



LEVEL 3+  
Passive DPF Technology

## LNF and LXF MUFFLER KITS and School Bus Application Guide





## Donaldson LXF and LNF Muffler Emissions Retrofit Kit A Lower Cost Approach to High Efficiency Results

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 Donaldson LNF and LXF products are designed and verified for select high NO<sub>x</sub> and low NO<sub>x</sub> on-road engine applications:

- LNF Mufflers for MY 1993-2006 high NO<sub>x</sub> engines
- LXF Mufflers for MY 2002- 2006 low NO<sub>x</sub> engines

LNF - Low NO<sub>2</sub> Filter    LXF - Low NO<sub>x</sub> Filter



*The dual LNF muffler system is shown above.*

## LNF & LXF Highlights

- Approved for most on-road engines:
  - LNF Muffler for MY 1993-2006 high NO<sub>x</sub> engines
  - LXF Muffler for MY 2002-2006 low NO<sub>x</sub> engines
- Extensive offering (over 60 installation kits)
- 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 (see page 7 for 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.

## LNF & LXF Highlights

### LNF and LXF Muffler

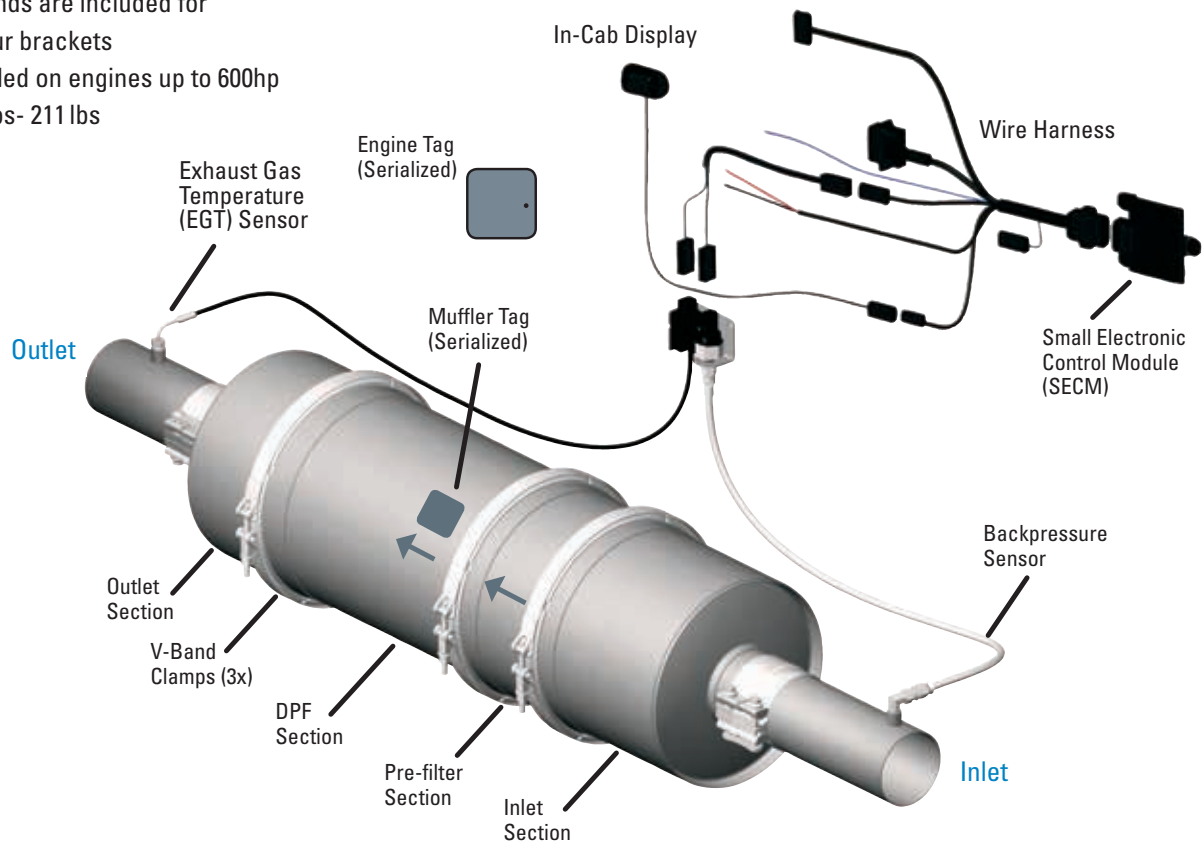
- Eliminates PM and gaseous emissions from diesel exhaust
- Uses exhaust heat to burn PM in the DPF
- Up to 3 times heavier than OEM Muffler

### Dual LNF and LXF Muffler

- Mounting bands are included for attaching your brackets
- Can be installed on engines up to 600hp
- Weighs 177 lbs- 211 lbs

### Emissions Device Monitor (EDM)

- Monitors status of LNF/ LXF Muffler
- Indicates when DPF cleaning is required



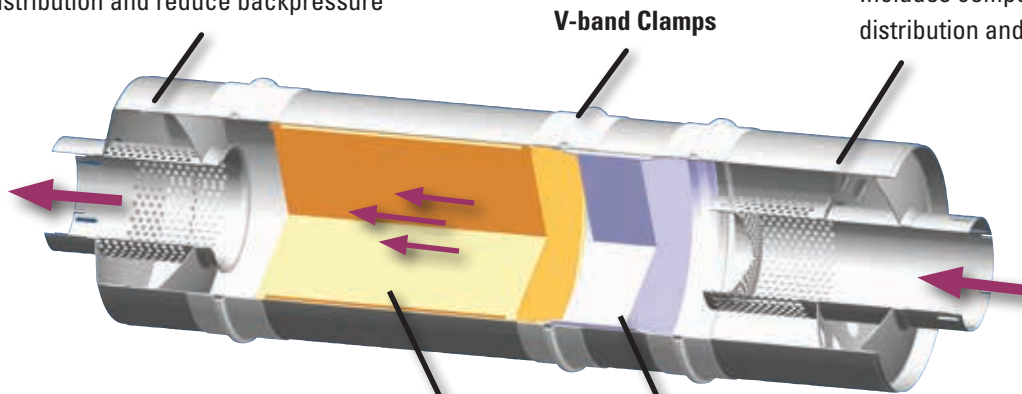
# The Technology Inside

## Outlet Section

- Includes components that enhance flow distribution and reduce backpressure

## Inlet 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>2</sub> for PM reduction

Features	Benefits
Customer-preferred passive DPF technology	<ul style="list-style-type: none"> <li>• Lowest cost approach to high-efficiency exhaust filtration</li> <li>• Lowest complexity product with the highest reliability</li> </ul>
Proprietary pre-filter design enhances device operation	<ul style="list-style-type: none"> <li>• Removes up to one third of incoming PM, reducing load on wall-flow DPF</li> <li>• Produces NO<sub>2</sub> for DPF regeneration</li> </ul>
Innovative catalyst coating	<ul style="list-style-type: none"> <li>• Produces NO<sub>2</sub> in zone where needed</li> <li>• Prevents excess NO<sub>2</sub> emissions</li> <li>• Reduces product cost</li> </ul>
Ceramic DPF substrate	<ul style="list-style-type: none"> <li>• Provides high filtration efficiency at lower backpressure</li> <li>• Increases engine horsepower range</li> </ul>
Optimized flow distribution provides uniform flow across entire DPF face	<ul style="list-style-type: none"> <li>• Increases flow (hp) capacity</li> <li>• Provides uniform soot loading for improved operation</li> </ul>
Broader application range	<ul style="list-style-type: none"> <li>• One point criteria and WAT expands product application range</li> </ul>
Modular design permits installation flexibility	<ul style="list-style-type: none"> <li>• Reduces installation and service time when cleaning the DPF</li> </ul>
Gasket-free design	<ul style="list-style-type: none"> <li>• Lower cost during DPF ash cleaning and service</li> </ul>
Emissions Device Monitor (EDM)	<ul style="list-style-type: none"> <li>• In cab display</li> <li>• 500+ hours of memory for data and fault collection to support troubleshooting</li> <li>• Temperature and backpressure monitoring</li> <li>• Provides convenient push button reset</li> <li>• Voltage range (12-24V)*</li> </ul>

Enhanced LNF and LXF Muffler maintenance

# Upgraded Monitoring System and Technician Tool

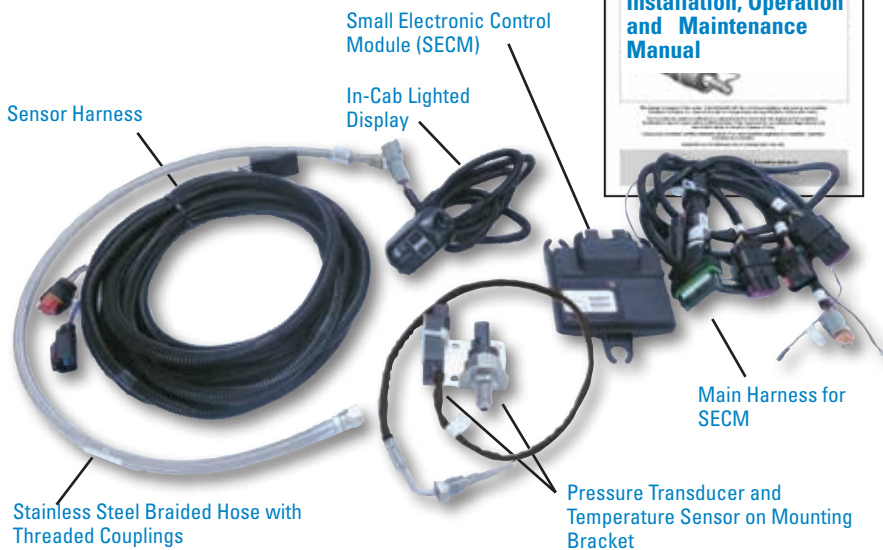
## Emissions Device Monitor (EDM)

The Donaldson Emissions Device Monitor (EDM) is an integral part of our filter-based diesel emission control system (DECS). The EDM continuously records and monitors exhaust system temperature and back pressure. The EDM sends alerts to the vehicle operator, via the In-Cab Display, when abnormal or undesirable conditions are detected. It also identifies when routine filter maintenance is required. The recorded information assists in troubleshooting and analyzing vehicle operating trends.

The EDM offers the following upgrades over the previous Filter Service Monitor:

- Date and time functionality on some versions
- Dual temperature sensing on some versions
- "Freeze Frame" fault tracking (included in versions with new software)
- "Real Time" display of back pressure and temperature
- Sensor rationality functionality

An EDM Kit is included with every LNF and LXF Muffler Kit.



### Optional Parts (sold separately)

**50 ft. Sensor Harness**  
(ideal for rear engine vehicles)  
Part No. P231739

**50 ft. Dual Temp Sensor Harness**  
(ideal for "dual temp" rear engine vehicles)  
Part No. P236776

**24-12V DC Converter**  
Part No. P232038

**50 ft. Display Extension Harness**  
(ideal when SECM is mounted in rear of vehicle)  
Part No. P236736

**4 ft. Temp Sensor Extension Harness**  
(ideal when the temperature sensor needs to be mounted more than 4 ft from pressure sensor)  
Part No. P236497



## Technician Service Tools

(sold separately)

**Diagnostic Reset Tool (DRT)**  
Part No. P231740



**Service Tool Link-up Cable**  
Part No. X007999



**Diagnostic Reset Tool & Link-up Cable**  
Part No. X009649

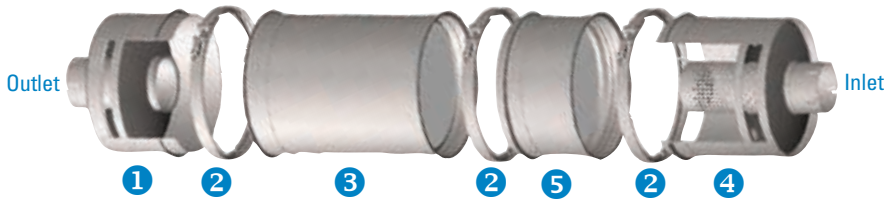


Extensive Product Line

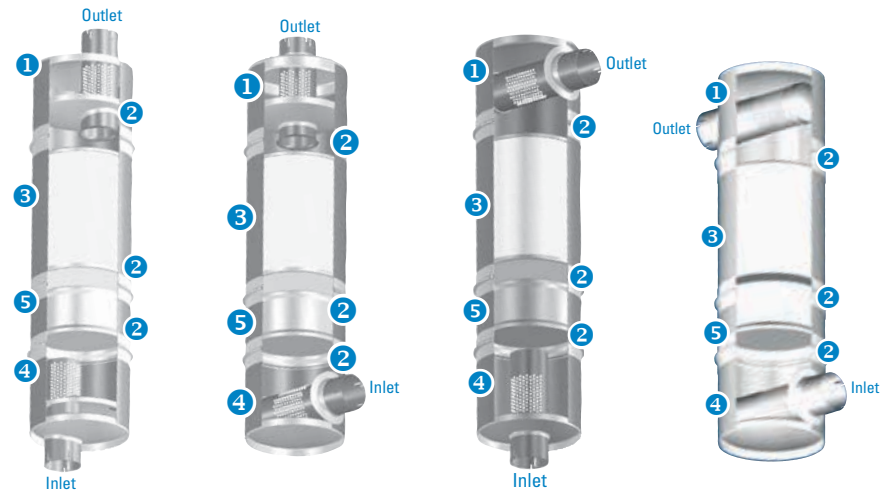
# Designed for Wide Range of Engines

## Style 1

LNF or LXF Muffler



- 1 Outlet End Section
- 2 V-band Connecting Clamps
- 3 DPF Section
- 4 Inlet End Section
- 5 Pre-filter Assembly



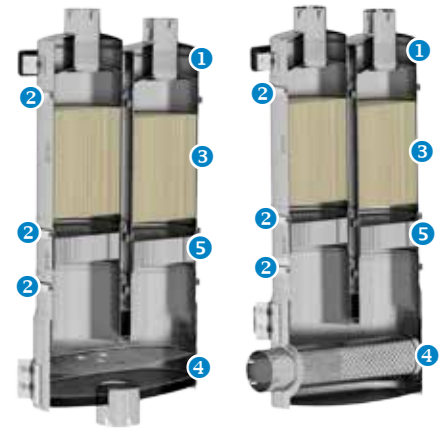
Style 2

Style 3

Style 4

Style 6

## Dual LNF or LXF Muffler

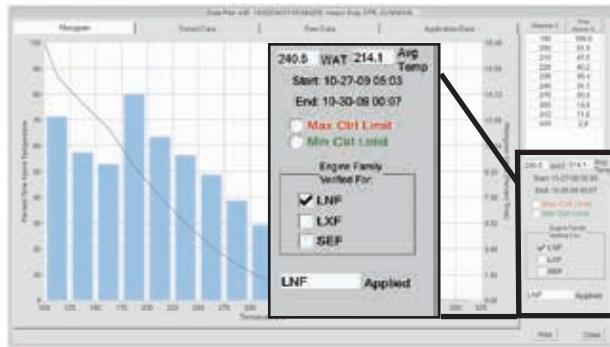


Style 1

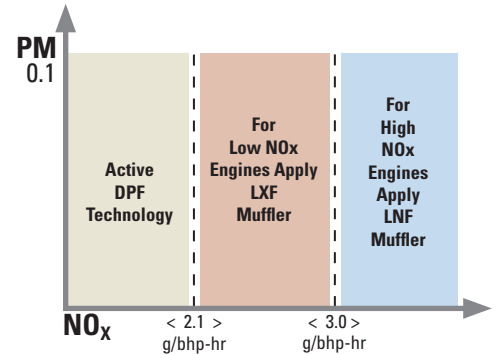
Style 3

## Selection Procedure

This procedure assumes you have a vehicle exhaust gas temperature (EGT) histogram report and recommendation letter from Donaldson confirming that an LNF or LXF Muffler is the best available technology.



Histogram Report with Recommendation Letter



1. **Confirm Engine Family Number is Approved for the Application**  
The ARB web site has separate Executive Order and Engine Family Listings for LNF and LXF Mufflers. If your engine family number is found on one of the Engine Family Listings, proceed to Step 2. If not, you cannot apply this product to that vehicle.
2. **Find Your Engine & Filter Size (A, B, C, D, Dual A, Dual B)**  
Find your engine make/model, maximum horsepower, and EFN rating on the LNF or LXF Muffler engine application listings. (pages 9-13)

3. **Select the Muffler Kit Configuration (based on HP)**  
Select your kit from the recommended Muffler Kit table (A-Dual B). If application is a school bus, choose a kit that best matches your existing muffler configuration and inlet/outlet sizes. (page 14)
4. **Prepare for Installation**  
Upon receipt of your LNF or LXF Muffler Kit, review the documentation package that ships with the kit. Proceed with your retrofit installation per the instructions included in the documentation package. (school bus mounting kits on pages 15-16)

## The Key to Reliable Operation

# Accurate Exhaust Gas Temperature Reading

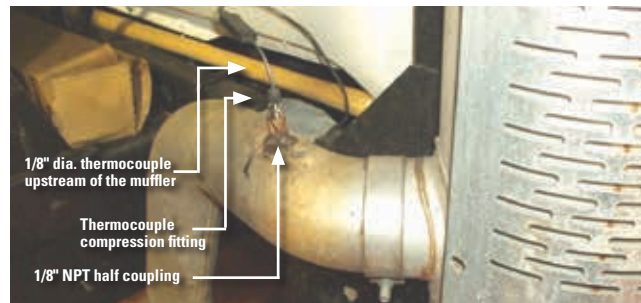
### Datalogging and EGT Profiling

It is IMPORTANT to understand the exhaust gas temperature (EGT) profile before applying an LXF/ LNF Muffler. Insufficient temperatures may lead to premature DPF plugging and increased maintenance to keep the filter clean and may potentially be a non-compliant device.

A data logger is a device used to record the EGT during engine operation. The recorder is operated for at least 24 hours under “normal” operating conditions to provide a reasonable snapshot of the EGT profile. Engine duty-cycle plays a big role in exhaust gas temperatures, and is influenced by factors such

as vehicle speed, load, idling, geography, ambient temperatures and driver tendencies.

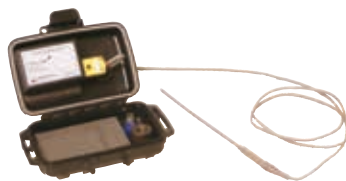
Reference: EGT Recording (Data Logging) document P480348 .



The photo shows the thermocouple connection installed in an existing exhaust pipe ahead of the muffler inlet. The small, plastic data logger case (not shown) would be attached to the frame rail.

#### Data Logging Kit

- 500,000+ data point memory
- Holds up to 30 days of data (@ 5 secs intervals)
- Meets California data logging requirements
- Installs on vehicle
- May need multiple kits for larger fleets



Data Logger Kit (X010839)

#### Other items you'll need:

- Software and link-up cable (X007948). You'll only need one kit, unless you may be gathering data from multiple fleet locations.
- Free Vehicle Profile Form available from Donaldson
- Computer with Microsoft® Windows® operating system (2003 or newer).



Software and Link-up Cable Kit (X007948)

### Application Temperature Criteria

Donaldson requires that every vehicle be data logged prior to applying LXF or LNF Muffler Kits

#### LNF Muffler Exhaust Gas Temperature Profile

The recorded duty cycle criteria must have:

1. A Weighted Average Temperature (WAT) that is at least 237° Celsius for each vehicle or,
2. An exhaust temperature profile that is either >235° Celsius for at least 40% of the time or,
3. >300° Celsius for at least 10% of the time.

#### LXF Muffler Exhaust Gas Temperature Profile

The recorded duty cycle criteria must have:

1. A Weighted Average Temperature (WAT) that is at least 263° Celsius for each vehicle or,
2. An exhaust temperature profile that is either > 245° Celsius for at least 40% of the time or,
3. > 310° Celsius for at least 10% of the time.

#### LXF-HT<sup>†</sup> Muffler Exhaust Gas Temperature Profile

The recorded duty cycle criteria must have:

1. A Weighted Average Temperature (WAT) that is at least 270° Celsius for each vehicle or,
2. An exhaust temperature profile that is either > 275° Celsius for at least 40% of the time.

<sup>†</sup>High temperature LXF system applies only to engines with the specified criteria

# WAT Analysis Method

## EGT Data Interpretation

The data logging files you send to Donaldson Engineering are analyzed to verify that a vehicle can successfully regenerate the passive DPF once installed. Donaldson then compares the exhaust temperature information to verification application criteria before sending a formal response letter to confirm suitability.

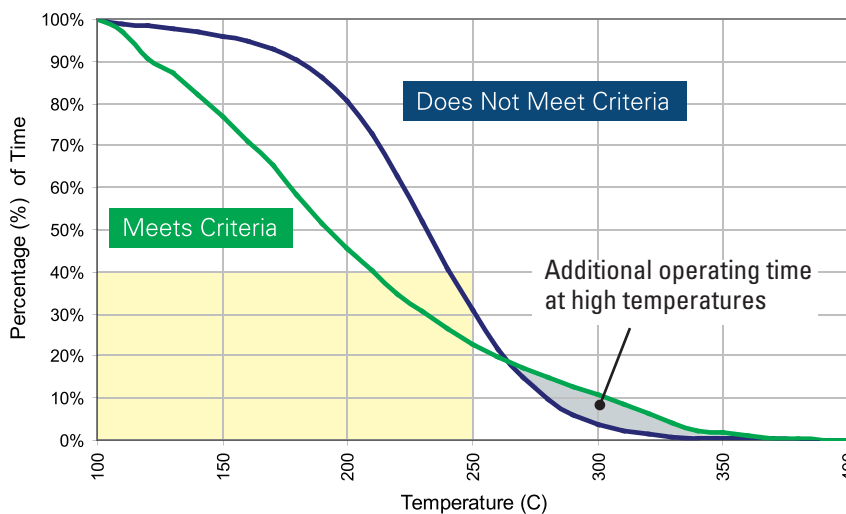
Traditional analysis methods give equal weighting to each temperature value when creating a histogram. However, it is known that soot burns faster at higher

temperatures. In fact, the Donaldson LNF and LXF muffler soot burning rate is roughly 4 times higher at 300C than at 240C.

Donaldson's proprietary WAT analysis method gives more credit, or weighting, to the time the vehicle generates the higher temperatures. This gives a more precise prediction of successful DPF regeneration compared to traditional analysis methods. In effect, it also expands the applications range of acceptable duty cycles.

### WAT vs. Single Point Analysis Method

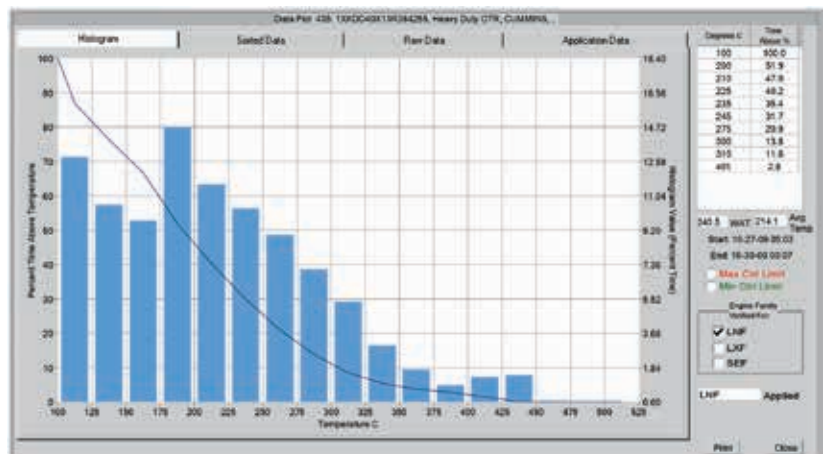
#### EGT Histogram: WAT vs. Traditional Single Point Analysis Method



In the example two different EGT histograms are illustrated. At first glance, the upper curve appears hotter; however this curve does not meet the device requirements. In contrast, the lower curve meets the device criteria. The lower curve would not be approved if using the single point analysis method, but the WAT analysis method factors in the higher soot burning rate at higher temperatures, demonstrating the benefit of the WAT analysis method.

### Vehicle EGT Profile Analysis

#### Histogram and Recommended Technology







Use this application listing for retrofit quotation purposes only. Any muffler kit installation must correspond with the Donaldson Approval Letter communicated to our Certified Emissions Dealer.

## LNF Muffler Engine Application Listing

Engine Make	Engine Model & Maximum HP Rating	Select Kit from Table	California A.R.B. Approved Engine Family Number(s)		
Caterpillar	3116 (6.6L)	195	A	RCP403DZDAAA, RCP403DZDARW, RCP403DZDASW, RCP403DZDABA, SCP403DZDAAA, SCP403DZDABA, SCP403DZDARK, SCP403DZDARW, TCP403DZDAAA, TCP403DZDABA, TCP403DZDARK, VCP403DZDAAA, VCP403DZDABA, VCP403DZDARK	
		250	B		
		300	C		
	3126 (7.2L)	190	A	SCP442DZDARK, TCP442DZDAAK, TCP442DZDARK, VCP442DZDAAK, VCP442DZDARK, WCPXH0442HRK, WCPXH0442HSK	
		275	B		
		300	C		
		330	D		
	3126 (7.2L)	250	B	XCPXH0442HRK, XCPXH0442HSK, YCPXH0442HRK, 1CPXH0442HAK, 1CPXH0442HBK, 1CPXH0442HRK, 2CPXH0442HRK	
		275	C		
		330	D		
	3176/C-10 (10.3L)	300	B	PCT0629FZE2, RCP629EZDARA, SCP629EZDARK, SCP629EZDARM, TCP629EZDARK, TCP629EZDARM, VCP629EZDARK, VCP629EZDARX, WCPXH0629ERK, XCPXH0629ERK, YCPXH0629ERK, 1CPXH0629ERK, 2CPXH0629ERK	
		365	C		
		370	D		
	3306 (10.5L)	300	C	RCP638EZDARA, SCP638EZDARA, TCP638EZDARA, VCP638EZDARA, WCPXH0638MRW, XCPXH0638MRW	
	C-12 (12L)	380	C	SCP729EZDARL, TCP729EZDARL, VCP729EZDARX, WCPXH0729ERK,	
		430	D		
	C-12 (12L)	425	D	XCPXH0729ERK, YCPXH0729ERK, 1CPXH0729ERK, 2CPXH0729ERK	
	3406/C-15 (14.6L)	330	C	PCT0893FZE3, RCP893EZDARA, SCP893EZDARK, SCP893EZDARW, TCP893EZDARK, VCP893EZDARA, VCP893EZDARX, WCPXH0893ERK, WCPXH0893MRW	
		375	D		
		550	Dual A		
600		Dual B			
3406/C-15 (14.6L)	355	D	XCPXH0893ERK, XCPXH0893MRW, YCPXH0893ERK, 1CPXH0893ERK, 2CPXH0893ERK		
	525	Dual A			
	600	Dual B			
3406/C-15 (15.9L)	525	Dual A	VCP967EZDARK, WCPXH0967ERK, XCPXH0967ERK, YCPXH0967ERK, 1CPXH0967ERK, 2CPXH0967ERK		
	600	Dual B			
Cummins	ISB (3.9L)	170	A	SCE239D6DAAA, TCE239D6DAAA, VCE239D6DAAA, WCEXH0239BAA, XCEXH0239BAA, YCEXH0239BAA, 1CEXH0239BAD, 1CEXH0239BAE, 2CEXH0239BAD, 2CEXH0239BAE, 3CEXH0239BAD, 4CEXH0239BAD	
	ISB (5.9L)	220	A	RCE359D6DAAB, RCE359D6DAAW, RCE359D6DASW, RCE359DABW, SCE359D6DAAA, SCE359D6DAAW, SCE359D6DABW, SCE359D6DARW, TCE359D6DAAA, TCE359D6DABW, VCE359D6DAAA, VCE359D6DABW, VCE359DJDARA, VCE359D6DARW, WCEXH0359BAD, WCEXH0359BAE, WCEXH0359BAB, WCEXH0359BAC, WCEXH0359BAG, XCEXH0359BAI, XCEXH0359BAJ, XCEXH0359BAK, XCEXH0359BAM, XCEXH0359BAQ, XCEXH0359BAR, YCEXH0359BAI, YCEXH0359BAO, YCEXH0359BAP, YCEXH0359BAA, YCEXH0359BAX, YCEXH0359BAY, 1CEXH0359BAY, 1CEXH0359BAO, 1CEXH0359BAU, 1CEXH0359BAV, 1CEXH0359BAX, 1CEXH0359BAA, 2CEXH0359BAB, 2CEXH0359BAO, 2CEXH0359BAD, 2CEXH0359BAX, 2CEXH0359BAE, 3CEXH0359BAE, 3CEXH0359BAI, 6CEXH0359BAI	
		275	B		
	ISC (8.3L)	295	B		PCE0505FDA5, RCE505D6DAAA, RCE505D6DAAB, RCE505D6DARW, RCE505F6DABW, RCE505D6DAAC, RCE505F6DAAW, SCE505D6DAAA, SCE505D6DAAW, SCE505D6DABW, SCE505F6DAAW, SCE505D6DARW, SCE505F6DABW, TCE505D6DAAA, TCE505D6DAAW, TCE505D6DABW, VCE505D6DAAA, VCE505D6DAAW, VCE505D6DABW, WCEXH0505CAC, WCEXH0505CAD, WCEXH0505CAE, WCEXH0505CAF, WCEXH0505CAA, XCEXH0505CAC, XCEXH0505CAD, XCEXH0505CAE, XCEXH0505CAF, YCEXH0505CAF, YCEXH0505CAG, YCEXH0505CAH, YCEXH0505CAI, 1CEXH0505CAM, 1CEXH0505CAN, 1CEXH0505CAO, 1CEXH0505CAP, 2CEXH0505CAM, 2CEXH0505CAN, 2CEXH0505CAQ, 3CEXH0505CAM, 3CEXH0505CAN, 3CEXH0505CAQ, 4CEXH0505CAS, 4CEXH0505CAR, 5CEXH0505CAR
		345	C		
		370	D		
	ISL (8.8L)	295	B		YCEXH0540LAA, 1CEXH0540LAA, 1CEXH0540LAB, 1CEXH0540LAC, 2CEXH0540LAB, 2CEXH0540LAC, 3CEXH0540LAC, 3CEXH0540LAB, 4CEXH0540LAE, 5CEXH0540LAE
		345	C		
		400	D		



**LNF Muffler Engine Application Listing - continued**

Engine Make	Engine Model & Maximum HP Rating		Select Kit from Table	California A.R.B. Approved Engine Family Number(s)
<b>Cummins-continued</b>	ISM/M11 (10.9L)	335	B	PCE0661FZA2, PCE0661FZB3, RCE661EJDARA, RCE661EJDARC, RCE661EJDARW, RCE661FJDAAA, SCE661EJDARA, SCE661EJDARC, SCE661EJDARW, SCE661EJDASW, SCE661EJDATW, SCE661FJDAAA, TCE661EJDARA, TCE661EJDARB, TCE661EJDARC, TCE661EJDARW, TCE661EJDASW, TCE661EJDATW, TCE661FJDABA, VCE661EJDARB, VCE661EJDARC, VCE661EJDASA, VCE661EJDATW, VCE661FJDABA, WCEXH0661MAA, WCEXH0661MAB, WCEXH0661MAC, WCEXH0661MAD, WCEXH0661MAE, WCEXH0661MAF, XCEXH0661MAC, XCEXH0661MAG, XCEXH0661MAH, XCEXH0661MAI, YCEXH0661MAG, YCEXH0661MAH, YCEXH0661MAI, 1CEXH0661MAP, 1CEXH0661MAQ, 1CEXH0661MAR, 2CEXH0661MAP, 2CEXH0661MAS
		400	C	TCE661EJDASW, TCE661EJDATW, TCE661FJDABA, VCE661EJDARB, VCE661EJDARC, VCE661EJDASA, VCE661EJDATW, VCE661FJDABA, WCEXH0661MAA, WCEXH0661MAB, WCEXH0661MAC, WCEXH0661MAD, WCEXH0661MAE, WCEXH0661MAF, XCEXH0661MAC, XCEXH0661MAG, XCEXH0661MAH, XCEXH0661MAI, YCEXH0661MAG, YCEXH0661MAH, YCEXH0661MAI, 1CEXH0661MAP, 1CEXH0661MAQ, 1CEXH0661MAR, 2CEXH0661MAP, 2CEXH0661MAS
		450	D	YCEXH0661MAI, 1CEXH0661MAP, 1CEXH0661MAQ, 1CEXH0661MAR, 2CEXH0661MAP, 2CEXH0661MAS
	N14 (14L)	400	D	PCE0855FZK4, RCE855EJDARW, RCE855EJDASW, SCE855EJDARA, SCE855EJDARB, SCE855EJDARW, SCE855EJDASW, SCE855EJDATW, TCE855EJDARA, TCE855EJDARB, TCE855EJDARW, TCE855EJDASW, TCE855EJDATW, VCE855EJDARA, VCE855EJDARB, VCE855EJDARC, VCE855EJDATW, WCEXH0855NAA, WCEXH0855NAB, WCEXH0855NAC, XCEXH0855NAD, XCEXH0855NAE, XCEXH0855NAF, YCEXH0855NAD, YCEXH0855NAE, YCEXH0855NAF, 1CEXH0855NAD, 1CEXH0855NAE, 1CEXH0855NAF, 2CEXH0855NAA
		525	Dual A	PCE0855FZK4, RCE855EJDARW, RCE855EJDASW, SCE855EJDARA, SCE855EJDARB, SCE855EJDARW, SCE855EJDASW, SCE855EJDATW, TCE855EJDARA, TCE855EJDARB, TCE855EJDARW, TCE855EJDASW, TCE855EJDATW, VCE855EJDARA, VCE855EJDARB, VCE855EJDARC, VCE855EJDATW, WCEXH0855NAA, WCEXH0855NAB, WCEXH0855NAC, XCEXH0855NAD, XCEXH0855NAE, XCEXH0855NAF, YCEXH0855NAD, YCEXH0855NAE, YCEXH0855NAF, 1CEXH0855NAD, 1CEXH0855NAE, 1CEXH0855NAF, 2CEXH0855NAA
	ISX (14.9L)	400	D	WCEXH0912XAA, XCEXH0912XAB, XCEXH0912XAD, YCEXH0912XAC, YCEXH0912XAD, YCEXH0912XAE, 1CEXH0912XAC, 1CEXH0912XAD, 1CEXH0912XAE, 2CEXH0912XAF
		530	Dual A	WCEXH0912XAA, XCEXH0912XAB, XCEXH0912XAD, YCEXH0912XAC, YCEXH0912XAD, YCEXH0912XAE, 1CEXH0912XAC, 1CEXH0912XAD, 1CEXH0912XAE, 2CEXH0912XAF
		600	Dual B	WCEXH0912XAA, XCEXH0912XAB, XCEXH0912XAD, YCEXH0912XAC, YCEXH0912XAD, YCEXH0912XAE, 1CEXH0912XAC, 1CEXH0912XAD, 1CEXH0912XAE, 2CEXH0912XAF
	<b>Detroit Diesel</b>	Series VM638 (3.8L)	160	A
SERIES 50 (8.5L)		275	B	PDD08.5FZK7, RDD8.5EJDARA, RDD8.5EJDARW, RDD8.5FJDABA, RDD8.5FJDARW, SDD8.5FJDABA, SDD8.5EJDARA, SDD8.5EJDARW, TDD8.5EJDARA, TDD8.5EJDARW, TDD8.5FJDABA, VDD8.5EJDARA, VDD8.5FJDABA, WDDXH08.5EJD, WDDXH08.5FJC, XDDXH08.5EJL, XDDXH08.5FJN, YDDXH08.5EJB, YDDXH08.5EJL, YDDXH08.5FJN, 1DDXH08.5EJB, 1DDXH08.5EJL, 1DDXH08.5FJY, 2DDXH08.5EJL, 2DDXH08.5FJY
		350	C	PDD08.5FZK7, RDD8.5EJDARA, RDD8.5EJDARW, RDD8.5FJDABA, RDD8.5FJDARW, SDD8.5FJDABA, SDD8.5EJDARA, SDD8.5EJDARW, TDD8.5EJDARA, TDD8.5EJDARW, TDD8.5FJDABA, VDD8.5EJDARA, VDD8.5FJDABA, WDDXH08.5EJD, WDDXH08.5FJC, XDDXH08.5EJL, XDDXH08.5FJN, YDDXH08.5EJB, YDDXH08.5EJL, YDDXH08.5FJN, 1DDXH08.5EJB, 1DDXH08.5EJL, 1DDXH08.5FJY, 2DDXH08.5EJL, 2DDXH08.5FJY
SERIES 60 (11.1L, 12L, 12.7L)		430	D	RDD11.EJDARA, RDD12.EJDARA, RDD12.EJDASW, SDD11.EJDARA, SDD12.EJDARA, SDD12.EJDASW, TDD11.EJDARA, TDD12.EJDARA, TDD12.EJDATW, VDD11.EJDARA, VDD12.EJDARA, VDD12.EJDATA, WDDXH11.1EHD, WDDXH12.7EGD, XDDXH11.1EHL, XDDXH12.7EGL, YDDXH12.7EGL, 1DDXH12.7EGL, 2DDXH12.7EGL, 2DDXH12.7FGN
		525	Dual A	RDD11.EJDARA, RDD12.EJDARA, RDD12.EJDASW, SDD11.EJDARA, SDD12.EJDARA, SDD12.EJDASW, TDD11.EJDARA, TDD12.EJDARA, TDD12.EJDATW, VDD11.EJDARA, VDD12.EJDARA, VDD12.EJDATA, WDDXH11.1EHD, WDDXH12.7EGD, XDDXH11.1EHL, XDDXH12.7EGL, YDDXH12.7EGL, 1DDXH12.7EGL, 2DDXH12.7EGL, 2DDXH12.7FGN
		600	Dual B	RDD11.EJDARA, RDD12.EJDARA, RDD12.EJDASW, SDD11.EJDARA, SDD12.EJDARA, SDD12.EJDASW, TDD11.EJDARA, TDD12.EJDARA, TDD12.EJDATW, VDD11.EJDARA, VDD12.EJDARA, VDD12.EJDATA, WDDXH11.1EHD, WDDXH12.7EGD, XDDXH11.1EHL, XDDXH12.7EGL, YDDXH12.7EGL, 1DDXH12.7EGL, 2DDXH12.7EGL, 2DDXH12.7FGN
SERIES 60 (14.0 L)		525	Dual A	XDDXH14.0ELL, YDDXH14.0ELL, 1DDXH14.0ELL, 2DDXH14.0ELL
		600	Dual B	XDDXH14.0ELL, YDDXH14.0ELL, 1DDXH14.0ELL, 2DDXH14.0ELL
<b>Mack</b>	E7 (11.9L & 9.9L)	265	B	PMT0728FAGX, PMT0728FAH0, PMT0728FAL6, RMK728EGDARA, RMK728EJDARA, RMK728EGDATW, RMK728EJDARW, RMK12.EJDARW, RMK728EGDASW, RMK728EJDASW, RMK728EJDATW, SMK728EGDARA, SMK728EJDARA, SMK12.EJDARW, SMK728EGDASW, SMK728EGDATW, SMK728EJDARW, SMK728EJDASW, SMK728EJDATW, TMK728EGDARA, TMK728EJDARA, VMK728EGDARA, VMK728EJDARA, VMK728EJDAYW, VMK728EJDARW, VMK728EJDASW, VMK12.EJDARW, WMKXH11.9E51, WMKXH11.9E52, WMKXH11.9E53, WMKXH0602M48, WMKXH0728V40, WMKXH0728V41, WMKXH0728V43, WMKXH0728M44, XMKXH11.9E54, YMKXH11.9E56, YMKXH11.9E57, 1MKXH11.9H56, 1MKXH11.9H59, 2MKXH11.9H59, 2MKXH11.9H63, 1MKXH11.9V57, 1MKXH11.9V60, 1MKXH11.9V61, 2MKXH11.9V60, 2MKXH11.9V61, 2MKXH11.9V65*, 2MKXH11.9V66*, 2MKXH11.9V67*
		305	C	PMT0728FAGX, PMT0728FAH0, PMT0728FAL6, RMK728EGDARA, RMK728EJDARA, RMK728EGDATW, RMK728EJDARW, RMK12.EJDARW, RMK728EGDASW, RMK728EJDASW, RMK728EJDATW, SMK728EGDARA, SMK728EJDARA, SMK12.EJDARW, SMK728EGDASW, SMK728EGDATW, SMK728EJDARW, SMK728EJDASW, SMK728EJDATW, TMK728EGDARA, TMK728EJDARA, VMK728EGDARA, VMK728EJDARA, VMK728EJDAYW, VMK728EJDARW, VMK728EJDASW, VMK12.EJDARW, WMKXH11.9E51, WMKXH11.9E52, WMKXH11.9E53, WMKXH0602M48, WMKXH0728V40, WMKXH0728V41, WMKXH0728V43, WMKXH0728M44, XMKXH11.9E54, YMKXH11.9E56, YMKXH11.9E57, 1MKXH11.9H56, 1MKXH11.9H59, 2MKXH11.9H59, 2MKXH11.9H63, 1MKXH11.9V57, 1MKXH11.9V60, 1MKXH11.9V61, 2MKXH11.9V60, 2MKXH11.9V61, 2MKXH11.9V65*, 2MKXH11.9V66*, 2MKXH11.9V67*
		345	D	PMT0728FAGX, PMT0728FAH0, PMT0728FAL6, RMK728EGDARA, RMK728EJDARA, RMK728EGDATW, RMK728EJDARW, RMK12.EJDARW, RMK728EGDASW, RMK728EJDASW, RMK728EJDATW, SMK728EGDARA, SMK728EJDARA, SMK12.EJDARW, SMK728EGDASW, SMK728EGDATW, SMK728EJDARW, SMK728EJDASW, SMK728EJDATW, TMK728EGDARA, TMK728EJDARA, VMK728EGDARA, VMK728EJDARA, VMK728EJDAYW, VMK728EJDARW, VMK728EJDASW, VMK12.EJDARW, WMKXH11.9E51, WMKXH11.9E52, WMKXH11.9E53, WMKXH0602M48, WMKXH0728V40, WMKXH0728V41, WMKXH0728V43, WMKXH0728M44, XMKXH11.9E54, YMKXH11.9E56, YMKXH11.9E57, 1MKXH11.9H56, 1MKXH11.9H59, 2MKXH11.9H59, 2MKXH11.9H63, 1MKXH11.9V57, 1MKXH11.9V60, 1MKXH11.9V61, 2MKXH11.9V60, 2MKXH11.9V61, 2MKXH11.9V65*, 2MKXH11.9V66*, 2MKXH11.9V67*
		525	Dual A	PMT0728FAGX, PMT0728FAH0, PMT0728FAL6, RMK728EGDARA, RMK728EJDARA, RMK728EGDATW, RMK728EJDARW, RMK12.EJDARW, RMK728EGDASW, RMK728EJDASW, RMK728EJDATW, SMK728EGDARA, SMK728EJDARA, SMK12.EJDARW, SMK728EGDASW, SMK728EGDATW, SMK728EJDARW, SMK728EJDASW, SMK728EJDATW, TMK728EGDARA, TMK728EJDARA, VMK728EGDARA, VMK728EJDARA, VMK728EJDAYW, VMK728EJDARW, VMK728EJDASW, VMK12.EJDARW, WMKXH11.9E51, WMKXH11.9E52, WMKXH11.9E53, WMKXH0602M48, WMKXH0728V40, WMKXH0728V41, WMKXH0728V43, WMKXH0728M44, XMKXH11.9E54, YMKXH11.9E56, YMKXH11.9E57, 1MKXH11.9H56, 1MKXH11.9H59, 2MKXH11.9H59, 2MKXH11.9H63, 1MKXH11.9V57, 1MKXH11.9V60, 1MKXH11.9V61, 2MKXH11.9V60, 2MKXH11.9V61, 2MKXH11.9V65*, 2MKXH11.9V66*, 2MKXH11.9V67*
<b>Navistar</b>	DT408 (6.7L)	200	B	RNV408D6DAAW
	T444 (7.3L)	230	A	RNV444C8DABA, RNV444C8DARA, RNV7.3C8DAAA, SNV444C8DOAA, SNV444C8DORA, SNV444C8DOSA, SNV444C8DAAA, SNV444C8DARW, SNV444C8DASW, TNV444C8DORA, TNV444C8DOSA, TNV7.3C8DAAA, VNV7.3C8DAAA, VNV7.3C8DAAW, VNV7.3W8DOAK, VNV444C8DARW, VNV444C8DASW, WNVXH0444CCB, WNVXH0444CCD, WNVXH0444FNA, WNVXH0444FNC, XNVXH0444ANA, XNVXH0444ANB, XNVXH0444ACC, XNVXH07.3ACA, XNVXH07.3ANE, XNVXH07.3FCC, XNVXH07.3FNH, YNVXH0444ACT, YNVXH0444ANA, YNVXH0444ANB, YNVXH0444ANC, YNVXH07.3ANA, YNVXH07.3FNB, 1NVXH07.3ACE, 1NVXH07.3ANA, 1NVXH0444ANA, 1NVXH0444ANB, 1NVXH0444ANC, 1NVXH07.3FNB, 2NVXH07.3FNB, 2NVXH0444ANA, 2NVXH0444ANB, 2NVXH0444ANC, 2NVXH07.3ACE, 2NVXH07.3ANA, 3NVXH0444ANB, 3NVXH0444ANC
		265	B	RNV444C8DABA, RNV444C8DARA, RNV7.3C8DAAA, SNV444C8DOAA, SNV444C8DORA, SNV444C8DOSA, SNV444C8DAAA, SNV444C8DARW, SNV444C8DASW, TNV444C8DORA, TNV444C8DOSA, TNV7.3C8DAAA, VNV7.3C8DAAA, VNV7.3C8DAAW, VNV7.3W8DOAK, VNV444C8DARW, VNV444C8DASW, WNVXH0444CCB, WNVXH0444CCD, WNVXH0444FNA, WNVXH0444FNC, XNVXH0444ANA, XNVXH0444ANB, XNVXH0444ACC, XNVXH07.3ACA, XNVXH07.3ANE, XNVXH07.3FCC, XNVXH07.3FNH, YNVXH0444ACT, YNVXH0444ANA, YNVXH0444ANB, YNVXH0444ANC, YNVXH07.3ANA, YNVXH07.3FNB, 1NVXH07.3ACE, 1NVXH07.3ANA, 1NVXH0444ANA, 1NVXH0444ANB, 1NVXH0444ANC, 1NVXH07.3FNB, 2NVXH07.3FNB, 2NVXH0444ANA, 2NVXH0444ANB, 2NVXH0444ANC, 2NVXH07.3ACE, 2NVXH07.3ANA, 3NVXH0444ANB, 3NVXH0444ANC
	DT466 (7.6L)	230	A	RNV466D6DOTW, RNV466D6DAAA, RNV466D6DABA, RNV466D6DARW, RNV466D6DASW, SNV466D6DARA, SNV466D6DASA, SNV466D6DATA, SNV466D8DARB, SNV466D8DASB, SNV466D8DATB, TNV466D6DATB, TNV466D6DARB, TNV466D8DARB, TNV466D8DARB, VNV466D6DARA, VNV466D8DARW, VNV466D8DASA, WNVXH0466CCB, WNVXH0466CCD, WNVXH0466ENE, WNVXH0466FNA, WNVXH0466FNC, XNVXH0466ANA, XNVXH0466ANB, YNVXH0466ANA, YNVXH0466ANB, 1NVXH0466ANA, 1NVXH0466ANB, 2NVXH0466ANA, 2NVXH0466ANB, 3NVXH0466ANA, 3NVXH0466ANB, 4NVXH0466ANA, 4NVXH0466ANB
		265	B	RNV466D6DOTW, RNV466D6DAAA, RNV466D6DABA, RNV466D6DARW, RNV466D6DASW, SNV466D6DARA, SNV466D6DASA, SNV466D6DATA, SNV466D8DARB, SNV466D8DASB, SNV466D8DATB, TNV466D6DATB, TNV466D6DARB, TNV466D8DARB, TNV466D8DARB, VNV466D6DARA, VNV466D8DARW, VNV466D8DASA, WNVXH0466CCB, WNVXH0466CCD, WNVXH0466ENE, WNVXH0466FNA, WNVXH0466FNC, XNVXH0466ANA, XNVXH0466ANB, YNVXH0466ANA, YNVXH0466ANB, 1NVXH0466ANA, 1NVXH0466ANB, 2NVXH0466ANA, 2NVXH0466ANB, 3NVXH0466ANA, 3NVXH0466ANB, 4NVXH0466ANA, 4NVXH0466ANB



**LNF Muffler Engine Application Listing - continued**

Engine Make	Engine Model & Maximum HP Rating		Select Kit from Table	California A.R.B. Approved Engine Family Number(s)
<b>Navistar - continued</b>	DT530 (8.7L)	265	B	RNV530D6DAAA, RNV530D6DARW, SNV530D6DARA, SNV530E6DASA, SNV530F6DATA, TNV530D6DARA, TNV530D8DARA, TNV530E6DASA, TNV530E8DASA, VNV530D6DARA, VNV530D8DARA, VNV530E6DASA, VNV530E8DASA, WNVXH0530CCB, WNVXH0530CCD, WNVXH0530FNA, WNVXH0530FNC, XNVXH0530ACT, XNVXH0530ANA, XNVXH0530ANB, YNVXH0530ACT, YNVXH0530ANA, YNVXH0530ANB, 1NVXH0530ACT, 1NVXH0530ANA, 1NVXH0530ANB, 2NVXH0530ACT, 2NVXH0530ANA, 2NVXH0530ANB, 2NVXH0530ANC, 3NVXH0530ANA, 3NVXH0530ANB, 3NVXH0530ANC, 3NVXH0530ACT, 4NVXH0530ANA, 4NVXH0530ANB, 4NVXH0530ANC
		345	C	
<b>Volvo</b>	VED7 (6.7L & 7.3L)	265	B	RVT6.7D6DBRA, SVT6.7D6DBRA, TVT6.7D6DBRA, VVT6.7D6DBRA, WVTXH07.350S, XVTXH07.350S, YVTXH07.399B, YVTXH07.350S, 1VTXH07.350S, 2VTXH07.350S
		305	C	
	VED12 (12.1L)	345	C	RVT12.EJDBRA, SVT12.EJDBRA, TVT12.EJDBRA, VVT12.EJDBRA, WVTXH12.150S, XVTXH12.150S, YVTXH12.150S, 1VTXH12.150S, 2VTXH12.150S
		400	D	
	525	Dual A		
<b>Mercedes-Benz</b>	OM366LA (6.0L)	300	A	RMB6.0D6DAAA, RMB6.0D6DARA, SMB6.0D6DAAA, SMB6.0D6DARA
		350	B	
	OM904LA (4.25L)	300	A	WMBXH4.25DJA, XMBXH4.25DJA, YMBXH4.25DJA, 1MBXH4.25DJA, 2MBXH4.25DJA, 3MBXH4.25DJA, 3MBXH4.25DJC
	OM906LA (6.37L)	300	A	XMBXH6.37DJA, YMBXH6.37DJA, 1MBXH6.37DJA, 1MBXH6.37DJC, 2MBXH6.37DJA, 2MBXH6.37DJC, 3MBXH6.37DJA, 3MBXH6.37DJC
		350	B	
	OM460LA (12.8L) OM457LA (12.0L & 10L)	450	D	RMB10.E6DARA, RMB12.E6DARA, SMB10.E6DARA, SMB12.E6DARA, YMBXH12.0DJA, 1MBXH12.0DJA, 1MBXH12.8DJA, 2MBXH12.0DJA, 2MBXH12.8DJA, 3MBXH12.0DJA, 3MBXH12.8DJA
		525	Dual A	
	OM501LA (15.9L & 11.9L)	390	D	2MBXH15.9DJB, 3MBXH15.9DJB
		525	Dual A	
		600	Dual B	
<b>Isuzu</b>	4BD2TC (3.9L)	130	A	RSZ3.9C6DARW, SSZ3.9C6DARW, TSZ3.9C6DARW, VSZ3.9C6DARA
	4HE1X (4.8L)	175	A	XSZXH04.83AA, YSZXH04.83AA, 1SZXH04.83AA, 2SZXH04.83AA, 3SZXH04.83AA
	8GF1 (6.6L)	215	A	1SZXH06.63RA, 2SZXH06.63RA 2SZXH06.64RA, 3SZXH06.64RA
		300	B	
	6HE1X (7.1L)	230	B	SSZ7.1D6DAAA, SSZ7.1D6DARW, TSZ7.1D6DAAA, VSZ7.1D6DAAA, VSZ7.1D6DAAW
	6HK1X (7.8L)	275	B	WSZXH07.84RA, XSZXH07.84RA, YSZXH07.84RA, 1SZXH07.84RA, 2SZXH07.84RA, 3SZXH07.84AA, 3SZXH07.84RA
<b>Hino</b>	W04C (3.8L)	150	A	RHM3.8C7DARW, SHM3.8C7DARW, THM3.8C7DARW
	J05C (5.3L) J08C (8.0L)	255	B	VHM8.0DHDARA, WHMXH08.0JTR, XHMXH08.0JTR, YHMXH05.3JTD, YHMXH08.0JTP, YHMXH08.0JTR, 1HMXH05.3JTD, 1HMXH08.0JTP, 1HMXH08.0JTR, 2HMXH05.3JTD, 2HMXH08.0JTP, 2HMXH08.0JTR, 3HMXH05.3JTD, 3HMXH08.0JTP, 3HMXH08.0JTR
			B	RHM6.5D7DARW, SHM6.5D7DARW, THM6.5D7DARW
<b>Mitsubishi</b>	4D34 (3.9L)	150	A	RMT238B7DAAA, SMT238B7DAAA, TMT238C7DBAA, VMT238C7DBAA, XMTXH03.9D4A, YMTXH03.9D4A, 1MTXH03.9D4A, 2MTXH03.9D4A, 3MTXH03.9D4A
	4M50 (4.8L)	175	A	1MTXH04.8M5A, 2MTXH04.8M5A, 3MTXH04.8M5A
	6D34 (5.8L)	175	A	TMT358D7DBAA, VMT358D7DBAA, XMTXH05.8D6A, YMTXH05.8D6A, 1MTXH05.8D6A, 2MTXH05.8D6A, 3MTXH05.8D6A
	6D16 (7.5L)	230	B	SMT460D7DAAA, SMT460D7DARW, TMT460D7DBAA, VMT460D7DBAA, XMTXH07.5D6A, YMTXH07.5D6A, 1MTXH07.5D6A, 2MTXH07.5D6A, 3MTXH07.5D6A
<b>GM/GE</b>	L65/L57 (6.5L)	200	A	RGM6.5C6DAAC, RGM6.5C6DAAA, TGM6.5C6DABA, TGM6.5C6DABW, VGM6.5C6DABW, VGM6.5C6DABA, VGM6.5C6DARW, WGMXH06.5521, WGMXH06.5522, WGMXH06.5523, XGMXH06.5521, XGMXH06.5522, XGMXH06.5523, YGMXH06.5521, YGMXH06.5528, YGMXH06.5529, YGMXH06.5522, 1GMXH06.5521, 1GMXH06.5528, 1GMXH06.5529, 1GEPH06.5522, 1GEPH06.5528, 2GMXH06.5528, 2GMXH06.5529, 2GEPH06.5522, 2GEPH06.5528, 3GEPH06.5521, 3GEPH06.5527



## LNF Muffler Engine Application Listing - continued

Engine Make	Engine Model & Maximum HP Rating		Select Kit from Table	California A.R.B. Approved Engine Family Number(s)
Nissan	TD42TI (4.2L)	140	A	RND254C6DAAA, SND254C6DAAA, TND254C6DAAA, VND254C6DAAA, WNDXH04.2TAB
	FD46TA (4.6L)	175	A	XNDXH04.6FAB, YNDXH04.6FAB, 1NDXH04.6FAB, 2NDXH04.6FAB, 3NDXH04.6FAB
	FE6TA/FE8TA (6.9L)	225	B	RND423D6DAAA, SND423D6DAAA, TND423D6DAAA, VND423D6DAAA, WNDXH06.9FAB, XNDXH06.9FAB, YNDXH06.9FAB, 1NDXH06.9FAB, 2NDXH06.9FAB, 3NDXH06.9FAB
Perkins	PHASER 110/180 (4L & 6L)	180	A	RPK243C6DAAA, RPK365D6DAAA, RPK365DGDAAA, SPK243C6DAAA, SPK365D6DAAA, TPK243C6DAAA, TK365D6DAAA
Renault	MIDR (6.2L)	250	B	SR3377D8DAAW, SR3377D8DABW, SR3377D8DARW, SR3377D8DASW, TR3377D8DAAW, TR3377D8DABW, VR3377D8DAAW, VR3377D8DABW, WR3XH0377BNF, XR3XH0377KWC, XR3XH0377LWC, XR3XH0377BNF, XR3XH0377BWF, YR3XH0377KWC, YR3XH0377BWF, 1R3XH0377BWF, 2R3XH0377BNA, 2R3XH0377CNA
Saab/Scania	N/A	400	D	RSA673E6DARA, WY9XH11.7203, YY9XH10.6106, YY9XH11.7202, 1Y9XH10.6106, 1Y9XH11.7202, 2Y9XH10.6106, 2Y9XH11.7202

\* Contact Donaldson Engineering for more information at (866) 817-8733 or [emissions@donaldson.com](mailto:emissions@donaldson.com)



Use this application listing for retrofit quotation purposes only. Any muffler kit installation must correspond with the Donaldson Approval Letter communicated to our Certified Emissions Dealer.

## LXF Muffler Engine Application Listing

Engine Make	Engine Model & Maximum HP Rating		Select Kit from Table	California A.R.B. Approved Engine Family Number(s)
Caterpillar	3126 (7.2L)	275	B	2CPXH0442HAK, 2CPXH0442HBX, 2CPXH0442HBV, 2CPXH0442HBK, 3CPXH0442HBV, 3CPXH0442HBX
		330	C	
	C7 (7.2L)	230	B	4CPXH0442HBK <sup>†</sup> , 5CPXH0442HBK <sup>†</sup> , 6CPXH0442HBK <sup>†</sup>
		330	C	
		350	D	
	C9 (8.8L)	370	D	4CPXH0537HBK <sup>†</sup> , 4CPXH0537HBX <sup>†</sup> , 5CPXH0537HBK <sup>†</sup> , 6CPXH0537HBK <sup>†</sup>
		440	Dual A	
	3176/C-10 (10.3L)	325	C	2CPXH0629EBX, 3CPXH0629EBV, 3CPXH0629EBX
		370	D	
	C11 (11.1L)	400	Dual A	4CPXH0680EBK <sup>†</sup> , 5CPXH0680EBK <sup>†</sup> , 6CPXH0680EBK <sup>†</sup>
	C12 (11.9L)	410	D	2CPXH0729EBX, 3CPXH0729EBV, 3CPXH0729EBX
		505	Dual A	
	C13 (12.5L)	525	Dual A	4CPXH0763EBK <sup>*†</sup> , 5CPXH0763EBK <sup>*†</sup> , 6CPXH0763EBK <sup>*†</sup>
	C-15 (14.6L)	355	D	2CPXH0893EBX, 3CPXH0893EBV
		455	Dual A	
600		Dual B		
C15 (15.2L)	355	D	4CPXH0928EBK <sup>†</sup> , 5CPXH0928EBK <sup>†</sup> , 6CPXH0928EBK <sup>†</sup>	
	455	Dual A		
	600	Dual B		



**LXF Muffler Engine Application Listing - continued**

Engine Make	Engine Model & Maximum HP Rating		Select Kit from Table	California A.R.B. Approved Engine Family Number(s)
<b>Cummins</b>	ISB (5.9L)	245	A	3CEXH0359BAH <sup>†</sup> , 4CEXH0359BAD, 4CEXH0359BAH <sup>†</sup> , 5CEXH0359BAD, 5CEXH0359BAB, 5CEXH0359BAF, 5CEXH0359BAH <sup>†</sup> , 6CEXH0359BAD, 6CEXH0359BAH <sup>†</sup> , 6CEXH0359BAB, 6CEXH0359BAF
		275	B	
		325	C	
	ISC (8.3L)	295	B	5CEXH0505CAW, 5CEXH0505CAX, 5CEXH0505CAY, 6CEXH0505CAW, 6CEXH0505CAX, 6CEXH0505CAY
		330	C	
	ISL (8.8L)	330	C	5CEXH0540LAH, 5CEXH0540LAI, 6CEXH0540LAI, 6CEXH0540LAJ
		370	D	
	ISM (10.3L)	425	D	5CEXH0661MAX, 6CEXH0661MAX
525		Dual A		
525		Dual A		
<b>Detroit Diesel</b>	Series 60, (12.7L)	430	D	3DDXH12.7EGY, 4DDXH12.7EGY*, 5DDXH12.7EGY*, 6DDXH12.7EGY*
		525	Dual A	
	Series 60, (14L)	525	Dual A	
		600	Dual B	
<b>Mack</b>	AC/AI (11.9L)	355	C	2MKXH11.9H64 <sup>†</sup> , 3MKXH11.9H70, 3MKXH11.9H64 <sup>†</sup> , 4MKXH11.9H64 <sup>†</sup> , 4MKXH11.9H70, 4MKXH11.9H73, 5MKXH11.9H70, 5MKXH11.9H73, 6MKXH11.9H70, 6MKXH11.9H73, 6MKXH10.8C02
		400	D	
		525	Dual A	
<b>International</b>	VT365 (6.0L)	250	B	2NVXH0365AEA*, 3NVXH0365AEA*, 3NVXH06.0AEA*, 4NVXH06.0AEB* <sup>†</sup> , 4NVXH0365AEB*, 5NVXH0365AEC*, 5NVXH06.0AEC* <sup>†</sup> , 5NVXH0275AEA*, 6NVXH0275AEA*, 6NVXH0365AEC*, 6NVXH06.0AEC* <sup>†</sup>
		325	C	
	466 (7.3L)	225	A	
		300	B	
	570 (8.7L)	295	B	
		340	C	
<b>Volvo</b>	VED12 (12.1L)	395	D	3VTXH12.150S, 4VTXH12.150S, 5VTXH12.150S, 6VTXH12.150S
		525	Dual A	
	D16 (16.1L)	525	Dual A	
600		Dual B		
<b>Mercedes-Benz</b>	904 (4.25L)	175	A	4MBXH4.25DJA, 5MBXH4.25DJA, 6MBXH4.25DJA
	906 (6.37L)	230	A	
		300	B	
	926 (7.2L)	300	B	5MBXH7.20DJA, 6MBXH7.20DJA
		330	C	
	460 (12.8L)	450	D	4MBXH12.8DJA, 5MBXH12.8DJA, 6MBXH12.8DJA
525		Dual A		
<b>Isuzu</b>	5.2L	190	A	4SZXH05.23AA, 5SZXH05.23AB, 6SZXH05.23AB
	6.6L	210	A	
		300	B	
	7.8L	230	A	4SZXH07.84RA, 4SZXH07.84RW, 5SZXH07.84RA, 5SZXH07.84RB, 5SZXH07.84RW, 6SZXH07.84RA, 6SZXH07.84RW
		300	B	
<b>GM/GE</b>	6.6L	210	A	2GEPH06.5527, 4GMXH06.5527, 5GMXH06.6592, 5GMXH06.6593, 6GMXH06.6590, 6GMXH06.6591
		300	B	
		310	C	
		360	D	
<b>Hino</b>	J05D (4.7L)	175	B	4HMXH04.7JTA, 5HMXH04.7JTA, 6HMXH04.7JTA
	J08E (7.7L)	260	C	
<b>Mitsubishi</b>	4M50 (4.9L)	175	B	5MFTH04.9H5A, 6MFTH04.9M5A
	6M60 (7.5L)	275	C	

\* Contact Donaldson Engineering for more information at (866) 817-8733 or [emissions@donaldson.com](mailto:emissions@donaldson.com)

<sup>†</sup> High temperature LXF must be applied using the exhaust gas temperature profile on page 7

# LNF & LXF Muffler Kit Tables

ID - Inner Diameter Dia. = Diameter (Dimensions shown in inches)

Style	Inlet I.D.	Outlet I.D.	Inlet/Outlet Body Dia.	Muffler Body Length	LNF Muffler Kit	LXF Muffler Kit	Service Parts				
							Inlet Section	Outlet Section	Pre-Filter Section		
<b>A</b>	Style 1	3.0	3.0	10.0	35.0	X009603	X010001	P232216	P232380	P232371	
		3.5	4.0	10.0	35.0	X009605	X010002	P232217	P232382	P232371	
		4.0	4.0	11.0	36.0	X009645	X010003	P232218	P232383	P232391	
		4.0	5.0	11.0	36.0	X009636	X010004	P232218	P232384	P232391	
		5.0	5.0	11.0	36.0	X009628	X010005	P232227	P232384	P232391	
	Style 2	3.5	4.0	11.0	36.0	X009609	X010006	P232220	P232386	P232391	
		4.0	4.0	11.0	36.0	X009613	X010007	P232221	P232386	P232391	
	Style 3	4.0	4.0	11.0	36.0	X009617	X010008	P232224	P232383	P232391	
		4.0	5.0	11.0	36.0	X009638	X010009	P232224	P232384	P232391	
	Style 4	4.0	4.0	11.0	40.0	X009642	X010010	P232218	P232388	P232391	
		3.5	4.0	11.0	40.0	X009643 <sup>(1)</sup>	X010011 <sup>(1)</sup>	P232220	P232388	P232391	
	<b>B</b>	Style 1	4.0	4.0	11.0	36.0	X009606	X010012	P232218	P232383	P232372
			4.0	5.0	11.0	36.0	X009607	X010013	P232218	P232384	P232372
			5.0	5.0	11.0	36.0	X009608	X010014	P232227	P232384	P232372
			4.0	4.0	11.0	36.0	X009610 <sup>(2)</sup>	X010015 <sup>(2)</sup>	P232218	P232386	P232372
		Style 2	3.5	4.0	11.0	36.0	X009611	X010016	P232220	P232386	P232372
4.0			4.0	11.0	36.0	X009612	X010017	P232221	P232386	P232372	
5.0			5.0	11.0	36.0	X009614	X010018	P232223	P232387	P232372	
Style 3		4.0	4.0	11.0	36.0	X009615	X010019	P232224	P232383	P232372	
		4.0	5.0	11.0	36.0	X009616	X010020	P232224	P232384	P232372	
		5.0	5.0	11.0	36.0	X009618	X010021	P232226	P232384	P232372	
Style 4		3.5	4.0	11.0	40.0	X009619 <sup>(1)</sup>	X010022 <sup>(1)</sup>	P232220	P232388	P232372	
		4.0	4.0	11.0	40.0	X009620	X010023	P232218	P232388	P232372	
		4.0	4.0	11.0	40.0	X009621 <sup>(1)</sup>	X010024 <sup>(1)</sup>	P232221	P232388	P232372	
		5.0	5.0	11.0	40.0	X009622	X010025	P232227	P232389	P232372	
Style 6		4.0	4.0	11.0	40.0	X009623	X010026	P232224	P232388	P232372	
		5.0	5.0	11.0	40.0	X009624	X010027	P232226	P232389	P232372	
<b>C</b>		Style 1	4.0	4.0	11.0	37.5	X009625	X010028	P232218	P232383	P232372
			4.0	5.0	11.0	37.5	X009626	X010029	P232218	P232384	P232372
			5.0	5.0	11.0	37.5	X009627	X010030	P232227	P232384	P232372
		Style 2	5.0	5.0	11.0	38.0	X009641	X010031	P232223	P232387	P232372
			Style 3	4.0	4.0	11.0	37.5	X009629	X010032	P232224	P232383
		4.0		5.0	11.0	37.5	X009630	X010033	P232224	P232384	P232372
		5.0		5.0	11.0	37.5	X009631	X010034	P232226	P232384	P232372
		Style 4	5.0	5.0	11.0	41.5	X009632	X010035	P232227	P232389	P232372
	Style 6		4.0	4.0	11.0	41.5	X009633	X010036	P232224	P232388	P232372
		5.0	5.0	11.0	41.5	X009634	X010037	P232226	P232389	P232372	
	<b>D</b>	Style 1	5.0	5.0	13.0	37.0	X009635	X010038	P232524	P232390	P232523
		Style 2	5.0	5.0	13.0	37.0	X009644	X010039	P231928	P232539	P232523
		Style 3	5.0	5.0	13.0	37.0	X009637	X010040	P232527	P232390	P232523
		Style 4	5.0	5.0	13.0	40.0	X009639	X010041	P232524	P232393	P232523
		Style 6	5.0	5.0	13.0	40.0	X009640	X010042	P232527	P232393	P232523
		<b>Dual A</b>	Style 1	5.0	4.0 (2X)	10.0 (2X)	43.0	X011456	X011452	P236688	P236708
Style 3	5.0		4.0 (2X)	10.0 (2X)	43.0	X011457	X011453	P237440	P236708	P232371 (2X)	
<b>Dual B</b>	Style 1	5.0	5.0 (2X)	11.0 (2X)	43.0	X011458	X011454	P236898	P237438	P232372 (2X)	
	Style 3	5.0	5.0 (2X)	11.0 (2X)	43.0	X011459	X011455	P237440	P237438	P232372 (2X)	

## Muffler Styles



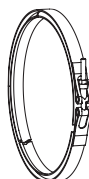
## DPF Replacement Sections & V-Band Clamps

Core Size	DPF Replacement Section <sup>(3)</sup>		V-Band Clamps
	LNF Muffler	LXF Muffler	
A	X009814 (10")	X009980 (10")	P227750
A	X009816 (11")	X009979 (11")	P212925
B	X009818	X009978	P212925
C	X009820	X009977	P212925
D	X009822	X009976	P229851
DUAL A	X009814	X009980	P227750
DUAL B	X009818	X009978	P212925

Core Size	DPF Spare Section <sup>(4)</sup>	
	LNF Muffler	LXF Muffler
A	X009813	X011214
A	X009815	X011215
B	X009817	X010818
C	X009819	X010819
D	X009821	X010820
DUAL A	X009813	X011214
DUAL B	X009817	X010818

### NOTES:

- (1) Inlet offset from center position
- (2) Outlet offset from center position
- (3) For warranty replacement only
- (4) For swapping purposes only



The separate sections of LNF and LXF Mufflers are connected by heavy-duty V-band clamps that create a reliable, yet serviceable joint.

## Replacement DPF Tags

LNF Muffler	X009646
LXF Muffler	X009975

# LNF/LXF School Bus Product Listing

Use this application listing for retrofit quotation purposes only. Any muffler kit installation must correspond with the Donaldson Approval Letter communicated to our Certified Emissions Dealer.

Vehicle Manufacturer	Engine Make	Model	Bus Style	Vehicle Model Year	Tailpipe Install Kit	CARB - Level III+		
						1993-2006	2002-2006	
						LNF Muffler (for High NOx)	LXF Muffler (for Low NOx)	
<b>Am Tran</b>	International	DT360	Conventional	1991-2005	X010424	Style 2 (11" body dia., 3.5"/4")		
		DT466	Conventional	1991-2004	X010424	Style 2 (11" body dia., 3.5"/4")		
				2005-2006	X010424	Style 2 (11" body dia., 3.5"/4")		
		DT466, DT530	Rear Engine	Front Engine/Forward Control	1991-2004	X010424	Style 2 (11" body dia., 3.5"/4")	
					1991-2004	X010434*	Style 4 (11" body dia., 3.5"/4")	
		International	Conventional	2002-2005	X010424	Style 2 (11" body dia., 3.5"/4")		
		T444E	Conventional	1991-2005	X010424	Style 2 (11" body dia., 3.5"/4")		
	Rear Engine	1991-2004	X010434*	Style 2 (11" body dia., 3.5"/4")				
<b>Bluebird</b>	Caterpillar	3116, 3126	Conventional	1997-2000	X010428	Style 1 (11" body dia., 4"/4")		
				2001-2003	X010428	Style 1 (11" body dia., 4"/4")		
		3116,3126 with TC2000 chassis not bi-flow	Rear Engine	1994-2001	X010425*	Style 3 (11" body dia., 4"/4")		
		3126 w/ All American chassis	Front Engine/Forward Control	2001-2004	X010429	Style 1 (11" body dia., 4"/5")		
				Rear Engine	1999-2003	X010426*	Style 4 (11" body dia., 3.5"/4")	
		C7	Front Engine/Forward Control	2002-2004	X010429	Style 1 (11" body dia., 4"/5")		
				Rear Engine	2002-2004	X010429*	Style 3 (11" body dia., 4"/5")	
	C7 / Vision	Conventional	2004-2006	X010429	Style 1 (11" body dia., 4"/5")			
	Cummins	ISB	Conventional	1997-2004	X010427	Style 1 (11" body dia., 4"/4")		
				1991-2004	X010433*	Style 4 (11" body dia., 3.5"/4")		
		ISB w/ All American chassis	Front Engine/Forward Control	1991-2004	X010430	Style 1 (11" body dia., 4"/4")		
		ISB w/ TC2000 chassis	Front Engine/Forward Control	1991-2004	X010430	Style 1 (11" body dia., 4"/4")		
		ISC	Front Engine/Forward Control	1992-1997	X010431	Style 1 (11" body dia., 5"/5")		
				1998-2005	X010432	Style 1 (11" body dia., 4"/4")		
	Rear Engine			1991-2004	X010426*	Style 4 (11" body dia., 4"/4")		
	International	DT360	Conventional	1991-2005	X010424	Style 2 (11" body dia., 3.5"/4")		
				1991-2004	X010424	Style 2 (11" body dia., 3.5"/4")		
DT466		Conventional	2005-2006	X010424	Style 2 (11" body dia., 3.5"/4")			
			1991-2005	X010424	Style 2 (11" body dia., 3.5"/4")			
T444E	Conventional	1991-2005	X010424	Style 2 (11" body dia., 3.5"/4")				
<b>Carpenter</b>	International	DT360	Conventional	1991-2005	X010424	Style 2 (11" body dia., 3.5"/4")		
		DT466	Conventional	1991-2004	X010424	Style 2 (11" body dia., 3.5"/4")		
				2005-2006	X010424	Style 2 (11" body dia., 3.5"/4")		
		DT466, DT530	Rear Engine	Front Engine/Forward Control	1991-2004	X010424	Style 2 (11" body dia., 3.5"/4")	
					1991-2004	X010434*	Style 2 (11" body dia., 3.5"/4")	
		T444E	Conventional	Rear Engine	1991-2005	X010424	Style 2 (11" body dia., 3.5"/4")	
					1991-2004	X010434*	Style 4 (11" body dia., 3.5"/4")	

\* P231739 50' harness is required.

## LNF/LXF School Bus Product Listing - Continued

Vehicle Manufacturer	Engine Make	Model	Bus Style	Vehicle Model Year	Tailpipe Install Kit	CARB - Level III+		
						1993-2006	2002-2006	
						LNF Muffler (for High NOx)	LXF Muffler (for Low NOx)	
International	International	DT360	Conventional	1991-2005	X010424	Style 2 (11" body dia., 3.5"/4")		
		DT466	Conventional	1991-2004	X010424	Style 2 (11" body dia., 3.5"/4")		
				2005-2006	X010424	Style 2 (11" body dia., 3.5"/4")		
		T444E	Front Engine/Forward Control	1991-2004	X010424	Style 2 (11" body dia., 3.5"/4")		
			Conventional	1991-2005	X010424	Style 2 (11" body dia., 3.5"/4")		
VT365	Conventional	2002-2005	X010424	Style 2 (11" body dia., 3.5"/4")				
Thomas Built/Freightliner	Caterpillar	3126	Front Engine/Forward Control	1997-2004	X010440	Style 1 (11" body dia., 4"/4")		
			Rear Engine/Right Hand Exhaust	2001-2004	X010442*	Style 3 (11" body dia., 4"/4")		
		3116, 3126	Conventional	1997-2000	X010436	Style 2 (11" body dia., 4"/4")		
			Rear Engine/Right Hand Exhaust	1996-2004	X010442*	Style 1 (11" body dia., 4"/4")		
		3116, 3126, C7	Rear Engine/Right Hand Exhaust	1996-2004	X010442*	Style 3 (11" body dia., 4"/4")		
				1996-2000	X010442*	Style 3 (11" body dia., 4"/4")		
		3126, C7	Conventional	2001-2002	X010440	"Style 2 (11" body dia., 4"/4") (4) / Style 1 (11" body dia., 4"/4") (5)"		
				2003-2006	X010440	"Style 2 (11" body dia., 4"/4") (4) / Style 1 (11" body dia., 4"/4") (5)"		
		Rear Engine/Left Hand Exhaust	2001-2004	X010442*	Style 3 (11" body dia., 4"/4")			
		Cummins	ISB	Conventional	1999-2002	X010435	Style 2 (11" body dia., 4"/4")	
	2003-2004				X010435	Style 2 (11" body dia., 4"/4")		
	Front Engine/Forward Control			1994-1997	X010439	Style 1 (11" body dia., 4"/4")		
	1998-2004			X010440	Style 1 (11" body dia., 4"/4")			
	Rear Engine/Left Hand Exhaust	1994-2000	X010441*	Style 3 (11" body dia., 4"/4")				
	International	International	DT360	Conventional	1991-2004	X010424	Style 2 (11" body dia., 3.5"/4")	
			DT466	Conventional	1991-2004	X010424	Style 2 (11" body dia., 3.5"/4")	
					2005-2006	X010424	Style 2 (11" body dia., 3.5"/4")	
			T444E	Conventional	1991-2005	X010424	Style 2 (11" body dia., 3.5"/4")	
	Mercedes	MBE900	Conventional	2004	X010438	Style 1 (11" body dia., 4"/4")		
				2002-2003	X010437	Style 2 (11" body dia., 4"/4")		
				2005-2006	X010905	Style 2 (11" body dia., 4"/4")		
Rear Engine/Left Hand Exhaust			2004	X010442*	Style 3 (11" body dia., 4"/4")			

\* P231739 50' harness is required.



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