

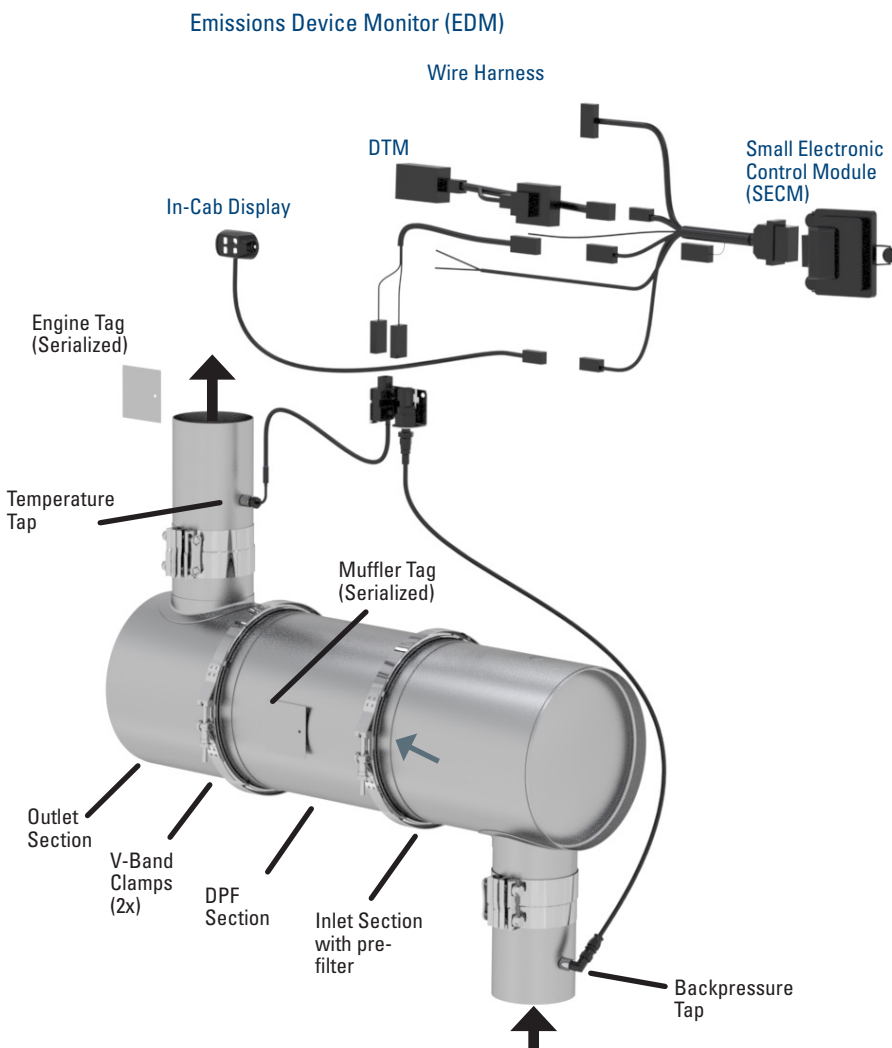


# EPA Verified Non-Road LNF Muffler System

## Solutions for Off Road Vehicles

### NR-LNF (Non-Road - Low NO<sub>2</sub> Filter Muffler Kit)

Passive Diesel Particulate Filter (DPF) technology provides the highest tailpipe PM reduction available today (>90%), making it a popular choice for retrofit programs. However, passive DPFs are sensitive to exhaust temperature and minimums must be met to ensure consistent and reliable DPF regeneration. The Clean Diesel Group NR-LNF muffler is designed and verified for non-road, EPA Tier 1 or Tier 2 diesel engine applications.



### NR-LNF Technology

- Eliminates PM and gaseous emissions from diesel exhaust
- Uses exhaust heat to burn PM in the DPF
- Passive DPF technology relies on engine duty cycle to provide the heat necessary for DPF regeneration. Data logging of the existing vehicle is required to confirm the application meets the device criteria.
- Requires ULSD Fuel (15 ppm or less sulfur content) that meets ASTM D975. Blends up to B20 BioULSD (20% biodiesel/80% ULSD) per ASTM D6751 diesel fuel specifications may also be used.
- Under normal operation, the DPF requires cleaning annually, every 50,000 miles, 1,800 hours or when the in-cab display alerts are illuminated, whichever comes first.

### NR-LNF Highlights

- Approved for EPA Tier 1 and Tier 2 non-road diesel engines
- Robust off-road mounting hardware included
- Can be installed on engines up to 365 hp
- Weighs 177 lbs - 211 lbs
- Shorter length allows for easier under hood installation
- Includes Emissions Device Monitor (EDM)
  - Monitors status of LNF Muffler
  - Indicates when DPF cleaning is required
- Made in Auburn, Alabama USA
- Filtration solution providers to OEM's for 100 years

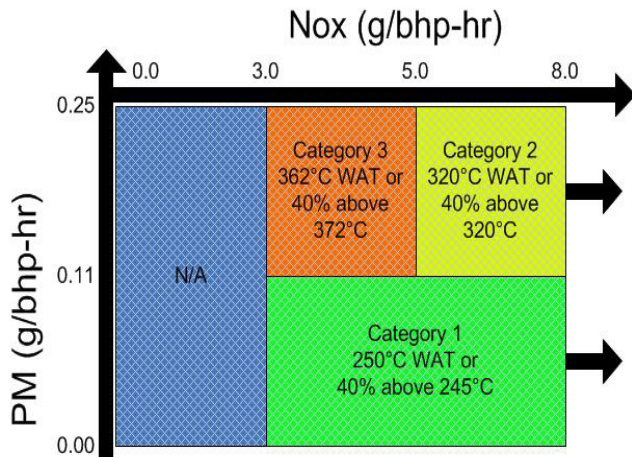
## NR-LNF Application Criteria

Clean Diesel Group requires that every vehicle be data logged prior to applying NR-LNF Muffler Kits.

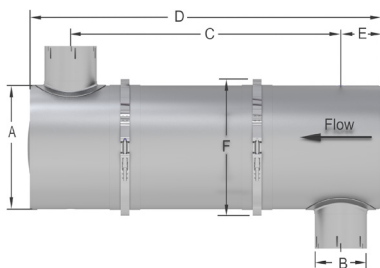
The NR-LNF muffler is EPA verified for non-road Tier 1 or Tier 2 diesel engines certified with a maximum PM level of 0.25 g/bhp-hr. The NR-LNF muffler requires an exhaust temperature profile sufficient for regeneration.

To see if your engine qualifies for a NR-LNF muffler, please refer to the chart below to determine your engine category and the required temperature profile.

For more information on data logging, see Brochure F111340.



## NR-LNF Muffler Kits



- Each NR-LNF Muffler Kit includes:
- Emissions Device Monitor (EDM)
  - Serialized Muffler and Engine Tag
  - Robust Off-Road Mounting Brackets

Dimensions						Max. HP	Muffler Kit Number	Inlet Assembly	Outlet Assembly	DPF Replacement Section	Mounting Bracket	V-band Clamp
A	B*	C	D	E	F							
10"	4"	27.02"	34.52"	3.75"	11.22" Dia	175	X009927	P233539	P235005	X009952	P236501	P227750
10"	5"	26.52"	34.52"	4.00"	11.22" Dia	175	X009928	P233540	P235006	X009952	P236501	P227750
11"	4"	27.02"	34.52"	3.75"	12.22" Dia	285	X009935	P234987	P235015	X009953	P236751	P212925
11"	5"	26.52"	34.52"	4.00"	12.22" Dia	285	X009936	P234992	P235016	X009953	P236751	P212925
13"	5"	26.52"	34.52"	4.00"	14.22" Dia	365	X009947	P234994	P235020	X009954	P236756	P229851

\*Inlet and outlet are the same nominal diameter

Replacement Tag Part No. X009648

## EDM

The Clean Diesel Group EDM tells the vehicle operator when DPF regeneration is required. It also records and monitors DPF operating conditions. Temperature and backpressure readings are continuously recorded to aid in analyzing vehicle operating trends and to support troubleshooting.



An EDM Kit is included with every NR-LNF Muffler Kit. In-cab display shown.

For more information on the Emissions Device Monitor and diagnostic service tool, see Brochure F111276.

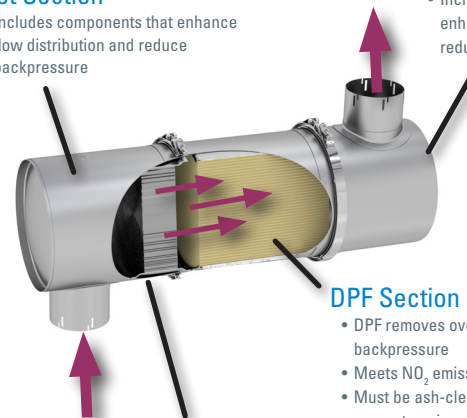
## Inside the NR-LNF Muffler

### Inlet Section

- Includes components that enhance flow distribution and reduce backpressure

### Outlet Section

- Includes components that enhance flow distribution and reduce backpressure



### DPF Section

- DPF removes over 90+% of PM at lower backpressure
- Meets NO<sub>2</sub> emission limits
- Must be ash-cleaned periodically to prevent engine performance degradation

### Pre-Filter Section

- Removes a third of incoming PM, reducing the load on DPF section.
- Creates NO<sub>x</sub> for PM reduction



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