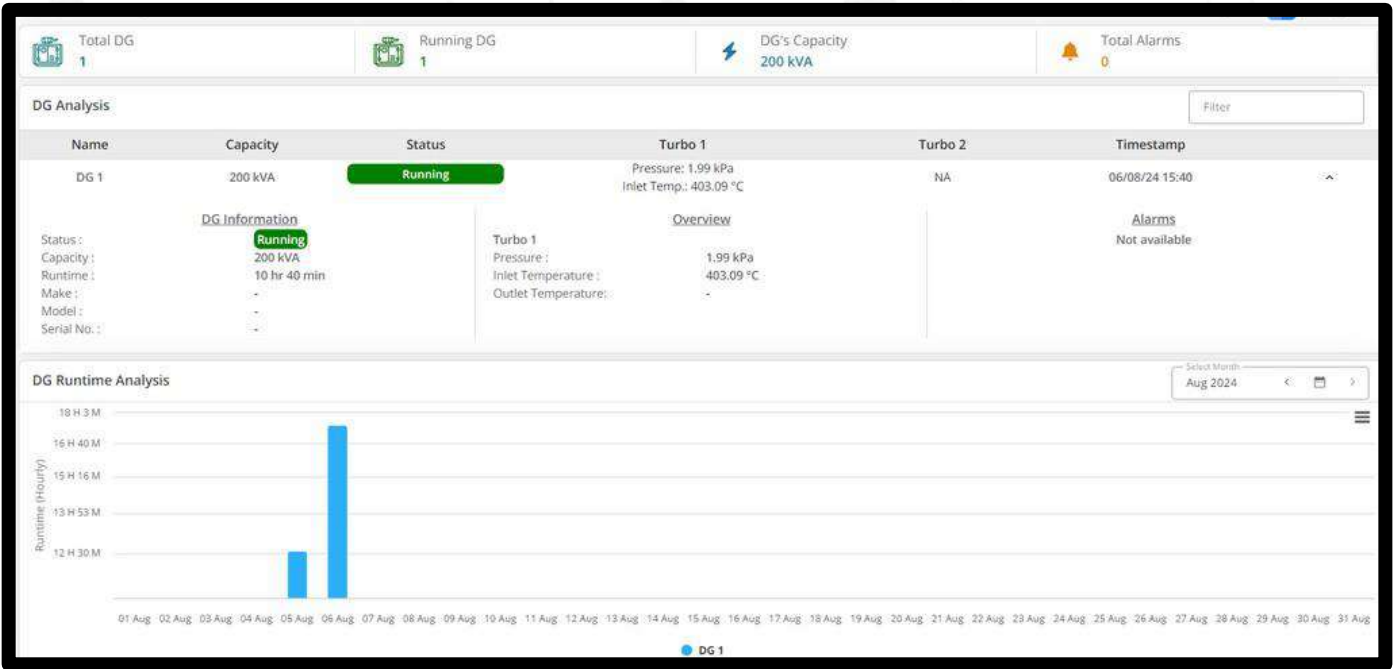
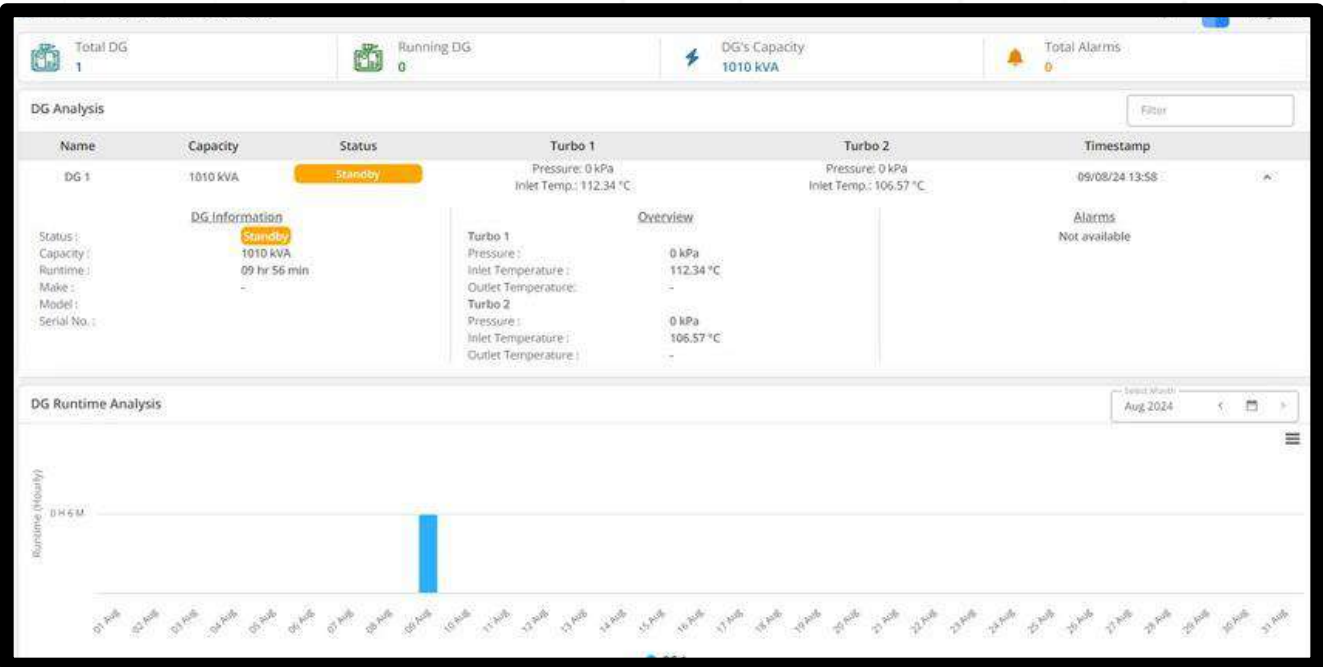
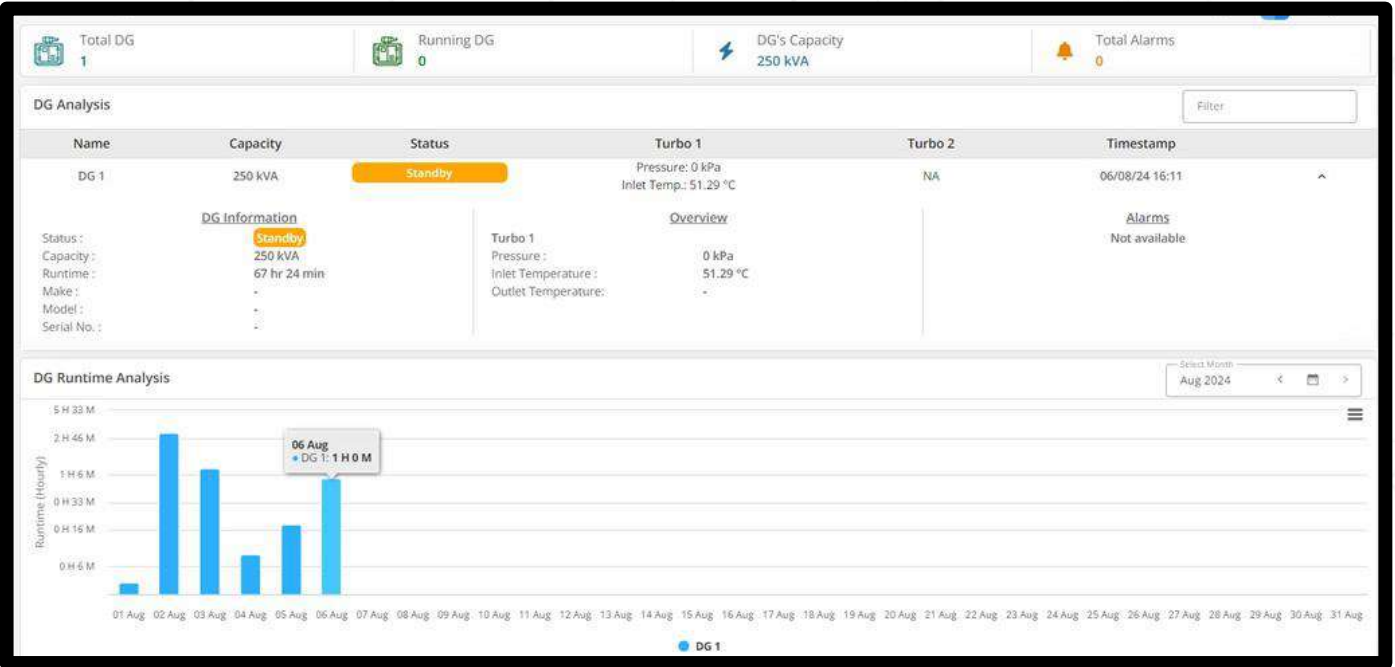
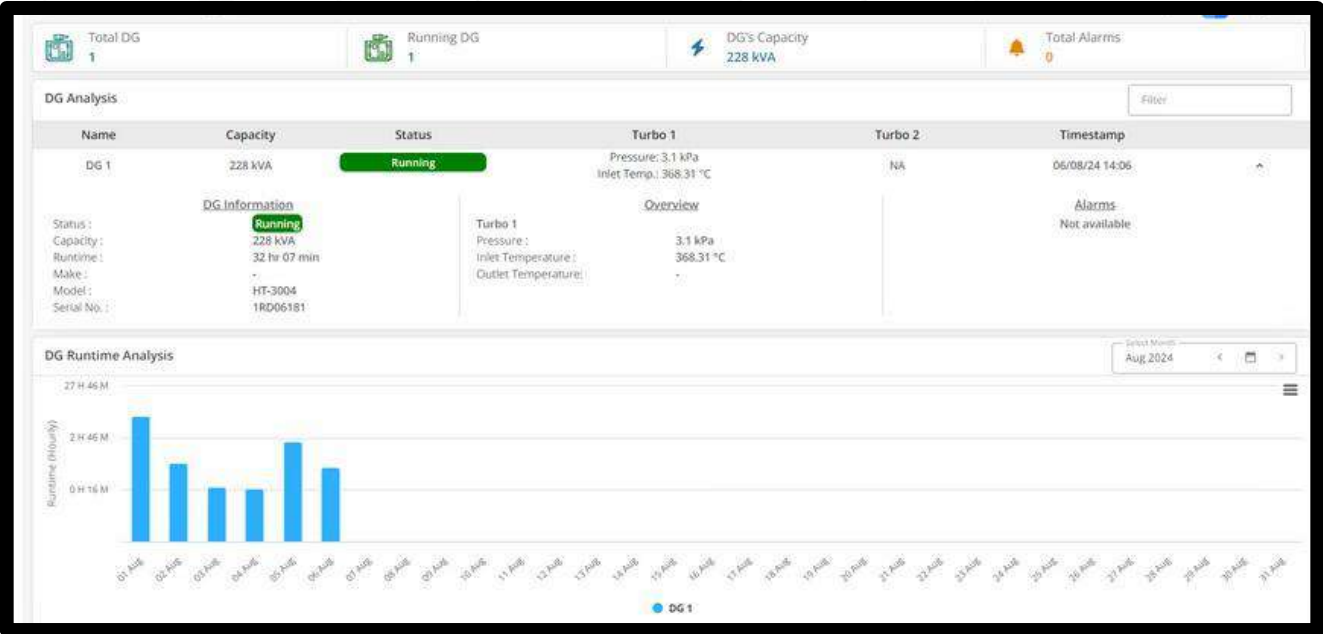


Real Time Monitoring with Advanced Telematics

TEPL-AUTOMOTO RECD



AUTOMOTO SMART DIAGNOSTIC SYSTEM IN ACTION



TEPL-AUTOMOTO RECD



ADVANTAGES



Reduces Particulate Matter (PM) emissions up to 99.21% and Hydrocarbons (HC) and Carbon monoxide (CO) emission by over 70%, right at the source



**Compliance with CPCB regulations;
Type Approved by ICAT Manesar**



Compliance with CAQM (Direction No. 76)



**Our technology is upgradable to meet evolving
emission standards**



100% indigenous technology



Sleek and Compact Design

Negligible operational cost & maintenance



Trusted by many; PAN India presence

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THEM VS US



Slow Service

Tiresome Nut and Bolts takes >1 Day for Service



Uncertified Products Installed

Have Approvals for only 1 power range of CPCBII



No PM Monitoring

Doesn't monitor real time PM Reduction



Poor PM Reduction

Have PM Reduction <85% in various Power Ranges



VS



Quick Service

Our Clamp Mechanism Ensure service in <2 Hours



Comprehensive Certification

We take certifications seriously and ensure timely approvals for all power ranges



Real time PM Monitoring

Available as a plug and play add on device ; Installs in 5 minutes



Best in Class PM Reduction

Our RECDs are certified with >95% PM Reduction for all Power ranges



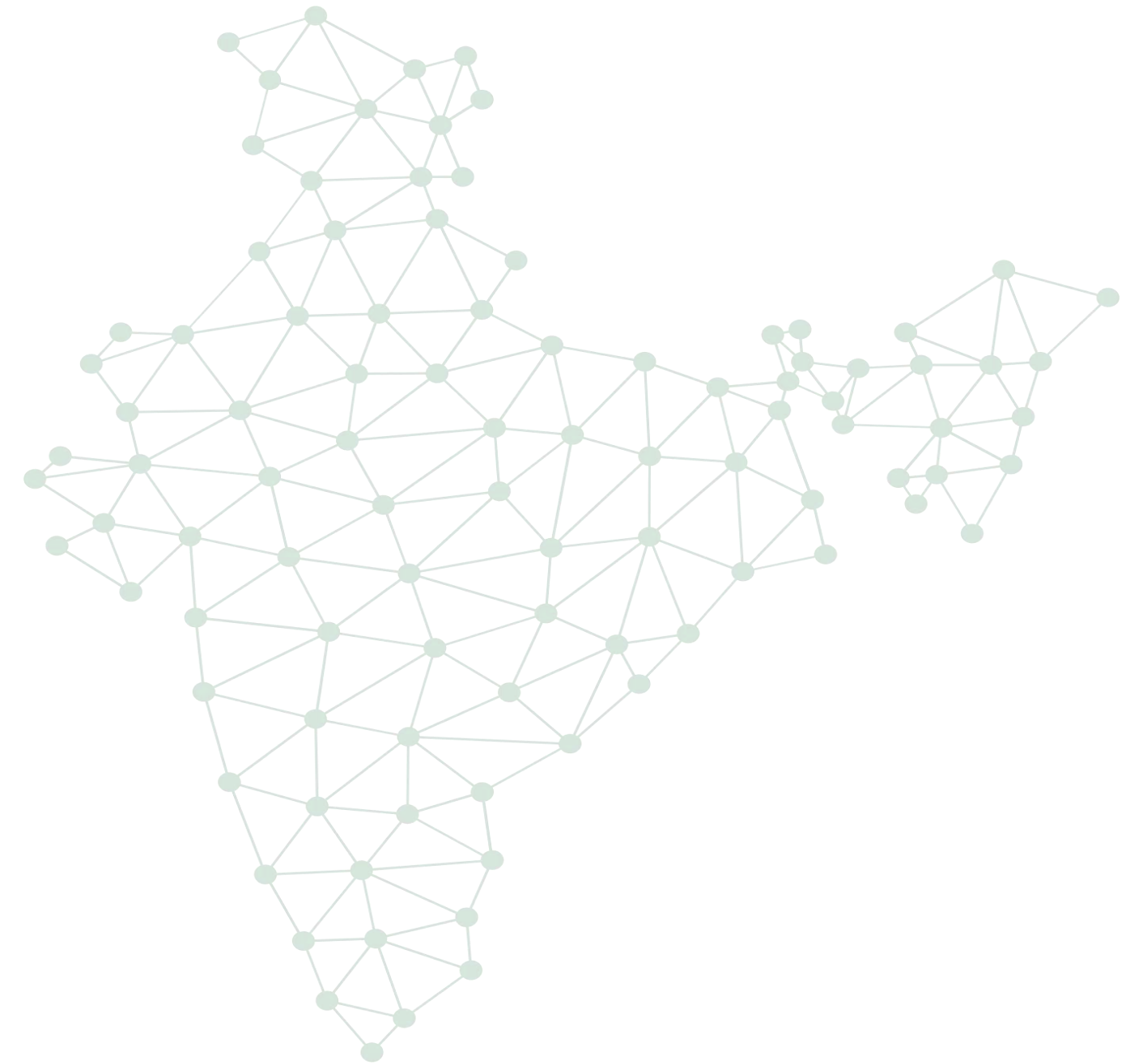
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TEPL-AUTOMOTO RECD



WE PROVIDE nationwide services

- ✓ **Service Guarantee:** We offer nationwide service coverage ensuring prompt assistance wherever you are.
- ✓ **On-Site Engineer Visit:** Rest assured, our engineer will be at your site within 2 days of reporting any issues.
- ✓ **Same-Day Telephonic Resolution:** For problems that can be resolved remotely, we provide same-day telephonic assistance, ensuring minimal downtime



TEPL-AUTOMOTO RECD

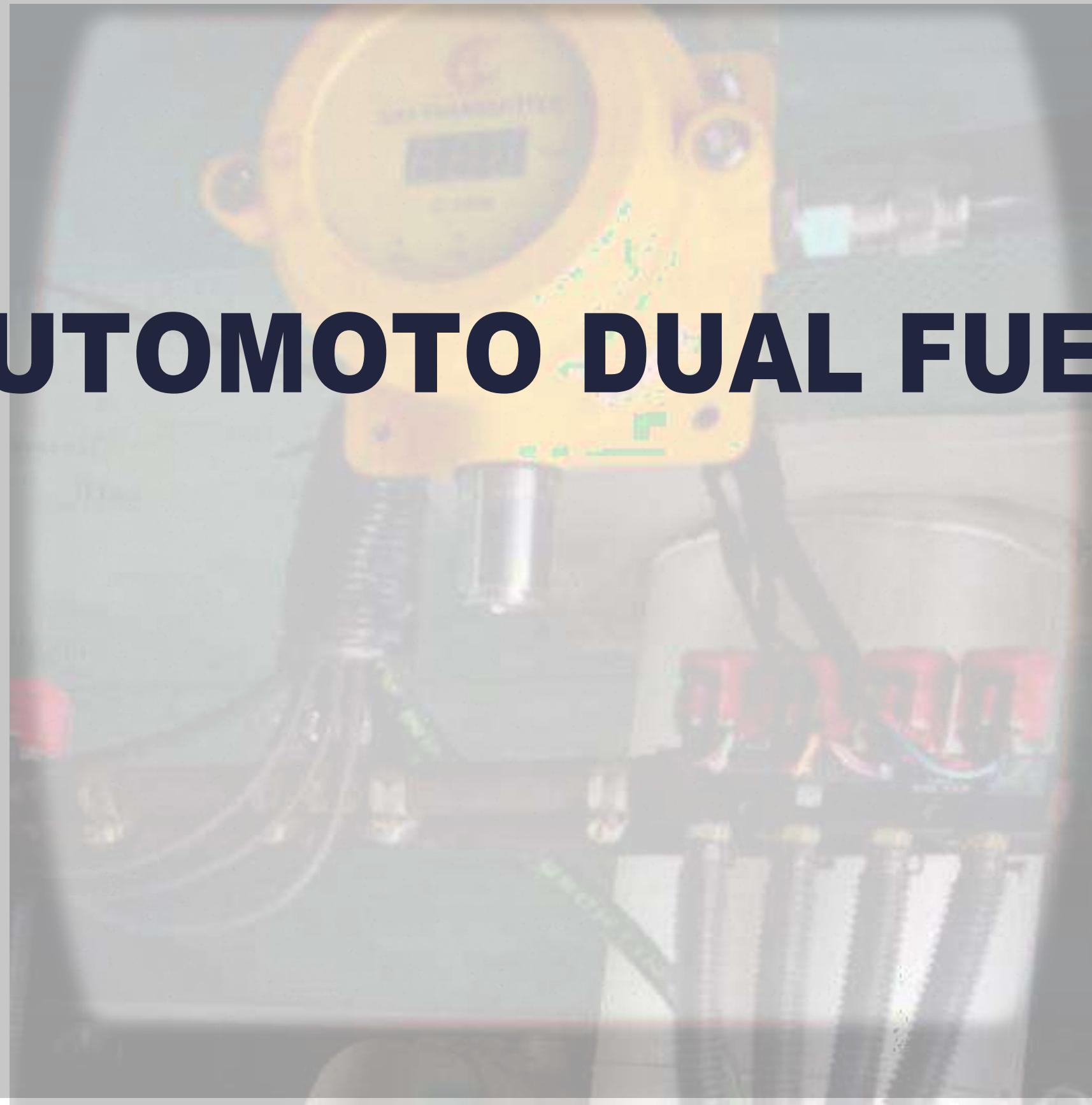
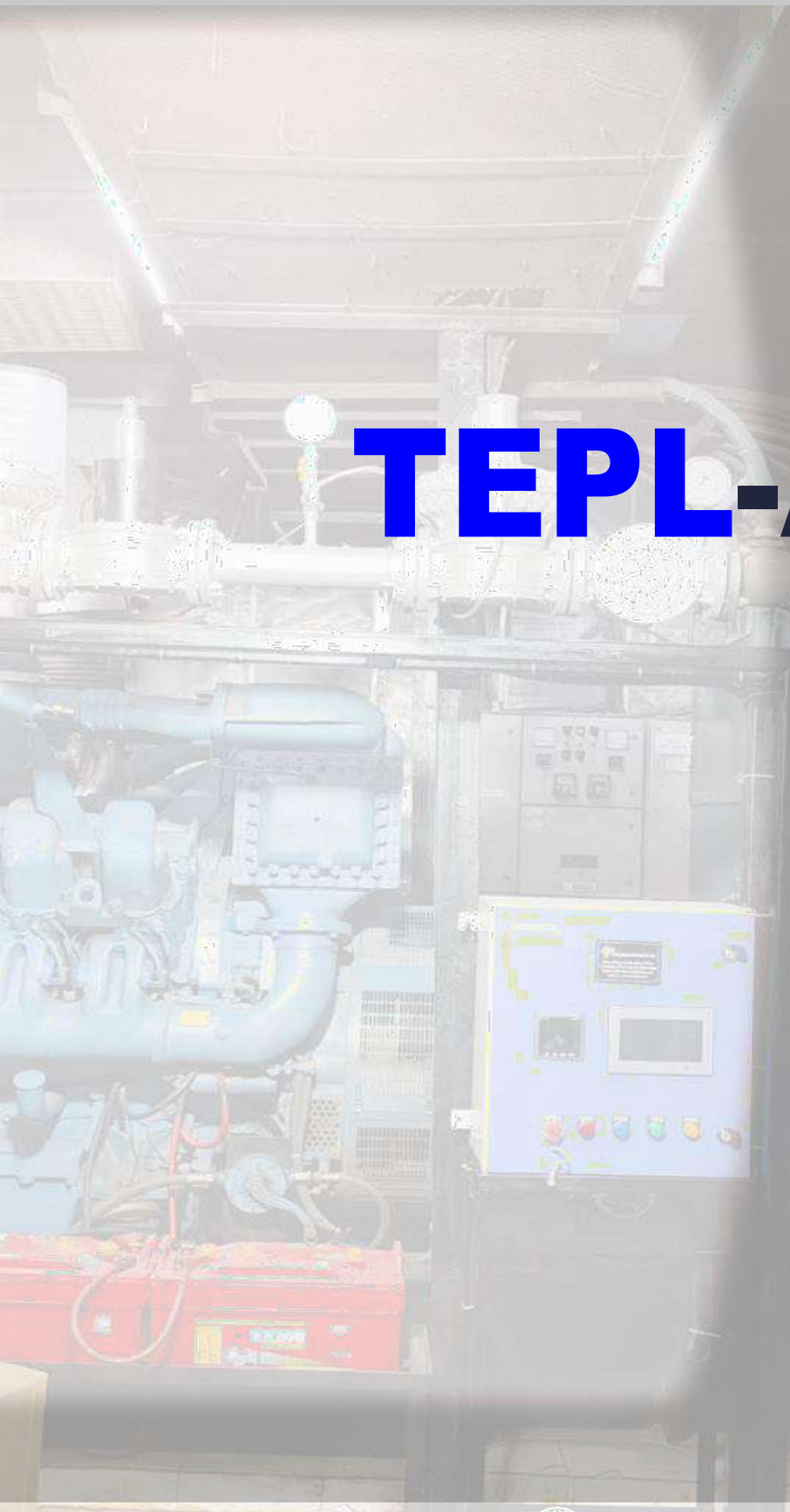


INSTALLATION PICTURES



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TEPL-AUTOMOTO DUAL FUEL KIT



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TEPL-AUTOMOTO DFK

ABOUT AUTOMOTO DFK

Automoto Genset is dedicated to providing top-tier, cost-effective solutions that significantly reduce Particulate Matter (PM) emissions from diesel generators, promoting a cleaner and sustainable environment. Automoto Dual Fuel technology has been developed to safely operate the engine at an optimized diesel fuel/gas ratio of at least 25:75, and to maintain the same power output and response to load changes, as the original diesel engine.

**ECU
Controlled
System**

**Cost
Effective
Solution**

**Reduced
Diesel fuel
Consumption**

**Low
Maintenance**

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TEPL-AUTOMOTO DFK



TECHNOLOGICAL SPECIFICATION - ELECTRONIC FUEL INJECTION

Control System



- Adjusts fuel maps
- Sensor **calibration**
- Controls algorithms to optimize gas **delivery**
- Ensures proper generator performance

Electrical Connection Harness



- Custom design for automotive use
- Meets IP54 Standard
- Thermal protection in areas exposed to **high temperatures**
- **Protection against the intrusion of dust and humidity**

Injector Rail



- Specially designed to deliver natural gas **into the engine**
- Sized appropriately as per generator power **requirements**

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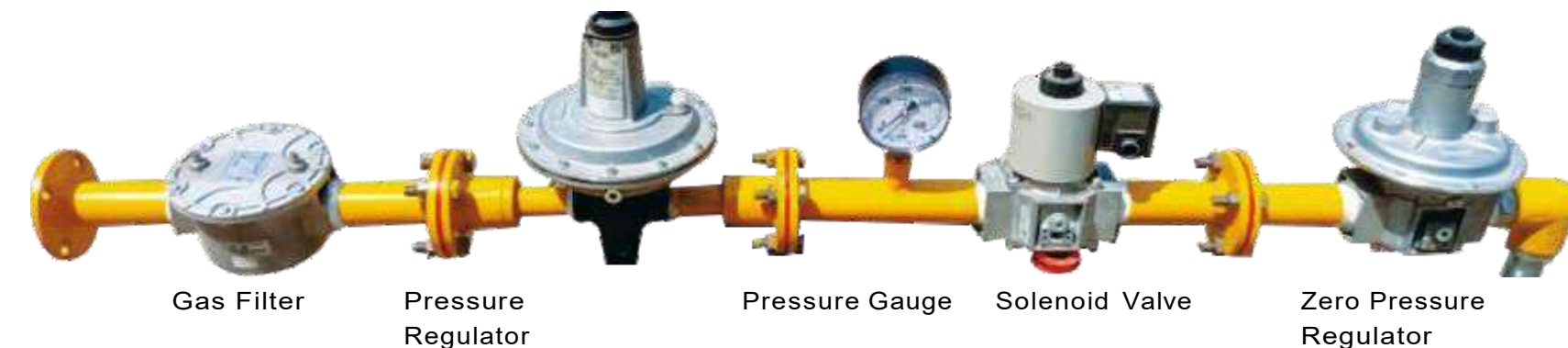
TEPL-AUTOMOTO DFK



TECHNOLOGICAL SPECIFICATION - GAS TRAIN

- **Dual fuel solutions consist of specialized kits that can be retrofitted onto existing high-speed diesel engines, enabling the use of a diesel and natural gas mixture as fuel. Post-conversion, the engine retains the capability to operate solely on diesel. However, 'gas-only' operation is not feasible.**
- **The dual-fuel system delivers fuel gas to the combustion cylinders through the gas train into a specialized air-gas mixer. The mixer is installed on the engine's air inlet before the turbocharger. Combustion is initiated by diesel as the ignition source, followed by the ignition of the gas.**
- **A state-of-the-art electronic controller continuously monitors critical engine parameters through the operation and transitions seamlessly from 'Dual fuel' to 'diesel only' mode if they cross the preset limits. It provides complete safety to the engine while operating in the Dual-fuel mode.**

Gas Train



DUAL FUEL CONTROLLER



Modulating Actuator/Valve





TEPL-AUTOMOTO DFK

SAFETY FEATURES

Gas Leak Detector



Hooter



If Leakage, auto cut-off



TEPL-AUTOMOTO DFK



BENEFITS

-   **Best in Class; Make & Safety features as per European Standards**
-   **Compliance with CPCB, CAQM & SPCB Regulations**
-   **Improved air quality with significant reduction in NOx, PM and GHGs emissions**
-   **Cost Effective Solution**
-   **Optimizes the combustion process, maximizing engine efficiency and power output**
-   **Low Maintenance**
-   **No Major Changes in the Basic Generator configuration**
-   **Seamless Transitions between different fuel sources, ensuring uninterrupted power**
-   **Enhanced Environmental Impact**

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INSTALLATION PICTURES

Electronic Fuel Injection



Gas Train



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Thank You!

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